16 Socio-Economic

16.1 Introduction

This section of the EIS assesses the impact of the Proposed Project, both during construction and operation, on the human environment and quality of life in the general area of the subject site for the Proposed Project, and also within a 10 minute walk time from the site.

Human beings in this chapter refer to people who live, work or visit the area. Actual and perceived impacts of the Proposed Project on human beings may arise from many aspects of the proposal. These impacts are dealt with throughout the EIS, in particular, the following chapters:

- Air Quality and Climate Factors (Chapter 7)
- Noise and Vibration (Chapter 8)
- Townscape and Visual (Chapter 11)
- Material Assets: Utilities (Chapter 14)

This chapter initially sets out the methodology to be used for the assessment (**Section 16.2**), then describes the existing environment (**Section 16.3**), sets out the predicted impacts of the Proposed Project for the area during both the construction and operational stages of the Proposed Project (**Section 16.4**). Following this, the identification of impacts, avoidance and mitigation measures to be incorporated in the Proposed Project are set out (**Section 16.5**), following by details of any residual impacts (**Section 16.6**). Finally, the chapter outlines the difficulties encountered in compiling information (**Section 16.7**).

16.2 Assessment Methodology

16.2.1 General

16.2.1.1 Overview

The methodology is based on established best practice with cognisance given to all relevant guidelines and legislation. GIS mapping has been used to visually record information relevant to the assessment. The assessment will consider attributes and characteristics associated with the following aspects:

- Demographics;
- Land use;
- Community and residential settlement;
- Economic activities and employment;
- Public amenity and community infrastructure;
- Tourism; and
- Access and connectivity.

It should be noted that conformity with recognised national and international standards have been addressed within the EIS under relevant environmental topics such as noise, vibration, landscape and visual and air quality. Details from these assessments have been used to inform the assessment of impacts.

16.2.1.2 Use of Geodirectory

GeoDirectory is a service, jointly established by An Post and Ordnance Survey Ireland, which provides a complete database of all of the buildings in the Republic of Ireland and their geolocation details. It holds records for 1.8 million properties. The database is regularly updated and no legacy or previous versions are retained. In this case the GeoDirectory (used under licence), provides a snapshot for a particular point in time (Q2 2016). The GeoDirectory has been utilised in this Proposed Project to determine the level of commercial activity and the sectoral base/provision of services in the study areas.

16.2.1.3 Desktop research

The assessment involved desk top research and analysis of existing documentation to build up profiles of the communities which would be directly impacted upon by the Proposed Project. The principal data sources used in the study are described below:

- Census 2011, 2016, Central Statistics Office (CSO);
- Pobal Maps (Pobal.ie);
- GeoDirectory (An Post GeoDirectory- Dublin City Council area);
- Map viewer of the Valuation Office of Ireland;
- Dublin City Council online planning searches of recently submitted and granted planning applications for development in the area;
- Dublin County Council data retrieved from Dublinked - http://dublinked.com;
- Department of Education and Skills;
- Fáilte Ireland; and
- Property Services Regulatory Authority (PSRA).

16.2.2 Guidance and Legislation

As the Proposed Project is located in the centre of Dublin City it intersects with several roadways. It was therefore considered appropriate to assess the impact of the Proposed Project in terms of disturbance arising from the changes in the function and movement characteristics of this space and adjoining areas. The assessment was carried out in accordance with the guidelines contained in "Environmental Assessment", Volume 11 of the UK HA/DMRB, published by the UK Department of Transport, but with some modifications having regard to the EPA's Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (2003) and Guidelines on the Information to be Contained in Environmental Impact Statements (2002).

Impacts on Residential Settlements and Communities

The criteria used for assessing the significance of community (social) impacts are presented below. The impact of the works on resident, working and visiting communities is based on assessing the impact of the Proposed Project on connectivity and accessibility. Severance is a key community issue addressed in this report. The UK Highways Agency Design Manual for Roads and Bridges (UK HA/DMRB, 1995) defines community severance as the separation of residents from facilities and services they use within their community caused by new or improved roads or changes in traffic flows. Thus in its widest definition, it is the impact that a project (where roads are impacted on) may have on the accessibility and mobility of the resident, working and visiting communities including social interaction between neighbours. Impact ratings have been based on those recommended in Volume 11, Part 8, Section 3 of the UK HA/DMRB, refer to **Table 16.1**.

Table 16.1 - Assessment of Community Effects (Source: HA/DMRB, 1995, Volume 11, Section 3, Part 8)

Community	
Significant negative	Considerable hindrance will be caused to people trying to make their existing journeys. People are likely to be deterred from making trips.
Moderate negative	Trips will become longer or less attractive. Some people, particularly children and elderly people, will be dissuaded from making trips.
Slight negative	Some hindrance is caused to current journeys. However the current journey pattern is likely to be maintained.
Imperceptible	No appreciable change is caused to present journeys.
Slight positive	Present journeys will become safer and more attractive thereby offering some relief from existing severance.
Moderate positive	Existing roads will be much easier to cross. Existing severance will be considerably relieved.
Significant positive	Traffic flows will reduce to such an extent that they will no longer hinder trips and existing severance will be substantially eliminated.

Similarly, impacts on facilities and amenities are assessed on the basis of whether there is a direct impact on their property, and whether the facility or amenity is severed from its surrounding community. Furthermore, environmental impacts affecting the pleasantness of journeys, such as pollution, noise and visual impacts, also affect general amenity or the wellbeing of people living in the vicinity. So too can direct impacts on particular community facilities and recreational sites. Typically, these impacts are specifically addressed under separate chapters throughout this EIS, notably the chapters on noise and visual impacts. However, these impacts have a community dimension too in that well-being is affected through the effect on utility and, possibly tourism.

Economic Impacts

The assessment of economic effects is carried out in accordance with **Table 16.2**.

Table 16.2 - Assessment of Effects on Business (Source: HA/DMRB, 1995, Volume 11, Section 3, Part 8)

Economy/Business	
Significant negative	An impact that would substantially negatively affect business or trading patterns
Moderate negative	An impact that causes a noticeable negative change to the business and trading environment
Slight negative	An impact that causes noticeable negative changes in businesses or premises without affecting trade
Imperceptible	No appreciable impacts on business or economy
Slight positive	An impact that causes noticeable positive changes in businesses or premises without affecting trade
Moderate positive	An impact that causes a noticeable positive change to the business and trading environment
Significant positive	An impact that would substantially positively affect business or trading patterns

16.2.3 Study Area

For the purposes of this environmental assessment it is important to understand the project in terms of the core area in which the physical works will take place at College Green itself, as well a wider area which may be impacted by works during construction and operation phases. This is in order to consider direct and indirect impacts respectively.

For the purposes of the socio-economic assessment a study area of 10 minute walk catchment was considered as reasonable. This area which is illustrated in **Figure 16.1** includes Trinity, Grafton Street district, Temple Bar and the main core district north of the river including O'Connell Street and Henry Street. The map highlights the position of the College Green within the city centre as a central hub and highly connected area.

Within the 10 minute walk-time catchment (or 10 minute isochrone) a study area of 45 CSO Small Areas has been defined for the assessment of impacts on human beings. The area covers approximately 531.8 Ha from the proposed College Green Plaza.

