

Accessibility Review – DRAFT 8th March 2022

PUBLIC REALM IMPROVEMENT PROPOSALS

TEMPLE BAR SQUARE AREA

for Dublin City Council Road Design & Construction Division



Fionnuala Rogerson Architects

Architecture | Inclusive Design | Access Consultancy

Ardtona House, Lower Churchtown Road,

Dublin D14 DR40, Ireland.

Tel. 01.2984261 email: info@rogerson.ie

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Appendix A FRA Accessibility Review dated 25th January 2019

Appendix B Photographs during delivery hours – Google 2018

Appendix C NCBI Report 2022

1.0 INTRODUCTION

1.1 Generally

This report relates to an independent accessibility review conducted between February 2021 and February 2022 by Fionnuala Rogerson Architects, Access Consultants (FRA), of proposed revised public realm improvement works to the Temple Bar Square Area including Temple Bar Street and Crown Alley, Dublin 2. The review aims to assist Dublin City Council (DCC) to achieve maximum accessibility throughout the proposed scheme whilst balancing all competing considerations.

1.2 Scope of Review

- 1.2.1 In April 2018 FRA were commissioned to conduct an accessibility appraisal of proposals for the Temple Bar Square area following the granting of approval by DCC for their development. Following site visits, document appraisals and meetings with the architects, DCC Parks Department and with representatives of groups and organisations of people with disabilities a detailed report was prepared. The report addressed design issues likely to impact on the use of the square by people of all abilities. These included levels and gradients, accessible routes, surfaces, tactile paving, street furniture, lighting and wayfinding. Fifteen recommendations for improvements were made including a recommendation to undertake broader consultation, to give greater consideration to matters of detail and to the safety and ease of use of the area by the diversity of people using it including visitors and people with mobility and vision impairments. A copy of this report is included at Appendix A as some of its recommendations are still relevant.
- 1.2.2 In January 2021 FRA were asked by Dublin City Council Road Design and Construction Division to undertake a further review of the scheme as it was now responsible for its detail design and delivery. FRA were informed that during the detail design phase changes had to be made in order to accommodate service and delivery vehicle movements. It had been found that larger delivery vehicles would not be able to turn into Fownes Street, as had been envisaged in the initial design, without overrunning adjacent pedestrian areas at the junction of Temple Bar Street and Fownes Street Lower due to the very narrow carriageways. DCC advised that in developing the design, to achieve the functional requirements and the levels of safety necessary, it had tried to implement as many of the recommendations from the original accessibility review as possible.

1.3. Methodology

- 1.3.1 The accessibility review and services provided included the following:

- a) Reviewing progress drawings and other documents throughout
- b) Commenting on proposed changes and advising DCC on same
- c) Holding virtual meetings and corresponding with Dublin City Council engineers
- d) Holding virtual meetings and corresponding with representatives of the Irish Wheelchair Association and the National Council for the Blind of Ireland and with individuals with disabilities
- e) Visiting the Temple Bar Area to observe traffic, cyclist and pedestrian movements
- f) Reviewing photographs from Google Street View taken during early morning delivery periods, pre-Covid, to gain an understanding of vehicle behaviour and pedestrian interaction – selection shown in Appendix B
- g) Reviewing report on Traffic Movement passing through Temple Bar Square between 6.00am and 11.00am over a period of seven days prepared for Temple Bar Co. in 2012
- h) Consulting a range of national and international guidance documents, research documents and standards governing accessibility and usability of the urban environment
- i) Commissioning an assessment of the proposals by the Possibility Lab at NCBI, including virtual meetings and correspondence on key access considerations, in particular for people who are blind or vision impaired. Report included at Appendix C.
- j) Preparing a report on the accessibility review of the revised design proposals, identifying access improvements and limitations and making recommendations

Revised Design Proposal



Figure 1 View towards Temple Bar Street



Figure 2 View towards Lower Fownes Street

1.4 Standards and Guidelines

Three new international standards were published in 2021 during the course of this accessibility review which are relevant to the report, as the standards & guidance given reflect state of the art practice in relation to access and use of the built environment, including the urban environment, and has been arrived at through consensus. These are:

- *EN 17210 : 2021 Accessibility and usability of the built environment – Functional Requirements*
- *EN 17621: 2021 Accessibility and usability of the built environment – Technical performance criteria and specifications*
- *ISO 21542: 2021 Building Construction – Accessibility and usability of the built environment*

A further relevant guidance document published in December 2021 which includes an update to earlier UK guidance and is a response to some research recommendations is:

- *Guidance on the use of tactile paving surfaces* – Department for Transport Dec. 2021

Also relevant are:

- *BS 8300 – 1: 2018 Design of an accessible and inclusive built environment Part 1 External Environment*
- *Design Manual for Urban Roads and Streets DMURS May 2019* pub. Government of Ireland
- *Building for Everyone – A Universal Design Approach Sxn 1 External Environment* pub. Centre for Excellence in Universal Design 2012

1.5 Standards & Guidelines Relevant to Squares & Shared Space

1.5.1 The recently published suite of European Standard on accessibility and usability of the built environment EN 17210 and EN 17621 give guidance on requirements, recommendations and details for Squares and “Shared Space” which have been used as a benchmark for this review.

1.5.2 For Squares

The Functional Requirements include:

- Squares shall be accessible for all users, particularly at main pedestrian entry points and connecting pedestrian routes
- Squares shall be protected against vehicular traffic with barriers, kerbs, bollards or similar elements which are appropriately designed to avoid hazards for pedestrians
- There shall be adequate lighting
- Seating shall be provided at regular intervals

Recommendations include:

- In the case of temporary events that change the configuration of the space within the square the equivalent level of accessibility of routes, furniture etc should be maintained
- Desire lines and wayfinding should be considered

1.5.3 For “Shared Space”, where pedestrians and vehicles may use the same space

The Functional Requirements include:

- Measures to ensure low traffic speeds and the achievement of pedestrian priority
- A clearly designated comfort zone shall be provided to enable pedestrians, including persons with vision impairments, to distinguish between this and the shared area
- Visual contrast shall be provided between the comfort zone and the shared area
- Comfort zones shall be of adequate width for the pedestrian density and continuous between junctions
- Tactile guidance such as tactile walking surface indicators (TWSI), where necessary, shall be provided through the comfort zones, with visual contrast
- There shall be adequate space alongside the TWSI to provide an obstacle free route
- Paving surfaces shall be suitable for pedestrians
- Where parking is restricted priority shall be given to location of designated parking for persons with disabilities

Recommendations include:

- “Gateways” should be provided between a conventional street layout and a “Shared Space”, a change of visual contrast and TWSIs on both the footpath and road where they become shared space
- Wayfinding signage should inform all users (drivers, pedestrians and cyclists) about the nature of the intended usage, and direct people to comfort zones or other features of importance
- Preferably kerbs should be avoided and other reference elements e.g. street furniture used

For each of the above requirements and recommendations detailed technical guidance is given.

2.0 OBSERVATIONS

2.1 Temple Bar Square and surroundings

2.1.1 FRA’s observation on the existing levels of accessibility in Temple Bar are recorded in Section 5.0 of FRA report dated 2019 at Appendix A. These are still applicable and will not be repeated. Of note is the proliferation of obstructions to access routes, sandwich boards, poor quality signage, bicycles tied to street furniture, poor quality maintenance of surfaces and uncontrolled occupation by commercial premises of areas of the public realm. Most of these are outside the scope of the brief for this accessibility review but each are critical to the accessibility of the area and require clear strategies, regulation and enforcement.

2.1.2 Observations which are relevant to the current review include the difficulties many pedestrians could be seen having when walking and /or pulling roller travel bags along

surfaces of the three streets forming part of the area for improvement. These are mainly paved with re-used Dublin Dolerite setts (cobblestones) which were laid in the 1990's with only Lower Fownes Street having its original historic setts. The setts have been poorly laid and many are undulating with wide open joints. The polished surfaces of the setts are also extremely slippery when wet.

- 2.1.3 The sheer numbers of pedestrians, both local and visitors, who frequent the area during the day and at night also contributes to making it a difficult area to negotiate particularly for people with mobility, cognitive and vision impairments as well as for children and older people.
- 2.1.4 It can be seen from a review of photographs taken in 2018 in the early morning, which can be accessed in Google Street View (see sample at Appendix B), that the daily servicing of premises in the Temple Bar area between 6am and 11am poses significant difficulties for the vehicles involved in deliveries and collections, as well as for the traders who have to load / unload from narrow pavements and cellars, and for pedestrians who have to resort to using the carriageways to avoid beer kegs, refuse bags and bins, street cleaning equipment and other obstacles whilst moving around vans and trucks.

