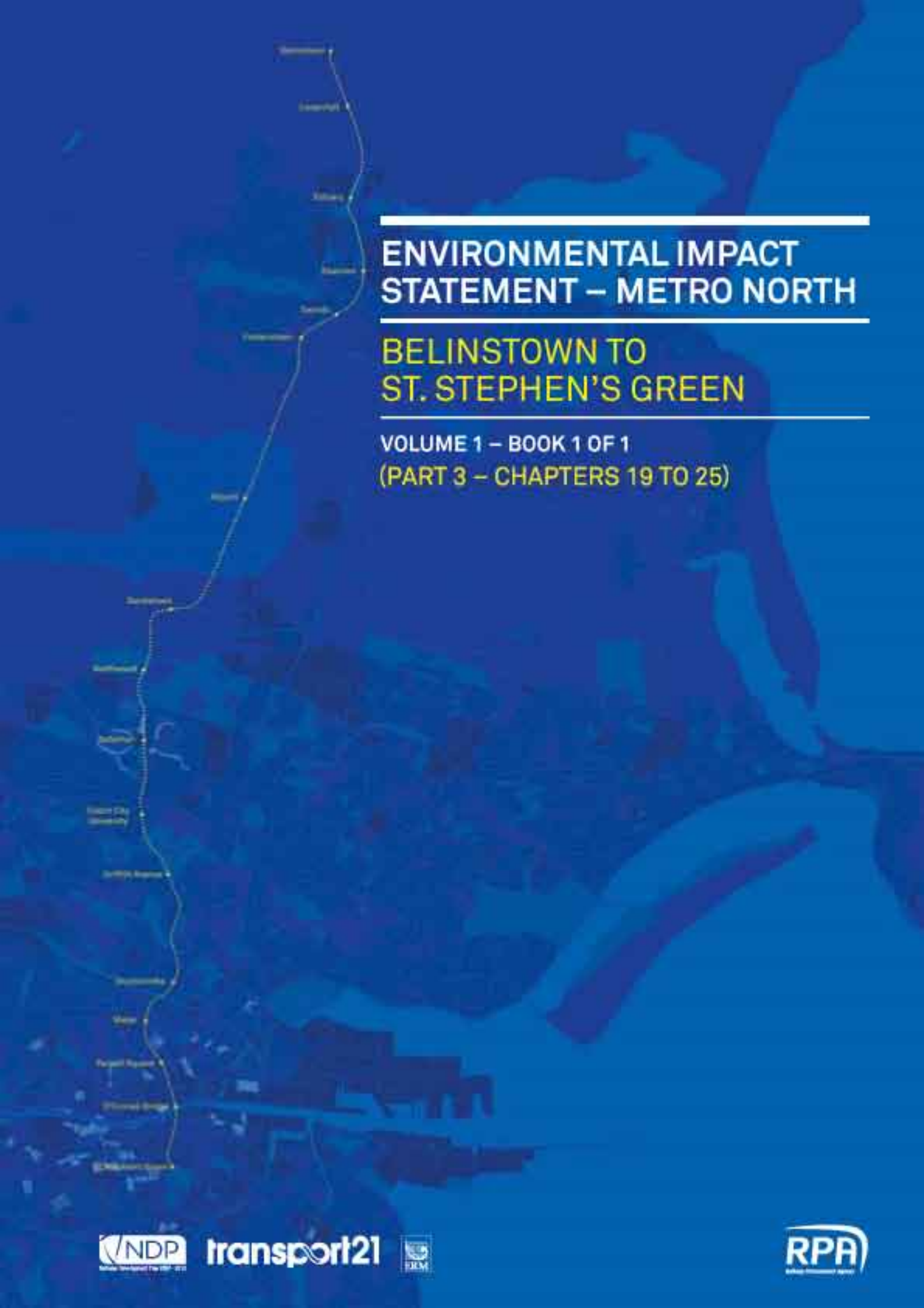


ENVIRONMENTAL IMPACT STATEMENT – METRO NORTH

BELINSTOWN TO ST. STEPHEN'S GREEN

VOLUME 1 – BOOK 1 OF 1
(PART 3 – CHAPTERS 19 TO 25)

NDP transport21 RPA

19 SURFACE WATER

Section 39(2)(b) of the Railway Infrastructure Act, 2001 specifies that an environmental impact statement must contain a description of the aspects of the environment that are likely to be significantly affected by the proposed scheme. This chapter has been prepared in order to fulfil this requirement in respect of surface water.

19.1 INTRODUCTION

This chapter describes and evaluates the existing surface water environment in the area of the proposed scheme.

Prior to preparing this chapter, a number of national, regional and local planning and policy documents were reviewed to ascertain if the documents contain any plans, policies or objectives relating to surface water. The following documents have been reviewed:

- Fingal County Development Plan 2005-2011;
- Airport Local Area Plan (2006);
- Dublin City Development Plan 2005-2011;
- Masterplan for the new Ballymun, (1998 (as amended)).

The results of this review are detailed in the Planning and Policy Context chapter of this EIS (Volume 1, Chapter 4).

19.2 BASELINE CATEGORISATION METHODOLOGY

19.2.1 Introduction

The section presents the methodology used in assessing the baseline surface water environment. As well as considering the relevant EPA guidance with respect to EISs (EPA, 2002, 2003), the scope and methodology for the baseline assessment has been devised with reference to the following guidelines:

- Guidelines for the Crossing of Watercourses During the Construction of National Road Schemes (Natura and the NRA, 2005);
- Design Manual for Roads and Bridges (UK Highways Authority, 1997 (with ongoing updates));
- Geology in Environmental Impact Statements – A Guide (Institute of Geologists of Ireland, 2002);
- Greater Dublin Strategic Drainage Study, (National Development Plan and Dublin Drainage, 2005).

19.2.2 Study area

The geographical scope of the assessment comprises any watercourses and floodplains that are intersected by the alignment or lands five hundred metres to either side of the central line of the proposed alignment.

19.2.3 Baseline data

An extensive desktop review of available data has been undertaken in order to establish the baseline surface water environment. In addition, chemical and biological water sampling of surface water courses along the proposed route corridor was undertaken in April 2008. The data that was used to compile the baseline environment is detailed in Table 19.1. The flood assessment has been carried out on a qualitative basis for this project because potential flood zones have not yet been defined in Ireland. This assessment was carried out by means of a site walkover, a visual inspection of the area around relevant watercourses and a review of archival material on previous flooding events.

Table 19.1 Baseline data

Information required and survey criteria	Data source
A description of the surface water quality of watercourses within the study area. - Chemical water quality indicators. - Biological water quality indicators (Q Values and Water Quality Classes) based on the composition of the macroinvertebrate communities which inhabit the substratum of rivers and streams.	- Water Quality Database for Ireland (EPA, 2007). - Water Quality in Ireland, 2001-2003, (EPA, 2005). - Dublin Airport, Terminal 2 EIS (Ove Arup & Partners International Ltd, 2006). - Chemical and biological water quality sampling carried out in September/October 2007 and April 2008
Description of known flooding events within the study area. - Visual and anecdotal evidence including archival material relating to previous flooding events within the study area.	- Office of Public Works (OPW) national flood hazard mapping website, www.floodmaps.ie - Greater Dublin Strategic Drainage Study, (2005). - River Tolka Flood Study, OPW, (2002). - Consultation with OPW (2007).

With respect to data limitations, it should be noted that there is little data available on flooding within the study area, specifically with respect to predicted flood levels for rivers. A detailed study of the Tolka River has been completed (OPW, 2002), with details of predicted flood levels. Predicted data is also available for the River Liffey (GDSDS, 2005) but predictive studies have yet to be completed for the other rivers within the study area.

19.2.4 Baseline categorisation criteria

Characterisation is based on the identification of features of the baseline environment that are relevant and can be assigned a functional value. The functional value of each of these features is determined with reference to three factors: the importance of the feature, the sensitivity of the feature and the existing adverse effects affecting the feature. The assignment of functional values also takes into account technical standards and relevant legislation.

The individual functional values are then used to assign a functional value to specific areas within the study area depending on the features that are present in those areas. When an area contains a number of features to which a range of functional values have been assigned, the highest of the functional values will be assigned to the overall area.

19.2.4.1 Importance

Surface water acts as a resource for ecological communities and is an essential requirement for human life. Floodplains around watercourses can also act as a reserve or store for floodwaters during times of significant flooding and this can prevent the floodwater from impacting on more populated areas downstream. Table 19.2 indicates how the importance of surface water resources is evaluated using specific criteria that have been defined for the purpose of this baseline assessment.

19.2.4.2 Sensitivity

Watercourses are sensitive to culverting, which can change flow conditions in a watercourse. Watercourses are also sensitive to discharges of surface water run off which may contain polluting substances that can have a negative impact on the status of a watercourse as a salmonid river or stream. Watercourses are also sensitive to deepening, realignment or diversion of their natural channel. These factors were taken into account when defining the criteria to be used to assign a functional value to the baseline environment.

19.2.4.3 Existing adverse effects

Existing pollution has an impact on the functional value of surface watercourses and has been taken into account when defining the functional value for each individual watercourse. The existing adverse affects are reflected in the EPA Q-Value, which describes the biological status of the watercourse. The higher the pollution level in a watercourse, the lower the Q-value. The Q-value reflects impacts from surface water run-off (including run-off from agricultural land which may contain nutrients and run-off from roads and buildings which may contain solids, hydrocarbons and heavy metals). EPA monitoring stations along the Broad Meadow, Ward, Liffey, Mayne, Santry River and the Tolka River indicate moderate to serious pollution. However, these stations are located outside the route corridor.

19.2.4.4 Functional value

The functional value of the baseline environment is evaluated by means of a number of specific criteria to take into account the importance and sensitivity of different features of the environment. The criteria that have been defined are described in Table 19.2.

Grab sampling of each watercourse along the route of the proposed scheme was carried out and chemical analysis completed. The results are discussed in Section 19.3, and a comparison with relevant water quality standards is provided. However, the chemical data has not been used in direct calculation of the functional values for the baseline quality of each watercourse assessed (the monitoring locations). This is because the composition of macroinvertebrate communities at the monitoring location and the biological quality (expressed as Q Value), is dependant on chemical quality and provides a more representative, long-term indication of water quality. Biological sampling indicates the quality of a watercourse over a period of time and chemical sampling indicates the likely cause of any pollution present.

The results of the baseline categorisation in terms of functional value are shown in Table 19.5 and illustrated on maps (Baseline Surface Water and Groundwater) included in Volume 3, Book 1 of 2 of this EIS.

Table 19.2 Criteria for baseline categorisation

Criteria	Functional value
- Areas of watercourses with Q-values of Q5 and/or Q4-5 or Q4, which are classified by the EPA as 'Class A - Unpolluted' - Watercourses with flood plains that have significant storage capacity for potential floodwaters	Very high (V)
- Areas of watercourses with Q-values of Q3-4, which are classified by the EPA as 'Class B -Slightly Polluted' - Watercourses with flood plains that have significant storage capacity for potential floodwaters	High (IV)
- Areas of watercourses with Q-values of Q3 or Q2-3, which are classified by the EPA as 'Class C - Moderately Polluted' - Watercourses with flood plains that have significant storage capacity for potential floodwaters	Medium (III)
- Watercourses with Q-values of Q2 or Q1-2 or Q1, which are classified by the EPA as 'Class D - Seriously Polluted' - Watercourses with flood plains that have no storage capacity for potential floodwaters	Low (II)
- Not applicable	Very low (I)

19.3 DESCRIPTION AND CATEGORISATION OF THE BASELINE ENVIRONMENT

19.3.1 Description of the baseline environment

The study area is located within the Eastern River Basin District, as defined under the EU Water Framework Directive (2000/60EC). There are a number of watercourses within the study area:

- Broad Meadow and Ward Rivers;
- Sluice River and tributaries;
- River Mayne;
- Santry River;
- River Tolka and its tributaries;
- Royal Canal;
- River Liffey;
- Ponds at St. Stephen's Green (which is fed by the Grand Canal although the Grand Canal is outside of the study area);
- Unnamed streams and ditches along the alignment;

The watercourses along the alignment of the scheme are characterised in terms of biological water quality, chemical water quality and flooding characteristics. The criteria for biological and chemical water quality are detailed in Annex F, Volume 3, Book 2 of 2.

The Office of Public Works (OPW) Flood Hazard Database (2007) and the Greater Dublin Strategic Drainage Study (2005) were used in order to obtain information on historical flooding events along the proposed scheme. This information was used to establish the current baseline conditions in terms of what sections of the proposed scheme are liable to flood.

Following the completion of the desktop review, consultation, a walkover of the proposed route corridor, and chemical and biological water quality sampling the key findings were as follows:

19.3.1.1 Ditches to the north of Broad Meadow and Ward Rivers

A number of ditches which contain standing water were noted to the north of the Broad Meadow and Ward Rivers. These form part of a field drainage system which drains the land within the study area and the proposed depot site in Belinstown. This drainage system generally drains south towards the Ward River. The water in these ditches is generally stagnant and the ditches are heavily overgrown and dry in places.

The results of the analysis of the physical and chemical properties of surface water samples taken from ditches at the proposed Belinstown Depot site and are contained in Table 19.3 (the concentrations of Orthophosphate as P have been calculated). Comparison of these results with relevant standards indicates the following:

- The dissolved oxygen concentrations (at 3.8 mg/l, 3.9 mg/l, 3.5 mg/l and 4.8 mg/l for samples SW1, SW2, SW3 and SW4 respectively) fail to meet the lower limit (grab sample) trigger action value of 9 mg/l recommended in the EPA's Proposed Water Quality Standards.
- The total suspended solids concentration of SW4 (at 58 mg/l) exceeds the limit value for A1 waters set in the Surface Water Regulations 1989 (of 50mg/l). It also exceeds the guide value of <25mg/l set in the Freshwater Fish Directive (78/659/EEC) and the mandatory value of <25mg/l set in the Salmonid Waters Regulations 1988.
- The orthophosphate concentrations of SW1 (444 µg/l as P), SW2 (179 µg/l as P) and SW3 (160 µg/l as P) exceed the standard set in the Phosphorus Regulations, 1998 for all classes of rivers (i.e. unpolluted, slightly polluted, moderately polluted and seriously polluted). (The limit value for Molybdate Reactive Phosphate median concentration depends on the class of river.) The orthophosphate concentration of SW4 (at 16 µg/l as P) exceeds the standard set in the Phosphorus Regulations, 1998 for rivers of a biological quality rating/Q index of 5.
- The nitrate concentrations of SW2 (of 146.6 mg/l) exceeds the limit value set in the Surface Water Regulations 1989 of 50 mg/l for A1, A2 and A3 waters. It also exceeds the mandatory concentration of 50 mg/l set in the drinking water directive.
- The concentrations of ammoniacal nitrogen (as N) of SW1, SW2 and SW3 (0.3 mg/l, 18 mg/l and 0.5 mg/l respectively) exceed the threshold set for A1 waters (of 0.16 mg/l) in the Surface Water Regulations 1989. SW2 exceeds the threshold set for A2 and A3 waters. The ammoniacal nitrogen concentration of SW2 exceeds the mandatory (and guideline) values set in the Freshwater Fish Directive. SW1 and SW3 also exceed the Freshwater Fish Directive guideline values.
- The concentrations of Kjeldahl nitrogen in SW1 (2 mg/l), SW2 (16 mg/l) and SW3 (2 mg/l) exceed the threshold set for A1 waters (of 1 mg/l) in the Surface Water Regulations 1989. SW2 exceeds the threshold set for A2 and A3 waters.

The ditches at Belinstown Depot and other ditches north of the Broad Meadow River along the proposed scheme cannot be categorised in terms of functional value because biological water quality and other data for these ditches is not available.

19.3.1.2 Broad Meadow and Ward River confluence

The Broad Meadow River flows into the Broad Meadow Estuary at Swords. The surface catchment which the Broad Meadow is part of, is drained by the rivers Nanny and Devlin and by all of the streams that enter tidal water between Mornington Point and Sea Mount, Co. Dublin. According to EPA biological (Q Value) monitoring, sensitive species were not observed at any of the locations surveyed on the Broad Meadow in 2005 indicating significant water quality degradation over its course. The Ward River is a tributary of the Broad Meadow and flows into the Broad Meadow Estuary at Swords. During the latest EPA monitoring event (2005) the Q Values at the Ward River range from 2 at Coolatrath Bridge to 2-3 at Killeek Bridge and the bridge downstream of Scotchstone Bridge.

The proposed alignment crosses the Broad Meadow and Ward Rivers at Lissenhall Bridge and Balheary Bridge.

Biological water quality sampling carried out by AWN on the Broad Meadow River in the townland of Balheary Demense in September/October 2007 indicated a Q Value of 3 at this location (Class C, moderately polluted). There was an absence of Group A (sensitive) and Group B (less sensitive) taxa. Group C (tolerant) taxa were dominant with a scarce presence of Group D (very tolerant) taxa.

Similarly, a sample of the Ward River taken upstream of the confluence with the Broad Meadow also indicated a Q Value of 3 (Class C, moderately polluted). Tolerant species were dominant with some less sensitive species present.

The results of chemical grab sampling are contained in Table 19.4. These results indicate that the Broad Meadow River is classified as a Class A3 river at the sampling location. The measured Kjeldahl Nitrogen level is <1 mg/l.

In comparing the results of chemical analysis from a grab-sample taken of the Broad Meadow River with relevant standards as set out in Annex F (Volume 3, Book 2 of 2), the following parameters conform: temperature, pH, conductivity, percentage oxygen saturation, BOD, total suspended solids, nitrate, nitrite and Kjeldahl Nitrogen.

The orthophosphate concentration (111 µg/l) exceeds the standard set out in the Phosphorus Regulations, 1998. The Broad Meadow River is a moderately polluted river with a Q value of 3, and a Molybdate-Reactive Phosphate (MRP) limit value (median concentration) of 50 µg/l of P. MRP is a precisely-defined unit and is broadly equivalent to 'orthophosphate' as determined using the ascorbic acid/molybdate chlorimetric procedure.

Chemical analysis of a water sample from the Ward River indicates that it is categorised as a Class A2 river at the sampling location. The measured Kjeldahl Nitrogen level is 2 mg/l (see Table 19.4).

Comparison of measured parameters with relevant standards as set out in Annex F (Volume 3, Book 2 of 2) indicates that temperature, pH, percentage oxygen saturation, conductivity, BOD, total suspended solids, orthophosphate, nitrate, nitrite and Kjeldahl Nitrogen are compliant.

The dissolved oxygen (at 5.8 mg/l) fails to meet the lower limit (grab sample) trigger action value of 9 mg/ recommended in the EPA's Proposed Water Quality Standards. However, the percentage oxygen saturation is acceptable at 82.2%.

The confluence of the Broad Meadow and Ward Rivers is located downstream of the proposed point at which the metro alignment crosses the river close to Lissenhall. According to the OPW, the channels of both rivers have been improved to reduce flooding risk.

19.3.1.3 Ditches which cross R132 between Estuary Roundabout and the River Mayne

There are a number of drainage ditches piped under the R132 which flow in an easterly direction taking surface water drainage from Swords. These ditches are generally dry except during periods of high rainfall. The ditches in this area cannot be categorised in terms of functional value because water quality and other data for these ditches are not available.

19.3.1.4 Sluice River and tributaries

The Sluice River flows eastwards towards the Baldoyle Estuary and enters the sea at Portmarnock. Tributaries of the Sluice River include the Forrest Little Stream, Wad Stream and Kealy's Stream. All of these streams occur within the grounds of Dublin Airport. The Sluice River is not currently monitored by the EPA. During the consultation process for the Dublin Airport Terminal 2 EIS, the Eastern Regional Fisheries Board identified the Sluice River as a salmonid river system (Ove Arup & Partners, 2006). In order to be classified as a salmonid river, the EPA quality class would need to be Class B (slightly polluted) to Class A (unpolluted). As part of the baseline monitoring process for the Dublin Airport EIS, Kealy's Stream was evaluated as having a Quality Class of C (moderately polluted).

The results of biological water quality sampling carried out by AWN on the Sluice River in the townland of Greenwood in September/October 2007 indicated a Q Value of 2-3 (Class C, moderately polluted) at this location. Group C (tolerant) and Group D (very tolerant) taxa were dominant.

The proposed alignment does not cross the Sluice River but it does cross a number of heavily overgrown field drains which contain stagnant water in the vicinity of the playing fields to the south of Dublin Airport. All of the drainage from this area drains to the Sluice River.

There is anecdotal evidence from local residents that flooding has occurred in the past along some sections of the Sluice River but no quantitative flood data exists. Consultation with the OPW has confirmed that the Sluice River can be subject to localised flooding.

19.3.1.5 River Mayne

The River Mayne rises near Ballystruan south of Dublin Airport. It flows in an easterly direction through mainly agricultural and recreational land before discharging to the sea at Mayne Bridge between Baldoyle and Portmarnock. The proposed scheme crosses the River Mayne to the south of Dublin Airport. It also crosses a stagnant heavily overgrown ditch which contains some standing water.