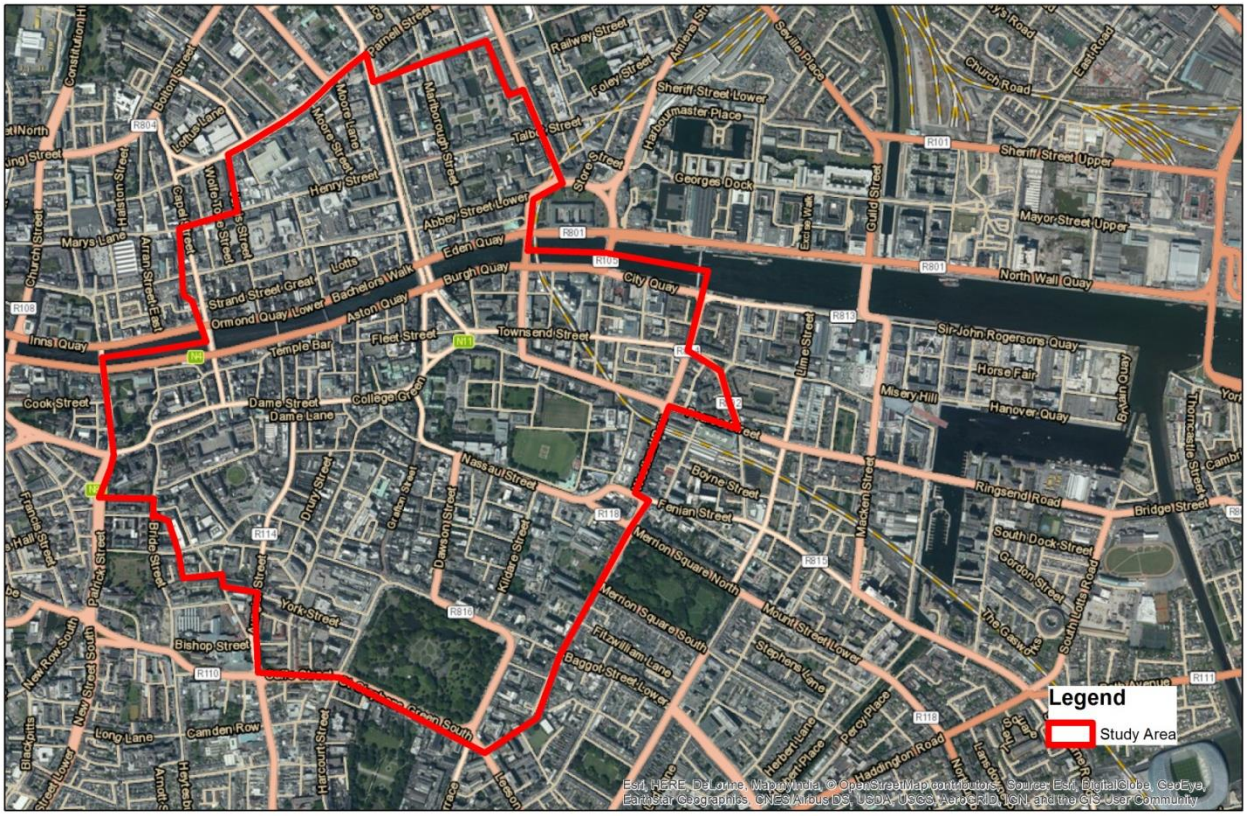


Figure 16.1 - Study Area and the road network

16.2.4 Site Visits

A number of site visits were undertaken by the study team throughout the course of the EIS preparation during working hours and at evening time.

16.2.5 Consultation

The preparation of the Human Beings sections of the EIS was informed by consultation events held by Dublin City Council.

A period of non-statutory public consultation of the Proposed Project was conducted from 12th April 2016 to 24th May 2016 with the intention of obtaining the views of the public and interested parties on two aspects of the scheme:

1. The proposal to remove East-West traffic from College Green allowing a Civic space to be created and
2. The bus diversion routes which were proposed following consultation with the NTA and Dublin Bus.

Some 2,756 submissions were received during the six week consultation period.

Dublin City Council undertook further consultation with the Imagine College Green Workshop in November 2016 (with Report in January 2017). Further on-street and on-line surveys were conducted in January 2017.

As part of the Environmental Impact Assessment process stakeholders were circulated with the EIS Scoping Report at the end of November 2016. In February and March 2017 business organisations were contacted. The design team facilitated a workshop and discussion on 28th March 2017 and 13th April with business groups, refer to Chapter 3, *'Consultation'*.

16.3 Baseline Environment

16.3.1 Demographics

16.3.1.1 Resident Population

Information on demographics is useful in providing an overview of key characteristics of the local population that resides in the study areas. A demographic profile of the study area was established based on 2011 Census data. The study area contains 45 CSO Small Areas as shown in **Figure 16.2**. Small Areas are areas of population comprising between 50 and 200 dwellings created by the National Institute of Regional and Spatial Analysis (NIRSA) on behalf of the Ordnance Survey Ireland (OSi) in consultation with CSO. Small Areas were designed as the lowest level of geography for the compilation of statistics in line with data protection and generally comprise either complete or part of townlands or neighbourhoods (within Electoral Division boundaries). Small areas were used as the basis for the enumeration in Census 2011.

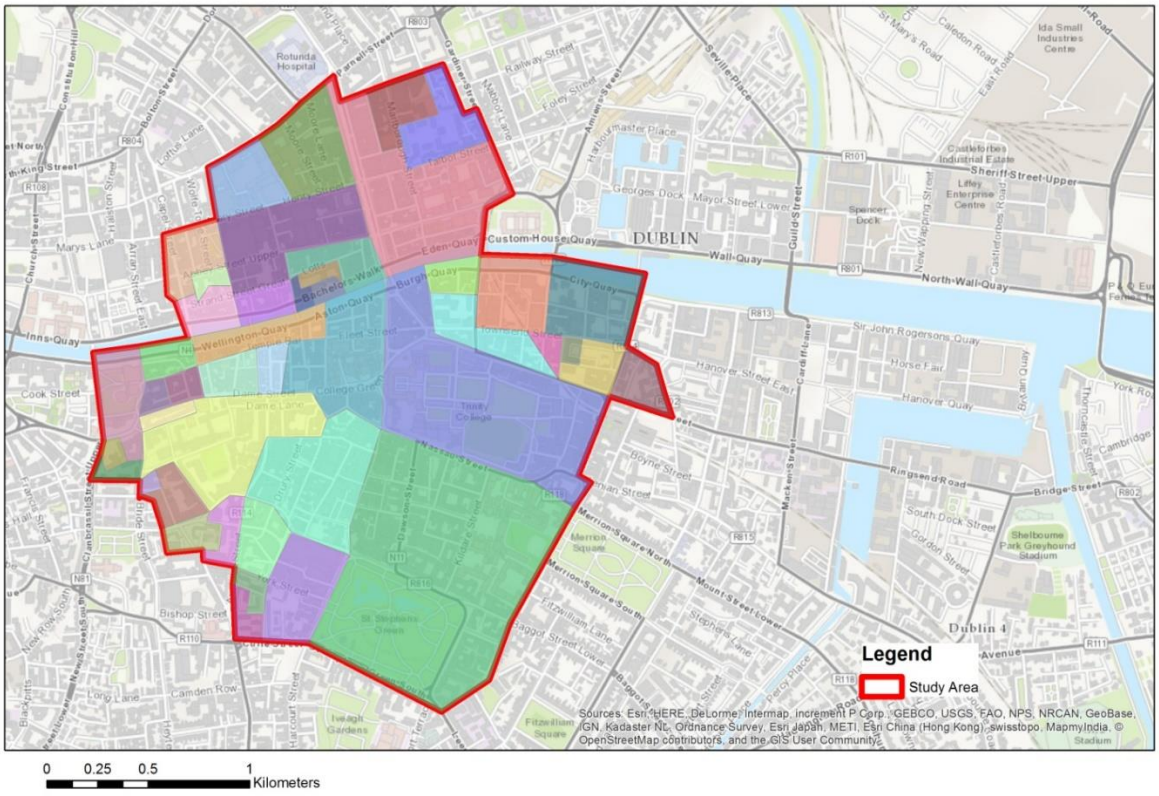


Figure 16.2 - Small areas located within the Study Area

The 2011 population recorded inside study area is 12,694. The 2016 population for this area is not yet available from the CSO. Therefore, in order to provide a sense of population dynamics in this city centre location, analysis of the Electoral Divisions (ED) covering the study areas was undertaken. **Figure 16.3** illustrates the outline of the EDs relative to the 10 minute catchment area. **Table 16.3** provides information on population and household change from 2006 to 2011. The areas highlighted in green most closely align with the 10 minute catchment area, refer to **Figure 16.4**.

