

2 Background to the Proposed Project and Alternatives Considered

2.1 Introduction

This chapter provides a summary of the background to the Proposed Project namely, the need for the Proposed Project and how it evolved through relevant planning and transportation policy. The main strategic and design objectives of the Proposed Project are also outlined. Alternative designs considered through the design development are also outlined.

2.2 Background and Need for the Proposed Project

2.2.1 Background

College Green has had a prominent role as a civic space going back to Viking Dublin when the Thingmount, where town meetings were held, was located on the river shore nearby (close to the present-day St Andrew's Church).

Traditionally the place where the Trinity College campus met with the life of the city, its prominence today comes from its connection between the civic route from Parnell Square along O'Connell Street and the east-west route along Dame Street to Christchurch. It is believed that in the 16th century College Green was cobbled. There were no kerbs, so the street surface running up to the edge of the buildings.

In the 18th century redevelopment by the Wide Street Commissioners turned it from an irregular junction into a significant public space, fronted by the impressive House of Lords (now Bank of Ireland) which housed Ireland's parliament until its abolition in 1800.

This imposing setting has been the backdrop to major events in Irish life, such as the famous public address by Michael Collins in 1922. The layout of College Green and the elegant backdrop provided by the Bank of Ireland created a naturally impressive stage for President Barack Obama in 2011.

2.2.2 Need for the Proposed Project

The Proposed Project will transform College Green and redefine the area as a Civic Space of National importance in line with Dublin City Council's long standing objective for College Green. The Proposed Project will contribute to the achievement of the vision for College Green set out both in the Dublin City Development Plan 2016-2022 and the Heart of Dublin City Centre Public Realm Masterplan (Dublin City Council, 2016) for the City.

The Proposed Project plan for the city includes a specific objective to "*prioritise the redevelopment of College Green as a pedestrian friendly civic space, including the pedestrianisation of Foster Place.*"

This is in recognition of College Green's historic and architectural importance and its pivotal setting within the civic spine, the route running from Parnell Square through O'Connell Street, College Green and Dame Street to Christchurch Place.

College Green is identified as the City's potentially most important civic space in Dublin City's Public Realm Strategy 2012 – 'Your City, Your Space'. The strategy acknowledges that College Green has the potential to be a great civic space but is at present dominated by its traffic functions.

The introduction of Luas Cross City through the College Green area provides a catalyst for major transport change at College Green. The project, which is currently under construction, will involve two-way tram movement along Lower Grafton Street, replacing the current one-way traffic movement.

The implementation of the Luas Cross City project opens the way for a complete redesign of the College Green area, including the removal of the many traffic management and signage infrastructure elements which currently clutter the area.

College Green is currently very congested with a high traffic volume of primarily bus and taxi currently passing through the area. The area is accessible only to public transport and taxis between the hours of 07:00-19:00 Monday to Friday with all traffic permitted outside these times.

In addition, approximately 6,500 cyclists and 75,000 pedestrians per day pass through College Green currently. The Proposed Project will ensure safe passage across this currently busy space.

2.3 Project Objectives

The Proposed Project has the potential to transform the College Green area through redefining the space and its use for the benefit of the citizens of, and visitors to Dublin. The following have been identified by Dublin City Council in its 'College Green Traffic Management Measures Public Consultation Document', April 2016 as objectives, and potential benefits of the Proposed Project:

- The space to be created can be used to meet the City Council's objective of creating a major civic space, presenting Dublin City Council with the opportunity to fulfil its policy and objectives in the creation of an improved public realm;
- Alleviate congestion in the area by barring all traffic travelling in an east-west direction across College Green;
- Transform the area of College Green into a more accessible and usable space by linking the Luas to a fully pedestrianised area;
- Provide an uninterrupted pedestrianised route from St. Stephen's Green to the quays, significantly improving pedestrian journey times;
- Provide cyclists with a designated cycle track which will physically separate the cyclist from Luas and bus movements; and
- The cycle provision in the plaza area will generate a key safe city centre link connecting to the cycle provisions planned for Dame Street and Westmoreland Street.

2.4 Alternatives Considered

2.4.1 Introduction

The EIA Directive which was transposed into Irish law as the European Communities (Environmental Impact Assessment) Regulations (as amended) require that the Environmental Impact Assessment Report contains an outline of the main alternatives considered and the reasons for choosing the Proposed Project taking into account the environmental effects.

This section outlines the main alternatives considered for the Proposed Project.