At Balgriffin, the River Mayne is joined by its tributary, the Cuckoo Stream. From Swords Road to Malahide Road, the River Mayne flows approximately parallel to the M50 motorway. Wellfield Bridge is the only monitoring station on the River Mayne. According to the most recent results obtained during the EPA monitoring event in 2005, the River Mayne is classified as Class C river (moderately polluted).

Biological water quality sampling carried out by AWN on the Mayne River in the townland of Clonshaugh in September/October 2007 resulted in a Q Value of 2-3 (Class C, moderately polluted). Group D (very tolerant) taxa were dominant together with some Group E (most tolerant) and several Group B (less sensitive) taxa.

Chemical analysis of a water sample from the Mayne River indicates that it is categorised as a Class A2 river at the sampling location (see Table 19.4). The measured Kjeldahl Nitrogen level is 2 mg/l.

Comparison of measured parameters with relevant standards as set out in Annex F (Volume 3, Book 2 of 2) indicates that temperature, pH, percentage oxygen saturation, conductivity, BOD, total suspended solids, orthophosphate, nitrate, nitrite and Kjeldahl Nitrogen are compliant.

The concentration of dissolved oxygen (at 4.7 mg/l) is less than the lower limit (grab sample) trigger action value of 9 mg/ recommended in the EPA's Proposed Water Quality Standards. However, the percentage oxygen saturation is acceptable at 92.3%.

According to OPW data, the River Mayne has a small catchment, is subject to widely varying flows, can run very low in periods of dry weather and is subject to localised flooding.

19.3.1.6 Santry River

The Santry River rises in Harristown. It flows in a south-easterly direction through Sillogue Golf Course before being culverted beneath the M50 to the immediate west of the Ballymun interchange. It continues in a south easterly direction through Santry Lodge and flows through Coolock and Raheny before discharging to Dublin Bay near Watermill Road. EPA monitoring of the river in recent years has noted that some improvement was apparent at Clonshaugh where serious pollution had abated. According to the most recent EPA monitoring event in 2005, the Q Values at the Santry River was Q2-3 at Clonshaugh Road Bridge.

The results of biological water quality sampling carried out by AWN on the Santry River in the townland of Greenwood in September/October 2007 indicated a Q Value of 1-2 (Class D, seriously polluted) at this location. Group E (most tolerant) taxa were dominant together with the presence of some Group C (tolerant) taxa.

Chemical analysis of a water sample from the Santry River indicates that it is categorised as a Class A1 river at the sampling location. See Table 19.4 for chemical sampling results.

In comparing the results of chemical analysis from a grab-sample taken of the Santry River with relevant standards as set out in Annex F (Volume 3, Book 2 of 2) the following parameters conform: temperature, pH, conductivity, percentage oxygen saturation, BOD, total suspended solids, orthophosphate, nitrate, nitrite and Kjeldahl Nitrogen.

The dissolved oxygen level (at 5.1 mg/l) fails to meet the lower limit (grab sample) trigger action value of 9 mg/ recommended in the EPA's Proposed Water Quality Standards. However, the percentage oxygen saturation is acceptable at 86.4%.

According to the OPW Flood Hazard Database, flooding was noted in the catchment of the Santry River on the 14th November 2002, 20th-21st October 2002 and the 28th October 2004. This information was also listed in an EPA report in 2005. The EPA monitoring station is located in Coolock, outside the study area.

19.3.1.7 River Tolka

The River Tolka rises in Co. Meath in an area 12km northwest of Dunboyne. It flows in a southeasterly direction along with a number of tributaries, through agricultural land until it reaches the Fingal County Council boundary at Clonee. From Clonee, it flows east/southeast through Mulhuddart and Blanchardstown into Finglas. It flows through the urban areas of the Tolka Valley Park, Botanic Gardens, Griffith Park and Fairview Park before discharging to the sea at the River Tolka Estuary. According to recent EPA monitoring, the Tolka has improved to some extent in the Black Bull area since 2002 but there is still evidence of considerable eutrophication in this area and also downstream at Loughsallagh Bridge in Dunboyne. The river has been assessed as moderately polluted (Class C) at Mulhuddart, Abbotstown and Finglas.

The River Tolka is classified as a Class A1 river at the sampling location. See Table 19.4 for the results of chemical analysis carried out on the grab sample.

Comparison of measured parameters with relevant standards as set out in Annex F (Volume 3, Book 2 of 2) indicates that temperature, pH, percentage oxygen saturation, conductivity, BOD, total suspended solids, nitrate, nitrite and Kjeldahl Nitrogen are compliant. The orthophosphate level (70 µg/l) is just within the standard set out in the Phosphorus Regulations, 1998. The Tolka is a moderately polluted river with a Q value of 2 – 3, and a MRP limit value (median concentration) of 70 µg/l of P.

The dissolved oxygen concentration (at 5.4 mg/l) is less than the lower limit (grab sample) trigger action value of 9 mg/ recommended in the EPA's Proposed Water Quality Standards. However, the percentage oxygen saturation is acceptable at 80%.

A flood study report was commissioned by Dublin City Council, in association with Fingal County Council, Meath County Council and the OPW in 2002. This report has since been incorporated into the Greater Dublin Strategic Drainage Study (2005). Historically, a major flood occurred on the River Tolka in December 1954. The three other major floods for which records are available were that of 28th of October 1880, 6th of November 2000 and November 2002. The principal areas affected by the flood in November 2002 were the areas to both sides of the river between Glasnevin Bridge and Luke Kelly Bridge. These areas are just outside the study area. Other areas affected included Botanic Avenue and Richmond Road.

19.3.1.8 Royal Canal

The Royal Canal is a man-made waterway between the River Shannon in Longford and the River Liffey in Dublin. It is now navigable between the River Shannon and Dublin and is an important tourist attraction and amenity area. The canal is also a proposed National Heritage Area (pNHA). As part of the EPA monitoring programme, the section was monitored from Mullingar in Co. Westmeath to Dublin. According to the EPA's 'Report on Water Quality 2001-2003', good water quality has been recorded during all sampling periods with no breaches of nutrient or faecal coliform threshold limits at any of the sampling sites (EPA, 2005).

Chemical analysis of a water sample from the Royal Canal indicates that it is categorised as a Class A1 watercourse at the sampling location.

Comparison of measured parameters with relevant standards as set out in Annex F (Volume 3, Book 2 of 2) indicates that temperature, pH, percentage oxygen saturation, conductivity, BOD, total suspended solids, orthophosphate, nitrate, nitrite and Kjeldahl Nitrogen are compliant.

The concentration of dissolved oxygen (at 5.5 mg/l) fails to meet the lower limit (grab sample) trigger action value of 9 mg/ recommended in the EPA's Proposed Water Quality Standards. However, the percentage oxygen saturation is acceptable at 74.7%.

Historical records from the OPW do not provide any evidence that flooding has ever occurred on the Royal Canal.

19.3.1.9 River Liffey

The River Liffey rises in the Wicklow Mountains approximately 20km to the south of Dublin. It flows in an arc to the west of Naas and discharges into Dublin Bay at Dublin Port. According to EPA monitoring, the water quality in the River Liffey in June 2005 was similar to 2002 i.e. generally satisfactory. However, the reach from Leixlip to Lucan and further downstream is moderately polluted and the source of this pollution is suspected to be sewage and water treatment plant effluent. According to the EPA, the upper reaches have satisfactory water quality, despite the fact that these areas are stressed by forestry, agriculture and quarrying, which is reflected by the reduced quality recorded at Ballysmuttan and Ballyward Bridges. The river from Ballymore Eustace to Connell Ford is quite heavily silted due to pollution. According to the EPA, typical lake effects (slow flow and high water temperatures during summer months), has also contributed to the reduced water quality in this stretch.

A marked deterioration has been recorded upstream of Kilcullen where, according to the EPA, 'luxuriant algal crops and a dirty substratum' indicate low water quality. Weed growth has increased considerably at Castlekeely Ford below Osberstown since 2002 but according to the EPA the present conditions remain satisfactory (Q4). Abundant weed-growth at Clane and algal development at Straffan indicate that eutrophication has occurred at these locations. According to the EPA, ecological disruption due to heavy siltation continues to occur but there is some indication of recovery at Lucan. However, further improvement is required here before a satisfactory standard of water quality can be achieved (EPA, 2005). The EPA have classified the River Liffey as moderately polluted (Class C) at Lucan.

The River Liffey is classified as a Class A2 river at the sampling location, due to Kjeldahl Nitrogen level of 2 mg/l (all other relevant parameters meet the standards of a Class A1 river).

In comparing the results of chemical analysis from a grab-sample taken of the River Liffey with relevant standards as set out in Annex F (Volume 3, Book 2 of 2), the following parameters conform: temperature, pH, conductivity, percentage oxygen saturation, BOD, total suspended solids and nitrate. The orthophosphate level (70 µg/l) is just within the standard set out in S.I. No. 258/1998 – Local Government (Water Pollution) Act, 1977 (Water Quality Standards for Phosphorus) Regulations, 1998 (Phosphorus Regulations, 1998). These regulations stipulate a median concentration for MRP of 70 µg/l of P in rivers with a Q value of 2 – 3.

The dissolved oxygen level (at 5.2 mg/l) is less than the lower limit (grab sample) level recommended in the EPA's Proposed Water Quality Standards for Surface Water Classification (Water Quality Standards) which recommend a lower limit trigger action value of 9 mg/l. However, the percentage oxygen saturation is acceptable at 89.3%. Trigger Action Values (TAV) are numerical values proposed in some cases for certain parameters (e.g. phosphorus), usually in parallel with an environmental quality standard (EQS), and which provides in these cases amore stringent non-binding target than the EQS, e.g. in the case of a water bodies thought to be especially sensitive to that parameter. TAVs are also used in other situations such as in the case of the parameter 'dissolved oxygen' where 24-hour continuous monitoring is required to establish compliance or otherwise with the EQS in the event that the TAV value based on 'grab-sampling' is breached.

The Liffey River, while not listed in the Salmonid Waters Regulations, supports a salmonid population, and as such the nitrite level of 0.09 mg/l (as NO_2) exceeds the standard for salmonid waters set out in the Salmonid Waters Regulations, 1988 of <0.05 mg/l.

Historical records from the OPW do not provide any evidence that any area within the study area has been affected in the past by flooding of the River Liffey. Flooding events have been recorded by the OPW on the Camac River (a tributary of the River Liffey) at Islandbridge and Kilmainham but these areas are located outside the study area. Historical data also indicates that the River Liffey flooded at Chapelizod. This area is also located outside the study area.

19.3.1.10 St. Stephen's Green Ponds

The ponds in St. Stephen's Green are fed from a 300mm diameter cast iron watermain which originates in the Portobello Basin of the Grand Canal. No details are available for water quality in the ponds at St. Stephen's Green, but given the virtually stagnant conditions, the shallow depth of water and the significant waterfowl population (mostly mallard duck), the water is likely to have high bacterial and organic loads from faecal material. The ponds are therefore described as artificial or highly modified habitats with low species diversity and low wildlife value and no current or significant potential fisheries value.

19.3.1.11 Grand Canal

The Grand Canal is an 82 mile long man-made waterway, the main line of which is between the River Shannon at Shannon Harbour in Co. Offaly and the River Liffey in Dublin. There are three branch lines: the Barrow Line (28 miles) which runs south from Lowtown in County Kildare to join the River Barrow in Athy, the Naas Branch which is navigable to Naas Harbour (2 miles) and the Kilbeggan Branch which has not yet been restored. Water quality monitoring of the Grand Canal is carried out by the Central Fisheries Board. According to the EPA Report on Water Quality in Ireland, 2001 – 2003, water quality was generally satisfactory in the Lowtown to Dublin section of the Grand Canal.

Heavy rainfall led to flooding in multiple locations in south Dublin City in June 1963. A number of defence assets have since been put in place. No flood events on the Grand Canal in the vicinity of St. Stephen's Green and the proposed route corridor have been recorded by the OPW.

Table 19.3 Surface Water Samples of Ditches at Belinstown Depot Site: Physical and Chemical Parameters Analysed and Results Received from the RPA

		Sampling Location			
Chemical Sampling Parameter	Units	SW1	SW2	SW3	SW4
Temperature	oC	10.5	9.0	10.9	10.7
pH	pH units	7.96	8.12	8.10	7.71
Dissolved Oxygen	mg/l	3.8	3.9	3.5	4.8
Conductivity	mS/cm	0.794	1.082	0.725	0.806
Biological Oxygen Demand	mg/l	<2	<2	<2	<2
Chemical Oxygen Demand	mg/l	26	<15	<15	<15
Total Suspended Solids	mg/l	<10	22	<10	58
Orthophosphate as PO_4	mg/l	1.36	0.55	0.49	0.05
Orthophosphate as P	µg/l	444	179	160	16
Nitrate as NO_3	mg/l	4.8	146.6	12.0	31.8
Total Oxidised Nitrogen as N	mg/l	1.2	34.4	2.8	7.3
Total Nitrogen as N	mg/l	4	50	4	9
Ammoniacal Nitrogen as N	mg/l	0.3	18	0.5	<0.2
Kjeldahl Nitrogen	mg/l	2	16	2	1

Table 19.4 Surface Water Samples: Physical and Chemical Parameters Analysed and Results

		River							
Chemical Sampling Parameter	Units	Liffey	Royal Canal	Tolka	Santry	Mayne	Sluice	Ward	Broad Meadow
Temperature	°C	9.7	10.6	9.9	11.1	13.5	14.0	10.2	9.8
pH	pH units	7.55	7.63	7.48	7.6	7.72	6.78	7.31	7.22
Oxygen Saturation	%	89.3	74.7	80.0	86.4	92.3	78.6	82.2	87.5
Dissolved Oxygen	mg/l	5.2	5.5	5.4	5.1	4.7	5.4	5.8	5.9
Conductivity	µS/cm	564	568	561	686	565	566	527	524
Biological Oxygen Demand	mg/l	2	2	2	<2	2	<2	5	<2
Total Suspended Solids	mg/l	<10	<10	<10	11	<10	<10	<10	<10
Total Phosphorous	mg/l	0.16	0.09	0.28	0.13	0.06	0.24	0.16	0.19
Orthophosphate as PO_4	mg/l	0.19	0.17	0.19	0.17	0.12	0.43	0.08	0.34
Orthophosphate as P	µg/l	70	55	70	55	39	140	26	111
Nitrate as NO_3	mg/l	10.4	0.8	7.2	9.0	6.0	7.1	7.2	13.2
Nitrite as NO_2	mg/l	0.09	0.21	0.18	0.14	0.13	0.13	0.27	0.18
Total Nitrogen as N	mg/l	4	1	3	3	3	5	4	4
Ammoniacal Nitrogen as N	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Kjeldahl Nitrogen	mg/l	2	<1	<1	1	2	3	2	<1
Water classification*	-	A2	A1	A1	A1	A2	A3	A2	A1

*Water classification as per the water categories in S.I. No. 295/1989 – European Communities (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations, 1989–

See Annex F, Volume 3, Book 2 of 2.

19.3.2 Categorisation of the baseline environment

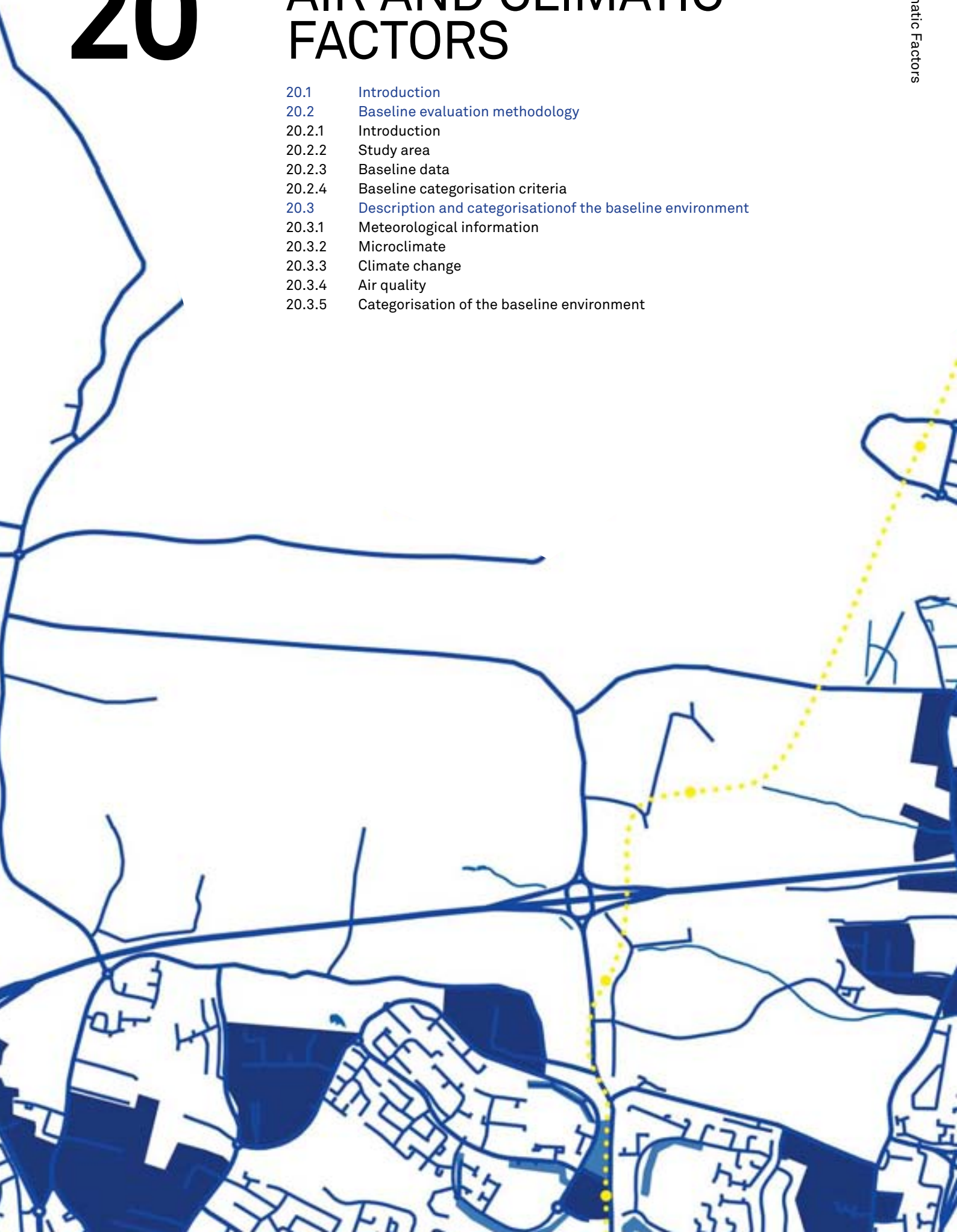
The results of the baseline categorisation are summarised in Table 19.5.

Table 19.5 Baseline categorisation

Area	Watercourse	Summary description	Functional value
MN101	Broad Meadow River and Ward River	- The rivers are classed as moderately polluted and suffer from a degree of localised flooding. Some fishing activity takes place in the upstream reaches of the Ward River. - Historically flooding occurred in the area. Recently the channels of both rivers have been improved to reduce flooding risk.	Medium (III)
MN102	Sluice River and tributaries	- These streams drain Dublin Airport and the Swords Urban area and both are generally of poor quality. Some local claims of flooding along sections of the stream have been noted but little flood or water quality data exists (however there is some water quality monitoring data from work carried out by Dublin Airport). These streams are considered to be of Medium functional value. - These streams can be subject to localised flooding according to the OPW.	Medium (III)
MN103	River Mayne	- Wellfield Bridge, the only monitoring station on the River Mayne has shown the river to be to be moderately polluted during the most recent monitoring event (2005). - The Mayne River has a small catchment and is subject to widely varying flows and can run very low in periods of dry weather. Some localised flooding can occur in areas according to the OPW.	Medium (III)
MN104	Santry River	- The Santry River is classed as seriously polluted along much of its route, and again suffers from urban drainage discharges. The Santry River has a small catchment and is subject to widely varying flows and can run very low in periods of dry weather, the flow regime and poor water quality mean that it is not a viable fishery. - No significant flooding issues have been reported for the river.	Low (II)

Area	Watercourse	Summary description	Functional value
MN106	River Tolka	- The River Tolka is moderately polluted. This river discharges into the Tolka Estuary and Dublin Bay, which is both and SPA and SAC and therefore water quality impacts from the Tolka could have knock-on impacts on the water quality in the SPA and SAC. - A major flood study has been undertaken for the River Tolka. Historically Flooding has occurred in different areas in close proximity to the route corridor.	Medium (III)
	Royal Canal	- The water quality of the canal is generally believed to be good, although little data is available on water quality in the Canal. - Historical data from the OPW has no information of flooding on the Royal Canal.	High (IV)
MN107	River Liffey	- The Liffey is classed as slightly polluted in the city centre area but the quality of the river has improved significantly in recent years. The Liffey is a salmonid river and therefore the route through the City, while the water may be slightly polluted, is a transit route for migratory salmon and therefore all efforts must be made to prevent negative water quality impacts. - OPW flooding data has shown that areas outside the route corridor are liable to flood (Islandbridge and Kilmainham). No areas within the route corridor recorded any historical floods.	Medium (III)

20 AIR AND CLIMATIC FACTORS



Section 39(2)(b) of the Railway Infrastructure Act, 2001 specifies that an environmental impact statement must contain a description of the aspects of the environment that are likely to be significantly affected by the proposed scheme. This chapter has been prepared in order to fulfil this requirement in respect of air and climatic factors.