2.2 Traffic Study

- 2.2.1 In 2012 the Temple Bar Company commissioned a study and report on the public domain in the Temple Bar area. As part of the study a traffic count was carried out over a period of seven days in order to quantify the vehicular traffic in the pedestrianised zone comprising Temple Bar, Temple Bar Square, Fownes Street Lower and Crown Alley. The survey was completed during the five hour time slot in the mornings which was reserved for goods and service deliveries. The survey also took account of vehicle movements for two hours outside the restricted times. FRA were informed that it is unlikely that vehicular traffic in the area will have changed much since then. Hence it appeared relevant to review this study.
- 2.2.2 The study findings indicated that there were 1,062 vehicle movements over the seven day period with an average of 836 vehicles entering Temple Bar Square with 520 crossing the square and exiting via Crown Alley. Of the 1,062 vehicles 174 were cars and 31 motor bikes. The remainder were goods and delivery vehicles of varying sizes with approximately 20 construction related vehicles. The highest numbers were on a Monday and Friday with between 160 and 180 vehicle movements recorded. The peak time were between 9am-10am on a Friday and between 10am-11am on a Monday when between 80 and 100 vehicles per hour were recorded. Bicycle movements were not recorded and comparable information on pedestrian movements is not available though from observation pedestrian use of Temple Bar before 11am is relatively low. Vehicle speeds were also not evaluated but are likely to be low due to the narrow streets. The survey noted that 13% of the vehicles violated the traffic rules by entering the wrong way or over a raised pedestrian only

platform as a result of insufficient bollards. It also noted that 96 vehicles entered the pedestrian streets within two hours outside the permitted times. It is possible that some of these violations may have decreased in the interim due to control measures in place.

- 2.2.3 Numerous international guidance documents point towards shared surface schemes being appropriate only in areas with high pedestrian movement and very low traffic volumes and subject to certain key features being in place. 100 vehicles per hour or less as identified in the Traffic Survey is a very low number of traffic movements and would indicate that the necessary levels of safety can be achieved.

3.0 CHANGES TO THE ORIGINAL SCHEME DESIGN

3.1 Changes to the Scheme

- 3.1.1 There are two principal changes to the original scheme design. The first is a change to permit vehicles to cross the Square from Temple Bar and exit along Crown Alley. The second is a change from a kerb-free surface on the southern section of Crown Alley and the western end of Temple Bar to the retention of raised kerbs and segregated pedestrian footpaths.



Figure 3 Revised Layout as Proposed

- 3.1.2 The revised scheme has retained the existing vehicular route across the square to accommodate service vehicles during the hours of 06.00am and 11.00am. It proposes that

larger vehicles will enter the Square from Temple Bar and exit through Crown Alley. Smaller vehicles will either cross the square or turn left or right from Temple Bar onto Fownes Street. FRA were informed that strict enforcement of the delivery window will be achieved through the use of removable bollards around the perimeter of the Temple Bar Area and that this system has been trialled since mid-2020 with positive results. Outside of these times the area will be fully pedestrianised.

- 3.1.3 In order to prevent delivery vehicles moving and parking randomly across the kerb-free surface within the Square the revised design has defined a carriageway around three sides of the square, delineated by drainage channels on both sides, with bollards protecting a pedestrian only route around the perimeter. This route is intended to be fully accessible along the eastern and northern edge i.e. leading to/from Crown Alley to Fleet Street and Merchants Arch and leading to/from Temple Bar East and Fleet Street to Temple Bar Street and Essex Street. Within the Square street furniture has been placed on the inner side of the designated carriageway to prevent vehicles from accessing the central area. It is proposed that there will be a subtle colour contrast between the pedestrian only areas and the area to be used as a carriageway and the footpaths will be paved in large flagstones with the carriageway paved in small smooth modular setts.
- 3.1.4 Seating is now proposed around all three sides of the square as well as around the tree in the north east corner. Previously the seating was located only along Fownes Street and around the tree.
- 3.1.5 Lighting of the square which was to have been catenary lighting suspended from the buildings is now provided by three standard lights located in line with the other street furniture around the inner perimeter.
- 3.1.6 A second accessible route¹ in an east west direction is proposed across the southern side of the square together with a seating area associated with the cafés / restaurants on the southern edge. This had not been included in the original proposal
- 3.1.7 A tactile guidance path has been introduced along the accessible route leading from the intersection of Crown Alley and the Square as far as the intersection of Lower Fownes Street and the Square.
- 3.1.8 In the original scheme a continuous band of metal studs with tactile demarcation studs were proposed for insertion in the paving to define a vehicular route across the full width of the Square along Fownes Street. In the revised scheme these have been replaced by

¹Accessible route: Any route capable of being independently accessed and used to reach a place or space, to approach a building or to move between buildings. BS 8300-1: 2018

bollards and tactile blister paving has been introduced at each entry point into the square to signify a change from raised to flush kerbs.

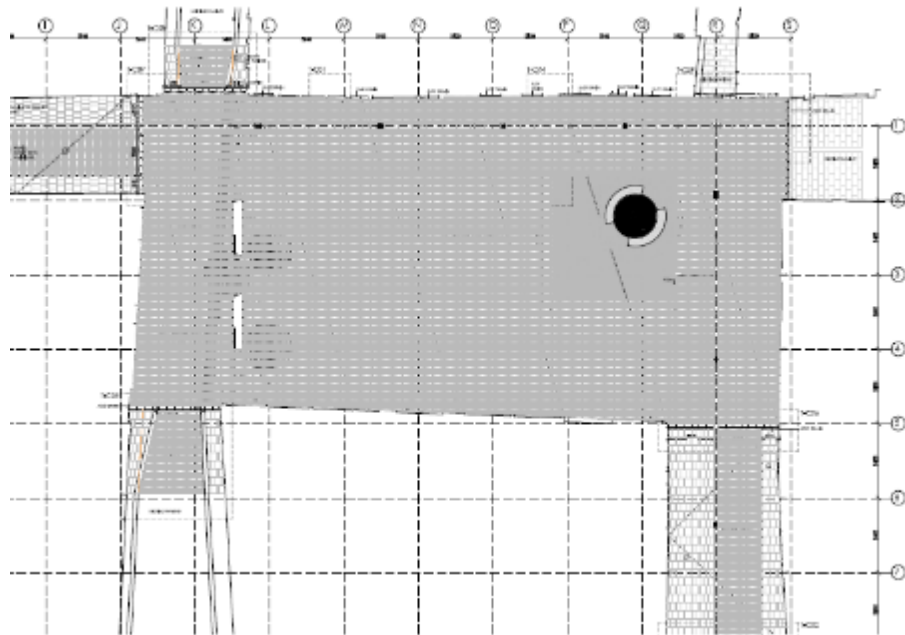


Figure 4 Layout as Approved 2017

- 3.1.9 The original scheme had eliminated kerbs along Temple Bar and Crown Alley and had proposed a kerb free shared surface with pedestrian areas on both sides defined by a drainage channel and change of paving type and size. The revised scheme has retained the vertical kerbs along both Temple Bar and Crown Alley and has ramped up to the kerb-free area across the Square at the intersection of each street with the Square. A pedestrian crossing has been introduced at each intersection
- 3.1.10 Surface finishes on the vehicular routes along Fownes Street and Temple Bar were originally proposed as re-laid Dublin setts (cobblestones). Surface finishes on the Square and along the centre section of Crown Alley were proposed as re-laid Dublin setts but with the tops “sawn” to provide a smooth surface finish. New Leinster granite was proposed along the kerb-free pedestrian routes on Crown Alley and Temple Bar. The revised proposal has limited the re-laid Dublin setts to the carriageways in Crown Alley and Temple Bar and proposed Leinster granite along all segregated footpaths and accessible routes with new “Azul Platino” Spanish granite in different formats within the Square, similar to the material palette used in the Grafton Street Quarter.

4.0 CONSULTATION & ENGAGEMENT

- 4.1.1 As the detail design of the proposal was being developed during the Covid period it was mainly possible to engage with those who had previously been consulted pre-Part 8 as well as people and organisations who FRA had been in contact with when preparing the 2019 accessibility report. These were contacted via telephone, correspondence and on-line meetings. Several of those who had provided feedback on the original scheme were no longer available or no longer working for the organisations so new contacts were made.
- 4.1.2 The Irish Wheelchair Association (IWA) had previously expressed concern about the removal of the level area in the centre of Temple Bar Square and the gradual grading of the levels from south to north. They also had a particular concern about the reuse of cobbles. Drawings and photographs were sent to IWA of the revised scheme and an example of a small square of similar dimensions and gradients as the revised proposal was identified. These were discussed by phone and through correspondence with several of their members and representatives. It was confirmed by them that they were familiar with Market Square off Smithfield, which has similar gradients, and that the gradient there was acceptable. Their concern regarding cobbles was relayed to DCC engineers.
- 4.1.3 Discussion were also held with several people in NCBI regarding detail measures necessary to ensure the scheme's accessibility, in particular for people who are blind or vision impaired. Arising from these discussions NCBI were commissioned to prepare an accessibility assessment and three on-line meetings were held with their team, two of which were also attended by DCC engineers. The resultant report which outlines key access issues and recommendations is included at Appendix C. Several of its recommendations have already been implemented by DCC in the scheme design, including the moving of tactile paving marking the entrance to the level surface areas of the Square and the introduction and location of a tactile guidance path along the accessible routes on the west and north sides of the Square where the accessible route is protected only by bollards. NCBI also recommended the creation of an accessible route along the southern building boundary of the square and that it should be immediately adjacent to the building line. FRA understands that this will also be implemented.
- 4.1.4 For five weeks In September / October of 2021 DCC provided a publically accessible on-line information portal about the detailed design proposals and invited feedback via an on line survey. Feedback has been assessed by DCC.

5.0 RECOMMENDATIONS

The following recommendations are based mainly on Technical Detail in EN17621:2021.