Alternatives are considered through the development of the following design elements:

- Public realm strategy;
- Traffic management;
- Architectural plaza layout.

2.4.2 Overview

In order to achieve the Proposed Project objectives, an initial approach was adopted whereby consideration was given to whether there were feasible alternative means by which the Proposed Project objectives could be met. These are addressed in **Section 2.4.3**, ‘*Public Realm Strategy Alternatives*’.

Following this process, a number of alternative road designs and traffic management measures were considered in order to determine the optimal road layout and bus re-routing around the city centre. This process is described in **Section 2.4.4**, ‘*Road Design and Traffic Management Alternatives*’.

At a project design level, a number of key alternatives were considered in terms of the architectural design of the Civic Plaza, as summarised in **Section 2.4.5**, ‘*Architectural Design Alternatives*’.

2.4.3 Public Realm Strategy Alternatives

The need for the Proposed Project, as outlined in **Section 2.2** together with the Proposed Project objectives, as outlined in **Section 2.3** is focused on the provision of traffic management measures which allows for a civic space of national importance at College Green in line with the City Council’s long standing objective for the area.

Clifton Scannell Emerson Associates (CSEA) was commissioned by DCC to assess a number of public realm strategy options for College Green. The options put forward for assessment by CSEA are listed in **Table 2.1**.

Table 2.1: Public Realm Options Considered

Option	Public Realm Strategy
Option 1	Double bus lane - north side of the plaza - monuments relocated
Option 2a	Two-way cycle track - north side plaza - monuments relocated
Option 2b	Two-way cycle track - north side shared pedestrian / cyclist plaza - monuments relocated

Option 3a	One-way cycle lanes, no bus stop - north side plaza - monuments relocated
Option 3b	One-way cycle lanes with single bus stop - north side plaza - monuments relocated
Option 4	One-way cycle tracks, island bus stop - north side plaza - monuments relocated
Option 5	One-way cycle tracks, plaza on south side of college green - monument locations retained
Option 6	No westbound buses, two-way cycling adjacent Luas tracks, tracks side by side at pinch point - monument locations retained - north side plaza
Option 6a	Two-way cyclists between tracks and two-way cyclists on southside of College Green - monument locations retained - no westbound buses - north side plaza
Option 6b	North and south bound Luas track sharing - north side plaza
Option 7	Reduced numbers of westbound buses, two-way cycletracks, tracks side by side at pinch point, low number of westbound buses - monuments relocated - north side plaza
Option 8	No westbound buses, westbound cyclists between tracks - monument locations retained north side plaza
Option 9	No westbound buses, westbound cyclists between tracks, Luas track adjusted to allow a wider lane for bus and cyclist - monument locations retained - north side plaza
Option 10	One-way cycle lanes, bus lanes in both directions, northbound Luas tracks moved towards Grattan monument - monuments relocated - north side plaza
Option 11	One-way cycle lanes & bus lanes in both directions with central island, monuments retained, northbound Luas moved towards Grattan monument
Option 12	Shared north side plaza, no buses eastbound or westbound, monument location retained

The options assessment process involved the consideration of a number of determining factors including: safety, pedestrians, cyclists, bus, Luas, public realm, and monument locations. Each of the options were ‘graded’ with respect to each of these factors in order to determine the most viable option for the public realm.

Following the options assessment, CSEA determined that Option 12 was the most viable public realm strategy option, for the following reasons:

- This option provides a full shared pedestrian / cyclist plaza at College Green with cyclists being fully segregated from both buses and Luas facilities;
- The removal of the need for a pedestrian crossing for northbound / southbound pedestrian movements allows for a much more comfortable pedestrian environment without any delay;
- With the provision of a full plaza at College Green, there is greater scope for streetscaping and civic space development. A full plaza could cater for civic ceremonies as well as providing a space for meeting, idling, appreciation of buildings and monuments etc. This option does not require relocation of the monuments so the existing symmetry of the space can be retained; and
- This option presents the possibility of reducing cycle time at traffic signals outside Trinity College, thus improving services for northbound / southbound buses and Luas as well as allowing for a more frequent pedestrian stage between the proposed plaza and Trinity College.

Option 12 of the public realm strategy alternatives was then further developed from architectural and traffic management perspectives to generate the Proposed Project.