20.1 INTRODUCTION

This chapter describes and evaluates the existing environment with respect to the factors that affect air quality and microclimate in the area of the proposed scheme, together with emission of the greenhouse gas, carbon dioxide. Meteorological conditions in the area of the scheme are also discussed in brief in this chapter because conditions such as wind direction and precipitation may have the potential to impact upon the dispersion of pollution.

Prior to compiling this chapter, relevant planning and policy documents were reviewed to ascertain if they contain any policies or objectives relating to air quality and microclimate. The following documents have been reviewed:

- Fingal County Development Plan 2005-2011;
- Airport Local Area Plan (2006);
- Dublin City Development Plan 2005-2011;
- Masterplan for the new Ballymun, (1998, (as amended)).

The results of this review are detailed in the Planning and Policy Context chapter of this EIS (Volume 1, Chapter 4).

20.2 BASELINE EVALUATION METHODOLOGY

20.2.1 Introduction

The proposed scheme has the potential to cause changes to traffic flows on the road network. Some of these changes will be very small while others may be of significance. The alignment of the proposed scheme has been assessed with respect to the pollutants that relate to road traffic, nitrogen dioxide (NO_2), particulate matter (PM_{10} and $PM_{2.5}$), and the greenhouse gas, carbon dioxide (CO_2). The Transport Analysis Guidance (TAG) (UK Department for Transport, 2004) and the Design Manual for Roads and Bridges (DMRB) Air Quality Assessment (Highways Agency, 2003) has been used, as produced by the UK Highways Agency. These tools have been used, because they allow the user to asses the impacts across many roads in a network, rather than simply considering individual roads in isolation.

Monitoring data collected by the Environmental Protection Agency (EPA) for locations within Dublin and are discussed in Section 20.3.4.

Meteorological conditions within the study area are summarised in Section 20.3. These conditions are described because factors such as wind direction, speed and rainfall can have an impact on pollution transport (i.e. distribution of airborne pollutants). For example, airborne particulate matter (i.e. dust) will tend to be more prevalent in the air during hot, dry periods and less prevalent during wet weather, when it is 'washed out' of the atmosphere.

This assessment also includes consideration of microclimatic effects. The Urban Heat Island (UHI) effect is a microclimatic feature that is experienced in urban areas. This effect occurs in areas where man-made hardstanding areas (e.g. buildings and roads) dominate. These man-made hardstanding areas absorb and retain heat in a different way to natural green or vegetated areas. The energy from solar radiation, which would otherwise be used for evaporation of water from transpiring vegetation, is instead used to heat the air and man-made structures, which then release this stored heat at night. Disruption of the local surface energy balance therefore occurs. The UHI effect is sometimes welcome during the winter but can lead to the creation of excess heat and uncomfortable conditions during the summer.

20.2.2 Study area

Microclimatic and construction dust impacts within 175m of the alignment and all construction compounds are considered as part of this assessment. There are no legal standards relating to acceptable levels of deposited dust, although monthly mean deposition rates in excess of 200 mg m^{-2} day^{-1} are considered likely to cause a nuisance (Schofield and Shillito, 1990). The Building Research Establishment (BRE) in the UK suggests that nuisance from dust is unlikely to occur at distances greater than 50m from a construction site boundary (BRE, 2003). One particular study (Baughan, 1980) has also shown that at least half the people living within 50m of the site boundary of a road construction scheme were 'seriously bothered' by construction nuisance due to dust, but that beyond 100m less than 20% of the people were 'seriously bothered'.

The assessment of air quality in terms of the changes in traffic movements associated with its operation and construction takes into account the entire road network, and all its 'links', in the vicinity of the alignment. Associated with each road link in the traffic network modelled are four distance bands, extending out to 200m. The change in air quality is predicted within each of these bands, i.e. at four distances from the centre of the road link. Changes in road traffic have no significant influence on air quality at distances beyond 200m.

Traffic assessments are usually undertaken for road links where traffic flows increase by 10% or more and air quality impacts are considered to be possible. This, however, would not reflect the large number of individually small changes to traffic flows on roads as a result of the scheme. For a more comprehensive assessment, all of the road links affected by the scheme alignment have been assessed. The road links have, therefore, been screened on the basis of pollutant concentration change as a result of the proposed scheme, instead of in terms of traffic flows at the beginning of the assessment.

Table 20.1 Study area

Criteria	Width of study area (on both sides of the alignment)
Air quality and dust	175m either side of the alignment and construction compounds
	200m either side of relevant traffic links
Microclimate	175m either side of the alignment and construction compounds

20.2.3 Baseline data

The data used to compile the baseline are shown in Table 20.2.

Table 20.2 Baseline data

Information required	Data source
Air quality: existing concentrations of Nitrogen Dioxide (NO_2), Particulate Matter (PM_{10} and $PM_{2.5}$) and Carbon Monoxide (CO)	EPA report: 'Air quality in Ireland 2006: Key Indicators of Ambient Air Quality'
Meteorological conditions in the area of the proposed scheme including wind speed/direction, average rainfall within the study area.	Climate Records from Dublin Airport Meteorological Station
Sensitive and important landuses within 150m of the proposed scheme	Baseline Landuse maps produced for the proposed scheme.
Road links where traffic flows will change	Traffic modelling data produced by MVA Consulting (MVA, 2008). The means by which the traffic data were used and interpreted is detailed in the modelling report included as Annex I, Volume 3, Book 2 of 2.

20.2.4 Baseline categorisation criteria

Categorisation of the baseline environment involves the allocation of overall 'functional values' to discrete areas within the study area. The functional value of the area is determined with reference to the 'importance' and 'sensitivity' of the area and also any 'existing adverse effects' that impact on the area. Each of these three terms is explained in detail in this section.

Importance

Outdoor areas that are used by people for recreation are considered to be very important. Regular exercise and recreation are important, because these activities help to maintain good health and wellbeing. Recreation and exercise also help people manage and relieve stress. Recreational areas may be used by large numbers of people for extended periods of time. The value of these areas can be significantly and adversely affected by dust and bad air quality. Recreational areas may include recreational parks and large outdoor green areas that may be associated with educational facilities and/or residential areas.

Healthcare facilities are considered to be very important. These facilities are often used by very sensitive populations such as the elderly, the very young and the sick. The importance of maintaining good air quality in these areas is, therefore, recognised.

With respect to climatic factors, unpaved spaces such as green areas, watercourses and woodland areas are considered to be important with respect to regulation of the UHI effect, as they exert a cooling effect. In contrast, paved areas tend to store heat and may exacerbate the UHI effect. Paved areas are, therefore, not considered to be important in the context of minimising the UHI effect.

Sensitivity

Outdoor recreational areas are considered to be very sensitive to air pollution. These areas are used by individuals for sport and other aerobic activities that raise a person's metabolic rate and air intake. Areas that are frequented by large numbers of people for extended periods of time are considered to be sensitive because the duration and extent of exposure to pollution can increase the severity of adverse health effects. These areas may also be located within residential areas or health facilities and may be used by sensitive populations. They are open to the air so air quality cannot be controlled or maintained by engineering methods such as air conditioning systems. People in these areas are, therefore, quite sensitive to pollution.

Any areas where airborne concentrations of any pollutant are already in breach of the regulatory limit value are also considered to be very sensitive, because any increase in air pollution may have significant adverse health effects.

Healthcare facilities are often used or visited by very sensitive populations such as the elderly, the very young and the sick. These facilities may also have green areas which are used by patients recovering from major illness. Healthcare facilities and their resident populations are, therefore, considered to be highly sensitive to changes in local air quality.

Residential areas are also considered sensitive as people will be present for long periods and they are generally densely populated. Schools are considered to be sensitive because of the sensitivity of the population using these areas and because of the fact that many schools have outdoor recreational areas.

Dust is considered to be a nuisance and can cause annoyance to neighbours, through soiling of surfaces, such as windows and cars. It is visible and affects amenity. Commercial and industrial premises may also be sensitive to dust. An example would be a production process requiring a clean environment. Some agricultural activities may also be sensitive to dust e.g. market gardening and other agricultural enterprises where produce may suffer cosmetic damage.

With respect to microclimate, unpaved spaces such as green areas, watercourses and woodland areas are considered to be sensitive to development. Development of any green area or water body is typically associated with a reduction in the abundance of vegetation including trees and a reduction in the amount of open, unpaved space. This decreases the potential of the area to ameliorate the UHI effect. The removal of vegetation or the development of man made structures in these areas intensifies the temperature gradient that characterises the UHI effect. The small-scale air exchange that occurs over small green areas is particularly sensitive to development.

Paved areas are deemed to be of low sensitivity, as they are already developed to some extent and therefore any further development that might occur in association with the proposed scheme will not add further to the UHI effect.

Existing adverse effects

In general, air quality within the study area is good. Localised areas of existing low air quality are, however, known to exist and these areas primarily occur in locations where existing traffic levels are high. These specific locations are discussed, where information is available.

In the context of microclimate, paved areas generally experience higher temperatures than vegetated areas. The functional value of these areas is therefore considered to be Low.

Functional value

The functional value of the baseline environment is evaluated by means of a number of specific criteria to take into account the importance and sensitivity of different features. The criteria that have been defined to evaluate the baseline environment with respect to air quality and microclimatic factors are described in Table 20.3. In the case of air quality, five classes of functional value are used. In the case of microclimate only two classes of functional value are used because the precision of the assessment is such that only two classes are required.

The results of the baseline categorisation in terms of functional value are shown in Section 20.3.5 and illustrated on maps (Air and Climatic Factors Baseline and Impact) included in Volume 3, Book 1 of 2.

20.3 DESCRIPTION AND CATEGORISATION OF THE BASELINE ENVIRONMENT

20.3.1 Meteorological information

A summary of the most relevant meteorological data available from Dublin Airport is shown in Table 20.4. The data that have been collected at Dublin Airport are assumed to be relevant to the entire study area in that minor localised differences in specific areas of the study area are assumed to be outweighed by the fact that the data shown in this section are presented as 30 year averages. According to Met Eireann, this is an appropriate assumption to make.

According to the wind rose for Dublin Airport (as specified on the Met Eireann web-site, 2008), the wind in Dublin typically blows from the west and southwest out towards the Irish Sea.

Table 20.3 Criteria for baseline categorisation of receptor locations with respect to air quality

Criteria	Functional value
Air quality: Any area where existing concentrations of any pollutant are in breach of any regulatory limit Any significant outdoor recreational areas including large green areas within residential areas and other facilities Health care facilities	Very high (V)
Air quality: Residential areas and educational facilities Microclimate: All unpaved/green areas	High (V)
Air quality: Sensitive commercial and industrial premises Outdoor areas that are not specifically used for recreation and which are not densely populated e.g. agricultural areas	Medium (III)
Air quality: All other areas Microclimate: Paved areas	Low (II)
Not applicable	Very low (I)

Table 20.4 Mean monthly values based on monitoring results collected between1961 and 1990 at Dublin Airport

Parameter	Jan	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Mean temperature (°C)	5	5	6.3	7.9	10.5	13.4	15.1	14.9	13.1	10.6	7	5.9
Mean daily duration of sunshine (hrs)	1.8	2.5	3.6	5.2	6.1	6	5.4	5.1	4.3	3.1	2.4	1.7
Mean no. of days with no sunshine	11	8	5	3	2	2	1	2	3	6	8	11
Mean monthly total rainfall (mm)	69.4	50.4	53.8	50.7	55.1	56	49.9	70.5	66.7	69.7	64.7	75.6
Mean monthly wind speed (knots)	12.2	11.7	11.6	9.7	8.7	8	8.1	8	8.9	9.9	10.8	11.8

20.3.2 Microclimate

Extensive green areas exist in a number of locations within the study area. Such areas include: agricultural lands around Belinstown/ Lissenhall; Greenbelt lands to the north of the airport; greenfields in the area of Dardistown and to the south of the M50 in Santry Demesne; Albert College Park; Griffith Park; the playing fields of St. Patrick's College; the grounds of Trinity College; and St. Stephen's Green. This list of green areas is not a complete list; an estimate of the total open green space in each area of the alignment is illustrated on maps (Air and Climatic Factors Baseline and Impact) included in Volume 3, Book 1 of 2. All open green spaces are considered to be of High functional value. A number of watercourses and a small number of woodland areas also exist within the study area. These watercourses and woodlands are included in the calculation of total open green space and considered to be of High functional value. Areas of woodland are limited to areas such as riparian woodland adjacent to the Broad Meadow River and Santry Demesne. Watercourses within the study area are described in detail in the Surface Water chapter of this EIS (Volume 1, Chapter 19).

Paved areas dominate within the study area south of the M50. Extensive hardstanding areas are also present at the airport and in the area of Swords. Within these areas, green areas tend to be limited to urban parks and other relatively small green areas such as sports grounds etc. The functional value of all paved areas is considered to be Low.

20.3.3 Climate change

The contribution that existing traffic makes to greenhouse gas emissions for the do minimum scenarios (i.e. 2011 (forecast construction year), 2029 (forecast horizon operation year)) was estimated by considering traffic flows, traffic speeds and vehicle mixes in the Dublin area and calculated using the DMRB methodology.

The DMRB tool, like TAG, is not capable of carrying out assessments beyond 2020. The results presented for 2029 are based on background concentrations and improvements predicted for 2020 but with traffic movements for 2029.

The DMRB tool provides an output for tonnes of carbon emitted per year from road traffic. In this context, 'carbon' relates to the carbon bound in the emitted pollutants (carbon dioxide, carbon monoxide, hydrocarbons and particulate matter). This was converted into carbon dioxide emitted per year by a mass ratio. CO_2 emissions from traffic using the network considered in 2011 for the do minimum scenario are 2,654,111 tonnes per annum. CO_2 emissions from traffic using the network considered in 2029 are 3,114,124 tonnes per annum.

20.3.4 Air quality

20.3.4.1 Existing air quality

The Air Framework Directive deals with each EU member state in terms of 'Zones' and 'Agglomerations'. The Republic of Ireland is divided into four zones in the Air Quality Regulations (2002), for air quality monitoring purposes. These are as follows:

- Zone A – Dublin Conurbation;
- Zone B – Cork Conurbation;
- Zone C – Other cities and large towns including Galway, Limerick, Waterford, Clonmel, Kilkenny, Sligo, Drogheda, Wexford, Athlone, Ennis, Bray, Naas, Carlow, Tralee, and Dundalk;
- Zone D - Rural Ireland i.e. the remainder of the State excluding Zones A, B and C.

The scheme lies predominantly within Zone A. A small section of the study area, from the depot site to the confluence point of the Broad Meadow River and the Ward River is located in Zone D i.e. 'Rural Ireland'. The EPA does not operate any monitoring stations within this area but the air quality can be assumed to be very clean because of the fact that the area is rural and dominated by green fields.

To the south of the confluence point, the rest of the study area is located within Zone A. A number of monitoring stations are operated within this area. The location of these stations are illustrated on maps (Air and Climatic Factors Baseline and Impact) included as Volume 3, Book 1 of 2. Background concentrations from the monitoring within this area are discussed in the following sections.

NO_2

There are four monitoring stations in Zone A that measured NO_2 concentrations in the year of 2006. The annual average from the four stations has been averaged to obtain an overall estimate for 2006.

The environmental impact associated with the operation of the scheme is to be assessed for the years of 2011 (construction phase) and 2029 (operational phase). Baseline air quality scenarios have, therefore, been estimated for these years using a Year Adjustment Calculator provided by Netcen through the UK's Air Quality Information Archive (NAQIA) website (2008). At present, the calculator can only predict up to the year 2020; this year was used to represent the concentrations in 2029 with little loss of accuracy, given the inherent uncertainties in such calculations. The results of these calculations are shown in Table 20.5.

As shown in Table 20.5, NO_2 concentrations within the inner city areas at traffic influenced sites (e.g. Winetavern Street) are typically quite high. According to the EPA report 'Air Quality in Ireland' (EPA, 2006); 'the results show that... higher levels (of NO_2)... in urban areas have the potential to pose a threat to compliance with the annual limit value'.

PM_{10}

Six monitoring stations in Zone A measured PM_{10} concentrations in 2006. The annual average from each of the six stations has been used to obtain an overall average value for the study area in 2006. The Year Adjustment Calculator has been used to predict future concentrations for the years of operation. The annual average from each station together with the model input value and associated calculations are shown in Table 20.6.

Table 20.5 Background NO_2 Concentrations (µg m^{-3})

Monitoring Station	Annual Average NO_2 Concentration 2006 (µg m^{-3})	2006 (µg m^{-3})	2011 (µg m^{-3})	2029[1] (µg m^{-3})
NO_2				
Winetavern Street	35			
Coleraine Street	31			
Rathmines	23			
Ballyfermot	22			
Average All Stations		27.8	24.5	23.0

(1) These concentrations are for 2020 based on the Netcen calculator as this is the last year for conversion

Table 20.6 Background PM_{10} Concentrations (µg m^{-3})

Monitoring Station	Annual Average PM_{10} Concentration 2006 (µg m^{-3})	2006 (µg m^{-3})	2011(µg m^{-3})	2029* (µg m^{-3})
Winetavern Street	20			
Coleraine Street	21			
Marino	16			
Rathmines	19			
Phoenix Park	14			
Ballyfermot	17			
Average All Stations		17.8	16.2	16.0

*These concentrations are for 2020 based on the Netcen calculator as this is the last year for conversion

PM_{10} concentrations measured at all of the monitoring stations within the city from 2000-2006 were within the appropriate limits as set out in the Irish Air Quality Standards. The highest concentrations of emissions were typically measured at traffic influenced sites (e.g. Winetavern Street) and according to the EPA, the threat of exceeding the limit value (i.e. 35 days greater than 50 µg m^{-3} daily mean concentration) remains a possibility at these and other locations affected by emissions of traffic'.

No routine measurements are made of $PM_{2.5}$ concentrations. However, it is known from measurements made elsewhere in Europe that $PM_{2.5}$ concentrations are typically 50-60% of PM_{10} concentrations in urban areas.

20.3.4.2 Description of the study area

To the far north of the proposed scheme, in the area of Belinstown the study area is dominated by unpaved agricultural lands with very few sensitive receptors. These areas are considered to be of Medium functional value. South of Estuary Roundabout, a number of residential areas of High functional value are located within 150m of the alignment including areas such as Estuary Court and Seatown Villages. St. Columcille's Boys School and Girls National School is located to the south west of Seatown Roundabout and residential areas are located around Malahide Roundabout and to the northwest of Pinnock Hill Roundabout. Paved areas are, therefore, more common in this part of the alignment. To the north of the airport, two halting stops are located within 50m of the alignment and are considered to be of High functional value. These halting sites are surrounded by open spaces that are unpaved. No sensitive receptors are present within the airport lands. To the south of the airport, open spaces are commonplace and a number of recreational areas are present including Cumann Parnell and the Royal College of Surgeons' sports grounds. These recreational areas are considered to be of Very high functional value.

To the south of the M50, Santry Demesne is within 150m of the alignment and is considered to be a receptor of High functional value. A large sports ground of Very high functional value is located to the west of Ballymun Road. St. Pappin's Church is located in this area and residential landuses of High functional value are common. A number of schools of High functional value are present towards the southern end of Ballymun Road including Ballymun Junior Comprehensive School. To the south of the proposed DCU Stop is Albert College Park which is a large recreational area of Very high functional value. Elmhurst Convalescent Home is located to the south of this park and if also considered to be of Very high functional value. South of this, the dominant landuse is residential (High functional value). Notable exceptions include a church and school off Home Farm Road, St. Patrick's College and playing fields, Griffith Park recreational area, St. Vincent's Centre for the Deaf, some religious facilities and the Grand Canal. All recreational landuses in this area are considered to be of Very high functional value.

South of the Grand Canal, Mater Hospital and the Rotunda Hospital are located within the study area and are recognised to be of Very high functional value. South of these facilities, the landuse is dominated by commercial and retail landuses of Low functional value. Notable exceptions include Trinity College and St. Stephen's Green. St. Stephen's Green is a large recreational area and is recognised to be of Very high functional value.