5.1 Accessible Routes / Comfort Zones:

- 5.1.1 An accessible route / comfort zone has been integrated into the design of the level surface area. It leads from the southern end of Crown Alley on its western side as far as the junction with the Square, across a pedestrian crossing and passed the Telephone Exchange as far Merchant's Arch. From the corner of Merchant's Arch an accessible route will lead along the north side of the square to the junction with Lower Fownes Street, to a pedestrian crossing to Temple Bar Street and onwards as far as Temple Bar Lane. It is also proposed, that another accessible route will lead across the south side of the Square from the Crown Alley junction as far as Lower Fownes Street. Consideration should be given to defining an accessible route / comfort zone on the west side of the Square to connect the entry point at the south-west corner of the Square from Fownes Street Lower to the junction with Temple Bar Street. This could possibly be located along the building line or on the eastern side of the bollards using a guidance path to connect to a crossing leading to the accessible route along the northern boundary of the Square. This would then meet the requirement in EN 17210 referred to above, for accessible routes from each main access point into the square.
- 5.1.2 The accessible route across the southern boundary of the Square should be clearly defined and ideally should following the building line, keeping tables and chairs for cafés and restaurants to the north of the route. This would allow users easy access to such facilities as the ATM and the Tourist / Information Office, as well as facilitating vision impaired users to follow the building line.
- 5.1.3 The minimum unobstructed width of all accessible routes should be 1800mm but preferably 2000mm to accommodate larger electric mobility scooters. Occasional narrowing of the width of the accessible route, where unavoidable, may be acceptable provided a minimum width of 1200mm is maintained and the restricted width extends for a maximum of 2000mm. (EN 17210: 2021, 7.1.6 and BS 8300-1: 2018, 8.1.2). Given the high level of two way traffic in Temple Bar these figures should be exceeded wherever possible.
- 5.1.4 Where using guidance paving the minimum clear space either side of the guidance path should be 600mm on each side (ISO 23599:2012 4.2). The new *Guidance on the use of tactile paving surfaces* UK 2021 guides that the minimum width if adjacent to a busy shopping area should be 2000mm. It should be borne in mind that the minimum clear width in constant two way traffic for two wheelchair users to pass is 1800mm, and preferably 2000mm (EN 17621 Table 1) and for one way traffic the minimum clear width is 1200mm. Assuming a 300mm wide guidance tile is used and only one way traffic with no obstructions the clear width of path should 2100mm.

- 5.1.5 The maximum cross fall on any accessible route should be 1:50 (2%)
- 5.1.6 Visual contrast between the surface of the accessible route and the adjacent surfaces at the same level should have an LRV (Light Reflectance Value) difference of 30 points with the lighter surface greater than or equal to 40 points LRV. (EN 17621: 2021, 7.6.1.3)
- 5.1.7 The minimum light level should be 20 lux (EN 17621 Table 2)
- 5.1.8 Further consultation should be undertaken with NCBI and with users with vision impairments and other people with disabilities to ensure that the proposed tactile guidance path along the accessible route on the west and north sides of the Square is effective and does not impede other users. It should be noted that the recent UK *Guidance on the use of tactile paving surfaces* highlights the negative effects tactile paving can have on the experience of wheelchair users and others with walking difficulties. It also recommends that a guidance paths is used where traditional cues such as a property (building) line are not available, that when used it should be 800mm wide, though this can be site specific, and that in busy areas there should be a minimum width of 2000mm unobstructed space between the path and the property line. This cannot be achieved in Temple Bar due to the narrow accessible routes and pavements.

5.2 Tactile Paving:

- 5.2.1 There is consensus across all standards that information for people who are blind or have low vision needs to be given in at least two ways e.g. by use of tactile walking surface indicators (TWSIs) and by colour contrast. It is preferable that information is also conveyed through another senses e.g. sound. Consideration should be given to incorporating sound tiles or similar to alert people who are blind or vision impaired to the transition points between segregated surfaces and shared surfaces.
- 5.2.2 To detect any tactile surface a smooth surface is needed either side. Intersecting tactile surfaces such as a blister surface signifying a road crossing which occurs at the end of a length of tactile paving running parallel to a carriageway may be difficult to detect and other means of drawing attention to the change should be considered e.g. a drainage channel with a metal grille or a sound tile. It is important when detailing the TWSIs in Temple Bar that additional expert advice is taken in relation to their correct use, particularly within the level surfaces zone around the Square.
- 5.2.3 The effective depth and width of attention patterns / blister paving (hazard warning) shall be at least 560mm and greater depth may be needed particularly where the hazard is in the

direct line of travel (ISO 23599:2012 sxn. 4.5.3). Generally a depth of 1200mm has been shown in the proposed scheme.

- 5.2.4 When a guiding pattern (flat topped elongated bar) is used to designate a path of travel along an accessible route it shall have a minimum effective width of 250mm, or minimum effective width of 550mm if approached obliquely (ISO 23599: 2012 4.5.4) The new *Guidance on the use of tactile paving surfaces* UK 2021 guides that the minimum width should be 800mm.
- 5.2.5 Visual contrast between Tactile Walking Surface Indicators and the surrounding or adjacent surfaces shall be greater than 30% using the Michelson Contrast formula. The reflectance value (CIE Y value) of the lighter surface shall be minimum of 40 points (ISO 23599:2012 4.3.1) or minimum 30 points Light Reflectance Value (BS 8300-1:2018)
- 5.2.6 I'DGO research by SURFACE in the University of Salford found that many older people with balance problems, arthritis in lower limbs, reduced mobility and fear of falling were concerned with safety of walking on tactile paving, particularly if wet, icy or laid on a slope. 17% of 1,400 older people surveyed had fallen at least once outside the home in the 12 months preceding the research, 17 on tactile paving and 30 had fallen on tactile paving at some stage. Hence caution should be exercised when using tactile surfaces in areas where there is no alternative option to crossing them.

5.3 Cycling

- 5.3.1 It is intended that the entire area of Temple Bar Square, Temple Bar Street, Lower Fownes Street and Crown Alley will be closed to vehicular traffic apart from the delivery period and that it will be signed as a pedestrian zone. It is our understanding that it is an offence to cycle in a pedestrian zone unless expressly signalled that it is permitted to do so. It is important that adequate controls are put in place to ensure that cyclists dismount when entering the area and that they have alternative routes to circumvent it. A cycling strategy should be established if one is not already in place.
- 5.3.2 The proposals do not indicate any cycle parking within the zone for improvement despite the fact that so many bicycles are currently found tied to lampposts and bollards within the area. Bicycle parking at the junction of Essex Street and Temple Bar is well used but it also intrudes on the footpath. When considering cycle parking locations and stands consideration should be given also to provision for non-standard cycles as increasingly these are being used by people with disabilities when mobilising in urban areas

5.4 Designated Accessible Car Parking

- 5.4.1 As there will be no parking permitted within the Temple Bar Square Area, consideration should be given by DCC to allocating designated spaces and an accessible drop-off zone as close as possible to the centre of the area in order to facilitate people with disabilities to access the area and the amenities it offers

5.5 Street Furniture.

- 5.5.1 Street furniture includes bollards, lighting columns, signposts, seating, cycle stands and litter bins. Street furniture should be kept to a minimum to avoid clutter and obstructions. It should be located consistently in a defined zone and should not project into an accessible route / comfort zone. All furniture including tree planters should have rounded edges. Waste bins should be 1300mm in height and with the waste opening 1000mm above ground level. Street furniture should visually contrast with its background or have visually contrasting bands between 1400mm and 1600mm above ground level and which can be seen in all lighting conditions.
- 5.5.2 The seating around the square is proposed to be selected from OSMOS GSQ range, as used in the Grafton Street Quarter. NCBI has expressed a preference that the stone base should be continuous so as to be detectable by a white cane user. Ideally the stone base should visually contrast with the paving so as to be more readily detectable.

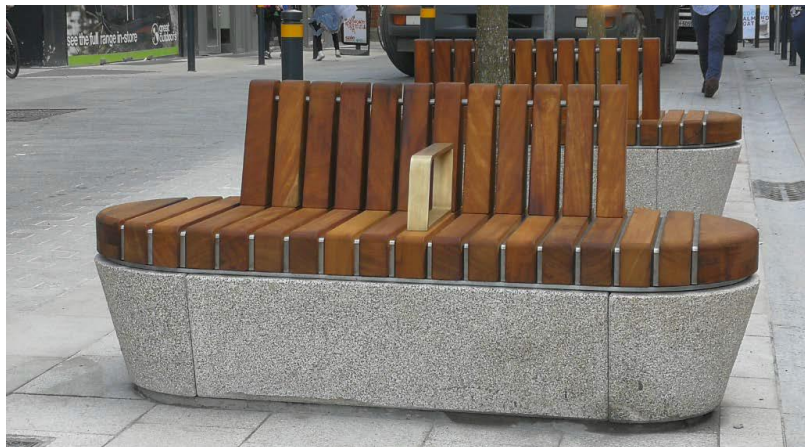


Figure 4 Seating as used in Grafton Street Quarter with solid base

- 5.5.3 Bollards are usually used to prevent vehicles encroaching on pedestrian areas. The use of bollards, is a significant obstacle to most users, as they reduce the effective width of narrow pedestrian routes. They should not be used in pedestrian areas unless essential for safety reasons. Where used they should be a minimum 1.0m high and should visually contrast with their background and have visually contrasting markings 150mm deep from the top.