2.4.4 Traffic Management Alternatives

On the basis of the selection of Option 12 as the preferred strategy, a number of traffic management measures were originally developed and considered, including combinations of:

- No through east-west traffic movements in the College Green area except for pedestrians and cyclists;
- Reversal of Church Lane and Trinity Street to allow for traffic to access this area for deliveries, car parks etc. and to use this route to turn around and leave the area;
- Bus turn-around arrangement on Dame Street, west of the Plaza area;
- A right turn from O'Connell Bridge to the South Quays for southbound buses;
- A left turn from the South Quays to Parliament Street;
- Introduction of a contra-flow bus lane on Parliament Street; and
- A right turn from Dame Street to Parliament Street.

These proposals were modelled using the NTA Eastern Regional traffic model. An air dispersion modelling assessment determined that the increase in the number of buses on Parliament Street resulted in a breach of the air quality standards.

As a result, and in response to local opposition to the increased buses on Parliament Street, an alternative route was required to be identified for the buses which were proposed to travel in both directions on Parliament Street. A number of alternative routes were considered, as described below.

A. Contraflow bus lane on Winetavern Street

A contraflow bus lane on Winetavern Street to accommodate buses was considered. This proposal would see buses travelling from the South Quays under the arch at Christchurch.

This option was ruled out due to the extensive works which would be required at the High Street/Winetavern Street junction and the risk posed to cyclists in the bus lane, as it would be too narrow to accommodate a separate bus and cycle lane.

B. Fishamble Street bus lane

A bus lane on Fishamble Street to accommodate buses was considered which would result in buses travelling from the South Quays, up Fishamble Street, and rejoining traffic at the junction of Fishamble Street/Christchurch Place and Lord Edward Street.

This option was ruled out due to the gradient of the hill, the number of deliveries which take place here and the requirement to remove parking spaces. However, it remains an alternative route for general traffic.

C. Limiting the buses on Parliament Street

By limiting the number of buses on Parliament Street to less than 60 buses in the AM peak and only allowing public transport between 7am and 7pm, Monday to Friday, it was determined that good compliance with the air quality standards could be achieved.

On this basis, it was deemed that Option C, limiting the number of buses on Parliament Street was the preferred option. Further details on bus rerouting is provided in Chapter 6 ‘*Traffic and Transportation*’.

It was initially considered necessary to reverse flow on Church Lane and Trinity Street. However further assessment deemed this measure unnecessary for the provision of the Proposed Project.

2.4.5 Architectural Design Alternatives

2.4.5.1 Introduction

Paul Keogh Architects (PKA) and Dixon Jones Architects were commissioned by DCC to lead a design team to carry out the architectural design of the proposed civic plaza. The design was developed on the basis of the Option 12 from the CSEA Public Realm Strategy alternatives study.

2.4.5.2 Concept development

College Green is a highly particular and memorable shape, 200m in length, 25m wide at the west and increasing to 50m wide at the east.

As illustrated in Bernard De Gomme’s map of Dublin of 1673, a clear wedge of space from Trinity Street to the west façade of Trinity College entitled ‘College Green’ is visible, refer to **Figure 2.1**.

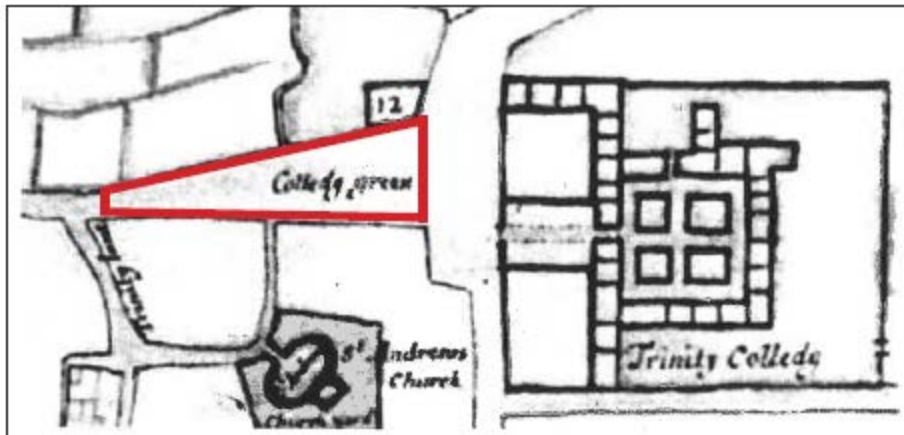


Figure 2.1: De Gomme’s map of Dublin 1673

It is in the spirit of this Proposed Project to reclaim the wedge shape of College Green as a civic enterprise. The position of the Parliament building, situated on the north side of College Green, introduces a strong asymmetry into the composition – city fabric on the south side versus city monument on the north.