20.3.4.3 Traffic modelling

The means by which the traffic modelling data were analysed and interpreted is described in detail in the report included as Annex I, Volume 3, Book 2 of 2. This section, therefore, only presents the main findings of the modelling exercise.

It is noted that background concentrations of air pollutants used in this assessment have been estimated for the entire study area and, therefore, are not specific to particular traffic links or local areas within the study area. Air modelling of traffic data therefore provides an indication of where there may be potential air quality problems but the reporting of road links with exceedences should be regarded with care.

Do minimum construction scenario (2011)

NO_2

Using predicted background annual mean NO_2 concentrations of 24.5 µg m^{-3} in 2011, the modelling exercise predicts that for the do minimum scenario in 2011 (the proposed construction stage), 3 road links will experience NO_2 concentrations above the air quality limit value of 40 µg m^{-3}.

Table 20.7 Links where exceedences of the NO_2 limit value occurs for the do minimum scenario in 2011

Road link*	Street name*	New Concentration (µg m^{-3})	Distance from Alignment
NO_2			
9703_9700	Port Tunnel Northbound	43.38	Between 1km and 2km
9705_9704	Port Tunnel Northbound	41.69	Between 2km and 3km
4221_4220 (a)	Roundabout section of the N7 Red Cow Roundabout heading towards northbound M50	40.62	More than 5km

* Road links and street names provided by MVA traffic consultants

PM_{10} and $PM_{2.5}$

Using background annual mean PM_{10} concentration of 16.2 µg m^{-3} in 2011 (with an implied background concentration for $PM_{2.5}$ of about 8 µg m^{-3}), the modelling exercise predicts that for the do minimum scenario in 2011, there are no exceedences of the limit values for PM_{10} or $PM_{2.5}$ at any location.

Do minimum operation scenario (2029)

NO_2

Using a background annual mean NO_2 concentration of 23.0 µg m^{-3} in 2029, the modelling exercise predicts that, for the do minimum scenario in 2029, six road links will experience NO_2 concentrations above the air quality limit value of 40 µg m^{-3}.

Table 20.8 Links where exceedences of the NO_2 limit value occur as a result of the do minimum scenario in 2029

Road link*	Street name*	New Concentration (µg m^{-3})	Distance from Alignment
NO_2			
1833_1832	Oscar Traynor Road	53.34	Between 2km and 3km
1415_1408	Berkeley Road	42.50	Between 250m and 500m
2013_2012	Junction between College Green, Westmoreland Street and College Street	43.97	Less than 250m
5165_5144	Taney Road	44.39	More than 5km
5014_5011	N11	44.42	Between 3km and 4km
4250_4210	N7 Eastbound	41.20	More than 5km

* Road links and street names provided by MVA traffic consultants

PM_{10} and $PM_{2.5}$

The modelling exercise predicts that for the do minimum scenario in 2029, there are no exceedences of the limit values for PM_{10} or $PM_{2.5}$ at any location.

20.3.5 Categorisation of the baseline environment

A summary of the results of the baseline categorisation is shown in Table 20.9.

Table 20.9 Baseline Categorisation

Area	Summary Description	Functional Value
MN101	Air quality	
	- Dominated by agricultural lands and residential receptors	(III) & (IV)
	Microclimate	(IV)
	- Mainly unpaved areas and green areas	(II)
	- Some paved areas	
MN102	Air quality	
	- Dominated by landuses of Low functional value	(II)
	- Some limited residential receptors	(IV)
	Microclimate	(IV)
	- Mainly unpaved areas and green areas	(II)
	- Some paved areas	
MN103	Air quality	
	- Dominated by landuses of Low functional value	(II)
	Microclimate	
	- Mixture of paved and unpaved areas	(IV) and (II)
MN104	Air quality	
	- Dominated by landuses of Low functional value	(II)
	- Some recreational areas	(V)
	- Some residential areas	(IV)
	Microclimate	
	- Mainly unpaved areas and green areas	(IV)
	- Some paved areas	(II)
MN105	Air quality	
	- Dominated by residential areas	(IV)
	- Some recreational open space	(V)
	Microclimate	
	- Mainly paved areas	(II)
	- Some unpaved areas and green areas	(IV)

Area	Summary Description	Functional Value
MN106	Air quality	
	- Significant recreational areas	(V)
	- Residential landuses common	(IV)
	- Small number of highly sensitive landuses e.g. Mater Hospital	(V)
	Microclimate	
	- Mainly paved areas	(II)
	- Some unpaved areas and green areas	(IV)
MN107	Air quality	
	- Dominated by landuses of Low functional value	(II)
	- Some sensitive receptors such as residential areas	(IV)
	- Small number of highly sensitive landuses e.g. Rotunda Hospital, Trinity College Dublin, St. Stephen's Green and Iveagh Gardens	(V)
	Microclimate	
	- Mainly paved areas	(II)
	- Minor unpaved areas and green areas	(IV)

21 LANDSCAPE AND VISUAL

Section 39(2)(b) of the Railway Infrastructure Act, 2001 specifies that an environmental impact statement must contain a description of the aspects of the environment that are likely to be significantly affected by the proposed scheme. This chapter has been prepared in order to fulfil this requirement with respect to landscape and visual impacts.

21.1 INTRODUCTION

The chapter considers:

- landscape character and resources including effects on the aesthetic values of the landscape, that may be caused by changes in the elements, characteristics, character and qualities of the landscape as a result of the scheme;
- visual amenity, including effects upon potential viewers and viewing groups caused by change in the appearance of the landscape as a result of a proposed scheme.

Landscape character and resources are considered to be of importance in their own right even if they are not visible to people. Impacts on visual amenity as perceived by people are therefore clearly distinguished from, although closely linked to, impacts on landscape character and resources.

The term landscape is generally used throughout this chapter when referring to landscape resources and landscape character. This term 'landscape' is replaced with the term 'townscape' when referring to landscape in the context of a predominantly built-up area.

Prior to preparing this chapter, a review of relevant planning and policy documents was undertaken in order to identify relevant objectives relating to the protection of flora and fauna within the study area. The following documents were reviewed:

- Fingal County Development Plan 2005-2011;
- Dublin City Development Plan 2005-2011.

The findings of this review are detailed in the Planning and Policy Context chapter of this EIS (Volume 1, Chapter 4).

21.2 BASELINE CATEGORISATION METHODOLOGY

21.2.1 Introduction

This section presents the methodology used in assessing the baseline environment in terms of landscape and visual amenity. As well as considering the relevant EPA guidance with respect to EISs (EPA, 2002, 2003), the scope and methodology for the baseline assessment has been devised in consideration of the 'Guidelines for Landscape and Visual Impact Assessment' (LI & IEMA, 2002). These guidelines are referred to hereafter as 'the 2002 Guidelines'.

21.2.2 Study area

The study area corresponds to the potential zone of visual influence of the scheme and includes tunnelled sections. The study area is illustrated on maps (Baseline Landscape and Visual) included in Volume 3, Book 1 of 2 of this EIS.

The dimensions of the study area vary in width depending on the local landscape. In built-up areas, the study area typically extends to the edges of the buildings on either side of the centre line of the proposals.

The dimensions of the study area are generally wider in locations where the proposed alignment runs through open space or farmland where longer distance views are possible.

21.2.3 Baseline data

The information used to compile the baseline for this chapter is shown in Table 21.1

Table 21.1 Baseline data

Information required	Data source
Policies and designations relating to landscape and visual amenity;	Dublin City Development Plan 2005-2011; Fingal County Development Plan 2005-2011;
Protected Structures (buildings, monuments and architectural features as above ground elements);	Baseline Archaeological, Architectural Heritage and Cultural Heritage chapter of this EIS (Volume 1, Chapter 23);
Local landscape character areas determined for the purpose of the EIS; Zone of Visual Influence of the proposed scheme; Viewpoint locations.	Aerial Photography provided by RPA; OSI maps of the study area; Walkover survey carried out in 2008.

21.2.4 Baseline categorisation criteria

The receiving environment includes a wide variety of landscapes ranging from relatively flat farmland, to areas of residential development interspersed with open space, to city or urban landscapes. The local landscape environment is described in terms of Local Landscape Character Areas (LLCAs). These LLCAs are illustrated on maps (Baseline Landscape and Visual) included in Volume 3, Book 1 of 2. Each LLCA consists of an area that is perceived as having its own particular landscape character. Important viewpoints along the length of the alignment have also been identified.

The categorisation of each LLCA and each viewpoint is undertaken in accordance with the 2002 Guidelines taking into account the overall general methodology outlined in the Introduction chapter of this EIS (Volume 1, Chapter 1). Key terms and definitions used in the assessment are explained in this section.

21.2.4.1 Landscape character

Landscape character is 'the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people'.

21.2.4.2 Landscape value (importance)

Landscape value is the relative value or importance attached to a landscape (often as a basis for designation or recognition), which expresses national or local consensus, because of its quality, special features, including perceptual aspects such as scenic beauty, tranquillity or wildness, cultural associations or other conservation issues.

21.2.4.3 Landscape quality or condition (existing adverse effects)

Landscape quality or condition is based upon judgements about the physical state of the landscape and about its intactness from visual, functional, and ecological perspectives. It also reflects the state of repair of individual features and elements which make up the character in any one place.

21.2.4.4 Landscape sensitivity (functional value)

Landscape sensitivity is defined in relation to a specific type of change. It is the extent to which a landscape can accept change of a particular type and scale without unacceptable adverse effects on its character. The sensitivity of the baseline environment is evaluated with reference to the criteria detailed in Table 21.2. Three classes of functional value are used in accordance with the 2002 Guidelines.

Table 21.2 Evaluation criteria for baseline categorisation of landscape

Criteria	Sensitivity of landscape to proposed change (Functional value)
- A landscape protected by a regional (structure plan) or national designation; - A landscape widely acknowledged for its quality and value; - A landscape with distinctive character and low capacity to accommodate the type of change envisaged.	High
- A moderately valued landscape; and/or - A landscape that is potentially locally important; - A landscape of some quality whose character, landuse, pattern and scale may have the capacity to accommodate a degree of the type of change envisaged.	Medium
- A landscape which is not valued for its scenic quality; - A landscape where its character, existing landuse, pattern and scale are tolerant of the type of change envisaged, and the landscape has capacity to accommodate change.	Low

Table 21.2 is a guide only. Each case is assessed on its own merits using professional judgement and experience.

Table 21.3 Evaluation criteria for baseline categorisation of visual amenity

Criteria	Sensitivity of viewpoint to proposal (Functional value)
- Viewers with a proprietary interest and prolonged viewing opportunities such as residents and frequent recreational users who are likely to experience the type of change resulting from the scheme as an adverse (or positive) change in their view and/or - The quality of the existing view, as likely to be perceived by the viewer, is assessed as being high.	High
- Viewers with a moderate interest in their environment such as recreational travellers and less frequent users of recreational facilities who are likely to experience the type of change resulting from the scheme as an adverse (or positive) change in their view and/or - The quality of the existing view, as likely to be perceived by the viewer, is assessed as being medium	Medium
- Viewers with a passing interest in their surroundings or whose interest is not specifically focussed on the landscape, for example, workers who are likely to experience the type of change resulting from the scheme as an adverse (or positive) change in their view and/or - The quality of the existing view, as likely to be perceived by the viewer, is assessed as being low.	Low

Table 21.3 is a guide only. Each case is assessed on its own merits using professional judgement and experience. A large number of viewers in a location that would be of low or moderate sensitivity may increase the sensitivity of that viewpoint to the next level. Where the quality of an existing view is judged to be poor, the sensitivity of the viewpoint may be reduced to a lower level.

The results of the baseline categorisation for landscape in terms of sensitivity are shown in Table 21.4 and are evaluated by reference to the criteria in Table 21.2. The results of the baseline categorisation of visual amenity are shown in Table 21.5 and evaluated by reference to the criteria held in Table 21.3 of this EIS.

21.3 DESCRIPTION AND CATEGORISATION OF THE EXISTING ENVIRONMENT

The receiving environment includes a wide variety of landscapes ranging from relatively flat farmland; to areas of residential development interspersed with open space; to city or urban landscapes. A total of 25 LLCAs are identified and described in Table 21.4. A number of viewpoints have been selected to represent a range of viewing opportunities within the study area. Each of these viewpoints is described in Table 21.5 in terms of the location, viewer type and the view components.

Table 21.4 Baseline categorisation of landscape

MN101

LLCA Ref. No.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
1	Lissenhall farmland (LLCA 1)	**Designations** - Protected trees/woodlands associated with Balheary Demesne are located in this LLCA. **Landuse Zonings** - GB - Greenbelt zoning applies in this area. - RU – Rural Amenity zoning applies in this area **Description** This local landscape character area comprises large tracts of open space bisected by the M1 road which extends in a north south direction. This landscape principally comprises farmland with hedgerows containing many mature trees. Isolated large dwelling houses are also present and are scattered throughout the area e.g. Balheary Demesne, which is surrounded by dense woodland. Some industrial landuses occupy the eastern side of the N1 road. Apart from the line of the original N1 road, roads in general are narrow and winding and many of them are lined with hedgerows containing some mature trees. Overall, the quality of this landscape is judged to be high however the eastern boundary or part of this character area is compromised by the M1 motorway, resulting in a reduction in quality to the east. The sensitivity of this character area to the proposed change is assessed as high. This landscape is generally a good quality landscape in particular the southern part. This character and condition would be fundamentally altered in part by the proposals in this area.	High

LLCA Ref. No.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
2	Broad Meadow River Corridor (LLCA 2)	**Designations** - High Amenity Area associated with Broad Meadow River. - Protected trees/woodlands associated with the river. - The Bridge over the Broad Meadow River and Ward river is a Recorded Archaeological monument and Protected Structure. **Landuse Zonings** - HA - High Amenity applies to this area. **Description** The heavily vegetated river corridors associated with both the Ward and Broad Meadow Rivers extend across this landscape in an east west direction. The R132 bridges over both rivers. The immediate river corridors are generally well vegetated. Footpaths follow the course of each river and are located to one side of the vegetated area along the water's edge. The quality of this landscape is generally judged to be high although the existing R132 road detracts to some extent from this landscape resulting in a reduction in quality, in this part of the character area. This landscape is overall deemed highly sensitive to change owing to the unique river environment, the uniqueness of which cannot be replaced if altered.	High
3	St. Anne's Estate and environs	**Designations** - None relevant to landscape and visual amenity. **Landuse Zonings** - OS - Open Space Zoning associated with St. Anne's Estate and environs. **Description** This is largely a parkland landscape but significant tree lines remain as remnants of former hedgerow patterns. Footpaths provide access and are used by many recreational walkers. These footpaths are aligned in part to the Ward River corridor. Some industrial landuses are present. Housing is present in this area and residential areas typically comprise terraces of semi-detached dwellings located at the edges of open spaces. The R132 road adjoins this open space and this road, together with the traffic that is on it, is visible from many locations within this open space. The quality of the landscape is judged to be high on the western side of the R132 road. On the eastern side, the quality of the landscape is compromised by the presence of industrial development resulting in a reduction in quality. This landscape is judged to be highly sensitive to the proposed scheme owing to its visual exposure and the alterations to landscape character that would be expected to arise from the proposals in this location.	High

LLCA Ref. No.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
4	Swords and Seatown residential areas	**Designations** - Vegetation groups protected by Tree Preservation Order (T.P.O.) close to the centreline of the existing N1 road at Pinnock Hill Roundabout. **Landuse Zonings** - OS - Open space zoning applies to small parcels of land associated with housing areas adjacent to the R132 road. - RS - Residential amenity applies to the residential areas. **Description** This area primarily comprises residential, two-storey dwellings that are arranged as housing estates in linear and sometimes grid like format. Pockets of open space are dispersed throughout these housing areas and usually feature as open grassed areas with small amounts of park vegetation. Areas of undeveloped land are present on the eastern side of the R132 road and agricultural field patterns are still evident in these areas. This land has recently been developed for industrial and commercial uses and these uses detract from landscape quality and condition in this area. The quality of this character area is judged to be medium in regard to the residential areas and associated open spaces. Areas of landscape of a lesser quality (owing to the presence of industrial development) are present. This character area is of variable quality and condition and the overall sensitivity to the proposed scheme is assessed as medium.	Medium

Part of LLCA 4 is within Area MN102

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
5	Crowcastle semi urban farmland.	**Designations** - None relevant to landscape and visual amenity. **Landuse Zonings** - OS - Open Space zoning applies to a small vegetated area at Pinnock Hill Roundabout. **Description** This area currently comprises farmland with large field patterns that are defined by hedgerows with mature trees. This semi rural setting is severed by the presence of the R132 road which detracts from this landscape. Housing is present to the west of this character area and comprises semi-detached, two-storey dwellings. The eastern edge of this area features commercial and industrial uses which are present as large, built elements which are visible in this landscape which detract from the quality of this landscape because of their visibility. Overall, the quality of this landscape is judged to be low. The sensitivity of this landscape to the proposed scheme is assessed as low as a result of the overall low scenic quality therein.	Low
6	Nevinstown residential and commercial Area	**Designations** - A protected view is located along the line of the N1 road adjacent to the carpark of the Airside Retail Park. No indication of view direction is provided in the development plan, however it is assumed that the view direction relates to Howth. **Landuse Zonings** - RS – Residential amenity applies to small areas of this LLCA. **Description** This landscape consists of areas of commercial landuse, remnant areas of farmland and occasional, scattered, single dwellings. The most prominent element of this landscape is the Airside Business Park. Fields in this area are irregular in shape and vary in size. The boundaries of these fields typically consist of hedgerows containing mature vegetation although some of these hedgerows have been removed due to intensification of agriculture. Small clusters of residential areas are present and single dwellings line the existing R132 road that bisects this character area. Overall, the quality of this character area is judged to be low. The low scenic quality and presence of detracting elements in this landscape contribute to an overall low sensitivity to the proposed scheme.	Low

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
7	Fosterstown Open Farmlands	**Designations** - None relevant to landscape and visual amenity. **Landuse Zoning** - GB - Greenbelt zoning applies to this LLCA. **Description** This is a large, relatively flat, open and largely agricultural landscape where the land is principally used for tillage. Intensive farming in this area has led to the removal of many hedgerows so field sizes are generally very large. Isolated pockets of land are used for industrial uses and a small number of isolated, single dwellings are also present. Overall, the quality of this landscape is judged to be low due to the impact that farming activities have had on the scenic quality overall. The greenbelt designation confers some degree of importance to this landscape although the greenbelt function has been somewhat undermined owing to the presence of development within this area. The quality of the landscape is judged as low and an overall low sensitivity to the proposed scheme is assessed.	Low

MN103

Part of LLCA 7 is within Area MN103

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
8	Airport	**Designations** - None relevant to landscape and visual amenity. **Landuse Zoning** - None relevant to landscape and visual amenity. **Description** This area is flat, exposed and open comprising semi-improved, extensive grassland across which a series of concrete runways and aircraft turning areas are located. Central to this character area is the more developed landscape of the airport terminal buildings and associated surface car parking. The internal or distributor road systems are lined with mature vegetation. This landscape is in poor condition and of poor quality owing to the airport development and to the absence of landscape structure, in terms of vegetation, in the large areas of open space that lie outside the airport development. The quality of this character area is assessed as being low. This is an infrastructural landscape (airport). It is of low scenic quality and these factors combined contribute overall to its low sensitivity to change. This low sensitivity to the proposed change is attributed in part to the nature of the proposed scheme in this area being in tunnel.	Low

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
9	Santry Semi Developed Farmland.	**Designations** - None relevant to landscape and visual amenity. **Landuse Zonings** - OS - Open Space zoning associated with a golf course at the western edge of this LLCA. This zoning also applies to a small parcel of land on the eastern side of this LLCA. **Description** This character area features farmland that is principally used for tillage. The farmland is relatively flat and exposed, so medium to long range views across this landscape are available. This open character is in part attributable to the absence of hedgerows and the large field sizes. Industrial landuses in particular areas detract from the overall quality of this landscape. Dwellings are few in number and are dispersed as isolated single units. The Sillogue golf course occupies the western edge of this landscape area. The southern part of the character area is dominated by the M50 motorway and this detracts from landscape quality. The quality of this character area is assessed as being low. The overall quality of this landscape is low and the sensitivity to the proposed scheme is assessed as being low.	Low
10	Balcurris and Santry Area	**Designations** - Wooded areas located at the eastern edge of this LLCA are protected by a T.P.O. **Landuse zonings** - RS – Residential amenity applies to parcels of land at the southern end of this LLCA. **Description** This landscape includes areas of farmland. South of the M50 a dwelling and extensive garden is present. The garden features woodland, an avenue of trees and a maze. South of this dwelling lies the site of the former Santry Charter School (now Santry Lodge), the grounds of which are quite degraded. Some industrial or commercial development is present in the south-eastern part of this local landscape character area and open space for sports grounds is located in the south-west. The area is bisected by roads (R108 and Ballymun Road). Occasional single dwellings are located throughout this area. The quality of this landscape is judged to be low in part owing to the partially degraded condition and the presence of roads as detractors. The landscapes associated with the private dwelling and garden south of the M50 is assessed as being of high quality. The variable quality of this landscape is the main basis for assessing it as having a medium sensitivity to the proposed scheme.	Medium