- 5.5.4 Where swept bends are necessary at the northern corner of Crown Alley adjacent to the tree and on the tight corners at the junction of Temple Bar Street and Lower Fownes Street bollards or other protection may be essential to ensure pedestrian safety and to facilitate the movement of larger and rigid delivery vehicles.
- 5.5.5 Due to the very narrow footpaths particularly in Temple Bar Street and on Temple Bar Square the management of refuse, bicycle parking, and trolleys at loading areas is paramount to ensure that a clear accessible route / comfort zone is maintained.

6.0 CONCLUSION

- 6.1.1 The current proposed design for Temple Bar Square has taken account, as far as possible, of most of the requirements and recommendations for squares and shared space as identified in the recent European Standards on Accessibility and usability of the built environment EN 17210 and EN 17621 referred to in Sections 1.4 and 1.5
- 6.1.2 The design has improved safety levels for pedestrians in critical locations such as at the junctions of streets with the square, where pedestrians are moving from traditional streets with raised kerbs and footpaths to level surfaces where there is no distinction between carriageway and footpath
- 6.1.3 Whilst the original design intent was to exclude through traffic from the Square it appears that this has not been possible to achieve and the knock-on effect has been the requirement for clearly defined accessible routes or comfort zones to be created within minimal sized pedestrian only areas, separated from the carriageway through the use of bollards.
- 6.1.4 The use of bollards throughout, both in the Square and on Crown Alley is an impediment to pedestrians generally, particularly where pedestrian numbers are high. Their use is an outcome of allowing vehicles through the Square, predicted poor driver behaviour, insufficient loading areas and inadequate enforcement of regulation. It is strongly recommended, in order to improve accessibility of the area, that their use is minimised as far as possible and where essential that removable bollards are installed e.g. could they be omitted from Crown Alley where raised footpaths are in place, and parking regulations for vehicles strictly enforced?
- 6.1.5 The placement of heavy and fixed street furniture around the inner perimeter of the square serves to control the movement of goods vehicles during the periods when vehicular access is permitted, and also provides more seating. Conversely it limits the flexibility of the space should it be required to reconfigure the Square for temporary events.

- 6.1.6 The absence of clear visual contrast between carriageway and footpath in the level surface area of the Square is a concern particularly for people with sensory impairments, cognitive impairments, many older people and those with children who may use the area during the 6am to 11am period. It does not conform to good practice guidance. It is an outcome of a desire to retain some of the design intent for which Part 8 approval was granted. It is less of an issue during the periods when the area is fully pedestrianised.
- 6.1.7 The footpath width on the northern side of Temple Bar has been increased as much as possible but is still in parts below minimum standards and well below standards for segregated surfaces with high pedestrian usage. The absence of data on pedestrian numbers during the service and delivery window of 6am to 11am makes it impossible to evaluate the level of difficulty that this will pose particularly for people with mobility impairments who may not be able to use the cobbled surface of the street.
- 6.1.8 The relaying of the Dublin setts (cobble) on Temple Bar will not meet accessibility standards for modular paving due to the undulation of the units and perceived or actual slipperiness of the surface particularly when wet. They will be inaccessible for many people with mobility impairments, for wheelchair users and for some people using wheeled luggage.
- 6.1.9 A city wide policy for the location of tables and chairs serving restaurants and cafés should be developed and adhered to as far as possible within the Temple Bar Area. Preferably they should be located away from the building line so as to allow access for people to building frontages and also to permit people who are blind or vision impaired to follow the building line.
- 6.1.10 A traffic management plan, effectively controlled, is crucial for the Temple Bar Area. It should also include a strategy for the management of deliveries, street cleaning and refuse collections. It needs to be responsive to changing circumstances and to be subjected to regular monitoring and review.

Accessibility Review of Proposals for TEMPLE BAR SQUARE

For

**Dublin City Council
In collaboration with
REDscape Landscape & Urbanism + GKMP Architects**



**Fionnuala Rogerson Architects
Access Consultants
Ardfona House, Lower Churchtown Road,
Dublin D14 DR40, Ireland.
Tel. 01.2984261
Fax 01.2987262
email: info@rogerson.ie**

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1.0 Introduction

- 1.1 Fionnuala Rogerson Architects, Access Consultants were requested to review proposals for the refurbishment of Temple Bar Square as prepared by REDscape Landscape and Urbanism + GKMP Architects for Dublin City Council, and to give an opinion on whether the proposals meet good practice standards in terms of accessibility and inclusion.

2.0 Methodology

- 2.1 The following drawings received 20.04.2018, in pdf format were reviewed.

| Dwg No. | Rev. | Title | Date of drawing: |
|---------|------|----------------------------|------------------|
| T_GA00 | - | Site Plan | 28.03.2018 |
| T_GA01 | - | Temple Bar Square | 27.03.2018 |
| T_GA02 | - | Temple Bar | 27.03.2018 |
| T_GA03 | - | Crown Alley 1 | 27.03.2018 |
| T_GA04 | - | Crown Alley 2 | 27.03.2018 |
| T_GA05 | - | Site Sections | 27.03.2018 |
| T_GA06 | - | Site Plan-Paving Materials | 28.03.2018 |

In addition the following detail drawings received on 7.06.2018 were reviewed:

| | | |
|--------|---|------------|
| T_C01 | Temple Bar Square 1 | 27.03.2018 |
| T_C02 | Crown Alley 1 | 27.03.2018 |
| T_C03 | Temple Bar 1 | 27.03.2018 |
| T_UE01 | Temple Bar Square, Linear Bench | 27.03.2018 |
| T_UE02 | Temple Bar Urban Elements, Circular Bench & Tree Surround | 27.03.2018 |
| T_UE03 | Temple Bar Urban Elements, Tree Surround | 27.03.2018 |
| T_UE04 | Temple Bar Urban Elements, Drinking Fountain | 27.03.2018 |
| T_UE05 | Temple Bar Urban Elements, Bin, Bollard & Stud | 27.03.2018 |
| T_UE06 | Temple Bar Urban Elements, Bespoke Gullies | 27.03.2018 |

- 2.2 The Draft Temple Bar Public Realm Plan dated August 2016 together with the report accompanying the Part 8 planning approval proposal for Temple Bar Square Refurbishment dated 12.07.2017, both available on line, were also reviewed.
- 2.3 In conjunction with the drawing review, meetings were held with the architects and their client, Dublin City Council (DCC), to ascertain the design intent and constraints. An ad-hoc meeting was also held with representatives and members of the Irish Wheelchair Association (IWA) and a representative of the National Council for the Blind in Ireland (NCBI) was contacted by phone.
- 2.4 Following the initial meeting with DCC the author visited Temple Bar Square and the surrounding area to observe the current condition and use of the square, its surroundings, and the pedestrian, cycle and vehicular movements in its vicinity. This site visit was made mid-week, in dry conditions and during the afternoon, when there were relatively few people in

the area. During the visit people visiting and living in the area were asked their opinions about the space and its ease of use.

- 2.5 A number of similar sized spaces in Dublin were visited in order to identify whether similar gradients to those proposed in Temple Bar Square would impede access and use. This was done with a view to being able to present to others a similar space, with comparable falls to better appreciate the impact of such gradients in an area of the public realm.
- 2.6 Relaid Dublin Setts forming part of the entrance pathway from Merrion Square West into the Square were inspected as well as an area of sawn Dublin setts which form part on an entrance route to Merrion Square from Merrion Square North.
- 2.7 An area of small granite setts in An Chroí, part of the DIT Grangegorman development, was also inspected, having been identified as having a similar surface to the proposed sawn setts, in terms of undulations and jointing. It was observed in use to ascertain whether there was any evidence of people experiencing difficulty. Enquiries were made in DIT's Rathdown House as to whether there had been any complaints or accidents.
- 2.8 Relevant standards for external environments were sourced and considered. Where standards are referred to in the following text, unless otherwise noted, they are taken from BS 8300-1:2018 *Design of an accessible and inclusive built environment Part 1 External Environment – Code of Practice*.

3.0 Meetings & Discussions

- 3.1 A meeting was held with Peter Leonard of Dublin City Council Parks Department and Michael Pike of GKMP Architects on the 19th April 2018. The proposals were outlined, focussing on how best to improve the area. The proposals for paving, pedestrians and vehicles, segregation of shared surfaces, cyclists, street furniture, seating and lighting were described. The consultation process which had been entered into was explained including meetings with the various stakeholders, traders and the Temple Bar Company. It was noted that the DCC Public Participation Network "Disability Linkage Group" had not been consulted but representatives of groups including the Centre for Excellence in Universal Design (CEUD), IWA and NCBI had been consulted. It was reported that NCBI were satisfied that the proposals were reasonable from the perspective of blind and visually impaired people and that wayfinding in the proposed area where kerbs are to be removed would be assisted by a drainage channel . It was also reported that IWA were concerned that the existing level area was to be removed and the square was to be paved with an even fall from south to north following the natural topography, which they indicated they could not support.
- 3.2 An ad hoc meeting was held with members of the IWA, including a wheelchair user and two of its access advisors, one of whom was familiar with the proposals and had previously met with the architects. They expressed their concern about the absence of a level area in the square, particularly if the square is to be used for events, as a place of public assembly. They also felt the area of sawn setts in Merrion Square was too small to adequately tell whether it would be accessible and they outlined their concerns regarding the danger of drainage gulleys and channels in pedestrian areas if profiles and gratings do not meet recommended standards. The members of IWA asked if alternative designs had been considered that would permit the square to remain level with the transition being made using seating around the perimeter which could go some way towards compensating for the lack of seating in the area

- 3.3 A second meeting was held with the architect at which more information about the history of the proposals was explained. Further telephone discussions were held with both the architect and landscape architect at which some initial concerns of the author were outlined and possible options for amelioration were discussed
- 3.4 Following receipt of the detail drawings telephone discussions were held with NCBI concerning the use of retrofitted stainless steel studs and the effectiveness of the proposed channel drainage profile when acting as a guidance path.