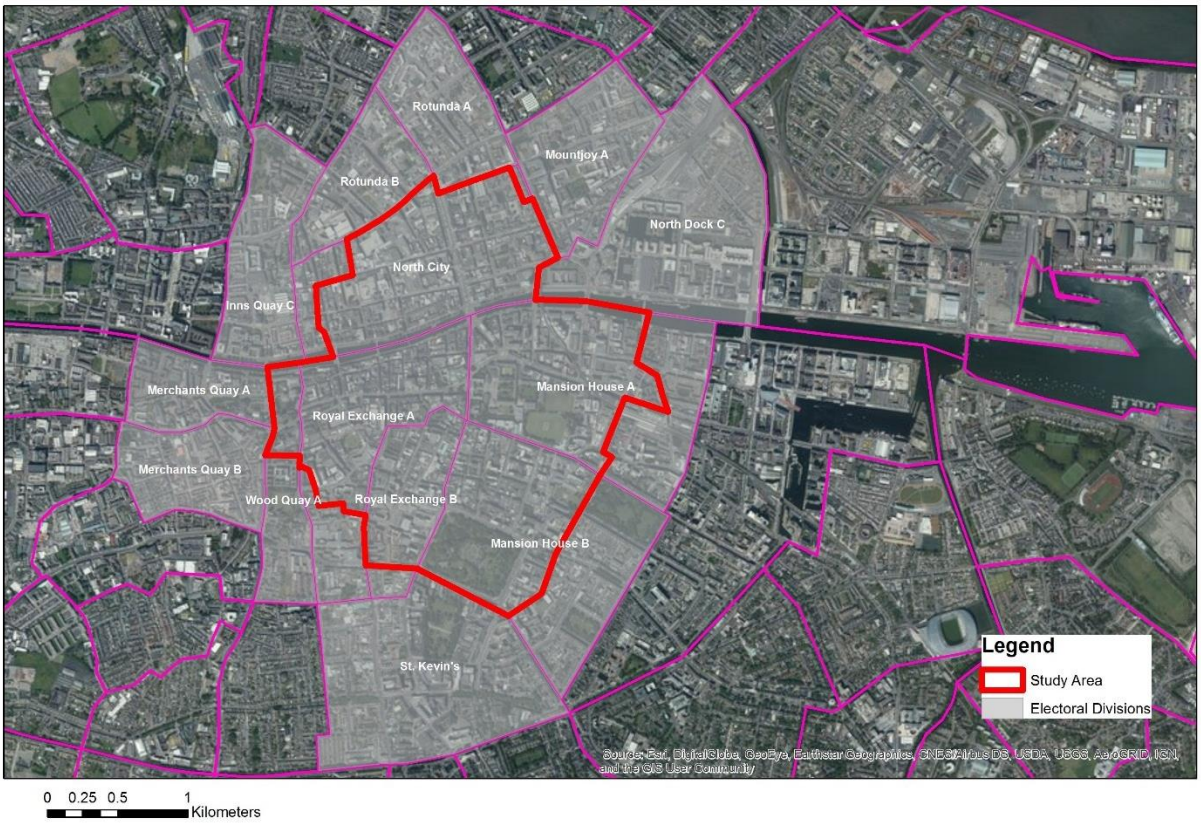


Figure 16.3 - Electoral Divisions located within Study Area

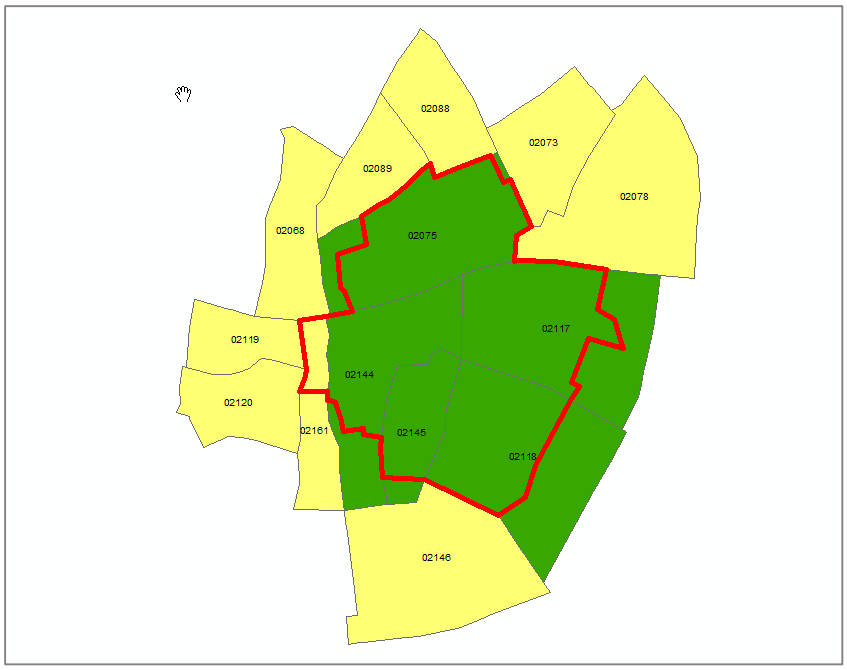


Figure 16.4 - City centre electoral divisions overlaid on 10 minute catchment area, with Mansion House A, Mansion House B, Royal Exchange A, Royal Exchange B and North City EDs highlighted in green closely align with 10 minute catchment.

Table 16.3 - Population and Household Change 2006, 2011 and 2016

CSOED	OSIED	EDNAME	Total Population 2006	2006 Occupied Dwellings	Average H'h size 2006	Total Pop 2011	2011 Occupied Dwellings	Average H'h size 2011	Total Pop 2016	2016 Occupied Dwellings	Average H'h size 2016
		State	4239848	1503291	2.8	4588252	1,705,394	2.7	4757976	1,763,333	2.7
		Dublin City	506211	197006	2.6	527612	217040	2.4	553165	220616	2.5
02068	268082	Inns Quay C	2672	1133	2.4	2709	1183	2.3	2715	1194	2.3
02073	268104	Mountjoy A	3760	1312	2.9	5326	1645	3.2	5313	1793	3.0
02075	268106	North City	3867	1148	3.4	5345	1794	3.0	5441	1720	3.2
02078	268109	North Dock C	4179	1552	2.7	4345	1628	2.7	4162	1673	2.5
02088	268138	Rotunda A	4672	1576	3.0	4698	1594	2.9	5629	1994	2.8
02089	268139	Rotunda B	2137	851	2.5	2439	921	2.6	2434	1029	2.4
02117	268096	Mansion House A	4462	1569	2.8	4347	1596	2.7	4544	1704	2.7
02118	268097	Mansion House B	869	208	4.2	1069	320	3.3	1278	324	3.9
02119	268098	Merchants Quay A	2062	855	2.4	2275	1000	2.3	2492	989	2.5
02120	268099	Merchants Quay B	3901	1725	2.3	3822	1801	2.1	3855	1791	2.2
02144	268140	Royal Exchange A	3602	1264	2.8	4481	1493	3.0	4550	1287	3.5
02145	268141	Royal Exchange B	2020	547	3.7	1914	635	3.0	2041	663	3.1
02146	268142	St. Kevin's	5206	1753	3.0	4910	1805	2.7	5085	1893	2.7
02161	268161	Wood Quay A	2743	1150	2.4	2669	1179	2.3	2598	1231	2.1
Totals			46152	16643	Av 2.9	50349	18594	Av 2.7	52137	19285	Av. 2.8

It is interesting to note that while the population in the city centre EDs has grown by 5,985 person or circa 13% between 2006 and 2016, within the core area (green) the population has grown 3,034 or circa 20.5% over the same period. The average household size for the core study area in 2016 stood at 3.01, down slightly from 3.39 in 2006. Overall, this demographic overview provides a picture of population growth in the core city centre area.

Figure 16.5 illustrates deprivation levels from the Pobal Index. It reflects that the study area is relatively affluent.

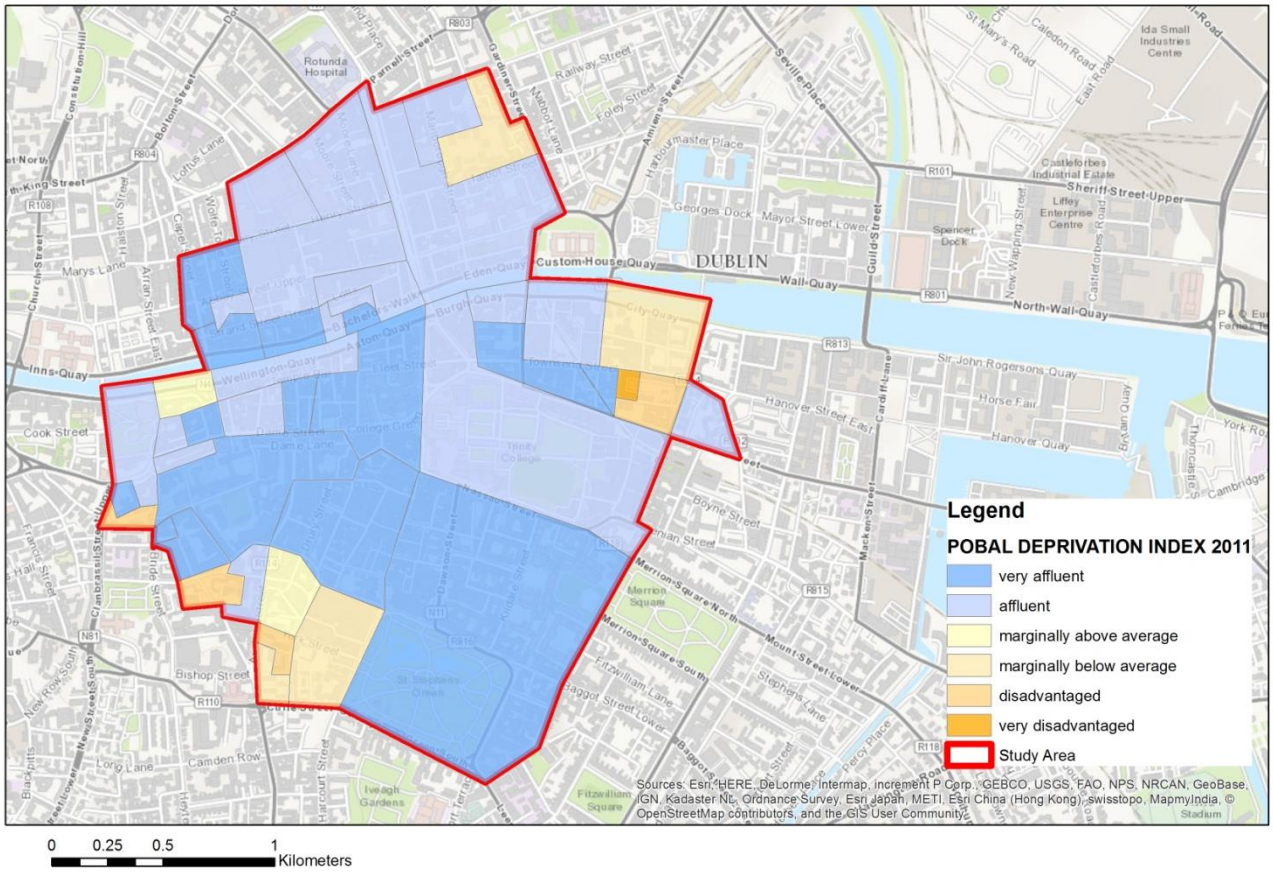
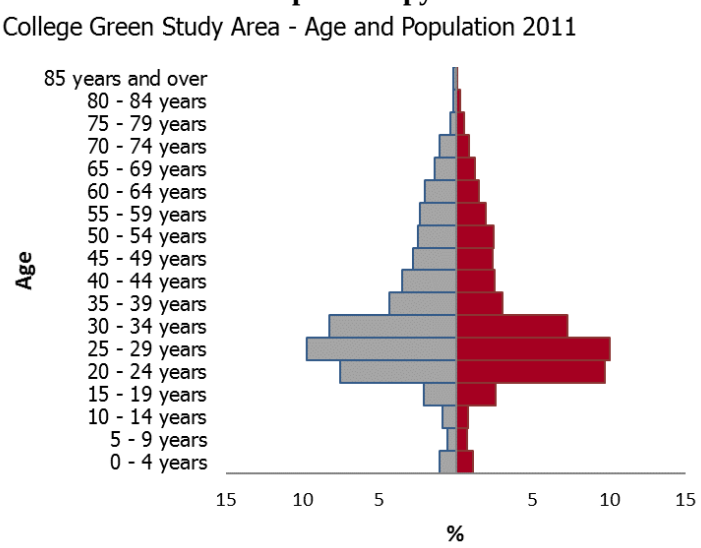