MN105

A small part of LLCA 10 is within Area MN105

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
11	Ballymun Urban Centre	**Designations** - None relevant to landscape and visual amenity. **Landuse Zonings** - None relevant to landscape and visual amenity. **Description** This character area is currently undergoing change as the masterplan for the regeneration of Ballymun is currently being implemented. Prior to this redevelopment, the urban area largely comprised high rise residential tower blocks arranged in a random layout featuring both hard surfaced and grassed open spaces with little or no planting. Currently the area comprises a mix of the older developments (dating back to the 1960s) and newer developments associated with the redevelopment of this area. The character of this area, as detailed in the masterplan, is urban and comprises a town centre of mixed landuses including residential, office, retail, civic and leisure. The urban centre is formal in its layout being centred on a main street, Ballymun Road, which is orientated in a north/south direction. The formality is further enhanced by the presence of specimen street tree planting along the main street which forms a boulevard. The new buildings are aligned along the main street and are interspersed with open spaces of a formal design including `Ballymun Market Square` and St. Pappin's Square. Public open space in the form of a green landscaped area entitled St. Pappin's Park and centred on St. Pappin's Church, is located at the northern end. The new buildings are generally variable in size or scale and feature bright contemporary finishes in terms of construction materials. The quality of this character area is assessed as being medium overall. This overall assessment of quality recognises that the area currently comprises older developments of poor quality and in rundown condition, and areas where new development has taken place which is of higher quality. An overall medium sensitivity to the proposed change is assessed for this landscape. Although the new and emerging masterplan will result in an overall high quality of landscape, the medium sensitivity to change is attributed in part to the proposed scheme being undergrounded (cut and cover) in this area.	Medium

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
12	Collins Avenue Residential area	**Designations** - None relevant to landscape and visual amenity. **Landuse Zonings** - Z1 – Residential amenity applies to the majority of the residential areas **Description** This area primarily comprises two-storey, residential developments that are grouped as terraces of semi-detached dwellings facing onto Ballymun Road. To the east of this area, a church entitled Our Lady of Victories faces Ballymun Road. The church, together with the open space located at the front of the building, is a prominent, local landmark in this area. This open space comprises a grassed area with planting and central access arranged in a formal or broadly symmetrical pattern. The housing style in this area is generally uniform comprising terraces of semi detached dwellings that front onto Ballymun Road. An elongated open space featuring ornamental standard trees is located south of the church and faces onto Ballymun Road. This street is lined with standard ornamental trees that are spaced at relatively regular intervals. This confers a formality to the streetscape thereby creating a boulevard effect. The quality of this character area is assessed as being high. The high quality and somewhat unique character of this area contributes to an overall assessment of high sensitivity to the proposed scheme.	High

MN106

A small part of LLCA 12 is within Area MN106

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
13	Griffith Avenue parkland	**Designations** - None relevant to landscape and visual amenity. **Landuse Zonings** - Z1 – Residential amenity applies in this area - Z2 – Amenity of Residential Conservation Areas. - Z9 – Recreational amenity and open space Zoning applies to the open space that is Albert College Park. - Z12 - Zoning applies to the lands associated with Hampstead Hospital and Elmhurst Convalescent Home. **Description** This area comprises large areas of open space. The largest of these is Albert College Park. This parkland is subdivided into a series of rectilinear open spaces each of which are bounded by hedgerows with mature trees. Institutional uses including a hospital and convalescent home are located towards the south of this character area. The buildings associated with Elmhurst Convalescent Home comprise a mix of older buildings of architectural merit and new developments. This complex of buildings overlooks a large open space to the south. The area is currently in use for tillage. The western boundary of this area is marked by a wide strip of mature woodland. The south eastern edge of the area is marked by a residential area comprising terraces of two-storey dwellings. The overall quality of this character area is judged to be high. The high quality and somewhat unique character of this area contributes to an overall assessment of high sensitivity to the proposed scheme.	High

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
14	Griffith Avenue residential area.	**Designations** - None relevant to landscape and visual amenity. **Landuse Zonings** - Z9 - Open Space Zoning applies to the tree planted edges of the streetscape associated with Griffith Avenue. - Z1 – Residential Amenity applies to the residential areas generally. **Description** This urban residential area features a strong geometric semi formal street pattern generally. Residential dwellings along the street primarily consist of two-storey, semi-detached units. The design style of these houses is relatively uniform and confers a distinct character to this area. Griffith Avenue is a wide street and has a formal, boulevard-like character because of the fact that it is approximately straight in alignment and is lined with mature standard specimen trees. Further south open spaces used for sport are associated with St Patricks College and St Patricks National School. The overall quality of this character area is judged to be high. The sensitivity of this landscape to the proposed change is assessed as low and this is attributed to the proposed scheme being in tunnel throughout the majority of this character area.	Low
15	Tolka River and environs	**Designations** - The river and environs is a designated Landscape Conservation Area. **Landuse Zonings** - Z9 - Open Space zoning applies to the vegetated open spaces adjacent to the watercourse. - Z11 - Protect and improve Canal, Coastal and River Amenities applies to this area. **Description** The character of this area is influenced by the River Tolka. In this area, the banks of the river are primarily lined with residential development and little or no vegetation is present. Overall, the river has a characteristic winding course. Further west, the river travels through Griffith Park, which is a large open space featuring scattered mature trees and small woodland areas. Further east, small pockets of open space occur along the southern bank. The residential developments located on the river edges within this area comprise two-storey, terraced dwellings. The quality of the area is generally judged to be high although along sections of the river corridor, where development extends to the river edge, the quality of is reduced to medium. The sensitivity of this landscape to the proposed change is assessed as low and this is attributed to the proposed scheme being in tunnel in this location.	Low

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
16	Drumcondra Road Lower Area	**Designations** - None relevant to landscape and visual amenity. **Landuse Zonings** - Z1 - Zoning applies to some residential areas. **Description** This layout of this area is formal and features streetscapes that are relatively straight and which collectively form a geometric pattern. The buildings primarily comprise of residential dwellings which occur as terraces that are faced in red brick to the front with a plain render to the rear. The Maynooth Rail, line crosses this area and the bridge that is associated with this crossing is visible as an elevated built structure with embankments that cross a number of small residential areas. The rail embankments that are associated with the rail line are regularly vegetated with grass and low mixed species shrubs. St. Alphonsus Church and a convent are located to the west of this area. These building are large in size and contrast strongly in terms of built character and scale to the residential areas located throughout. The quality of this area is judged to be high. The high quality and somewhat unique character of this area is the basis on which it is assessed as being of high sensitivity to the proposed scheme.	High
17	Royal Canal	**Designations** - The Royal Canal and environs is a designated Landscape Conservation Area. **Landuse Zonings** - Z9 - Open Space zoning applies to the vegetated open spaces adjacent to the watercourse. - Z11 - Protect and improve Canal, Coastal and River Amenities applies to this area. **Description** The Royal Canal is the central feature of this area and dominates the landscape. This canal dates from the early 1800s and is broad and relatively straight. The Royal Canal is considered to be an attractive landscape amenity. It is overlooked by a number of two-storey dwellings in the form of linear terraces. Many mature trees currently line the southern banks of this waterway and filter the view from the terrace of dwellings on the southern bank. The northern bank of the canal is only sparsely vegetated and the busy Whitworth Road is located very close to this edge. Residential dwellings on Whitworth Road currently have open and relatively uninterrupted views of the waterway. The quality and condition of this landscape is generally high and the designations that apply are a reflection of that fact that this townscape is highly valued both locally, and in the context of Dublin City overall. The sensitivity of this landscape to the proposed change is assessed as low and this is attributed to the proposed scheme being in tunnel in this location.	Low

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
18	Dorset Character Area	**Designations** - None relevant to landscape and visual amenity. **Landuse Zonings** - Z8 - Zoning (to protect existing architectural and civic design character) applies in this area. - Z1 - Zoning (to protect of residential amenity areas) applies to much of this character area. **Description** This character area comprises terraces of dwellings arranged in a semi-formal, grid-like street pattern. There are few or no trees lining the streets, but trees feature in the small rear gardens of many dwellings. Overall, the area is relatively quiet and tranquil when considered in light of its urban location. The site of the Mater Hospital, which comprises a series of random arranged buildings and a large area of surface car parking, significantly detracts from the landscape character. The quality of this character area is generally assessed as being medium although the part of this character area associated with the Mater hospital development is assessed as being very low. The variable quality and somewhat unique character of this area is the basis for an overall assessment of a medium sensitivity to the proposed scheme.	Medium

MN107

A part of LLCA 18 is within Area MN107

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
19	Parnell Square East and Frederick Street Area	**Designations** - Almost all of this character area is designated as a Conservation Area including Architectural Conservation Area. - None relevant to landscape and visual amenity. **Landuse Zonings** - Z8 - Zoning (to protect existing architectural and civic design character) applies to much of this character area. - Z9 - Zoning (to preserve and improve Recreational Amenity and Open Space) applies to the Garden of Remembrance. **Description** Both Frederick Street North and Parnell Square East are wide and relatively straight streetscapes. Long range views of the Dublin Mountains are available in a southerly direction from Parnell Square East. Parnell Square East is enclosed on the north eastern side by terraced buildings dating back to the mid-1700s. These buildings are generally three stories high. These buildings were formerly used as townhouses but are now primarily used for commercial and retail functions. The south western side of the street features a number of large buildings of a unique design. These include the Gate Theatre and the Rotunda Hospital. These features confer a unique character to the area. The Garden of Remembrance which is located off Parnell Square East is formally laid out with mature trees and a central water feature comprising a large sunken lake in the shape of a cross. The garden dates from the 1960s and was developed to commemorate those who gave their lives in the cause of Irish freedom. The corner of Parnell Square North and Parnell Square East features the Abbey Presbyterian Church. This Church is built of stone and has a spire that is visible from many locations in the area as a unique landmark above the surrounding rooflines. The quality of this character area is judged to be high. The sensitivity of this character area to the proposed change is assessed as high owing largely to the quality and uniqueness of the area.	High

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
20	O'Connell Street Area	**Designations** - This area is designated as a Conservation Area including Architectural Conservation Area. **Landuse Zonings** - Z5 – to protect the civic design and character of the central area applies to this character area. **Description** This character area has at its centre, the recently refurbished streetscape of O'Connell Street. This street is a broad straight street enclosed by large scale buildings dating from the mid-1700s. Historically, O'Connell Street was known as Drogheda Street and was a narrow thoroughfare lined with more modest buildings. During the 1740s these were levelled and the street was redefined to form a wider space with larger buildings constructed of granite and Portland Stone. Recent refurbishment works in this area include the insertion of decorative stone paving as part of the widening of the footpaths, and the introduction of formal tree planting along the street to create a boulevard. Both specimen standard trees, and also lines of pleached lime trees, are located along the length of the street. The central reservation comprises a wide elongated pedestrian space which, in addition to the formal street tree planting, features a number of monuments which have long been associated with this street and are now protected. The exception to this is the spire which has recently been introduced as a modern sculptural element that contributes to the character of the streetscape overall. Long ranging views are visible along the length of this street due to the linear and straight geometry. The quality of this character area is judged to be high. The sensitivity of this character area to the proposed change is assessed as high owing largely to the quality and uniqueness of the area.	High

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
21	River Liffey and Quays.	**Designations** - This area is designated as a Conservation Area including Architectural Conservation Area. **Landuse Zonings** - Z5 – to protect the civic design and character of the central area applies to this character area. - Z11 - Protect and improve Canal, Coastal and River Amenities applies to this area. **Description** The River Liffey is central to the landscape character of this part of Dublin city and in this area consists of an open wide watercourse. Long-distance views are visible along the river in an east west direction. O'Connell bridge dates back to the 1790s and was developed as part of the extension of O'Connell Street. The edges of the River Liffey are defined by quayside walls constructed of granite blocks. The river edges are strongly defined by terraces of buildings which exhibit considerable diversity in terms of building detail. Recent efforts to enhance the amenity value of the river have led to the addition of the boardwalk as a linear open space. Overall, the quality of this area is judged to be high. The sensitivity of this character area to the proposed change is assessed as high owing largely to the quality and uniqueness of the area.	High

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
22	Westmoreland Street Area	**Designations** - Most of this character area is a designated Architectural Conservation Area. All of this area is a designated Conservation Area. **Landuse Zonings** - Z5 – to protect the civic design and character of the central area applies to this character area. **Description** Westmoreland Street is central to the character of this area and in this area consists of a wide streetscape. Large, commercial buildings face out onto this streetscape and these buildings consist of recently developed buildings and older, larger buildings featuring decorative stone detailing. The layout of this street dates from the 1790s and is generally straight. Views in a northerly and southerly direction are visible from this street. The Bank of Ireland building is an important element of this landscape. This building is located at the southern end of the street. It is constructed with Portland Stone and the classical style of this building dates back to the mid 1700s when this building was the first purpose-built, two chamber parliament in the world. Occasional mature trees are located along the line of Westmoreland Street and these streets are regularly used by significant volumes of pedestrians. The heavy vehicular traffic on this street detracts from the townscape quality because of the fact that it has the effect of severing the open space. Overall, the quality of this area is judged to be very high. The sensitivity of this character area to the proposed change is assessed as high owing largely to the quality and uniqueness of the area.	High

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
23	Trinity College	**Designations** - This entire character area is a designated Conservation Area. **Landuse Zonings** - Z8 - to protect existing architectural and civic design character applies to much of this character area. - Z9 – to preserve and improve Recreational Amenity and Open Space applies to the open spaces in this character area. **Description** The landscape of this area is unique and follows a formal layout of college buildings and open spaces. The buildings are large in scale and vary in age. Many of these buildings are constructed of Portland Stone and generally date back as far as the early 1700s. The College site is almost fully enclosed by a stone boundary wall and this is topped with railings on the boundary with College Green and on the boundary with Nassau Street. The entrance at College Green is arranged in a formal layout with pedestrian access provided via a straight path leading to a decorative stone arch entry. A pair of small grassed open spaces, each of which is the mirror image of the other, is located on either side of the path. The open spaces contain the listed monument structures (Goldsmith and Burke). Mature trees are frequently dispersed throughout the open spaces that are given over to lawns. The enclosed nature of this area, together with the fact that traffic is generally limited, confers a relatively tranquil quality, albeit made lively by the presence of pedestrians. This serves to further enhance the exceptional quality and condition of this townscape. Overall, the quality of this area is judged to be high. The sensitivity of this landscape to the proposed scheme is assessed as low and this is attributed to the proposals being in tunnel in this location.	Low

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
24	Grafton Street Area	**Designations** - The Conservation Area designation and the Architectural Conservation Area applies to parts of this character area. **Landuse Zonings** - Z5 – to protect the civic design and character of the central area applies to this character area. **Description** This character area comprises a network of narrow streets and laneways that are considered to be relatively small and intimate compared with the nearby character areas already described. Terraces of predominantly red brick buildings line these streets and feature a mix of commercial and retail uses. Grafton Street is a relatively narrow, winding street and is oriented in a north-south direction. The orientation of the street ensures that during midday the street receives abundant sunshine when this is available. The buildings are arranged in terraces and face out onto the streetscape. Retail activities are generally carried out at ground level in these buildings. The fact that this street is pedestrianised is an important factor that significantly contributes to the townscape character. This street often serves almost as a public open space in which open air activities take place to entertain pedestrians. Larger scale stone buildings are present as landmark features in the area and these include Saint Teresa's Church on Clarendon Street and the Powerscourt Townhouse, which is now used as a shopping centre. Overall, the quality of this character area is judged to be high. The sensitivity of this character area to the proposed change is assessed as high owing largely to the quality and uniqueness of the area.	High

Ref.	Local Landscape Character Area (LLCA)	Description	Sensitivity of landscape to proposal (Functional value)
25	St. Stephen's Green	**Designations** - St. Stephen's Green is both a National Monument and Conservation Area. **Landuse Zonings** - Z9 - to preserve and improve Recreational Amenity and Open Space applies to the open spaces in this character area. **Description** This character area comprises an open space of historical significance which is designed as a city park. The layout of the park features both areas of informal parkland and areas of formally-arranged, planted beds centred on fountains located in the middle of the park. A lake occupies the northern part of the park. A pedestrian bridge crosses the narrow part of the lake and attractive views of the water are visible from this bridge both, in an easterly and westerly direction. The lake dates back to approximately the 1800s and the island that is located in the middle of the lake dates from the 1880s. Other landscape features within this park include a cascade located on the western side of the lake and a bog garden on the south eastern fringe of the lake. Much of the park comprises a network of pathways with informal shrub planting and abundant specimen mature trees. A formal tree-lined walk runs along the length of the northern boundary and is known as Lime Walk because of the Lime trees that are planted in this area. Outside of the park, the streetscapes of St. Stephen's Green West and North as relatively large scale linear and somewhat formal spaces featuring formal street tree planting. The buildings that front onto this streetscape are large in scale and vary in age. For example, the St. Stephen's Green Shopping Centre is a relatively modern building which occupies a corner site. In contrast, the building that is currently used by the Royal College of Surgeons of Ireland is an older, more classically designed, stone building. On St. Stephen's Green West, the existing Luas line and associated Luas stop has a subtle visual presence, it being constructed with materials (including limestone and granite) that have resulted in its successful integration into this townscape environment. Overall, the quality of this character area is judged to be high. The sensitivity of this character area to the proposed scheme is assessed as high owing largely to the quality and uniqueness of the area.	High

Table 21.5 Baseline description of visual amenity

Viewer Type: H: Residents of dwellings, R: Recreational Users, T: Travellers, W: Workers

MN101

LLCA/ Viewpoint ID	Position		Location and viewer type	Components of the existing view	Viewpoint Sensitivity (Functional Value)
LLCA1	Easting	Northing	Lissenhall farmland		
1a	319039	250630	Dwelling in Belinstown (H)	Local road. Earthbank. Undulating pastureland including localised ridgeline.	High
1b	318561	250596	Dwelling in Belinstown (H)	Farmland and hedgerow vegetation. Scattered trees. M1 motorway and traffic in far distance. Large scale agricultural buildings.	High
1c	318237	249979	Group of dwellings in Belinstown (H)	Minor road. Open farmland. Hedgerows. M1 motorway and traffic in far distance.	High
1d	317890	249427	Lissadell Stables in Lissenhall Little (W)	Dwelling entrance. Hedgerows. Filtered views of farmland through hedgerows.	Low
1e	318597	248659	Location outside of Balheary House (H), (T)	Driveway associated with dwelling in Lissen Hall Little. Farmland and vegetation.	High
1f	318810	248367	Dwelling on N1 road (H)	Boundary or curtilage planting. Farmed pasture beyond and adjacent to dwelling.	High
LLCA 2	Easting	Northing	Broad Meadow River Corridor		
2a	318782	248268	Location on N1 road (T)	Balheary Bridge crossing over the Broad Meadow River. Riverside vegetation. Open grassed spaces.	Low
2b	318691	248148	Location within open space (R)	Footpath. Stone wall. Bridge over the Ward River and associated piped infrastructure. Mature tree and shrub vegetation. Grassed open space in the foreground. Grassed open space beyond stone wall.	High
2c	318565	248001	Edge of Swords Business Campus along walkway beside Ward River (R), (W)	Open space. Shrub vegetation in foreground. Shelter belt planting in far distance. Sports buildings (partly visible through gaps in vegetation).	High
LLCA 4	Easting	Northing	Swords and Seatown residential area		
4a	318634	247189	Seatown Villas (H)	Grassed open space. Fence railing boundary and part of caravan/camping park. mature vegetation.	High
4b	318683	246973	Seatown Terrace (H)	Car park (partly visible through gaps in existing standard tree planting). Railing boundary.	High
4c	318719	246678	Seatown Walk (H)	Open space bounded by concrete block boundary wall. Mature vegetation in background. Railing to pedestrian access.	High
4d	318791	246519	Ashley Avenue (H) (R)	Open space and concrete boundary wall. Semi-mature cherry trees in foreground.	High