4.0 Findings from Site Visits

- 4.1 Of the sites visited, **Market Square**, off Smithfield, was found to be the closest in size and gradient to that proposed in Temple Bar Square. Falls to drainage gulleys across the main area of the square were found to be at gradients of between approximately 1:30 and 1:40. Some of the public seating in the square was located on paved surfaces with falls of up to 1:20. Private seating with tables connected to a café facing on to the square was located in places on paving with falls in excess of 1:20. See Photographs at Appendix A.
- 4.2 In the author's opinion the falls on Market Square are unlikely to pose undue difficulty to people either traversing the square or while at rest at the seating area though the falls in the vicinity of the private tables and chairs could pose problems
- 4.3 **An Chroí**, at the new Grangegorman DIT campus, is paved with a mixture of new granite setts and flagstones. The setts have been laid with a firm and reasonably smooth surface. The surface undulations were not measured and thus it cannot be confirmed that the guidance for paved surfaces given in BS8300:2009 has been met. However, people were observed traversing the area with ease
- 4.4 The receptionist in Rathdown House was asked if he was aware of any complaints concerning difficulty with use of the surface in An Chroí, and in particular by people with disabilities, people with buggies or people wearing high heels. He responded that, as far as he was aware, to date, with approximately 1,000 people on campus, there was only one person with a mobility impairment and that he appeared to have no difficulty. He had not heard of any complaints having been made.
- 4.5 **Merrion Square** has had two areas of salvaged Dublin setts laid at the entrance gates. The entrance from the east side of Merrion Square has been paved with unfinished setts comparable to those proposed to be relaid on the vehicular routes / shared surfaces in Temple Bar and Fownes Street. An entrance from Merrion Square North has been paved with (unfinished) Dublin setts with a route through it of sawn Dublin setts similar to those proposed for the pedestrian only areas. The unfinished setts would not meet standards for accessible routes. Based on a visual inspection the route with the sawn setts was considered to be accessible but the IWA comment that a larger sample area would need to be seen in order to test it is noted.

5.0 Observations on Temple Bar Square and surroundings

- 5.1 The general impression given by Temple Bar Square and its approach routes is of a very busy, cluttered and visually chaotic area, with street surfaces and furnishings in poor condition. The following were observed:

- a) Pedestrian routes and in particular accessible routes are inadequate and ill defined.
- b) Surfaces are worn, areas of paving have sunk, uneven footpath dishings are evident in places and all are poorly maintained
- c) Whilst the worst surfaces are the Dublin cobbles or setts, which are used on the vehicular routes, the granite flagstones on the pavements have also been poorly laid and many have sunk.
- d) Framed sandwich boards proliferate and obstruct the pavements
- e) Pavements are very narrow and do not meet current minimum standards for low trafficked areas and fall well short of standards for areas of high footfall
- f) Pedestrians are forced to walk on the cobbled carriageways
- g) Many pedestrians are pulling roller travel bags and struggle to keep on the narrow flagstone pavements
- h) Similarly pedestrians wearing high heeled shoes were observed trying to stay on the pavements and also stumbling on the cobbles.
- i) Many doorways to residential and other commercial buildings have been soiled or vandalised with graffiti
- j) Bollards, lamp standards and street furniture have been vandalised or marked
- k) There are no public WCs
- l) Places to sit are very limited in number
- m) Street signage is of poor quality and much is illegible.
- n) Bicycles are tied randomly to bollards and street furniture, obstructing routes
- o) Overspill from bars and restaurants onto the streets, whilst to some extent adding to the atmosphere, greatly impedes access.
- p) Canopies and external seating connected to cafés on the Square are visually un-co-ordinated and of poor quality.
- q) Tapered steps around a reasonably level area of the Square, whilst used as informal seating, could also be a trip hazard
- r) Litter bins and lighting columns are inconsistently located and together with sandwich boards and other obstructions, including parked bicycles, stools and tables, impede access routes

6.0 Comments on Documents Reviewed

- 6.1 The Draft Temple Bar Public Realm Plan clearly identifies the current weaknesses in the public realm, also noted as part of this review. It sets out clear strategies for its improvement with significant emphasis on ease of movement. Of particular note is its Accessibility Plan which identifies accessible routes through the quarter including the route from Dame Street through Crown Alley and Temple Bar Square leading to the Halfpenny Bridge and the route from Fleet Street through Temple Bar Square and Temple Bar leading to the west end of the quarter. Both of these routes traverse the subject area of the current proposal.
- 6.2 The planning report issued with the Part 8 application identifies the design concept including the simplifying and decluttering of the Square by removing most of the existing features, providing new and more flexible seating, regrading it to follow its natural topography, and extending it to include the adjoining sections of Temple Bar, Fownes Street and Crown Alley. The Square is effectively to double in size, to become a meeting place and host to all kinds of new activities. The report covers “Designing for Disability” and addresses the distinction between carriageway and pavement, the widening of pavements, and the proposed “smoother surfaces”. It suggest that the proposed removal of the steps at Temple Bar Square will ensure the primary aim of universal access to all.

7.0 Appraisal of Drawings Reviewed

7.1 Level Changes

- 7.1.1 The proposal is to remove the level area of the square and the steps and to evenly grade the falls from south to north following the natural contours of the site and existing levels of the adjoining streets as far as a new drainage channel running parallel to and approximately 2m from the northern square boundary.
- 7.1.2 From the levels indicated on the drawings the average level change across the square in a south north direction as far as the drainage channel is approximately 650mm over a distance of between 20m and 21.5m. This results in gradients of between 1:30 and 1:40 equivalent to between 2.5% and 3.3%.
- 7.1.3 In an east west direction across the square the proposed level change is approximately 330mm over a distance of 46.5m i.e. with a gradient of roughly 1:140 or 0.65%.
- 7.1.4 Taken on the diagonal the gradient from the intersection of the Square with Crown Alley to its intersection with Temple Bar and Fownes Street is approximately 1:56 equivalent to 1.8%
- 7.1.5 Across the north side of the Square the fall from the building line to the drainage channel is approximately 1:45 with one location on grid line Q where it increases to in excess of 1:20. Continuing along the wider pavement along Temple Bar, which is finished in Leinster granite, the fall is almost consistently 1:20.
- 7.1.6 Approaching the Square from Crown Alley the change in level from the southern end of Crown Alley to its intersection with the Square is 1.86m and to the northern side of the Square is in excess of 2.5m. This equates to an average gradient of 1:30 or 3.3%, with some areas of up to 1:23.
- 7.1.7 BS 8300 guides that a gradient of 1:60 or less steep is level; steeper than 1:60 but less than 1:20 is gently sloping and 1:20 or steeper is a ramp. It also guides that a cross fall gradient across a level access route should not exceed 1:50.
- 7.1.8 As the routes from Crown Alley to Merchant's Arch and from Fleet Street to Essex Street have been identified in the Plan for the Public Realm as accessible it is important that every effort be made to achieve and exceed the recommended minimum standards for access and use, for horizontal circulation.
- 7.1.9 Hence it is recommended that a) wherever possible along Crown Alley level landings 1.5m long should be created, for example at doorway entrances and b) across Temple Bar Square the cross fall gradient of the access route should not exceed 1:50.
- 7.1.10 Whilst the BS does not give guidance on appropriate levels for public assembly areas the CAE / BSI guidance document *Inclusive Urban Design: A guide to creating accessible public spaces* guides that "All spaces for public assembly should be fully accessible". This indicates that anywhere used for public assembly should be level. However, under the particular circumstances applicable to Temple Bar Square, where a larger space is being created which will be more usable for a greater variety of purposes, in the author's opinion a reasonable solution has been proposed. The solution proposed improves the existing situation and the proposed gradients are considered to be reasonable.

7.2 Widths of Access Routes

- 7.2.1 The routes along the east side of Crown Alley as far as the north side of the Square and across the North side of the Square and of Temple Bar, are deemed to be the most appropriate for designation as accessible routes.
- 7.2.2 In Crown Alley the smooth granite pavement on the east side varies from approximately 3m in width at its southern end to less than 1.3m at its northern end. On the western side the smooth pavement is uniformly in excess of 3m for its full length.
- 7.2.3 It is suggested that consideration be given to increasing the width of the Leinster granite pavement of the east side and reducing that on the west, and continuing the flagstone pavement at approximately 3m in width for the full length of Crown Alley as far as its intersection with northern side of the square and the route to Merchant's Arch. It is acknowledged that Part 8 approval has been given for the scheme as proposed and that a deviation such as that proposed could be deemed material.
- 7.2.4 It is also suggested that the route to the north of the drainage channel across Temple Bar Square be increased in width, possibly to 2.5 or 3m and that it should also be paved in Leinster granite. By doing this a clear and easily identifiable continuous accessible route is created along both Crown Alley and Temple Bar Square, in line with the Draft Public Realm Plan.
- 7.2.5 Along the north side of Temple Bar the width of the Leinster stone pavement varies from a minimum of approximately 1.7m to 2.0m. Despite the improvement in its width this is extremely narrow given the level of footfall and it will inevitably force people to walk on the raised carriageway. See also surfaces.
- 7.2.6 Notwithstanding the fact that it is intended that traffic be restricted to between the hours of 6am and 11.00am It is suggested that serious consideration be given to reducing the carriageway width from 3.5m to 3m or 3.1m and increasing the pavement from 1.7 / 2.0m to 2.1 / 2.4m.