The wedge is a fine urban form and has much historical precedence; from the Piazza di Spagna in Rome to the Place Dauphine in Paris and more recently Louis Kahn’s commemorative Four Freedoms Park to Franklin D. Roosevelt on Welfare Island in New York City. Unlike the conventional normality of the square or rectangle the wedge is dynamic in perspective, exaggerating the length of the space by the device of trompe l’oeil.

There is a gentle slope of 2.5m rising from east to west which will further exaggerate the sense of false perspective. In the opposite direction College Green is transformed into a parallel sided place.

PKA and Dixon Jones Architects in association with DCC adopted this ‘wedge’ urban form as the design concept for the proposed civic plaza.

Based on this concept and urban form, the layout of the plaza was developed further into alternative layouts.

Alternative designs considered

A core objective in developing the plaza design was that the scheme represents a considered response to the characteristics of the context within which it is situated and the various constraints impacting on its design. Consideration of alternatives was a key ingredient in decision-making around how the preferred design scheme evolved. Of the many alternatives considered, the following options illustrate key milestones along the route of developing the scheme design on the basis of the ‘Option 12’ taken forward from the CSEA Public Realm Strategy Alternatives Study.

Version 1: The City Council project brief called for a pedestrian-oriented civic space in the area immediately in front of the Bank of Ireland. The Proposed Project area was also to include Foster Place. The first design concepts proposed removing the trees from the central reservation: these had made the Henry Grattan statue and Thomas Davis memorial almost invisible and blocked views of the Trinity façade from Dame Street. While the plaza area east of Church Lane was envisaged as a pedestrian-priority area, that to the west was to remain as a conventional street with pavements, kerbs, carriageways and a turnaround for buses travelling to and fro on Dame Street.

Version 2: Further research by the design team established that College Green had historically extended from Trinity College and Grafton Street as far as the junction of Trinity Street with Dame Street. On this basis, the plaza was envisaged as a trapezoidal space running the full historic length of College Green, and centred on an axis between the centre of Dame Street and the entrance to Trinity College, with Foster Place as a separate and more recent adjunct to it as the result of the 19th century extension of the Parliament Building. The entire space, from Trinity Street to Grafton Street, was to be treated as a European-style ‘shared space’, i.e. without kerbs or level differences to segregate pedestrians, cyclists and vehicles using the turnaround for buses travelling to and from the area along Dame Street.

Version 3: If Version 2 might be seen as a long-term ambition for College Green, it was considered to raise potential safety issues in relation to the ‘shared space’ on which it was based and potential conflicts between pedestrians, cyclists and vehicles. In particular, the design of the bus turnaround on College Green had to be resolved. As a result, the full extent of the plaza was divided into three zones: a ‘circus’ turnaround for buses was introduced at the intersection of College Green and Church Lane, and this separated a pedestrian-priority plaza area in front of the Parliament and Trinity College from a more conventional street, albeit a single surface without kerbs, to the west of Church Lane.

This arrangement also had a secondary purpose, in that it provided a locus for the Thomas Davis memorial, with Thomas Davis positioned to west of the Four Angels fountain but in his traditional relationship looking east to Trinity College.

Version 3 was developed further into the finally adopted architectural design for the Proposed Project, with a detailed project description set out in Chapter 4.

During the development of Version 3, various options were explored on the basis of a number of specific issues to be addressed, including the following:

- Tree species, spacing and location;
- Types of surfacing to be used;
- Consideration of the removal of the railings at Bank of Ireland;
- Inclusion and number of the water jet fountains; and
- Relocation of statues.

These issues were then resolved into the final scheme design following discussions with the design team, various departments in DCC and other stakeholders.

Alternative Cycle Movements Considered

The following alternatives to accommodate cycle movement through the area were considered during the design development process:

1. Cycle Route provision via alternative route through Temple Bar

A route was considered via Fleet Street, most likely connecting to Dame Street via Anglesea Street. This option was discarded for the following reasons:

- It would require the removal of historic setts through Temple Bar in order to provide an appropriate standard of surfacing for a cycle route;
- Cyclists would have to share with vehicles accessing Fleet Street car park;
- Pedestrians tend to walk on the road through Temple Bar and these would pose a further obstacle;
- The route is indirect and uphill to Dame Street, which would likely result in cyclists going through College Green plaza even if the route were designated through Temple Bar; and
- Cumulatively, the above would result in an unacceptable low Quality of Service for cyclists.