MN102

LLCA/ Viewpoint ID	Position		Location and viewer type	Components of the existing view	Viewpoint Sensitivity (Functional Value)
LLCA 4	Easting	Northing	Swords and Seatown residential area		
4e	318321	246059	On footpath adjacent to R132 Swords Bypass southbound at gate entry to Airside Business park (T)	Road and traffic. Mature roadside trees. Hedgerow in centreline of road. Pedestrian access to Airside Business Park. Pinnock Hill Roundabout in far distance.	Low
4f	318037	245967	Carlton Court (H)	Road access. Grassed open space and a dense thicket of mature woody vegetation at the open space boundary.	High
LLCA 5	Easting	Northing	Crowcastle semi-urban farmland		
5a	317755	245526	The Willows, Boroimhe Housing Estate (H)	Boundary wall and chain-link fence. R132 road and traffic (visible through chain-link fence). Mature line of trees and field beyond.	High
5b	317878	245780	At driveway entrance to `Ceim Dearg' dwelling house (H)	Footpath adjacent to existing road. Grass verge. Fence boundary. Rolling pastoral farmland with prominent ridgeline above eye level. Hedgerow vegetation with mature trees.	High
LLCA 7	Easting	Northing	Fosterstown open farmland		
7a	317752	244907	Dwelling house on access road to McComish Patio centre on R132 road. (H)	Road, open farmland and mature vegetation in the distance. Dwelling house. Buildings in far distance.	High

MN104

LLCA/ Viewpoint ID	Position		Location and viewer type	Components of the existing view	Viewpoint Sensitivity (Functional Value)
LLCA 9	Easting	Northing	Santry Semi-developed farmland		
9a	315393	241736	Outside entrance to Sillogue Golf Course (R), (T).	Large expanse of grassland. Industrial buildings in far distance. Hedgerow vegetation. Fence boundary and signage in the foreground.	Medium
LLCA 10	Easting	Northing	Balcurris and Santry semi-developed farmland.		
10a	315598	240992	Dwelling entrance on Ballymun Road (H)	Gate entry. Conifer hedge lined driveway. Open grassland (visible in part beyond conifer hedge).	High
10b	315528	240710	Corner of Ballymun Road (T)	Road access. Open rough grassland. Mature trees in far distance. Mast.	Low
10c	241022	315529	Within curtilage of dwelling on Ballymun Road (H)	Mature trees, driveway or hard surfaced area. Gate lodge.	High

MN105

LLCA/ Viewpoint ID	Position		Location and viewer type	Components of the existing view	Viewpoint Sensitivity (Functional Value)
LLCA 11	Easting	Northing	Ballymun Urban Centre		
11a	315525	239681	Ballymun Main Street (T)	Main Street. Street tree planting in the central reservation. Mix of newly constructed residential and commercial developments together with original multi storey tower block residences in the far distance.	Medium
11b	315509	239927	Main Street outside original residential apartment blocks (T), (H)	Main Street. Street tree planting in the central reservation. New apartments entitled `The Plaza'.	High
LLCA 12	Easting	Northing	Collins Avenue residential area		
12a	315489	238843	Outside Our Lady of Victories Church (T)	Streetscape, traffic and street tree planting associated with Ballymun Road. Small linear open space and mature trees. Dwellings on Ballymun Road.	Low
12b	315471	238696	Corner of St. Pappin's Road and Ballymun Road (H)	Streetscape associated with Ballymun Road. Linear open space and mature trees. Some dwellings associated with Albert College Grove.	High

MN106

LLCA/ Viewpoint ID	Position		Location and viewer type	Components of the existing view	Viewpoint Sensitivity (Functional Value)
LLCA 13	Easting	Northing			
13a	316032	237835	Walnut Rise (H)	Boundary wall and streetscape in foreground. Part of large open space (currently used for tillage). Mature trees in the far distance.	Low
13b	315842	237957	Rear of Elmhurst convalescent home (H)	Scattered trees and shrub understorey in foreground. Large open space (currently used for tillage). Mature trees in the far distance.	High
LLCA 14	Easting	Northing			
14a	236968	315931	James Joyce Court (H)	Oblique view from second storey window of boundary wall and vegetation associated with St Patricks College	Low
14b	315980	236967	St Patricks National School (R), (W).	Hard surfaced open space. Scattered trees. Grassed embankment associated with sports pitch. Grassed open space and boundary wall. Dwellings beyond boundary wall.	Medium
LLCA 16	Easting	Northing	Drumcondra Road Lower Area		
16a	315903	236203	St Joseph's Avenue, Drumcondra (H), (T)	Streetscape. Boundary wall and entrance to St Vincent's Centre for Deaf people.	High

LLCA/ Viewpoint ID	Position		Location and viewer type	Components of the existing view	Viewpoint Sensitivity (Functional Value)
LLCA 19	**Easting**	**Northing**	**Parnell Square and Frederick Street Area**		
19a	315703	235163	On Parnell Square East opposite Garden Of Remembrance (R), (T),(H)	Entrance to the Garden of Remembrance on Parnell Square East. Part of streetscape associated with Parnell Square North.	High
19b	315670	235135	On Parnell Square East outside Garden of Remembrance (R), (T), (H)	Streetscape associated with Parnell Square East including four-storey red brick terraces. Traffic.	High
19c	315763	235064	Parnell Square East (T), (H)	Streetscape associated with Parnell Square East including four-storey red brick terraces. Traffic. Part of Rotunda Hospital building.	Medium
LLCA 20	**Easting**	**Northing**	**O'Connell Street Area**		
20a	315950	234509	Central reservation pedestrian area on O'Connell Street (R) (T)	Streetscape associated with O'Connell Street. Monument to William Smith O'Brien in foreground. Part of O'Connell Bridge in far distance.	High
LLCA 22	**Easting**	**Northing**	**Westmoreland Street Area**		
22a	315970	234325	Corner of Westmoreland Street and Aston Quay (R), (T)	O'Connell bridge and traffic. Quayside buildings. Recently introduced street tree planting in the far distance together with the Custom House building. Many pedestrians. The Spire monument.	Medium
LLCA 24	**Easting**	**Northing**			
24a	315851	233565	On Grafton Street outside St. Stephen's Green Park (R).	Streetscape associated with Grafton Street and St. Stephen's Green North and West. Boer War Arch and part of St. Stephen's Green Park in background.	High
LLCA 25	**Easting**	**Northing**	**St. Stephen's Green Park**		
25a	315930	233419	On footpath at edge of lake near entrance to Yeats memorial (R).	Lakeland setting. Vegetated island (Pulham Rock Feature). Part of cascade water feature. Boer War Arch entrance in the distance. Foliage of overhanging vegetation including large willow tree in foreground.	High
25b	315959	233502	Footpath adjacent to lake (R).	Footpath and trees associated with Lime Walk. Mature vegetation on the park boundary. Boer War Arch. Facades (in part) of St. Stephen's Green North and West	High
25c	315962	233437	Pedestrian bridge over lake in St. Stephen's Green Park (R).	Lake and lakeside vegetation including striking mature willow.	Medium

22 MATERIAL ASSETS: AGRONOMY

Section 39(2)(b) of the Railway Infrastructure Act, 2001 specifies that an environmental impact statement must contain a description of the aspects of the environment that are likely to be significantly affected by the proposed scheme. This chapter has been prepared in order to fulfil this requirement in respect of agronomy.

22.1 INTRODUCTION

This chapter describes and evaluates the existing agricultural environment in the area of the proposed scheme.

Prior to compiling this chapter, a number of planning and policy documents were reviewed to ascertain if the documents contain any plans, policies or objectives relating to agronomy. The following documents have been reviewed:

- Fingal County Development Plan 2005-2011;
- Airport Local Area Plan (2006);
- Dublin City Development Plan 2005-2011;
- Masterplan for the new Ballymun, (1998 (as amended)).

The results of this review are detailed in the Planning and Policy Context chapter of this EIS (Volume 1, Chapter 4). Of the agricultural lands in the study area (as described in Section 22.2.2) 94.3% are located within the Fingal County Council area and 5.7% of the agricultural lands are located within the Dublin City Council area.

22.2 BASELINE CATEGORISATION METHODOLOGY

22.2.1 Introduction

The baseline evaluation included:

- A desktop review of Fingal County Development Plan 2005 – 2011, Dublin City Development Plan 2005 – 2011, North Ballymun Local Area Plan (LAP) and Dublin Airport LAP;
- Review of existing data resources including data from the Central Statistics Office (CSO), aerial photography and soil maps;
- Review of land registry maps;
- Field surveys;
- Land owner interviews.

22.2.2 Study area

The study area encompasses agricultural and horticultural land holdings in the area of the proposed scheme. Nine farms are directly affected by the scheme to some extent. The total area of these farms is approximately 579 hectares (ha).

This total area includes outlying lands which will not be affected by the proposed scheme. The study area comprises of approximately 351ha of this total and is illustrated on maps (Baseline Agronomy) included in Volume 3, Book 1 of 2. This area may potentially be affected by the proposed scheme. The area of the land holdings was determined from land owner interviews and is shown in Table 22.1

Table 22.1 Study area

Land Owner Reference No.	Area of land holding within the study area (ha)	Description
1	43	The total area of this farm is 200ha of which 43ha are located within the study area. This land is used for tillage (winter cereals).
2	29	The total area of this farm is 71ha of which 29ha are located within the study area. This land is used for growing cereals, potatoes and other vegetables (cabbage and cauliflower etc.).
3	35	The total area of this farm is 35ha all of which is located within the study area. This land is used for winter cereals and 0.6ha of glass houses.
4	85	The total area of this farm is 85ha all of which is located within the study area. Parts if this land is let out on a short-term basis to a dairy and beef farmer, a beef and sheep farmer and a tillage farmer.
5	2	The total area of this farm is 2ha all of which is within the study area. This land is used for grazing by horses.
6	47	The total area of this farm is 47ha all of which is within the study area. This land is used for cereals
7	9	The total area of farmland owned by Dublin Airport is 400+ha of which 9ha is within the study area and is let out on a short-term basis for grazing for rough grazing.
8	81	The total area of this farm is 110ha of which 81ha are located within the study area. This land is used to grow cereals and potatoes.
9	20	The total area of this farm is 20ha all of which is within the study area. This land is used to grow cereals and potatoes.
TOTAL	351	

22.2.3 Baseline data

The data used to compile the baseline for this chapter is shown in the Table 22.2.

Table 22.2 Baseline data

Information required	Data source
Zoning policy objectives specifically relating to agriculture and horticulture	- Fingal County Council Development Plan 2005 – 2011 - Dublin City Council Development Plan 2005 – 2011
Soil types and land quality	- 'Soil Associations of Ireland and their land use potential' (Gardiner & Radford, 1980) - Soil Survey Bulletin No. 36. An Foras Talúntais, Dublin - Field surveys carried out between 09/08/2007 and 16/08/2007
Agricultural statistics relating to the study area	- Landowner interviews
Agricultural statistics for the county	- National census of agriculture statistics derived from the June 2000 census of agriculture (in particular Tables 1, 4, 41 and 42). Farm surveys were carried in 2003 and 2005 but these surveys did not include a breakdown of enterprise type on a county basis - Fact Sheet on Irish Agriculture – October 2007 published on the official Department of Agriculture website
Agricultural and horticultural landuse within the study area	- Aerial photography - Field surveys and land owner interviews carried out between 09/08/2007 and 16/08/2007
Individual farm details	- Field surveys and land owner interviews carried out between 09/08/2007 and 16/08/2007

22.2.4 Baseline categorisation criteria

Categorisation of the baseline environment involves the allocation of overall 'functional values' to discreet areas within the study area. The functional value of the area is determined with reference to the 'importance' and 'sensitivity' of the area as well as any 'existing adverse effects' that impact on the area. Each of these three terms is explained in detail in this section.

22.2.4.1 Importance

The importance of agriculture and horticulture within the study area is assessed by examining the enterprise types and sizes of the farms. The presence of breeding enterprises of high quality and high value livestock is indicative of a high degree of importance. Such farms would typically have very good facilities and would be recognised at a county and regional level. Intensive horticultural enterprises are also indicative of a high degree of importance. Viable farms are taken to be more important, from an agricultural point of view, than non viable (smaller) farms.

22.2.4.2 Sensitivity

Sensitive farms are those which may experience significant adverse changes in the future management of the farm as a result of impacts associated with the proposed scheme. For example, intensive dairy and other farming types where animals are moved daily within the farm are very sensitive to any disruption.

22.2.4.3 Existing adverse effects

Existing adverse effects impacting on the study area include poor land quality and location close to large urban areas. Poor land quality restricts crop yield and animal performance. Where lands are very close to urban areas the management of livestock and crops is made more difficult due to disturbance, noise, trespass and interference with fences and field boundaries. Some of the farms in the study area are zoned for industrial/housing development and the use of the land for agricultural purposes will be temporary or short-term.

22.2.4.4 Functional value

The functional value of the baseline environment is evaluated by means of a number of specific criteria to take into account the importance and sensitivity of different features of the environment. The criteria that have been defined are described in Table 22.3.

Table 22.3 Criteria for baseline categorisation

Criteria	Functional value
- Viable breeding enterprise of high quality livestock. - Viable training equine enterprise. - Presence of regionally important experimental husbandry and agricultural/ horticultural training farms. - Commercially viable horticultural enterprises employing more than two full time persons. - Very good quality land suitable for a wide range of uses such as horticultural crops, tillage crops and grassland.	Very high (V)
- Intensive and viable agricultural and horticultural farms. - Non viable agricultural and horticultural farms with excellent management practices (e.g. part time farmers). - Good quality land (mainly suitable for grass production only). - High actual and potential yields.	High (IV)
- Non viable agricultural and horticultural farms with good management practices. - Medium quality land (e.g. restricted drainage and nutrient status and therefore reduced yield potential).	Medium (III)
- Poor quality land. - Low agricultural and horticultural output.	Low (II)
- Land is virtually idle with minimal agricultural or horticultural use. - Land will be developed for non agricultural or horticultural purposes in the short term.	Very low (I)

The results of the baseline categorisation are shown in Table 22.7 and illustrated on maps (Baseline Agronomy) included in Volume 3, Book 1 of 2.

22.3 DESCRIPTION AND CATEGORISATION OF THE BASELINE ENVIRONMENT

22.3.1 Description of the baseline environment

22.3.1.1 Review of national statistics

In 2006, there were approximately 4.3 million ha of land used for agriculture in the Republic of Ireland. The total national area of land is 6.9 million ha. This represented approximately 8% of Ireland's Gross Value Added at Factor Cost. Between 1991 and 2000 there was a decrease of 17.5% in the total number of people working on farms in Ireland. In 2006, approximately 5.4% of the Irish work force worked on farms and approximately half of these workers also had an off-farm job.

There is a historic and current trend in Ireland of decreasing number of farms and increasing average farm sizes. For example, in 1991 the average farm size was 26ha. This increased to 31.4ha in 2000 and 32ha in 2005. Also, in this period the proportion of dairy farmers decreased and the proportion of beef farmers increased.

22.3.1.2 Review of agricultural statistics for County Dublin

In 2000 the total agricultural area of County Dublin was approximately 37,769ha. The average size of farms was 42.2ha, which was somewhat larger than the national average of 31.4ha (Table 22.4). In County Dublin, 30% of farms are between 30 and 100ha in size. This is less than the national average of 34.7%. Approximately 10% of the farms are greater than 100+ha in size, which is higher than the national average of 3.3%. Dublin has a greater percentage of tillage (24%) compared to the national average of 3%.

Dublin also has a greater percentage of other enterprises such as horticulture, fruit, pigs, poultry and unclassified enterprises (10%) compared to the national average (1%) and a lower percentage of beef farmers (46%) compared to the national average of 78%.

Table 22.4 Farms classified by size nationally and in County Dublin (Census of agriculture 2000)

	Farm Size Categories (ha)								Average Farm Size (ha)
	0 - <10	10 - <20	20 - <30	30 - <50	50 - <100	100 - <200	>200	Totals	
Actual Numbers of Farms									
National	28,419	34,290	25,045	29,627	19,535	3940	671	141,527	31.4
Dublin	265	170	99	128	141	64	28	895	42.2
Percentage of Farms									
National	20.1	24.2	17.7	20.9	13.8	2.8	0.5	100.0%	-
Dublin	30	19	11	14	16	7	3	100.0%	-

22.3.1.3 Agriculture within the study area

Farm Size

The average size of the farms along the proposed alignment, based on information gathered in the land owner interviews, is approximately 64.3ha (see Table 22.5). This is larger than the average farm size recorded for County Dublin as shown in Table 22.5 i.e. 42.2ha.

Landuse

The National Census of Agricultural Statistics categorises landuse into seven agricultural groups: specialist dairy, specialist tillage, mixed crops and livestock, specialist beef, specialist sheep, mixed grazing livestock and other. For the purpose of this assessment, specialist beef, specialist sheep and mixed grazing livestock have been grouped together under the one heading 'other grazing livestock'. The following categories are therefore used:

- Specialist Dairy (majority dairy livestock);
- Specialist Tillage (majority tillage);
- Mixed Crops and Livestock (various crops and livestock);
- 'Other Grazing Livestock (remaining livestock enterprises – includes specialist sheep, specialist beef and mixed farms with cattle, sheep and horses);
- Other Enterprises (e.g. horticulture is a significant enterprise).

Landuse for farms affected by the proposed scheme are illustrated on maps (Baseline Agronomy) included in Volume 3, Book 1 of 2. Table 22.5 shows the percentages of farms and land within each category. The principal enterprises of farms affected by the proposed scheme is tillage (44.5%). Tillage accounts for 50.5% of the farms nationally.

Table 22.5 Farm enterprise type along the proposed route

	Percentage of farms within each category			**Average size of farm within each category (ha)***	
Farm / Enterprise Category	% Farms within the study area	% Farms in Co Dublin (2000)	% Farms Nationally	Farms within the study area	Farms nationally
Specialist Dairy	0	8	18.6	0	42.8
Specialist Tillage	44.5	24	2.6	94	50.5
Mixed Crops & Livestock	11.1	5	3.3	85	53.9
Other Grazing Livestock	22.2	53	74.3	5.4	26.9
Other	22.2	10	1.2	53	25.1
Total	100	100	100	58.5	31.4

* The average farm size of farms along the route (64.3ha) is larger than the June 2000 Census figure for the average size of farms in Co Dublin – 42.2ha.

Soils within the study area

The baseline soils in the area of the proposed scheme are discussed in detail in the baseline Soil and Geology chapter of the EIS (Volume 1, Chapter 17). Soil types influence the nature and intensity of farming that can be carried out. In this section reference is made to the 'Soil Associations of Ireland and their Land Use Potential' (Gardiner & Radford, 1980) and the 'General Soil Map of Ireland' (1980). Using the soil classifications referred to in this map the predominant soil encountered in the area of the proposed scheme can be described as Soil Association 38. This soil is associated with flat and gently rolling topography and occurs mainly in east Meath and County Dublin. It is moderately well drained soil of clay loam texture.

The soil is suitable for a wide range of uses. While the soil may not be as productive or as suitable for tillage as tillage soils in other parts of the country, there is a tradition of vegetable and tillage crops due to the close proximity to the Dublin City market and low rainfall in this area. Crop types within the study area consist of grassland, cereals, potatoes and vegetables (in that order). There are small areas of gley type soils where drainage is impeded in the southern part of Fosterstown South, Balheary Demense and the eastern part of Lissenhall Little.

Zoning objectives relating to farms within the study area

The zoning objectives that relate to the different farms within the study area are detailed in Table 22.6.

Table 22.6 Zoning policy of the affected agricultural & horticultural lands in Fingal County Council and Dublin City Council

Zoning Objective		Land Holding Reference Number	% of study area (as defined in Section 22.2.2)
Fingal County Council Area			
DA	To ensure the efficient and effective operation of the airport in accordance with an Airport Action Plan	7	1.6
GB	To provide for a greenbelt and to provide for urban and rural amenities and agriculture.	1,2,3,4,6,7	61.1
GI	To facilitate opportunities for general industrial employment and related uses in industrial areas.	5, 8	3
HA	To protect and improve high amenity areas.	4	0.8
NC	To protect, provide for and/or improve local/ neighborhood centre facilities in Ballymun.	8	0.8
RS1	To provide for new residential communities in accordance with approved action area plans and subject to the provision of the necessary social and physical infrastructure.	6	0.7
RU	To protect and provide for the development of agricultural and rural amenity	1	6.7
ST1	To facilitate opportunities for science and technology based employment and associated and complimentary uses in a campus style environment in accordance with an approved action area plan and subject to the provision of the necessary infrastructure.	8	19.6
Dublin City Council Area			
Z12	To ensure that existing environmental amenities are protected in any future use of these lands	9	5.7

22.3.2 Categorisation of the baseline environment

The functional value of farms within the study area is evaluated by means of a number of specific criteria which are shown in Table 22.3. The functional value that has been assigned to each farm is shown in Table 22.7.

The functional value of the farms in the study area is generally High (73.6% of the study area). This is due to large farm size, significant horticultural enterprises, excellent soil types and high potential yields. Medium functional values (23.6% of the study area) are due to existing zoning of these lands which indicates that the land will be developed for industrial use. Low and Very low functional value (2.6% of the study area) is due to the non intensive use of the land (due to DA zoning), and in some situations, poor soil type.