Figure 16.5 - Deprivation and affluence from POBAL Index

The age profile pyramid for the study area is presented in **Table 16.4**. This reveals a high proportion of the population inside study area are within the prime working age cohorts (here defined as the 20-34 age cohorts).

Table 16.4 - Population pyramid– Census 2011



Non-resident Population

As may be anticipated for a city centre location non-residential population is larger and more significant than the resident. As highlighted in the Chapter 15, '*Material Asset: Land Use and Property'*, the area in and around College Green is characteristic of a mixed use city core with strong educational (third level) and retail functions. As a highly accessible location within the city centre, there is also a high level of throughput in peak hours.

Using publicly available information from pedestrian count cameras around the city (maintained by Dublin Town BID) an average profile of activity along key nodes within the study area has been generated. Taking bi-directional totals for each camera within the study area and matching this with peak and low traffic periods the daily flows of the non-resident population has been established (refer to **Table 16.5**).

Table 16.5 - Pedestrian Footfall Index - (Week 4,15,22,34 Summarised) - 2016

Name	Pedestrians recorded in Week 4 - 2016 IN	Pedestrians recorded in Week 4 – 2016 OUT	Pedestrians recorded in Week 15 - 2016 IN	Pedestrians recorded in Week 15 – 2016 Out	Pedestrians recorded in Week 22 – 2016 In	Pedestrians recorded in Week 22- 2016 Out	Pedestrians recorded in Week 34 - 2016 In	Pedestrians recorded in Week 34 - 2016 Out	Pedestrians recorded in Average In	Pedestrians recorded in Average Out
O'Connell Street at Clerys	127,919	85,539	154,920	100,289	157,071	98,297	158,497	101,668	**149,602**	**96,448**
South King Street	67,190	69,232	89,670	94,684	97,545	102,233	88,918	95,217	**85,831**	**90,342**
South Great George Street	55,815	65,848	61,770	71,294	58,547	68,806	62,308	70,673	**59,610**	**69,155**
Talbot Street	61,520	70,511	50,416	67,197	47,813	64,453	51,180	65,420	**52,732**	**66,895**
Mary Street	94,289	83,566	119,532	105,531	126,097	109,112	123,545	108,879	**115,866**	**101,772**
Moore Street	95,304	99,184	94,460	96,279	93,409	97,285	87,148	86,256	**92,580**	**94,751**
Capel Street at Mullen	23,902	23,011	30,303	27,054	25,734	27,218	30,955	27,248	**27,724**	**26,133**
Dame Court	19,952	23,864	16,199	18,984	21,417	24,043	19,299	22,833	**19,217**	**22,431**
Grafton Street Card Gallery	253,642	244,882	271,919	231,225	207,327	233,226	282,289	283,617	**253,794**	**248,238**
Grafton Street MS	239,071	231,128	257,962	249,959	276,465	264,868	283,379	271,058	**264,219**	**254,253**
OConnell Street Easons	111,973	133,506	123,898	155,655	122,669	152,150	129,897	162,544	**122,109**	**150,964**
Henry Street at Butlers	141,398	156,849	156,628	176,427	155,983	174,370	163,276	181,068	**154,321**	**172,179**
William Street South	24,384	28,915	26,908	32,705	29,074	35,804	29,619	34,932	**27,496**	**33,089**

Table 16.5 illustrates that the main commuter flows are observed on north-south axis between O'Connell Street and Grafton Street, with a strong correlation between the planning policy definition of the Grand Civic Spine along the route (see Planning Policy Chapter) and the intensity of pedestrian movement. Weekly pedestrian numbers on average of 518,472 (both directions) were observed on Grafton Street. It is also notable that pedestrian flows drop off considerably as close by as South Great George's Street, with average flow down to an average of 128,765 (both directions). Peak flows of pedestrians commence at 7am on O'Connell Street and at 8am on Grafton Street (refer to **Figure 16.6** for camera locations in the study area).

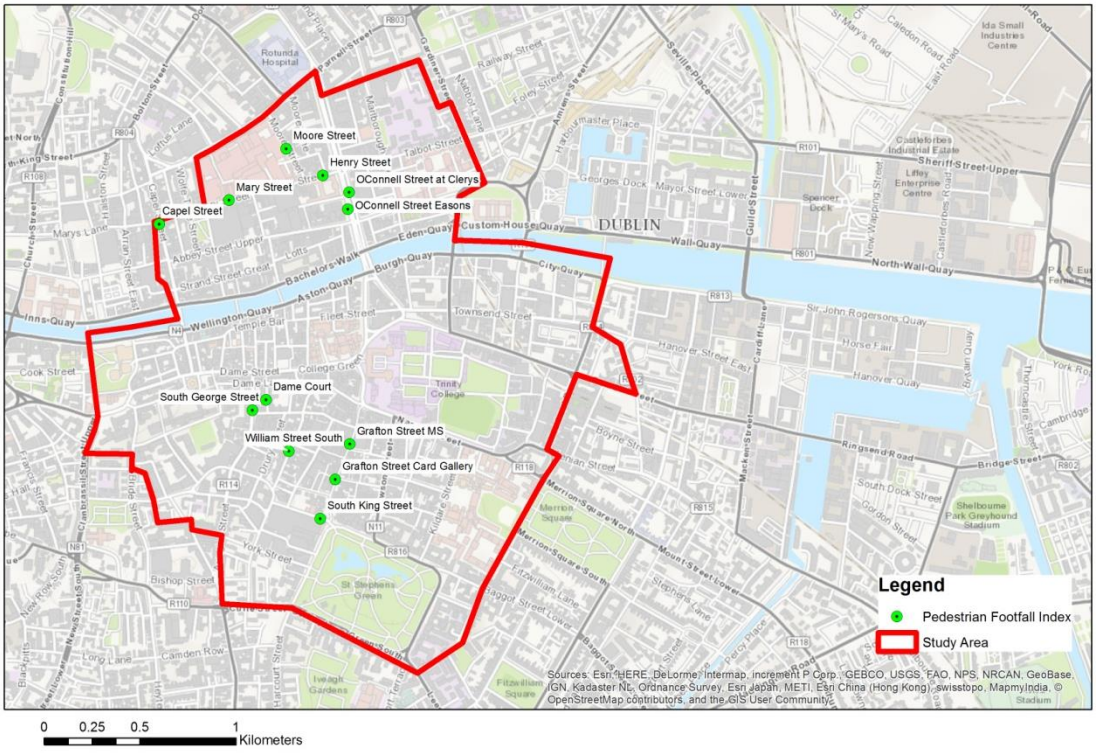


Figure 16.6 - Pedestrian Footfall Index – Approximate location of pedestrian cameras

Table 16.6 - Example of pedestrians flows in detail on Grafton Street (Marks & Spencer) – Week 15