2. No cycle route provision

The non-provision of a cycle route through the area would be contrary to the Greater Dublin Area Cycle Network Plan, which identifies the Dame Street to Westmoreland Street route as a 'primary route' [Route 11]. As such, it would contravene the NTA's policy – which is underpinned by the Development Plan and the NTA Greater Dublin Area Transport Strategy 2016 - 2035 that a cycle route should be provided through this area. Furthermore, as no convenient alternative route exists, it would therefore be inevitable that cyclists would continue to traverse the space, even if no facility or permission were provided. As such, this is not considered to be a viable option and was discarded from further consideration.

3. Two-way cycle track along northern side of plaza

This option would see the provision of a cycle track on the northern side of the pedestrianised space. The design consideration for this option had a preference to delineate this space with a line of trees. It was however considered unacceptable to place the trees in front of the historic Bank of Ireland building and therefore this option would not be viable. No other satisfactory means of defining a segregated route was identified without an unacceptable visual impact on the plaza. Also, the single entry point at the north-eastern corner of the plaza from the cycle track past Bank of Ireland would create an unacceptable single point unregulated conflict between the heavy north-south pedestrian flow and east-west cyclists. On that basis, this option was not preferred.

4. Separate one-way cycle routes through the plaza

This option would require double the number of interactions between cyclists and pedestrians, as well as facing similar issues as Option 3 in relation to the definition of the cycle route. On that basis, the option was not considered further.

5. Shared Space

A common shared space between pedestrians and cyclists was considered. However, the single entry point at the north-eastern corner of the plaza from the cycle track past Bank of Ireland would create an unacceptable single point unregulated conflict between the heavy north-south pedestrian flow and east-west cyclists. Furthermore, Dublin City Council's traffic department expressed concerns about the interactions between cyclists and buses at the western end of the pedestrianised space. On that basis, the 'shared space' concept would not achieve the objectives of the GDA Cycle Network Plan, as the 'Quality of Service' of the facility would be reduced to an unacceptable level. On that basis, the option was not considered further.

6. Pedestrian priority area with extended eastern entry

This option is similar to the Shared Space Option 5, but would remove the single point conflict between pedestrians and cyclists near Bank of Ireland by continuing the cycle track across the eastern side of the plaza adjacent to the Luas line. Cyclists would then weave through gaps in the heavy north – south pedestrian flow to continue across the 'pedestrian priority' area. While this option faced similar issues to the shared space option, the extended eastern entry would remove the greatest concern – being the interaction between pedestrians and cyclists at the eastern end. However, it was determined that this option would not achieve the objectives of the GDA Cycle Network Plan and it was therefore not considered further.

7. Underpass

The provision of an underpass was deemed not viable for the following reasons:

- The entry ramps would be circa 70m long and would require safety features such as railings, which would compromise the plaza design;
- It would need to cross beneath the Luas line at the eastern end, where on investigation it was concluded that there is insufficient room to construct ramps with retaining walls between the Bank of Ireland and the Luas.

Passing beneath the Luas line would therefore be prohibitively expensive and disruptive;

- Security and cleanliness concerns – below ground public washroom facilities at College Green were previously closed as a result of these issues;
- Potential impacts on utilities and services; and
- It is likely that many cyclists would be unwilling to use an underground route and that they would continue to cycle through the ground level plaza.

8. Overbridge

The option of an overbridge was briefly considered but ruled out on the grounds of visual impact.

9. Preferred option

The preferred option provides two one-way cycle lanes either side of the western end of College Green joining at the central turnaround and running along the south side of the plaza as a two-way dedicated cycle route, joining with the Westmoreland Street route at the north-west end of Grafton Street. The two-way cycle route through the plaza area is delineated with a line of trees.

The final agreed architectural design and traffic management measures form the Proposed Project that is presented and assessed in this EIAR.

2.5 References

Dublin City Council (2016) *The Heart of Dublin; City Centre Public Realm Masterplan 2016*. DCC, Dublin Ireland

Dublin City Council (2012) *Your City, Your Space – Dublin City Public Realm Strategy*. DCC, Dublin, Ireland

Dublin City Council (2016) *Dublin City Development Plan 2016-2022*, Dublin, Ireland.

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