Table 22.7 Baseline categorisation

Area	Landowner Ref. No.	% of study area	Summary description	Functional value
MN101	1	12.3	- Specialist tillage - Good quality land - High yield potential - Large tillage and horticultural farm - Zoned GB: Greenbelt (land will be in agriculture for long term)	High (IV)
	2	8.3	- Other (vegetables & cereals) - Good quality land - High yield potential - Large farm - Zoned GB: Greenbelt (land will be in agriculture for long term)	High (IV)
	3	10	- Other (glasshouses & tillage) - Good quality land - High yield potential - Large farm - Intensive horticultural enterprise present - Zoned GB: Greenbelt (land will be in agriculture for long term)	High (IV)
	4	24.2	- Mixed crops & livestock - Good quality land - High yield potential - Large farm - Dairy enterprise present - Zoned GB: Greenbelt (land will be in agriculture for long term)	High (IV)
MN102	5	0.2	- Dry-stock, beef and sheep	Medium

Area	Landowner Ref. No.	% of study area	Summary description	Functional value
			- Good quality land	(III)
			- Small farm size	
			- Zoned GI ('To facilitate opportunities for general industrial employment and related uses in industrial areas') so unlikely to be used for agriculture in the long term)	
	6	13.4	- Specialist tillage	High
			- Good quality land	(IV)
			- High yield potential	
			- Zoned GB: Greenbelt (land will be in agriculture for long term)	
MN103	7	2.6	- Other grazing livestock (ponies)	Very low
			- Medium quality land	(I)
			- Low yield potential	
			- The potential for this land to be used for agriculture is limited because of the close proximity to Dublin Airport	
			- A small section of this farm is located in Area MN102.	
MN104	8	23.1	- Specialist tillage	Medium
			- Good quality land	(III)
			- High yield potential	
			- Zoned GI ('To facilitate opportunities for general industrial employment and related uses in industrial areas') so unlikely to be used for agriculture in the long term)	
MN105	N/A	N/A	- There are no farms in this area	-
MN106	9	5.7	- Specialist tillage	High
			- Good quality land	(IV)
			- High yield potential	
			- Zoned Z12: development in this area is unlikely and land is likely to be used for agriculture in the long term.	
MN107	N/A	N/A	- There are no farms in this area	-

23 MATERIAL ASSETS: ARCHAEOLOGY, ARCHITECTURAL HERITAGE AND CULTURAL HERITAGE

Section 39(2)b of the Railway Infrastructure Act, 2001 specifies that an environmental impact statement must contain a description of the aspects of the environment that are likely to be significantly affected by the proposed scheme. This chapter of the EIS has been prepared in order to fulfil this requirement in respect of archaeological, architectural and cultural heritage.

23.1 INTRODUCTION

This chapter describes and evaluates the existing environment in the area of the proposed development with respect to all known archaeological and architectural sites comprising both the built environment and sites of cultural and historical significance. In addition, sites of archaeological potential and properties of architectural merit have been identified and considered as part of this assessment.

Policies and objectives within a number of planning and policy/strategy documents were reviewed to ascertain if the documents contain any plans, policies or objectives relevant to archaeological, architectural and cultural heritage. The findings of this review are detailed in the Planning and Policy chapter (Volume 1, Chapter 4).

23.2 BASELINE CATEGORISATION METHODOLOGY

23.2.1 Introduction

The section presents the methodology used in assessing the baseline environment. As well as considering the relevant EPA guidance with respect to EISs (EPA, 2002 and 2003), the scope and methodology for the baseline assessment has been devised with reference to the following guidelines:

- Guidelines for the Assessment of Archaeological Heritage Impacts of National Roads Schemes (NRA, 2005);
- Guidelines for the Assessment of Architectural Heritage Impacts of National Roads Schemes (NRA, 2005);
- Code of Practice between the Department of the Environment, Heritage and Local Government (DoEHLG) and the Railway Procurement Agency (2007);
- The Framework and Principles for the Protection of the Archaeological Heritage (Department of the Arts, Heritage, Gaeltacht and the Islands, 1999);
- Code of Practice between the National Roads Authority and the Minister for Arts, Heritage Gaeltacht and the Islands (2000).

The baseline assessment included:

- A desktop study;
- Field surveys;
- The allocation of Heritage Constraint numbers (HC#) to significant sites of archaeological, architectural and cultural heritage.

23.2.2 Study area

Table 23.1 sets out the limits of the study area. These dimensions are illustrated on maps (Baseline Archaeology, Architectural and Cultural Heritage) included in Volume 3, Book 1 of 2.

The study area ranges from 50m to 250m either side of the proposed alignment. The dimensions of the study area varied depending on the potential for impacts to occur during the construction phase. For example, the construction of cut-and-cover tunnel sections has the potential to have an impact on a greater area than is the case with the construction of bored tunnel sections. Greenfield areas have greater archaeological potential when compared to developed areas. These issues were taken into consideration when defining the study area.

Table 23.1 Study area

Criteria	Width of study area (on either side of the alignment)
- Designated features of archaeological, architectural and cultural heritage. - Areas of archaeological potential	- 250m in areas of undeveloped Greenfield - 100m in developed areas - 50m around proposed tunnelled sections
Properties of architectural merit	- Properties that are to be impacted upon by the proposed alignment and which occur within the study area detailed above.
Townland boundaries	- Townland boundaries intersected by the proposed alignment occurring within the study area detailed above

23.2.3 Baseline data

The data used to compile the baseline for this chapter is shown in Table 23.2.

Table 23.2 Baseline data

Information required	Data Source
General information	- Dublin City: Sources for Archaeologists (Dublin City Council, 2005). - Documentary Sources of University College, Dublin Library, Dublin City Library, other various sources. - Cartographic Sources of Trinity College, Dublin Map Library, Ordnance Survey of Ireland including Hatfield (1592, Trinity College), Speed (1610, Dublin City), Down Survey (1654-6, County Dublin), De Gomme (1673, Dublin City), De Gomme (1673, Dublin Bay Area), Yarrington (1674, Design Proposals for New Harbour), Dinely (1676, Trinity College), Unknown (1683, Lazars Hill), Phillips (1685, Dublin City), Phillips (1685, Dublin Bay Area), Unknown (1685, Jervis Estate), Collins (1686, Dublin Bay), Pratt (1708, Dublin City), Unknown (1709, Georges Quay), Unknown (1709(?), Aston Quay), Moll (1714, Dublin City), Bolton (1717, North Lotts), Unknown (1718, City Quay & Georges Quay), Stokes (1725, Dublin City and Dublin Bay Area), Brooking (1728, Dublin City), Mathews (1752, Flint's Croft), Kendrick (1755, Poddle Estuary Infill), Rocque (1756, Dublin City small), Rocque (1756, Dublin City large), Rocque (1756, Dublin Bay Area), Rocque (1760, County Dublin), Ensor (?) (1764, Merrion Estate), Pool & Cash (1780, Dublin City), Sherrard (?) (1784, Dame Street Wide Streets Plan), Sherrard (?) (1787(?), North Quays), Sherrard (?) (1787(?), Brunswick Street), Sherrard (?) (1787(?), School Street), Sherrard (?) (1787(?), North Fredrick Street), Roe (1789, Merrion Estate), Sherrard (1791, Gardiner Street & Gloucester Street), Roe (1791, Fitzwilliam Street), Bligh (1800-3, Dublin Bay Area), Unknown (1806, Dublin City), Nevill (1811, Wellington Quay), Duncan (1821, Dublin City), Roe (1822, Fitzwilliam Estate), Taylor (1824, Custom House Docks Area), Sherrard (1835, City Quay Improvements), Ordnance Survey (1838, 1st Edition Dublin City & County), Unknown (c.1908/9, Tara Street), Clarke (2002 ed., Medieval Dublin) - A select list of cartographic sources consulted can be found in Annex H, Volume 3, Book 2 of 2.
Location and description of Recorded Archaeological Monuments and Places	- Ordnance Survey 6' Sheets 7, 8, 11, 14 & 18 of the Record of Monuments and Places (RMP) (DoEHLG). - SMR Office files for these sites containing aerial photographs, early maps, Ordnance Survey (OS) memoirs, OPW Archaeological Survey Notes and other relevant information.
National Monuments	- National Monuments Section, DoEHLG.
Location and description of artefacts discovered within the study area	- Topographical Files (National Museum of Ireland, 2007). - Other published catalogues of prehistoric material: - Raftery (1983 - Iron Age antiquities); - Eogan (1965; 1983; 1994 - bronze swords, Bronze Age hoards and goldwork); - Harbison (1968; 1969a; 1969b - bronze axes, halberds and daggers); - The Irish Stone Axe Project Database (School of Archaeology, UCD).
Location of designated Architectural Conservation Areas (ACA) and Conservation Areas	- Dublin City Council Development Plan (2005-11). - Fingal County Council Development Plan (2005-11).
Areas of archaeological potential	- Aerial photographs of St. Joseph Collection, Cambridge, Geological Survey of Ireland and RPA. - Field Surveys carried out by CRDS from 2006 to 2008. - 'Dublin City Centre to Airport Metro Archaeological Assessment' (CRDS, 2003).

Information required	Data Source
Records of previous archaeological excavations	- National Monuments Section, DoEHLG, Dublin City Council (please refer to Annex H (Volume 3, Book 2 of 2) for a full list of references). - Excavations publications 1970-2002 (on-line) 2002-2004 (published).
Location and description of Protected Structures	- National Inventory of Architectural Heritage (NIAH) (DoEHLG 2007). - Record of Protected Structures (RPS) (DoEHLG, 2007). - Dublin City Council Development Plan (2005 - 2011). - Fingal County Council Development Plan (2005 - 2011).
Location and description of properties of architectural merit	- Field surveys carried out by CRDS from 2006 to 2008.

23.2.4 Baseline categorisation

Categorisation of the baseline environment involves the allocation of overall 'functional values' to discreet areas within the study area. The approved methodology for the baseline chapters of this EIS sets out the principle that the functional value of the area is determined with reference to the 'importance' and 'sensitivity' of the area as well as any 'existing adverse effects' that impact on the area. Each of these three terms is explained in detail in this section.

23.2.4.1 Importance

Archaeological sites and archaeological zones of interest are identified by a recorded monument (RMP) reference number on the landuse zoning maps of the relevant Development Plan. The RMP reference numbers are taken from the Record of Monuments and Places for Dublin, published by DoEHLG.

Irish National Monuments legislation does not differentiate between archaeological sites on the basis of relative importance. All recorded archaeological monuments are therefore considered to be of very high importance. A number of areas of archaeological potential were also specifically identified in the course of this study. These areas are considered to be of high importance.

The Local Government (Planning and Development) Act, 2000 (as amended), resulted in the establishment of a Record of Protected Structures of architectural importance for Dublin City Council and Fingal County Council areas. Legislation does not differentiate between Protected Structures on the basis of relative importance. A structure is either a Protected Structure or it is not. All Protected Structures are therefore considered to be very important.

A Conservation Area is defined as an area where the architectural design and scale of these areas is of sufficient importance to require special care in dealing with development proposals and works by the private and public sector alike. Conservation are managed through zoning measures. Development proposals within all Conservation Areas must complement the character of the area, including the setting of Protected Structures, and comply with development standards. In the context of this assessment, the importance of Conservation Areas is considered to be very high because of the protection that this designation affords.

Under the Local Government (Planning and Development) Act, 2000 (as amended), Architectural Conservation Areas are defined as 'a place, area, group of structures or townscape which is of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or contributes to the appreciation of Protected Structures, whose character it is an objective to preserve in a development plan'. Architectural Conservation Areas, as defined by Dublin City Council 'aim to identify areas of special character and architectural interest and to preserve that special character. The goal is to provide a framework that will permit a degree of flexibility in terms of design consistent with the maintenance and improvement of the essential character of the ACA. To fulfill this objective all new development in the area of the ACA should be implemented and carried out in accordance with the outlined policies/objectives'. Architectural Conservation Areas are seen as an additional measure to Conservation Areas, aimed at protecting the built heritage. In the context of this study, the importance of Architectural Conservation Areas is considered to be very high because of protection that this designation affords.

Architectural Heritage in Ireland has also been assessed by the National Inventory of Architectural Heritage (NIAH) on a county by county basis. Fingal has been completed but Dublin City has yet to be finalised. When local authorities are compiling the Record of Protected Structures for this area, they are obliged to consider all of the buildings that the NIAH deemed to be potentially significant. A Record of Protected Structures has been compiled by Fingal County Council and all of the buildings that the NIAH deemed to potentially significant have been listed as Protected Structures in this record.

A number of specific properties within the study area are to be directly impacted upon by the scheme e.g. demolition or partially demolition, severance etc. Each of these properties was assessed individually in the field to determine if any of the properties are of architectural merit. Structures of architectural merit are recognised to be important and mitigation measures should be considered if they are to be impacted upon.

23.2.4.2 Sensitivity

Irish National Monuments legislation does not differentiate between archaeological sites on the basis of relative sensitivity. The sensitivity of all recorded archaeological monuments is therefore considered to be very high.

The nature of archaeology is such that there is always the possibility that unknown sensitive archaeological features may be uncovered in any area, despite no apparent indication of the potential for a finding in this area. For this reason, areas of the study area that do not contain recognisable features of archaeological importance have been allocated a functional value of Medium.

Irish Architectural Heritage legislation also does not differentiate between Protected Structures on the basis of relative sensitivity. The sensitivity of all Protected Structures is therefore considered to be very high.

23.2.4.3 Existing adverse effects

Existing adverse effects are not considered in the case of designated sites of archaeological or architectural heritage because the sites are simply designated or they are not. Existing adverse effects are taken into consideration when considering potential features of architectural merit and of cultural heritage. Existing adverse effects in this regard include existing damage to the integrity of the structure.

23.2.4.4 Functional value

The categorisation of the baseline environment involves the allocation of overall 'functional values' to discreet areas within the study area. The functional value of the area is determined with reference to the 'importance', ' sensitivity' of the area and any 'existing adverse effects' that impact on the area. Each of these three terms is explained in detail in this section. The criteria that have been defined are shown in Table 23.3 and Table 23.5

Table 23.3 Criteria for baseline categorisation for archaeological, architectural and cultural heritage

Criteria	Functional value
All recorded monuments and their constraint rings	Very high (V)
All Protected Structures	
All designated Conservation Areas	
All designated Architectural Conservation Areas	
Sites of archaeological potential	High (IV)
Structures of architectural merit that will be impacted	
All other areas	Medium (III)
Not applicable	Low (II)
Not applicable	Very low (I)

23.3 DESCRIPTION AND CATEGORISATION OF THE BASELINE ENVIRONMENT

23.3.1 Description of the baseline environment

23.3.1.1 Historical context

Early to Late Medieval Dublin

Gaelic or pre-Viking Dublin comprised two discrete settlement clusters named after two important topographical features. The older settlement, Áth Cliath or the Ford of the Hurdleworks, took its name from a major river crossing. The river which would have been 300m wide at this point would have been fordable only at low tide. Hurdles constructed of interwoven branches and saplings would have consolidated the exposed mud-flats assisting traffic across the river (Clarke, 2002). The convergence of a number of important routeways and the proximity of the river crossing provided the impetus for the growth of a small settlement. The settlement, which is likely to have included a church, market and crossroads, may have been enclosed and an ancient ditch is referred to in medieval documents (Clarke, 2002). Downstream of the early ford the riverbank was not well defined. A small river known as the Bradogue flowed into the Liffey and caused the build up of extensive mud banks and the production of a large inlet known as the Pill (Simms, 2001).

The other settlement, Duiblinn (from Dubhlinn or Black Pool), took its name from a tidal pool on the River Poddle, a tributary of the River Liffey (Clarke, 2002). The settlement at Dubhlinn constituted an early medieval ecclesiastical enclosure. The line of this settlement is still visible in the present street layout of Stephen Street Upper, Johnson Place, Stephen Street Lower, Glover's Alley, York Street, Mercer Street Upper, Digges Street Upper, Peter Row and Whitefriar Street. The enclosure was approximately 335m north-south and 260m east-west.

The initial Viking settlement of AD 841 consisted of a longphort. This probably occurred at the confluence of the Poddle and the Liffey at Dubhlinn. It is also likely that the monastery on the south side of the pool was also seized by the Vikings for a short period of time. The longphort was used as a semi-permanent encampment which functioned as a base for raids on the Laigin and Ui Néill (Bradley, 1992). After AD 842 the annals refer to the Vikings at Áth Cliath and it is possible that a second longphort was established there to control the river crossing. The site included an island in the River Liffey to the north of the ford (Usher's Island). This island would have been naturally defensible and would not have required the construction of features such as ditches, ramparts, palisades and gates (Clarke, 2002). The early settlers were buried on the south bank of the Liffey at Kilmainham/ Islandbridge (Edwards, 1990).

After a period of exile at the beginning of the 10th century, the Scandinavians recaptured Dublin in AD 917. A new settlement began to grow up at the eastern end of the natural ridge at the confluence of the Liffey and the Poddle (Clarke, 2002). The annals refer to the settlement as a dún or stronghold and the construction of defensive embankments along the riverfront can be traced to this period. The primary focus of development was at Wood Quay and Essex Street West. This settlement developed as an important trading centre (Clarke, 2002: see following for more detail). Excavations have shown that the growth of the town was primarily due to the activities of merchants and craftsmen with Dublin remaining an important trading centre (Simms, 2001).

The arrival of the Anglo-Normans in 1170 led to the displacement of many of the Hiberno-Norse settlers to the north side of the Liffey. The suburb that consequently developed is recorded in latin documents as villa Ostmannorum. This suggests a mainly Norse ethnic composition (Clarke, 2002). The suburb occupied the lands between St. Mary's Abbey in the east and Oxmantown Green in the west. A stone bridge, constructed near the site of the ford of Áth Cliath c.1215, connected the north and south sides of the river. This bridge may have replaced a possible earlier structure on the same site.

Post Medieval to Modern Period

The city of Dublin was transformed by the upheavals of the 16th and 17th centuries which brought the first thorough English conquest of the country at the hands of the Tudor dynasty. By the end of the 17th century, Dublin was the capital of the English-run Kingdom of Ireland. One of the most significant developments made to the city of Dublin by a Tudor monarch, Elizabeth I, was the construction of Trinity College Dublin in 1592. This college was originally a Protestant university for the Irish gentry.

Development in Dublin City rapidly increased during the second half of the 17th century. Areas that had previously been marshy tidal flats around the River Liffey were reclaimed and quays and bridges were constructed on the new land. The reclamation project also involved the culverting of the Stein, Poddle and Bradogue rivers that once flowed through the city.

The first major changes, to what had (up until the 17th century) remained essentially a medieval city with narrow winding streets, occurred during the reign of King Charles II. The then Lord Lieutenant of Ireland, the Earl (later Duke) of Ormonde issued an instruction that the frontages of houses should face the new quays, which were being constructed along the banks of the Liffey This was a dramatic change in the fabric and layout of Dublin, whose buildings backed onto the river and whose population essentially used it as a collective sewer. Ormonde's decision made the Liffey the central feature of the city.

The 18th century saw rapid growth in the size and population of Dublin. The medieval walls were swept away and new, broad streets and squares were constructed in what had previously been open countryside on either side of the Liffey. Embankment of the river it continued and a number of elegant bridges were built at this time. As the city grew in size, stature, population and wealth, the existing medieval narrow streets required major redevelopment and new residential buildings were built. The Wide Streets Commission was established to replace many of the narrow medieval streets with fine, large Georgian streets. Among the famous streets to appear following this redesign were Sackville Street (now called O'Connell Street), Dame Street, Westmoreland Street and D'Olier Street. All of these streets were built following the demolition of narrow medieval streets and their amalgamation. Five major Georgian squares were also laid out to the south of the River Liffey: Rutland Square (now called Parnell Square), Mountjoy Square on the northside, Merrion Square, Fitzwilliam Square and Saint Stephen's Green. Families such as the Gardiners and the Fitzwilliams established estates in Dublin and were responsible for developing many of the streets, areas, squares and vistas of the cities. These families were therefore directly responsible for shaping the modern city with which we are familiar. Many landmarks and streets throughout Dublin bear these families' names as a direct and continual reminder of their role in this regard.

While previously development had focused on the southern and south-eastern side of the city (the medieval core), from the 18th century onwards growth and investment focused on the city's northside. This became the most fashionable district in Dublin. The northside remained the focus of the city until the Earl of Kildare built his mansion on the southside of the city. This mansion was originally called Kildare House but was later renamed Leinster House. The construction of this house prompting further development around it to follow.

After the Act of Union of 1801, with the loss of its administrative power and structures, Dublin entered a period of decline. Architectural development still continued for some years but the north side of the city began its long slide into disrepair. The huge northside houses, which were originally the finest in Dublin, eventually fell into disrepair and became tenements, into which large numbers of poor people moved. Despite the decline, in the later part of the 19th century, fine Victorian structures including banks, public houses, markets and train stations continued to be constructed.