Entrance Name: Grafton St at M&S														
	Mon		Tue		Wed		Thu		Fri		Sat		Sun	
Time	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
00:00	525	355	282	281	492	460	437	431	626	527	984	1013	1219	1253
01:00	393	185	247	214	234	194	240	157	410	283	996	624	1039	675
02:00	185	117	323	151	267	126	182	153	418	253	883	517	829	561
03:00	165	105	228	110	269	65	252	143	430	240	900	549	987	591
04:00	173	75	77	34	134	72	201	86	250	99	460	233	542	272
05:00	58	91	50	97	98	145	91	144	82	126	188	95	242	96
06:00	150	337	194	391	185	378	178	370	195	373	136	233	119	129
07:00	401	1021	506	1064	495	1150	500	1237	447	1074	200	358	163	163
08:00	1479	2252	1070	1806	1292	2245	1437	2222	1197	1969	385	633	247	300
09:00	1396	1715	1083	1694	1233	1771	1126	1510	911	1243	933	1032	440	560
10:00	1311	1572	1546	1842	1440	1690	1688	1848	1492	1680	1512	1668	888	1044
11:00	1944	2199	2036	2168	1920	2205	1827	2163	2060	2333	2423	2601	1619	1700

12:00	2564	2476	2575	2623	2779	2759	2837	2942	3146	2866	3179	3179	2535	2420
13:00	3162	3138	3494	3325	3572	3442	3867	3780	3937	3515	3534	3587	2592	2880
14:00	2604	2342	2615	2455	2844	2885	3168	2906	3574	3418	3671	3738	2787	3107
15:00	2476	2316	2497	2294	2871	2648	2924	2678	3051	2798	3424	3607	2873	3002
16:00	2758	2267	2858	2631	2897	2660	3131	2769	3896	3198	4157	3864	2664	2848
17:00	2694	2125	3571	2589	3411	2619	3867	3157	4561	3494	4223	3625	2981	2665
18:00	2671	1928	2910	2374	3232	2568	3680	3181	3580	3024	3264	2702	2371	2410
19:00	1672	1248	1989	1666	2124	1744	2791	2390	2586	2158	2384	2096	1548	1283
20:00	1036	868	1164	971	1283	1043	1729	1536	1704	1605	1602	1633	960	1000
21:00	776	747	1120	875	1093	932	1327	1102	1393	1263	1190	1277	737	855
22:00	552	544	899	830	909	863	1119	855	1282	1219	1258	1326	559	729
23:00	468	509	746	607	649	715	836	749	1224	1120	1107	1360	725	476

16.3.1.2 Community and Residential Settlement

The existing and proposed developments situated within the study area have been identified. This involved site visits, a review of aerial photography, and review of Dublin County Council zoning plans. Chapter 15 of this EIS reviews the land use in the vicinity of College Green and within the 10 minute catchment area in detail.

A land use zoning map showing all permitted land use zones within the study area is provided in **Figure 16.7**. As can be seen, the main land use zonings designated for the area are as follows:

- Z5 (blue) - To consolidate and facilitate the development of the central area, and to identify, reinforce, strengthen and protect its civic design character and dignity;
- Z8 (orange) - To protect the existing architectural and civic design character, and to allow only for limited expansion consistent with the conservation objective;
- Z1 (yellow) - To protect, provide and improve residential amenities; and
- Z9 - To preserve, provide and improve recreational amenity and open space and green networks.

As noted above, the zoning reflects the areas location and function generally as a mixed use city centre district, with a growing population. It is noted that within this framework there is a concentration of resident student population within the Trinity Campus.

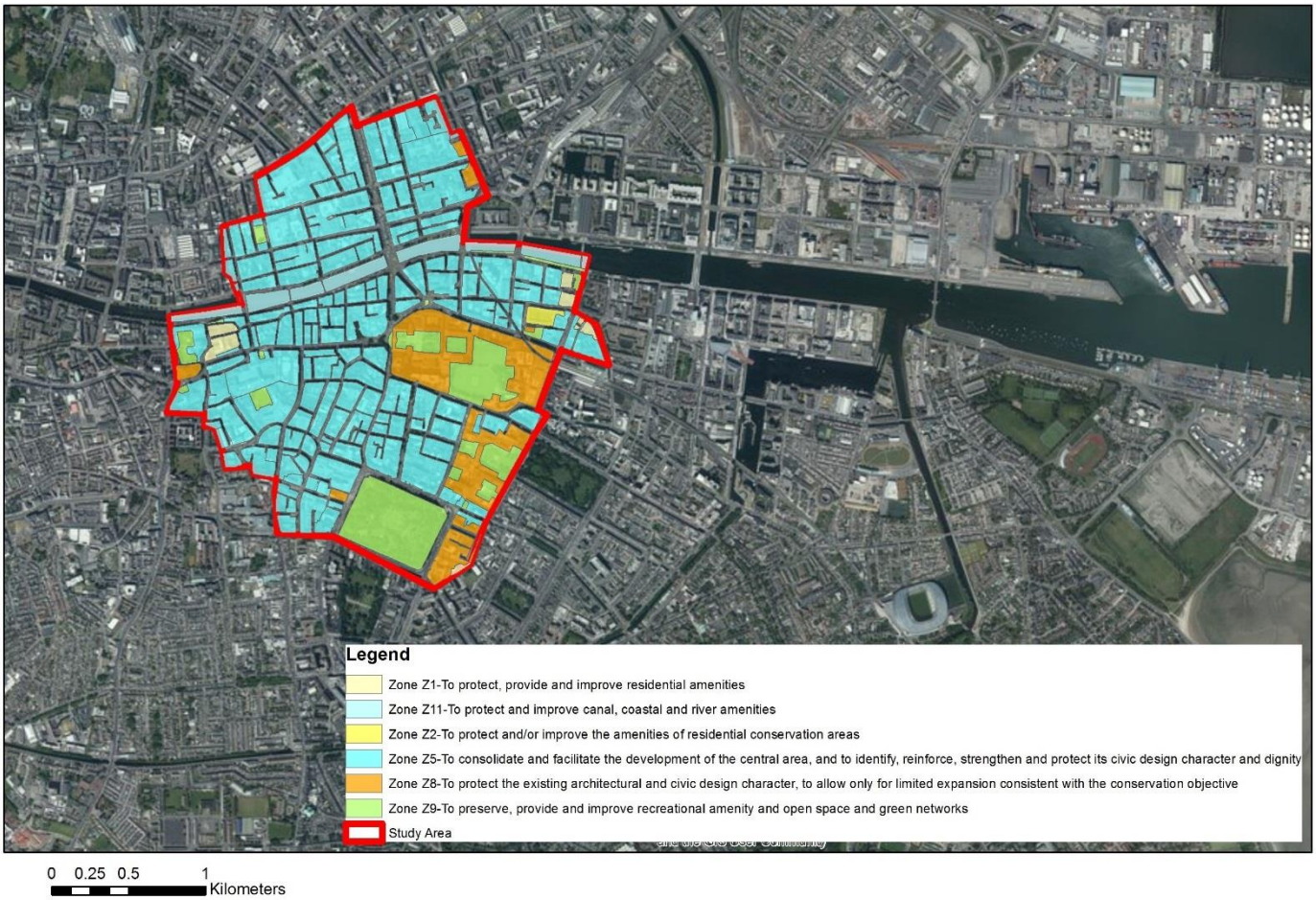


Figure 16.7 - Land Use Zonings –Dublin County Development Plan 2016-2022

16.3.2 Economic Activities and Employment

16.3.2.1 Employment

The total number of unemployed people within the study area based on CSO 2011 data is shown in **Table 16.7**:

Table 16.7 - Unemployment (Total number of persons) 2011 within the study area – Census 2011

College Green Study Area	2011
Total numbers	858

Live register figures from social welfare offices located inside the study areas were also reviewed for a more up to date overview of employment trends. As is evident for Dublin County as a whole, unemployment has been declining in Dublin city centre over the past number of years, refer to **Table 16.8**, **Table 16.9** and **Figure 16.8**.