7.3 Surfaces

- 7.3.1 The proposal is to use sawn Dublin setts in pedestrian only areas within Temple Bar Square and along Crown Alley, and to use relaid original Dublin setts, laid level with the Leinster granite pavements in Temple Bar and along Fownes Street, in areas where vehicular traffic will be permitted during restricted times.
- 7.3.2 BS 8300-1:2018 guides that undulations in the surface of paving should not exceed 3mm under a 1m straight edge. It also gives detailed guidance on the difference in level between adjacent paving units depending on the joint type used. This guidance should be followed for all pedestrian only areas and also on shared or kerb free surfaces where pedestrians are likely to walk on the carriageway, due to inadequate footpath widths such as along Temple Bar.
- 7.3.3 Whilst the principle of distinguishing between pedestrian only areas and what are effectively shared surface areas is clear, in practice the reality is that these carriageways or shared surfaces, will continue, as currently is the case, to be used by pedestrians due to the sheer volume of people using the area. People will be forced to step from the pavement on to the carriageway in order to pass one another.

7.3.4 It is recommended that, given the expected improved accessibility of the sawn setts and the volume of users, consideration is given also to using sawn setts along the carriageway in Temple Bar and, for consistency, along the intended carriageway area of Fownes Street at the Temple Bar Square end.

7.3.5 It is acknowledged that test information may not be available for redressed setts when used in areas on vehicular routes but if redressed setts are acceptable in pedestrian areas which will also have to accommodate emergency service vehicles (such as across the square and on Crown Alley) then we would suggest that it may be acceptable to use them in Temple Bar and Fownes Street where traffic volumes and speeds will be very low.

7.4 Tactile Walking Surface Indicators

7.4.1 The drawings indicate the use of stainless steel blister tactile paving studs, 800mm deep, across the full width of the square at the junction between the pedestrian only area and the carriageway at Fownes Street.

7.4.2 The use of stainless steel tactile paving studs in the external environment is generally not recommended for a number of reasons. Numerous accidents have been reported on stainless steel studs and awards have been made in the courts as a result. It is difficult to achieve adequate slip resistance in wet and icy conditions. They can become both very hot and very cold resulting in assistance dogs avoiding them. For visually impaired people they can create glare in sunny weather. They are disliked by many elderly people and people with minor mobility impairments who report they feel unsafe on them. They are likely to be very difficult to retrofit to non-uniform and small modular paving.

7.4.3 Alternatives to stainless steel studs to signify the change from pedestrian only to shared surface could include blistered ductile iron, profiled Leinster granite (with blisters) or another profiled stone, some of which are illustrated in the appendix. Note that a colour tonal contrast with the sawn setts is recommended.

7.4.4 Should an accessible ATM machine remain in its current location consideration should be given to providing a tactile guidance strip to locate it.

7.4.5 The effectiveness of the proposed demarcation studs is queried and their use in other locations in the city should be monitored. Demarcation studs are not favoured by either IWA or NCBI. It is suggested that an alternative could be to continue the Leinster paving along the building frontage on Fownes Street as far as the junction with Temple Bar, mirroring the suggested treatment at the bottom of Crown Alley, whilst at the same time creating a continuous surface across the entire of the Square.

7.5 Street Furniture & other site features

7.5.1 Street furniture proposed includes fixed linear and circular bench seating, a drinking fountain, litter bins, bollards and tree grilles.

7.5.2 The proposal includes the removal of up to 50 linear meters of steps which have been used as informal seating. The Temple Bar Public Realm Plan notes the almost total absence of public seating in the area with users relying either on informal seating opportunities or cafés and bars. People spoken to informally during the site visit of the area also referred to the lack of seating.

- 7.5.3 Good practice guidance for elderly and disabled people, which would apply equally for many visitors, is that there should be seating opportunities at least every 50m, and more frequently in areas where it is not possible to create level resting areas. This could apply to the quite steeply sloping route along Crown Alley.
- 7.5.4 Given the Irish climate it is noticeable that where seating is provided throughout the city that seating in sunny locations is the most popular, though some shading is also recommended. It is observed from the shadow diagrams illustrated in the Public Realm Plan that the proposed fixed bench seating is located mainly in shadow.
- 7.5.5 Linear Bench Seating.
Approximately 8 linear metres of limestone bench seating is proposed or 13 linear metres if seating is possible back to back. The proposed seating design is robust and varies in height from 375 to 485mm across its length due to the fall in the paving. This is a positive feature allowing for possible choice of height depending on user needs. An upstand at one end doubles as a back rest as well as a location for signage, though the signs will be obscured from view when the benches are in use, unless a sign is also located to the rear. No arm rests are indicated. It is good practice to provide some seating with arm rests as these are essential for many older and disabled people.
- 7.5.6 The seating or the space around it should contrast visually with the wider surroundings and this should be considered in the final selection of materials.
- 7.5.7 Circular Seating
Similar issues in relation to arm rests, back support and visual contrast apply to the design of the circular seating proposed.
- 7.5.8 Drinking Fountain
The provision of a drinking fountain is welcomed. It is not clear from the drawings exactly how it is to be used but it appears to be intended for filling water bottles and requires two handed operation which for some disabled people will be impossible. Guidance on the design of accessible drinking fountains can be found in *Building for Everyone Volume 1* and should be followed where applicable.
- 7.5.9 Bollards
Removable bollards in corten steel are proposed at the top of Crown Alley and at the intersection between the pedestrian only area of the Square and Temple Bar. They are indicated within the accessible routes in both locations. Good practice guidance, for example in the BRE *Inclusive Urban Design*, recommends that bollards should not be used unless essential and BS 8300 recommends that they should not be used within an access route. They should also contrast visually with the background against which they are seen. This can be achieved possibly by using reflective bands, by incorporating solar powered lighting or a contrasting material. Alternatives to the use of bollards to define the vehicular route across the Square at the end of Fownes Street should be considered.
- For safety purposes consideration should be given also to providing more bollards at the swept bends where the square meets Temple Bar. Tactile hazard warning should also be provided at this junction.

7.6 Lighting

- 7.6.1 The proposed lighting was not assessed. It was advised by DCC that lighting levels would be greatly improved, contributing to greater safety, and that fittings would be suspended from or mounted on buildings, thus eliminating column mounted fittings which create hazards.

7.7 Wayfinding

- 7.7.1 Wayfinding is using spatial, physical and environmental clues to navigate from one place to another. Ease of wayfinding, whether on foot or by other means is mainly supported by the inherent legibility of the spaces supported by good information systems and signage.
- 7.7.2 Wayfinding supports can be sensory, visual, tactile and through the use of personal navigation systems. Wayfinding clues should be thought into the overall plan for the public realm in Temple Bar.

7.8 Information and Signage

- 7.8.1 Temple Bar Square and the roads leading to it are relatively easy to navigate but good information and signage is crucial for the many who may visit this area and who are unfamiliar with it.
- 7.8.2 Location and design of signs should be considered to ensure that they provide the necessary information and that they are part of an overall scheme. Directional signs identifying the accessible routes should be provided with distance indicators. The location of accessible facilities should be indicated as part of an overall strategy and signage locations should be consistent with surface tactile information. Audible information should be provided in a quiet location so that it can be heard over the likely background noise.
- 7.8.3 Where one way vehicular traffic is permitted, particularly on Temple Bar and Fownes Street, and where pavements are level with the carriageway there should be clear signage at both ends indicating that the central areas are carriageways or are treated as shared surfaces

7.9 Drainage Channels

- 7.9.1 Drainage channels proposed are described on the drawings as Leinster granite and shown with a shallow dished profile. Whilst these may not present any significant difficulty for wheelchair users and most other pedestrians, which is positive, it is unlikely that they have sufficient profile to act as guidance tracks for visually impaired people. This should be discussed in more detail with representatives of both visually impaired users and wheelchair users.
- 7.9.2 Drainage gullies are described on the drawings as being of stainless steel. It appears tht the slots in the gratings are less than 13mm and are at right angles with the dominant line of travel, which accords with good practice. However, it should be confirmed that the stainless steel finish has adequate slip resistance.

7.10 Sanitary Conveniences

- 7.10.1 There are no known public sanitary conveniences in this area of Temple Bar which is a significant impediment for many people in terms of their ability to access and use the space with ease. It is recommended that DCC consider the provision of public accessible WCs as an essential component of any inclusive public realm.

8.0 Conclusion

- 8.1 Temple Bar is a key destination in an important and strategic location in Dublin for residents, visitors and tourists alike. It is home to over 2,000 people and is visited by approximately 22 million people per annum.
- 8.2 In the author's opinion the proposals will result in an improvement in the general quality of the public realm.
- 8.3 The pedestrianisation of Temple Bar Square and Crown Alley will greatly improve the visitor experience providing more comfortable circulation routes.
- 8.4 Wider pavements, improved surfaces, relaying of sawn setts and high quality paving, removal of pinch points, and the levelling of pavements with carriageways in areas where pavements are very narrow and traffic is minimal and controlled, all contribute to a more accessible environment
- 8.5 Further consideration needs to be given to matters of detail as outlined in the recommendations in Section 9.0 of this report, including the provision of level access routes and resting places, and the safety and ease of use of the area by people with vision impairments.