Table 16.8 - Live register figures for the month of December from 2010 to 2016

YEAR	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14	Dec-15	Dec-16
Thomas Street	4,435	4,496	4,555	4,366	3,960	Discontinued	Discontinued
Bishop Square	8,534	8,614	8,532	7,981	7,200	6,495	5,590
Apollo House (Tara Street)	2,804	2,766	2,616	2,520	2,260	Discontinued	Discontinued
Kings Inn Street	7,614	7,579	7,421	6,871	6,278	5,359	4,493
Cork Street	N/A	N/A	N/A	N/A	N/A	5,789	5,373

Table 16.9 - Live register figures for the month of December from 2011 to 2016 (percentage change year on year)

YEAR	Dec-11	Dec-12	Dec-13	Dec-14	Dec-15	Dec-16
Thomas Street	1%	1%	-4%	-9%	Discontinued	Discontinued
Bishop Square	1%	-1%	-6%	-10%	-10%	-14%
Apollo House (Tara Street)	-1%	-5%	-4%	-10%	Discontinued	Discontinued
Kings Inn Street	0%	-2%	-7%	-9%	-15%	-16%
Cork Street	N/A	N/A	N/A	N/A	N/A (no record from previous year)	-8%

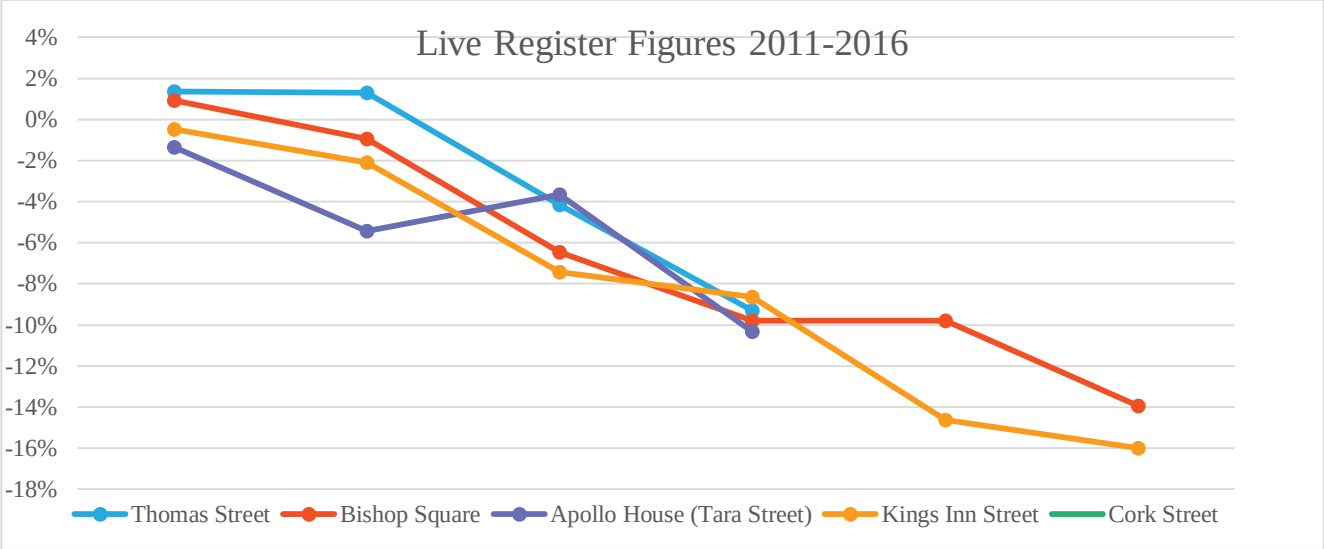


Figure 16.8 - Live Register Figures 2011-2016

16.3.2.2 Economic Status

A breakdown of socio-economic groups within the study area is provided in **Table 16.10**. As may be expected in a city centre location, the majority of the workforce is engaged in non-manual work (24%), lower professional (11%) and managerial (11%) groups. A significant proportion is also classified in 'Other' socio-economic groups. This is likely to reflect a high student population in the study area.

Table 16.10 - Persons aged 15 years and over by Socio-Economic Group, 2011 (CSO Census 2011)

	Employers & Managers	Higher Professional	Lower Professional	Non manual	Manual Skilled	Semi-skilled	Unskilled	Own Account Workers	Farmers	Agricultural Workers	Other	Total
College Green Study Area	837	616	884	1,857	254	452	303	96	5	0	2,442	7,746
	11%	8%	11%	24%	3%	6%	4%	1%	0%	0%	32%	100%

16.3.2.3 Economic activity

Existing and proposed economic activity taking place within the study area have been identified. This involved site visits, review of aerial photography, a review of Dublin County Council zoning plans, analysis of data from the Geodirectory database and the use of the Valuations Office map viewer.

There is a degree of overlap with Chapter 15 '*Material Assets: Land Use and Property'* which maps and assesses the distribution of various uses. This analysis highlights the mixed-use nature of the city centre location in which College Green is situated. The predominant land uses are the Grafton Street Retail district to the south, Trinity College education campus to the east and Temple Bar cultural and leisure/recreation district to the north of the site. At a fine grain level, there is a high degree of mix of uses including many office-based enterprise and SME businesses at ground and upper floors, residential, cultural and institutional uses. This is a dynamic land use context where College Green has already experienced change with comparison retailing and complementary service activities occupying former banking and institutional properties.

A review of the business activity in this area shows a sectoral base that ranges from retail, education, professional and other service related activity uses.

Particular attention has been drawn to the impact of diverted traffic at the EIS Screening stage, and statkeholder consultation to the potenial indirect socio-economic impact on Parliament Street arising from changes in bus movements. In terms of receiving environment it is notable that the street is an attractive tree-lined avenue currently serves as a heavily trafficked roadway, that marks a separation between eastern and western parts of Templebar. The streetfont units are characteristed by bars, cafes as well as several legal firms. The footpaths are quite restricted in area and none of the premises appear to have outdoor seating. There are no outdoor seating licenses in operation on the street.

It is notable that while there are a number of small offices with direct street access, the economy of the street is largely related to leisure and recreational uses associated with the Temple Bar area, which are predominantly off peak in operational character, associated with the evening and night time economies.

16.3.2.4 Transport and Infrastructure

College Green is situated at a highly accessible and integrated location within the city centre. It is accessible by national rail and bus stations, and metropolitan bus routes.

College Green is an important hub for the city's bus routes. There are 8 bus stops located at College Green, 5 out-bound and 3 in-bound. According to information provided by Dublin Bus there are 15,000 daily boardings at these stops.

It also relevant to refer to the Luas stops currently under construction at College Street and Westmoreland Street. The NTA have extracted information from the NTA ERM Do-Minimum Model, (2018 Do Min (LCC) for line flows between Dawson and Trinity / Westmoreland). It is estimated that during AM Peak Hours passenger flows will be 1,957 northbound and 2,550 southbound. This drops to approx. 640 and 842 respectively at off peak. The PM Peak is estimated to be 1,881 northbound and 2,142 southbound.

It is also notable that there is a taxi rank at the centre of College Green, and another rank at Foster Place (with a holding area).

According to the Dublin City Centre Transport Study, in 2014 there were 192,000 journeys into the city centre each weekday in the peak morning period alone (7am to 10am). By 2023, it is anticipated that Dublin City Centre will have to cater for an additional 42,000 journeys in the morning peak, an increase of over 20 per cent. It is also noted that with more than 57,000 annual subscribers and 12,003,733 trips taken since its launch in 2009, Coca Cola Zero dublinbikes have contributed significantly to increasing the use of sustainable transport in the City.

With reference to the 2016 City Centre Transport Proposals Assessment of Impact on Retail Market, (DKM and EY p.26) the most common reason for visiting the city centre is for shopping. This is based on market research undertaken by Millward Brown for the NTA in 2014. The majority of people who visit Henry Street do so for shopping (75% of people visited for the purposes of shopping). However, Grafton Street is equally a shopping and social/recreation location (49% visited for shopping compared to 48% visiting for social/recreation reasons).

The majority of visitors to the City Centre do so for shopping or social reasons, including for those who stated more than one reason for their visit, with 49% and 75% giving this reason for visiting Grafton Street and Henry Street respectively. The proportion of users who stated that work was a reason for their visit was lower, at 27% for Grafton Street and 15% for Henry Street.

16.3.2.5 Retail, hospitality and service industry

The importance of retail to the city centre is reflected in the Dublin City Development Plan 2016-22 Appendix 4 Retail Strategy.

It highlights Dublin city centre as *"unique in the range and mix of retail and associated linked services provided, the levels of connectivity it offers and the wide hinterland and tourist trade it serves"*. The city centre retail core area is the main shopping, tourist and employment destination for the Greater Dublin Area (GDA). In retail terms, the retail core area dominates 'fashion' and higher order comparison goods retailing with the GDA and acts as a significant attraction for persons outside the region. Therefore, the area is at the top of the hierarchy of retail centres within both the GDA and Dublin City Council area.

Currently, Dublin City Centre is estimated to have approximately 380,000m^2 of retail floor space, with an annual turnover of over €1.7 billion (Experian Property Consultancy). It also accounts for 33% of retail spending within the Greater Dublin Area catchment (Section 10.5.1, Luas Cross City Dawson Stop EIS, 2014).

16.3.2.6 Tourism

Fáilte Ireland, the National Tourism Development Authority has prepared Guidelines on the treatment of tourism in an Environmental Impact Statement. It highlights that under '*Human Beings*', the principal issues are to avoid damage to sites and structures of cultural, historical, archaeological or architectural significance – and to their contexts or settings. It is also highlighted that the character of the site in terms of tourist numbers and attractions should be highlighted. Fáilte Ireland's guidance considers a key question is whether will the development stimulate or suppress demand for additional tourism development in the area.

Tourism is one of Ireland's most important economic sectors and has significant potential to play a further role in Ireland's economic renewal. In 2015, tourism was responsible for overseas earnings of €4.208 billion (excluding carrier receipts – airfares and ferry costs). Combining the data from the domestic market and international visitors, total tourism revenue for the economy in 2015 was approximately €7.0609 billion. The tourism sector supports 143,500 jobs in the accommodation and food sector alone, and overall employment in tourism is estimated to be in the region of 205,000. Tourism also shapes Ireland's image and attractiveness as a place to live, work and invest (www.dttas.ie/tourism).

Data from the Central Statistics Office for 2015 shows that overall visits to Ireland in 2015 rose by 13.7% (8.645 million trips). Core tourism visits grew strongly with holiday trips up 20.4% and business trips up 12.3%. Visits to friends and relatives in Ireland rose by 4%. Spending by visitors to Ireland also increased in 2015, with total tourism and travel earnings from overseas visitors (including fares) growing by 17.3% to €5.530 billion.

The Dublin Economic Monitor (www.dublineconomy.ie) reflects that tourism is the lifeblood of every major city: it provides jobs and revenue, incentivises the preservation of cultural heritage, and allows the exchange of ideas and inspiration.

According to the Irish Tourist Industry Confederation (ITIC), in 2015 Dublin experienced a +14% year-on-year increase in visitors to 6.68 million with €1.95 billion spend. This included 4.7 million international visitors and 1.98 million domestic visitors to Dublin (Eoghan O'Mara Walsh Chief Executive Irish Tourist

Industry Confederation Economic Impact to Dublin of Tourism March 2016). The Book of Kells is one of the top three tourist attractions in the city.

The ITIC has highlighted a 2020 target of 6.2 million visitors for the city by 2020. The ITIC believes circa 8,000 additional net bedrooms are required to accommodate this demand.

College Green is located at pivotal location in the city at a central hub linking retail, leisure/recreation and visitor attractions (Dublin and Trinity College).

16.4 Predicted Impacts

16.4.1 Construction impacts

Business impacts

During the construction phase, the accessibility of certain businesses in the vicinity of the Proposed Project may be reduced due to the presence of temporary construction fencing and pedestrian diversions. Some disruption to the timing and locations of deliveries during construction hours is expected. The magnitude of the impact of the construction phase of the Proposed Project is considered to be significant, short-term and negative on these businesses.

Transport changes

The re-location of the taxi-ranks at College Green traffic island and Foster Place is considered to be a negative moderate short-term impact on that economic group, subject to the implementation of mitigation measures.

The Proposed Project entails the re-routing of all bus routes that currently run through College Green in an east-west direction. This will commence in the construction phase. Provision will be made for buses completing a u-turn on Dame Street. This is estimated to represent a drop of the order of 12,000 daily boardings at College Green/Dame Street. In terms of human beings and socio-economic context this is considered to be a significant short-term negative impact, on public transport customers as they adjust to new routes and bus stop configurations.

The introduction of the new Luas stops in 2018 will balance the loss of bus customers boarding on the street with light rail access to the city core.

It is notable that private car access to this area has already been greatly restricted with the bus gate and it is considered that there will be no significant impact in people's experience accessing College Green by private car. With the completion of the Luas Cross City works prior to commencement of the construction phase, north-south bus and taxi access from Westmoreland Street, College Street and Grafton Street shall be maintained.

Community severance

The construction of the College Green Plaza will entail the erection of construction hoardings to demarcate the site during this phase, so that pedestrians will experience local diversions and inconvenience. This is considered to be a moderate short-term negative impact.

In terms of indirect impact the traffic management measures associated with the Proposed Project will change, traffic movement patterns and buses will be diverted to alternative routes. This includes Parliament Street, Winetavern Street, and South Great George's Street.

Community severance considers the potential for the separation of residents from facilities and services they use within their community caused by changes in traffic flows. However, it is not likely that this will give rise to a signifcant chage in the character of any roadway, so as to increase separation. However, due to changes in the nature of traffic, with increased bus movement on Parliaments Street and Winetavern Street, residents and business are likely to perceive there to be a marked change in the environment of the streets.

Given that this change occurs on city streets that already heavily trafficked (and with no loss of footpath area or street trees) the impact is considered modertate negative and short-term.

Tourists

During the construction phase it is considered there will be a moderate short-term negative impact on tourists arising from disturbance, inconvenience and local diversions arising from the demarcation of the construction site.

16.4.2 Operational impacts

The potential impacts on business, retail and tourism and on improved accessibility of community and social facilities are all considered to be significant and positive.

The Proposed Project will enhance the economic wellbeing of the College Green area through improved amenity for workers, shoppers and visitors and is likely to further increase the attractiveness of the overall area as a place to do business.

The Proposed Project (taken cumulatively with Luas Cross City) will address severance between the Grafton Street area, Temple Bar, city quays and O'Connell Street caused by car and bus-dominated public realm. This will serve to enhance the city centre's retail environment and will support the retail policies and objectives promoted by Dublin City Council (DCC) in the Dublin City Development Plan (DCDP) 2016-2022. Accessibility and footfall are recognised as key factors in optimising retail and business performance as a destination.

The proposed plaza will complement retail and non-retail uses such as a café and restaurants that add to the vibrancy of the street and create a mixed-use environment to provide for a more integrated shopping and leisure experience, will be considered favourably but with regard also to the primary retail function of the street.

The City Development Plan recognises the importance of non-retail service uses as part of a "thriving and multi-dimensional city". It states that: "there is a need to facilitate the concept of the 24- hour city particularly in the city centre and other key district centres".

The plaza will link pedestrian streets and low-traffic environments on all sides of College Green improving linkage, the shopping and commercial environment, thereby strengthening and consolidating the retail core.

Impact on trade

International studies ranging from London to New York, Hong Kong and Copenhagen provide evidence that expansion and improvement of pedestrianised zones in cities has a positive impact on economic activity.

A 2014 Report by the Social Enterprise Research Group, The University of Northampton titled: Abington Street, Northampton *The evidence for and against pedestrianization,* comprised a comprehensive review of existing written material, published in reputable and ideally peer-reviewed journals, and identifying evidence that made the case both for and against pedestrianisation. It includes the following key finding:

"The evidence clearly shows that, provided a pedestrianisation scheme is part of a well-planned, integrated approach to urban development and renewal (the provision of adequate car parking being particularly important), the impact is overwhelmingly positive.

Effective pedestrianisation of urban areas benefits trade by increasing public throughput, public spending and commercial rent rates. Pedestrianisation also decreases the levels of vacancy in urban retail areas, thereby helping to increase employment levels in the area as well as trade figures."

Jan Gehl is a well-known urbanist who has studied the effects of pedestrianisation on Copenhagen since pedestrianisation commenced with Strøget in 1962 using surveys in 1968, 1986 and 1995/6 to examine the change in the city. This is documented in the 1996 book: *Public Spaces-Public Life, Copenhagen*. Interviewed for Siemens.com in July 2016 he noted the following conclusions:

"We were able to prove over many years that every expansion of the pedestrian system brought more people and more seats and more entertainment and more culture. For example, we found that for every extra 14 square meters of car-free space, you got another person participating in public life. So there's a direct correlation between the available space in square meters and the growth of public life."

Chung Yim Yiu (2009) of the Department of Real Estate and Construction, The University of Hong Kong, prepared detailed research on the *Impact of a pedestrianisation scheme on retail rent – an empirical study in Hong Kong (2009)***.** The literature review in the report cited the Research Institute of Trade's study, cited in Hass-Klau (1993), which found that in Germany that 83% of retailers within the pedestrianised areas reporting an increase in turnover, compared with the only 20% of retailing business outside the pedestrian areas. Hass-Klau (1993) also reported a survey of retailers in Germany, which found that turnover increased by 15% to 100% after the implementation of the pedestrianisation scheme.

While Hong Kong clearly presents a very different city environment to Dublin, Yim Yiu's empirical research is broadly referenced due to the rigorous nature of the research. He studied a pedestrian scheme which had been implemented in Hong Kong for about eight years (firstly introduced as a transport strategy to enhance the environment and safety for pedestrians) using a pedestrianised street and a control street for comparison.

The study found that pedestrianisation was generally welcomed by the public in terms of changes to the streetscape of the city. For example, one of the typical pedestrianised streets in Mong Kok, Sai Yeung Choi Street South, is now not only a

shopping street, but also a public space enjoyed by the local residents and tourists. Street performances and non-economic activities can commonly be found in the street. The increase in pedestrian flows in the pedestrianised street benefits the retail shops on the street in general.

He estimated the value difference between the selected pedestrian street and a control street before and after the implementation of the pedestrianisation scheme showed significant increases in the retail rental value of the street by approximately 17% all other matters being equal.

The Association of Town & City Management (ATCM) the British Parking Association (BPA), Springboard Research Ltd and Parking Data & Research International (PDRI) produced joint research in 2013 titled Re-Think! Parking on the High Street: Guidance on Parking Provision in Town and City Centres. This research is referenced here as there is a strong emphasis on increasing footfall having a positive effect on city centre economies.