9.0 Recommendations

- 9.1 The following recommendations are proposed for consideration by DCC and the Design Team as a means of improving the accessibility of the scheme and making it more inclusive for everybody. They should be considered in the context of the wider proposals for the development of the Temple Bar Area.
- 9.2 Engage with DCC Public Participation Network Disability Linkage Group (PPN DLG) to ensure that they have been fully consulted and understand the proposals. Invite the group to visit similar spaces to experience the reality of what is proposed, observe these spaces in use, allay any fears, and take on board suggestions.
- 9.3 Aim to achieve fully accessible routes, to best practice, along Crown Alley, Temple Bar Square and Temple Bar and promote these as such.
- 9.4 Consider relocating the wider Leinster granite pavement to the East side of Crown Alley, creating level resting areas (1:60 or less) and continuing the pavement along the east side of Temple Bar Square to link with the accessible route across its north side.
- 9.5 Ensure cross falls on accessible routes do not exceed 1:50
- 9.6 Consider reducing the carriageway width on Temple Bar to 3m or 3.1m and increasing the width of the pavement on the north side to 2.1m to 2.4m (current proposal is 1.7 to 2.0m). If this is not possible consider creating break-out spaces along the pavement, particularly if Recc. 9.7 is not followed.
- 9.7 Consider changing the carriageway surfaces on Temple Bar and in the area being resurfaced on Fownes Street as far as Temple Bar from relaid setts to redressed sawn setts.

- 9.8 Further research the use of stainless steel tactile studs and consider alternative appropriate tactile warning surfaces such as blistered cut stone or ductile iron. Consider the installation of a guidance strip to the ATM if it is to remain.
- 9.9 Consider the omission of demarcation studs along the bottom of Fownes Street and instead extend the Leinster Granite pavement from Fownes Street to Temple Bar.
- 9.10 Provide more seating options with arm and back rests, particularly on Crown Alley and Temple Bar Square. Ensure seating visually contrast with its wider surroundings.
- 9.11 Ensure that the design of the drinking fountain permits its use by a wide range of users including users with limited dexterity.
- 9.12 Consider omitting bollards on accessible routes except at swept bends in shared surface areas, or if essential, consider using flexible ones. Ensure they are visible in all lighting conditions.
- 9.13 Consider signage and wayfinding as an integral part of the design. Seek further advice on wayfinding from NCBI with particular reference to the use of building lines, surfaces and the proposed drainage channels.
- 9.14 Further consider the provision of and directional signage to public sanitary facilities.

Appendix A

TEMPLE BAR SQUARE & ITS ENVIRONS



Poor quality, uneven and badly maintained surfaces



Proliferation of obstructions impede access



Narrow paths used by people with wheeled luggage



Steps a trip hazard particularly when crowded



Tapered steps on right are also a trip hazard



Cycle parking and lack of public seating an issue

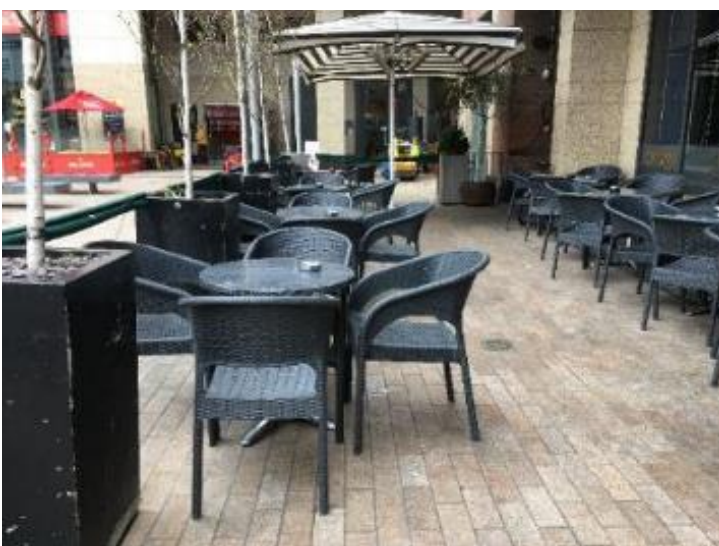
MARKET SQUARE, SMITHFIELD



Public Space with gradients between 1:30 and 1:40 at Market Square, Smithfield



Gradients in vicinity of seating of up to 1:20



Gradients of up to 1:20 found near tables

DIT, AN CHROÍ, GRANGEGORMAN



DIT, Grangegorman, with setts & flagstones



New granite setts, Grangegorman, appeared to meet relevant standards for access in terms of jointing and

MERRION SQUARE, Sample Setts



Relaid setts, Merrion Square, as proposed for vehicular surface



Relaid original Dublin setts, do not meet BS 8300 standards for pedestrian accessibility