This research examined the relationship between town centre prosperity and car parking. The research states that *"towns with higher footfall levels generate a higher spend and have a better quality of retail offer. For example, in towns with an average footfall of over 300,000 per week, annual spend is over £500 million and the average Venuescore is 483. This compares to towns with footfall of between 150,000 and 200,000 per week in which annual spend is around £150 million and the average Venuescore is 201."*

The report found that simply increasing the quantity of car park spaces would not necessarily have a positive impact on footfall. It does suggest that the quantity of car parks is well considered and planned in accordance with the performance of the location. The study highlights parking is about value, rather than cost having regard to attractions (retail and otherwise), parking provision and fees. In effect this that car parks are important for customers to use in order to facilitate increased footfall on streets, so that it is the increased circulation of people on streets (not necessarily in cars).

The New York City (NYC) Department of Transportation (DOT) (2013) report, *The Economic Benefits of Sustainable Streets*, notes that *"one of the most visible elements of New York City's sustainable development agenda has been the transformation of the city's streets from unwelcoming, traffic-dominated corridors to safer, more attractive public spaces that better accommodate all users. Large arterials have been transformed into "complete streets"".*

With reference to the CABE (Commission for Architecture and the Built Environment), Paved with Gold (2007), NYC DOT note that those quantitative studies that do exist, suggest that when streets within urban shopping districts are pedestrianized or receive streetscape enhancements the results are often positive, with businesses seeing increases in both the number of shoppers and in revenues. Similarly, the value of real estate increases so property owners benefit along with the retail tenants.

The design quality of a street appears to contribute to these outcomes on its own, regardless of other factors, and simply improving street design can have a major impact on market values.

The conclusion of NYC's own research, using total retail sales (cumulatively or per business) as the critical indicator for overall economic performance on a number of

street improvement schemes (compared to control streets or squares) is that *"It is clear that rolling out safer, more inviting and sustainable streets is rarely detrimental to local businesses and in the great majority of cases can be a boon to them."*

The research report notes:

"experience has shown that in many instances business owners are apprehensive of changes to streets that are perceived to benefit pedestrians and cyclists while reducing convenience for drivers based on a belief that providing easy access for motorists into their business district along with ample, nearby parking is critical to their store's success. As described above, results from surveys of shoppers in urban shopping districts suggest that this fear is in large part unfounded."

The 2014 report by Living Streets titled *The Pedestrian Pound* highlights four performance indicators for these investments were identified from their literature review. Namely; impact on existing business performance (footfall and retail); urban regeneration (new business, rental income, employment, social exclusion etc.); improved consumer and business perceptions, and business diversity.

While city centre pedestrian schemes always have their own particular contexts, circumstances and characteristics to differentiate details, it is nevertheless useful to have regard to general trends. This Living Street report highlights the following evidence:

- Case study evidence suggests that well-planned improvements to these public spaces can boost footfall and trading by up to 40%;
- Investing in better streets and spaces for walking can provide a competitive return compared to other transport projects; walking and cycling projects can increase retails sales by 30%;
- Evaluations of pedestrian improvements in Coventry and Bristol show a 25% increase in footfall on Saturdays and predict £1.4million benefits respectively;
- Improved walking routes to and from Wanstead High Street, in east London, increased footfall by 98%;
- In Dublin, the redevelopment of the Temple Bar District led to a 300% increase in employment before the economic boom.

Overall, the predicted impact on retail trade, services and employment in the vicinity of the plaza is considered to be positive, ranging from moderate to significant in the short to long-term.

Transport changes

The re-location of the taxi-ranks at College Green traffic island and Foster Place is considered to be a moderate negative short-term impact on that economic group, as customers adjust to changes in location of taxi-ranks.

The Proposed Project entails the re-routing of all bus routes that run through College Green in an east-west direction. In terms of human beings and socio-economic impact this is considered to be a moderate negative short-term negative impact, as customers adjust to new routes and bus stop configurations. Any changes in journey times also affect people's experience of using public transport in this area. In the longterm the impact is considered to be neutral.

With the completion of the Luas Cross City works prior to commencement of the construction phase, north-south bus and taxi access from Westmoreland Street, College Street and Grafton Street shall be maintained. During the operation phase, Luas Cross City will be operational with stops at College Street and Westmoreland Street.

Community severance

The construction of the College Green Project will form a pedestrian priority zone where a busy arterial road currently exists. It is therefore considered that the direct impact on College Green and Sussex Street (through a reduction in traffic) will be significant, positive and longterm.

In the secondary study area the indirect impact of the proposed plaza project is considered to be neutral. With regard to Parliament Street it is considered that the traffic plan associated with while introducing more bus traffic onto that street, does not alter the character of the street which is currently heavily trafficked. However, there is considered to be potential for long-term moderate negative impact on business from changes in traffic access to the street and day time servicing arrangements.

It is noted that the public nature of the plaza is designed to provide a new and unique space and experience for residents, workers and visitors alike. However, it is possible that this very openness may invoke anti-social behaviour randomnly or in assosication with events, if the space were to be unpolicied or unmanaged.

Tourists

The Proposed Project will provide a world class public space at the heart of the city, in a location that is readily accessible by tourists and visitors in the city. In terms of image, product and utility the plaza is envisaged to have a significant positive impact on tourism and associated businesses and services in the short to long-term.

16.5 Mitigation Measures

16.5.1 Construction impact

This assessment, has determined that the negative impact on businesses during the construction will be of slight to moderate negative significance. A broad range of mitigation measures will be implemented for the construction of College Green Plaza and the Proposed Project.

Mitigation measures for traffic/pedestrians relate primarily to maintaining access to businesses, which will minimise disruption during the construction phase. Changes to traffic, public transportation and access to the city core will be clearly communicated to the resident and visiting public.

The capacity for business to be serviced on street, and receive deliveries in limited periods in the day would mitigate the socio-economic impact of the proposal.

Alternative access arrangements for private cars and buses will mitigate the impact of direct access through College Green.

Mitigation measures will be introduced to minimise disruption during construction to businesses and visitors in terms of air and noise, refer to Chapters 7 and 8.

Luas Cross City works will be completed before construction commences on the site to ensure that north-south access by bus and taxis is available. Taxi ranks will be re-located on adjoining streets with no net loss in parking spaces. Changes to operation of services will be clearly communicated to customers and visitors, including on-street signage.

16.5.2 Operational Impacts

During the operational phase, the most important mitigation measures refer to the management and maintenance of the space. In order to sustain a positive impact on the economy of the city centre, a high level of street cleaning measures will be implemented and a policing presence maintained to ensure that there is a strong sense of a safe and secure space, where anti-social behaviour is controlled. As a public authority Dublin City Council engages with the Gardaí on a regular basis and has the capacity to work with Gardaí directly and in policing forums to manage the safety and security of the space.

Taxi ranks will be re-located on nearby adjoining streets (Dame Street, east of South Great George's Street and west of Trinity Street) with no net loss in parking spaces. Dublin City Council as the roads authority is empowered to provide these alternative spaces.

Luas Cross City works will be completed before construction commences on the site to ensure that north-south access by bus and taxis is available.

16.6 Residual Impacts

16.6.1 Construction residual impacts

The Proposed Project will entail changes in access and movement through the subject site. Alternative access arrangements for private cars and buses will mitigate the impact of direct access through College Green. Constraints on pedestrian and cycle will be short term.

The re-location of the taxi ranks will not have a negative impact on that socio-economic group. The review of bus route operations through College Green will seek to ensure that any potential negative impacts arising from change in routes and inconvenience for customers can be resolved.

While bus stops are being displaced, the careful management of this process will ensure that new the new routes and stops remain with the 10 minute catchment area and easy walking distance of services, businesses and facilities. The potential air quality and noise impacts are addressed in Chapters 7 and 8 respectively.

16.6.2 Operational residual impacts

The Proposed Project will have an operational residual significant positive impact on business, retail and tourism, by improving the public realm in a city centre site, increasing the space available to people and activity, improving the quality of the experience of visiting Dublin and improving convenient walking access to economic, commercial, tourism, educational and social facilities in the area. The residual impact of the Proposed Project is considered to be significant and positive in the long-term.

The re-location of the taxi ranks will not have a negative residual impact on that socio-economic group. The implementation of the Proposed Project will improve the permeability of the city centre areas, and support the improved growth and integration of the city core. It is expected that footfall will grow significantly in College Green itself as well as Westmoreland Street, Dame Street and Temple Bar. This will have a significant positive impact on trade and business. The considered review of bus route operations will address any potential negative impacts arising from change in routes and inconvenience for customers. The introduction of Luas stops beside College Green are likely to focus the new Civic Plaza the activity and interaction hub for the city centre. While bus stops are being displaced, the careful management of this process will ensure that new the new routes and stops remain with the 10 minute catchment area (and generally 5 minute catchment). The potential air quality and noise impacts are addressed in Chapters 7 and 8 respectively.

16.7 Difficulties Encountered

Proposals for the Proposed Project are made within a dynamic city centre environment, with a broad range of developments and interventions to public space. This includes Luas Cross City construction (and operation) and access arrangements to the city centre generally. The College Green Project is therefore a part of continual city change rather than a cause of it. This presents difficulties in extracting precise socio-economic impacts from the Proposed Project on its own, extracted from cumulative city wide change and progress.

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