PAVED ROUTES THROUGH COBBLES / SETTS



Accessible flagstone routes through

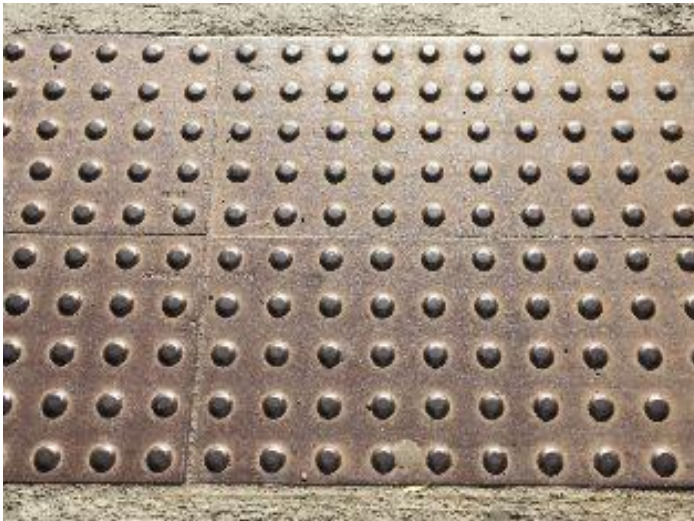


Smooth parallel tracks have limited

TACTILE SURFACES



Tactile studs retrofitted externally can



Blister paving in ductile iron with



Stone flags with blister surface at



Guidance in ductile iron



BOLLARDS



Corten bollard with lighting insert

Appendix B Photographs during delivery hours – Google 2018



Photo 1 Approaching Temple Bar From Temple Lane

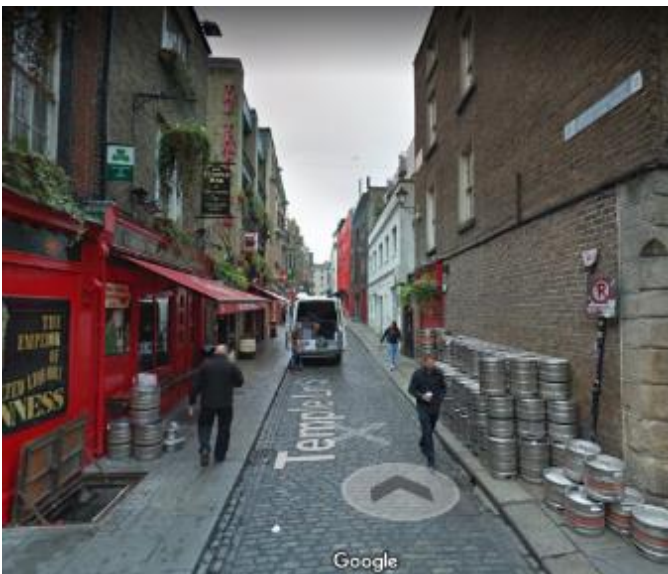


Photo 2 Extent of loading required



Photo 3 Clusters of visitors on the roadway. Note obstacles on pavement

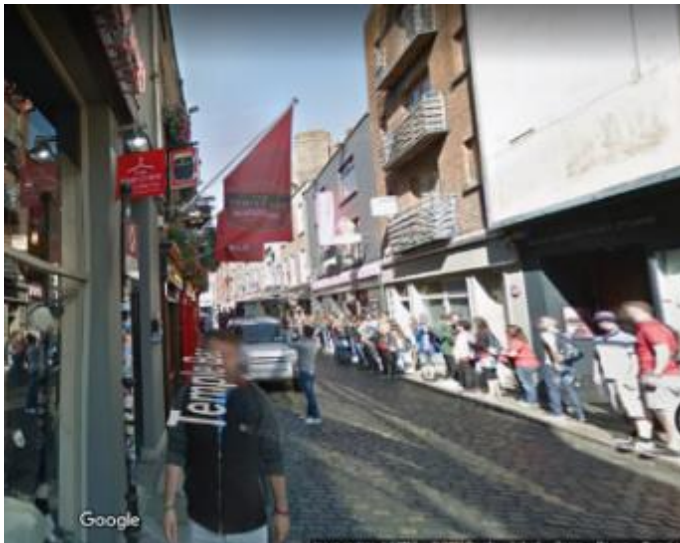


Photo 4 Very narrow inaccessible pavements both sides of Temple Bar



Photo 5 View towards Temple Bar Square

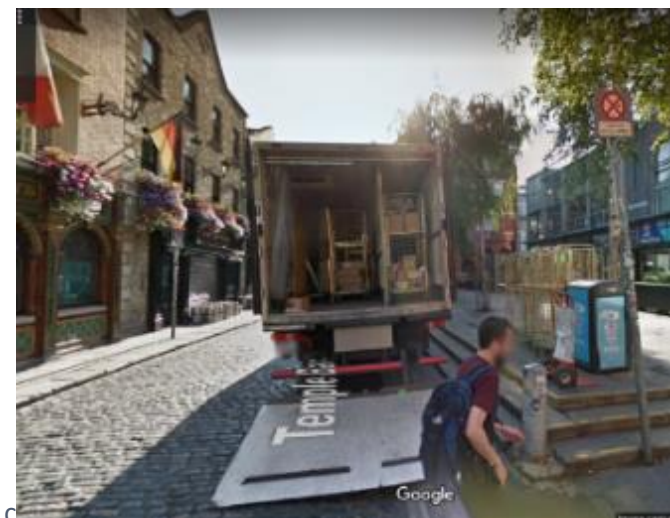


Photo 6 Loading on Temple Bar Square



Photo 7 Street Cleaning



Photo 8 Obstacles on the pavemen



Photo 9 View up Lower Fownes Street



Photo 10 Deliveries & Loading on the square – kegs on pavement



Photo 11 Crown Alley – impact of bollards and street furniture



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Environmental Access Consultancy Report

Temple Bar Square

Date of Assessment: Wednesday 5th January, 2022

Access Consultant: Rob Tobin

Date of Report: Friday 7th January, 2022 (DRAFT)

The benchmark for this Environmental Access Consultancy is the European Standard EN17210:2020 Accessibility and usability of the built environment – Functional requirements and the UN Convention on the Rights of Persons with Disabilities (2006), as well as some additional considerations to improve general access to the scheme.

This report provides an overview of the key access considerations in relation to the upgrade of Temple Bar Square for the purpose of improving access for all community members and visitors, in particular those people who are blind or vision impaired.

Assessment Scope:

This Environmental Access Consultancy is the outcome of an assessment requested by Fionnuala Rogerson Architects. The aim of the Access Consultancy is to provide recommendations for environmental modifications within Temple Bar Square, which may be accessed by members of the community who are blind or vision impaired or have limited mobility.

This specifically includes considerations around the carriageway crossing points, application of tactile surface walking indicators, kerb design and pedestrian barriers. This consultancy report provides information which is intended to encourage and promote equal access for all individuals accessing Temple Bar Square.

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Content of this report:

This report records the key design issues identified as part of our review that impact upon independence and wayfinding for people who are blind or have low vision or have limited mobility and recommends actions to improve access where deemed appropriate.

The report does not attempt to list all the technical details of regulations in the local context but does highlight in practical terms those issues which need to be addressed in considering best practice duties under the spirit of the UN Convention on the Rights of Persons with Disabilities (2006).

The advice is based on:

- The need to optimise access in the public realm for people with disabilities.
- The practical knowledge of NCBI in using and operating in a wide variety of environments used by people with reduced mobility and sensory impairments, and experience of providing a consultancy design service to built environment professionals.
- The need for ‘real world’ solutions based on practical and financial considerations when recommending improvements to access.
- It is NCBI’s aim that the recommendations will provide design solutions that broaden and enhance the usability of the environment for everyone, including people who are blind or vision impaired or have limited mobility.

Development Overview:

The Access Consultancy examined the following aspects of the Temple Bar Square development:

- Approach routes
- Corners, junctions and crossing points
- Public square
- Street finishes, furniture and lighting
- Key interfaces

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Snapshot of Key Access Issues:

1. Inaccessibility of narrow footways in an area of high pedestrian activity.
2. Inaccessibility due to arrangement and colour contrast of street furniture.
3. Lack of provision of safe crossing points at carriageways.
4. Ineffective delineation of edges between accessible routes and carriageways.
5. Ineffective use of tactile paving.
6. Lack of effective colour contrast in some areas.
7. Limitations to wayfinding.
8. Safety of vulnerable users of the public realm.

Key Recommendations:

1. Implementation of a Traffic Management Plan.
2. Implementation of a Wayfinding Strategy.
3. Implementation of a Street Furniture Policy.
4. Public Awareness Campaign.
5. Tactile paving installation and maintenance.
6. Addition of contrast on poles and steps.

Access Issues and Recommendations:

Element: Pavements and Access Routes

Pavements and access routes throughout the development site should be designed to give easy and safe access to all. The pathway should be sufficiently wide for all users to move freely and to pass each other. Any street furniture provided should not intrude into the circulation route and should be clearly maintained. The surface of the pathway should be level and smooth, with no obstacles located within the clear width of the circulation route.

| Element | Action Required | Priority | Cost | Refer |
|-------------------|--|----------|------|-------|
| Accessible Routes | Direct Primary Accessible Routes towards the main public plaza to promote equitable access to amenity for everyone in the community | High | High | |

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| | Realign carriageway to ensure consistent comfortable widths along footways | High | High | DMURS (v1.1) p86 |
| | Provide clear widths of at least 1.8m (note a footway width of 4m is preferred in areas of high pedestrian activity) | High | High | DMURS (v1.1) Figure 4.34 |
| | Ensure specification of guidance paving achieves effective colour contrast (LRV more than 30 points) in all lighting and weather conditions | High | Medium | *** |
| | Provide blister paving at end of Merchants' Arch to indicate the adjacent hazard of the carriageway edge | High | Low | |
| | Ensure continuity of blister paving across the full width of Fleet Street to indicate hazard, irrespective of the point of approach | High | Low | |
| | Provide guidance paving along primary accessible route along Crown Alley | High | Medium | |
| | Ensure accessible routes are free from low-level posts, e.g. bollards | High | Medium | BS 8300-1:2018 p29 |
| | Provide effective colour contrast (LRV more than 30 points) and incorporate contrasting strips on those bollards which cannot be removed | High | Medium | BS 8300-1:2018 p29 |
| | Ensure obstacles on accessible routes, such as street furniture and bollards, are designed and located to be detected by people who are blind or have low vision. Consider implementing a Street Furniture Policy. | High | Medium | CEN EN 17210:2020 p64-65, p67 |
| | Ensure effective colour contrast (LRV more than 30 points) is achieved for all existing steps or hazards which project | Medium | Medium | |

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| | into access ways and cannot be removed | | | |
| | Ensure adequate provision of cycle parking locally so that cycles are not attached to street furniture, especially along accessible routes | Medium | Medium | CEN EN 17210:2020 p82-83 |
| | Provide TWSIs at the southwest and southeast corners of Temple Bar Square to indicate proximity to carriageway edges at each end of the secondary access route shown running along the southern edge of Temple Bar Square. | Medium | Low | |

Element: Road Crossings

Safe crossing points should be provided at each point where accessible routes meet carriageways to ensure that Temple Bar Square and the surrounding streets can be safely accessed and enjoyed by everyone in the community. Affording these vital links can not only improved safety and access for all members of the community but can also improve the route from the Quay, serve to increase patronage to businesses from tourist coaches.

| Element | Action Required | Priority | Cost | Refer |
|-----------------|---|----------|--------|--------------------------|
| Crossing Points | Implement a Traffic Management Plan. Consider traffic density and the priority of pedestrian safety and comfort in a 'Shared Space' when designing and placing bollards. | High | High | CEN EN 17210:2020 p82 |
| | Provide safe crossing points at each point where accessible routes meet carriageways to ensure safe access to all amenities | High | High | CEN EN 17210:2020 p82-83 |
| | Ensure accessible crossing points and associated TWSIs are located adjacent to kerbs so that the change in levels indicates hazard and direction of crossing. | High | Medium | |

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| | Provide Tactile Walking Surface Indicators (TWSI) to each side of crossing points on each accessible route. The TWSI arrangement shown at the NW corner of Fownes Street Lower/Temple Bar West should be replicated on all sides of this junction and at all such crossing points throughout the development | High | Medium | CEN EN 17210:2020 p75 |
| | Install and Maintain blister tactile paving consistently throughout the development site on all sides of each safe crossing point | High | Low | |
| | Ensure bollards are located away from TWSIs and crossing points | Medium | Low | |

Photograph References:

Photograph 1: Example of public seating with ground level detection and continuous profile.

Weaver Park, Cork Street, Dublin 8 – Áit Urbanism and Landscape and Dublin City Council



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Photograph 2:

Summary:

This report is intended as a guide to improve safety and access for all community members and visitors using the Temple Bar Square development whilst improving access for people with a disability, in particular those who are blind or have low vision.

Whilst there are a number of access barriers associated with the environment it is anticipated that many of these can be easily addressed to improve equitable, dignified access for all.

Please do not hesitate to contact us on 086 1083114 for further clarification or information.

Yours sincerely,



Rob Tobin
Access Consultant – NCBI Possibility Lab

Architect ARB MRIAI
B.Sc Arch B.Arch Pg.Dip.PPA Pg.Dip.PM

DISCLAIMER

Whilst all care has been taken by NCBI in preparing this Access Consultancy Report, we do not accept any responsibility or liability for actions taken on the basis of this information, nor for any errors or omissions. The recommendations contained in this report are made after consultation with all relevant parties. NCBI accepts no responsibility for supervision of the work or for quality of workmanship.

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