In the years after independence in 1922, many people in Ireland came to see Georgian Dublin as a symbol of British rule and of the unionist identity which was at odds with the new republic. Much of Georgian Dublin was either left to decay or was actively destroyed. This process was worsened by the fact that many of the gentry and middle classes had moved to the wealthy Victorian suburbs outside the city itself. The introduction of tramways in the 1870's increased the relative attractiveness of suburbs like Drumcondra and Glasnevin to the middle classes, who wanted to move outside the cramped conditions of the city.

Many of the city's fine buildings became tenements. Some of these housed up to twenty families at a time in terrible conditions. The 1940's saw the start of an attempt to provide proper accommodation for the city's poor. Many of Dublin's historic buildings, which were too often associated with poverty, were pulled down. Once grand streets such as Gardener Street, Hardwicke Street, Dominick Street and Summerhill were transformed with unsympathetic modern apartment blocks replacing the Georgian Period townhouses. In the 1980's a number of controversial road widening schemes in the centre of Dublin awakened a new appreciation by the city's populace of its architectural heritage, a change that has seen a concerted effort in recent years to reverse the decline and destruction of the surviving architectural heritage.

23.3.1.2 Designated Conservation Areas

Archaeological Sites and Zones (RMP)
The following designated archaeological sites and zones exist within the study area:

- Parts of the study area are located within the historic city of Dublin (RMP designation DU018:020).
- 3 National Monuments occurs within the study area (St. Stephen's Green, O'Connell Monument and the William Smith O'Brien Monument).
- 35 RMP sites occur within the study area. A full listing and description of the RMP sites is set out in Table 23.5.

Information supporting the Archaeology, Architectural and Cultural Heritage chapter is set out in Annex H, Volume 3, Book 2 of 2.

These areas are illustrated on maps (Baseline Archaeology, Architectural and Cultural Heritage) included in Volume 3, Book 1 of 2.

Architectural Conservation Areas
The following Architectural Conservation Areas exist within the study area:

- The O'Connell Street area is designated as an Architectural Conservation Area (see Map E, Dublin City Development Plan 2005 – 2011 – adopted March 2005).
- The Grafton Street area is designated as an Architectural Conservation Area (see Map E, Dublin City Development Plan 2005 – 2011 – adopted July 2006)
- The South City Retail Quarter is designated as an Architectural Conservation Area (see Map E, Dublin City Development Plan 2005 – 2011 – adopted March 2007)

Conservation Areas
Three significant Conservation Areas overlap within parts of the study area:

- Parnell Square (including Parnell Square and part of Parnell Street, Granby Row and Frederick Street North). The Conservation Area around Parnell Square covered by landuse zonings Z8 'to protect the existing architectural and civic design character, to allow only for limited expansion consistent with the conservation objective and to allow primarily residential and compatible office and institution uses' and Z9 'to preserve, provide and improve recreational amenity and open space'.
- Grafton Street (including Grafton Street, Westmoreland Street, College Green, Trinity College Dublin and St. Stephen's Green). The Conservation Area around Grafton Street is covered by landuse zonings Z5 'to consolidate and facilitate the development of the central area, and to identify, reinforce and strengthen and protect its civic design character and dignity' and Z9 'to preserve, provide and improve recreational amenity and open space'.
- The River Liffey and its quays is a designated Conservation Area. The establishment of riverside quays with buildings facing onto the river was the single most important intervention in shaping the city. Today the character of the quays is defined by the existing historic fabric, new build, the height and setting of buildings, the quays, bridges and port area, the curving nature of the river and the vistas which emerge along its course.

23.3.1.3 Record of Protected Structures (RPS)

A number of Protected Structures exist within the study area.

- There are 333 Protected Structures within the study area and in the RPS for Dublin City.
- There are 5* Protected structures within the study area and in the RPS for Fingal. *Two Protected Structures are believed to be part of the same structure and have been treated as a single entity in this study.

A full listing and description of these structures is set out in Table 23.5. These areas are illustrated on maps (Baseline Archaeology, Architectural and Cultural Heritage) included in Volume 3, Book 1 of 2.

23.3.1.4 Townland names

Ireland is divided into four provinces and thirty-two counties. These counties are subdivided into baronies and parishes which are in turn, divided into approximately 60,000 townlands. These townlands are the smallest official land-unit in the country. All these various land-units have names and a study of the toponymy of an area can provide an immense amount of information about an areas cultural heritage. For example, the vast majority of names are fairly simple, describing natural features such as mountains, hills, lakes, rocks, rivers etc. The names reflect the impact of the natural environment on man and of man on the environment. There are names describing the use of the landscape by man: its division into fields, the addition of habitations, routeways, churches, burial monuments etc. Names may also contain a claim to a feature, man-made or natural, by an individual or a group of people. While the majority of these names are Irish in origin, many survive only in an Anglicised form and have been corrupted to some degree by the process of Anglicisation. Within the study area many of the place names are more modern in origin and reflect the process of colonisation from later medieval period onwards. This rich diversity provides an insight into the cultural heritage of the area.

In total, thirty-two townland names were identified within the study area. These names have been identified through review of the Ordnance Survey 1st edition 6-inch maps of the area. A description of these townland names is taken from the General Alphabetical Index of the Townland and Towns, Parishes and Baronies of Ireland. This index is based on the 1851 Census.

Table 23.4 Townland names within the study area

Townland name	Derivation
Belinstown	An English place name incorporating the family name of Belin or Belyn who were the landowners in the fourteenth century.
Balheary Demesne	Derived from the Irish Baile Uí Eaghra meaning 'O'Heary's town', or 'O'Heary's homestead'. The 'Demesne' element usually refers to the grounds belonging to a mansion or country house. The townland was also known as Park Place according to the Ordnance Survey Name Books for Co. Dublin.
Lissenhall Little	Derived from the Irish Lisín, meaning 'little fort'. The 'hall' element could be a later addition referring to a particular building within the townland.
Lissenhall Great	Derived from the Irish Lisín, meaning 'little fort'. The 'hall' element could be a later addition referring to a particular building within the townland.
Newtown	An English place name.
Seatown West	An English place name. According to the Ordnance Survey Name Books for Co. Dublin it was also known as 'Popham's Folly' after a row of small houses built in the townland by a Mr. Popham and called Popham's Folly.
Townparks [Swords]	An English place name, often dating from medieval times.
Swords Demesne	The Irish name of Swords was Sord or Sord Choluimcille. Joyce states that Sord was the name of a spring well which existed in the area and was venerated since pagan time. The Irish 'Life of Columcille' explains the term Sord' as meaning glan or pure. When Colum Cille established his church here he took possession of the well and blessed it. It is now known as St. Columcille's Well.
Commons East	An English place name usually associated with an area of land over which the people of the town held common rights such as grazing etc.
Barrysparks	An English place name incorporating the family name of Barry, major landowners in the area during the seventeenth and eighteenth centuries.
Miltonsfields	An English place name incorporating the family name of 'Milton' which probably refers to a former landowner.
Cremona	No explanation for this place name is given in the Ordnance Survey Name Books for Co. Dublin. It seems to incorporate the Irish term móin, meaning 'bog'.
Crowscastle	An English place name. Probably refers to the home of a family named Crow.
Fosterstown North	An English place name incorporating the family name 'Foster' which likely refers to a landowner.
Nevinstown West	Probably an English place name incorporating the family name 'Nevin' which likely refers to a landowner.
Fosterstown South	An English place name incorporating the personal name 'Foster' which likely refers to a landowner.
Cloghran	Possible derived from the Irish Cloghar, meaning 'stony place'
Corballis	Derived from the Irish Cor Baile, meaning 'Odd Town'
Collinstown	An English place name incorporating the family name of Collins which probably refers to a former landowner.
Ballystruan	Derived from the Irish Baile srutháin, meaning 'the town or homestead of the little stream'.
Ballymun	Incorporates the Irish Baile and the family name 'Munn', giving a meaning of 'Munn's town', or 'Munn's homestead'.
Balcurris	Derived from the Irish Baile Corra, meaning 'the town of the weir'.

Townland name	Derivation
Santry Demesne	Derived from the Irish Seantrabh, meaning 'old dwelling'. The 'Demesne' element usually refers to the grounds belonging to a mansion or country house.
Stormanstown	An English place name explained in the Ordnance Survey Name Books for Co. Dublin as incorporating the family name 'Storman' which likely refers to a former landowner.
Wad	Named 'Wadds Town' in the 1828 Tithe Applotment Book so therefore possibly derived from a personal name of a landowner. Also given the Name 'North Farm Townland' in the Ordnance Survey name Book for Co. Dublin.
Walnutgrove	An English language placename probably named for a natural feature within the area.
Hampstead North	An English placename derived from the Old English term for homestead.
Hampstead South	An English place name derived from the old English term for homestead.
Drishoge	Derived from the Irish Driseóg, meaning 'Bramble'
Clonliffe West	Derived from the Irish Cluain Life, meaning 'the meadow or plain of the Liffey'.
Crossguns North or Daneswell	An English placename.
Clonliffe South	Derived from the Irish Cluain Life, meaning 'the meadow or plain of the Liffey'.

23.3.1.5 Dublin street names

No townland information is available for the urban area of Dublin City Centre south of the Royal Canal on the Ordnance Survey mapping. A study of the names of streets traversed by the proposed development was therefore undertaken. The origins of the street names of Dublin are varied and include church names, names of Lord Lieutenants and their families, names of important landowners and other celebrated persons. A survey of sites and events of cultural heritage significance on or near these streets was also included.

Kenmare Parade
As with other locations in this area, Kenmare parade was named after a picturesque location in Co. Kerry.

Innisfallen Parade
This street is named after an island on the lower lake of Killarney. This area has several places named after picturesque Co. Kerry locations. The author Sean O'Casey lived here for a period of time at No. 9.

Muckross Parade
As with other locations in this area, Muckross Parade was named after a picturesque location in Co. Kerry.

North Circular Road
In 1673 the road was set out as a boundary road for the city of Dublin. When the road opened it became a fashionable promenade on the route to Phoenix Park. The road appears to have first been called North Circular Road in 1800. Many of the fine brick houses still stand on the street but have been converted into apartments.

Eccles Street
Sir John Eccles owned property on this street and was the Lord Mayor in 1710. This street is famous because it was the fictional home of James Joyce's protagonist Leopold Bloom and his wife Molly, in the author's famous work, Ulysses. The house at 7 Eccles Street, where the characters lived, has since been demolished and the site is now part of the Mater Misericordiae Hospital. The architect Francis Johnston (1760-1829), who designed the General Post Office among other important buildings, also lived here at No. 64.

Dorset Street
Dorset Street was previously known as Drumcondra Lane before the area was built up by the Gardiner family. The street was renamed in 1756 after Lionel Cranfield Sackville, First Duke of Dorset and the Lord Lieutenant of Ireland. The writer Sean O'Casey (1880-1964) was born at No. 85 Dorset Street before his family moved to Innisfallen Parade. Richard Brinsley Sheridan was born at No.12. The corner of Eccles Street and Dorset Street is also a location visited by James Joyce's protagonist, Leopold Bloom, in his famous novel Ulysses.

Parnell Square East
Parnell Square was originally called Rutland Square. The centre of the square is now taken up by the Rotunda Hospital, which was founded in 1745. The hospital moved to its present location in 1748 and was the first maternity hospital in Ireland and Great Britain. At the time of its construction, it was also the largest maternity hospital in the world.

No. 5 Parnell Square East was the birthplace of Oliver St. John Gogarty (1878-1957) who was a surgeon and a senator as well as being prominent in the literary scene. The east side of Parnell Street, near to Parnell Square itself, has the emerging reputation of being Dublin's 'Chinatown' as it is increasingly home to a thriving immigrant community. The street has a myriad of Chinese and Korean restaurants as well as African, Eastern European and Central European businesses. Notable Dublin landmarks and cultural heritage sites on and near to Parnell Square include:

- The Garden of Remembrance opened in 1966 to commemorate those who died in the 1916 Rising;
- The Dublin Writers Museum opened in 1991 (on the northern side of the Square);
- The Gate Theatre founded in 1928;
- The Hugh Lane Gallery (on the northern side of the Square);
- The James Joyce Centre, just off Parnell Street on North Great Georges Street which has the original door from Joyce's birthplace at 7 Eccles Street;
- The Rotunda Hospital at the bottom of Parnell Square.

Cavandish Row
This area is named after William Cavendish, the third Duke of Devonshire and Lord Lieutenant from 1737 to 1745. Building leases date from 1753 when Luke Gardener laid out a roadway 72 feet wide from Sackville Street through the gardens of the Bunch of Keys. Originally called Cavendish Street, it was renamed Cavendish Row in 1766.

O'Connell Street
Originally called ‚Sackville Street', Dublin's main thoroughfare was renamed in 1924 in honour of Daniel O'Connell, the early nineteenth century nationalist leader. The street is in the general location of a shorter seventeenth century street called Drogheda Street. It forms part of a grand thoroughfare through the centre of the city created throughout the eighteenth century comprising Carlisle Bridge (now O'Connell Bridge), Westmoreland Street, College Green and Dame Street and terminating at City Hall and Dublin Castle. The buildings along the street were largely rebuilt in the early twentieth century in the wake of substantial destruction caused during the War of Independence and the Civil War. The western side of O'Connell Street Upper still conforms to the original eighteenth century plot widths and retains some of its older fabric. O'Connell Street was the stage for several important events in Irish history including: one of the 1913 Dublin Lockout gatherings; the 1916 Easter Rising; the Irish Civil War of 1922; the destruction of the Nelson Pillar in 1966 and numerous public celebrations, protests and demonstrations. The street continues to be used as a place of both protest and celebration. It is the main route of the St. Patrick's Day Parade and the setting for the annual 1916 Commemoration. Notable Dublin landmarks and cultural heritage sites on and near to O'Connell Street include:

- The General Post Office (GPO), originally built in 1814, was seized by the Irish Republicans in the 1916 Easter Rising and substantially rebuilt after damage caused during the conflict;
- The Spire of Dublin which was erected in 2003 and was originally the site of Nelson's Pillar which was destroyed in 1966;
- 'Clery's' department store which stands on the street was rebuilt in the 1920's, but was originally constructed by 1853 and was one of the world's first purpose-built department stores;
- The Gresham Hotel which was also rebuilt after the conflict and was reopened in 1927; http://en.wikipedia.org/wiki/Image: Spire_Dublin_night.jpg
- The O'Connell Monument which was designed by John Henry Foley and was unveiled in 1882. It is designated a National Monument;
- The William Smith O'Brien monument by Thomas Farrell which was moved to O'Connell Street in 1929 after having originally stood on O'Connell Bridge. It is designated a National Monument;
- The Sir John Grey monument by Thomas Farrell which was unveiled in 1879 and was carved of white Sicilian marble;
- The bronze statue of James Larkin by Oisín Kelly. which was unveiled in 1980;

- The monument to Father Theobald Mathew, who founded the temperance movement, which was unveiled in 1893 by Mary Redmond;
- The Parnell Monument unveiled in 1911 and designed by Augustus Saint-Gaudens;
- The Pro Cathedral;
- The Taxi Drivers Shrine at the taxi rank at the top of O'Connell Street;
- The cast iron vents in front of the Parnell Monument

O'Connell Bridge
The original bridge was designed by James Gandon and commissioned by the Wide Streets Commission. This bridge was completed in 1795 and was named Carlisle Bridge for the then Lord Lieutenant of Ireland - Frederick Howard, fifth Earl of Carlisle. In 1880 the Carlisle Bridge was widened, its hump was removed and it was renamed after Daniel O'Connell, whose statue stands nearby. In recent years the lamps on the central island have been restored. The keystone head on the bridge was designed by Gandon to represent the River Liffey. The bridge is another site which is visited by Bloom in Joyce's famous novel Ulysses. A bronze plaque can be found just across the road at Aston Quay commemorating the event. Another plaque commemorating a fictional Dublin character was inserted on the bridge in recent years. The hoax has become part of popular Dublin culture and a decision was made to leave the plaque in-situ as a monument to Dublin wit.

Westmoreland Street
The area of Westmoreland Street was reclaimed during the seventeenth century and was previously tidal marsh land. The street itself was formed in the late 1790's as part of building project which sought to improve and revitalise the city. This construction saw the destruction of many older buildings and streets. It was named after John Fane, tenth Earl of Westmoreland and Lord Lieutenant from 1790 to 1794. Notable Dublin landmarks and cultural heritage sites on and near to Westmoreland Street include:

- Bewley's Oriental Café, also on Grafton Street which has since closed, but was once a Dublin institution. This outlet was opened in 1896 and was frequented by James Joyce.

College Street
The street is a short street flanking Trinity College for which it is named. For a brief period after 1821 it was known as Bank Street reflecting the Bank of Ireland's installation in the former Houses of Parliament on College Green. Its former name was restored in 1835. Notable Dublin landmarks and cultural heritage sites on and near to College Green include:

- A statue of Thomas Moore in facing the old House of Lords;
- The underground toilets beside the statue of Thomas Moore.

College Green
The area known today as College Green in front of Trinity College was, in early times, part of an unfenced area of pasture known as Hoggen Green. It was bounded roughly by the River Poddle, the River Liffey, the River Stein and the present line of Dame Lane (or perhaps Exchequer Street) and Suffolk Street. In medieval times Hoggen Green was an open common controlled by the city and its overlords. The green was used as a pasture, as a place of recreation for the citizens and as a dumping ground for refuse. The development of Hoggen Green proceeded rapidly during the seventeenth and eighteenth centuries and it is at this time that the name Hoggen Green also began to fall into disuse.

In 1591 Adam Loftus, the Archbishop, established the College of the Holy Trinity on the site of All Hallows Priory on Hoggen Green. The College Green façade of Trinity College is one of the finest in the city and was designed by Theodore Jacobsen in 1751. The present Bank of Ireland building on College Green occupies the site of a hospital for maimed soldiers known as Carew's Hospital. The first parliament in Ireland was held in this building in 1661. The present building was erected on the site in 1729. College Green has often served as a meeting point for political rallies. For example, in the 1990s, the President of the United States of America, Bill Clinton, addressed a crowd during his visit to Ireland. Notable Dublin landmarks and cultural heritage sites on and near to College Green include:

- A nineteenth century statue of Henry Grattan, one of the leading members of the old Irish Parliament;
- A statue of patriot Thomas Davis and a fountain. This was previously the site of a statue of William III of Orange on Horseback which was blown up by Irish republicans in the 1930s;
- Statues of Goldsmith and Burke inside the railings at Trinity College;
- Two cast iron lamp standards with ornate design in front of the Gratten monument.

St. Andrew Street
This street was called Hog Hill until 1776. This name was derived from the Abbey of the Blessed Virgin Mary del Hogges which was located nearby. The street was renamed after the Church of St. Andrew which had been located in the area since the medieval period. The church which stands today was built between 1860 and 1862 and replaced an earlier oval Gothic church designed by Francis Johnston. A memorial to the dead of the Boar War is located within the grounds.

Wicklow Street
Significant development in this area appears to have commenced in the late seventeenth century. The street was originally part of Exchequer Lane (Street) which was named after the old Exchequer building which was located in the area. The eastern end of this street became Wicklow Street in the nineteenth century allegedly because the residents wanted to disassociate themselves from the older street and its bad reputation. The street was pedestrianised in the 1980s.

Grafton Street
Grafton Street was named after the first Duke of Grafton, who was the owner of property in the surrounding area. It was originally a country lane, but was developed by the Dawson family in 1708. Today the street is a shopping destination and is popular with buskers who perform for the crowds. Notable Dublin landmarks and cultural heritage sites on and near to Grafton Street include:

- The eighteenth century Trinity College Provost's House;
- The late twentieth century statue of Molly Malone, which is a popular Dublin meeting place and tourist attraction;
- A sculpture entitled Winter Trees by Leo Higgins was erected at the top of the street;
- Bewley's Oriental Cafe which became a Dublin institution upon opening in 1927.

Harry Street
The street was named after Harry Dawson, whose family developed the area in the eighteenth century. Harry Street is home to a bronze statue of Phil Lynott which was unveiled in 2005. Notable Dublin landmarks and cultural heritage sites on and near to Harry Street include:

- McDaid's Pub which was the original city morgue and at one time a church. It was also a favourite meeting place for some of Dublin's celebrated authors and artists.

Chatham Street / Chatham Lane
This area is named after William Pitt (1759-1806), the son of the first Earl of Chatham. The street appears to have been laid out at some stage in the late eighteenth early nineteenth centuries. In the nineteenth century the street gained a reputation for its victuallers, poulterers and fish merchants. The Enniskerry coach office was also located in Chatham Street at this time. The site of the present College of Music in Chatham Street originally housed the Clarendon market, built in 1783, which was mainly occupied by victuallers.

Tangier Lane
The Lane was named after Tangier, a fortress in Africa. Tangier was part of the dowry of Catherine of Braganza, Queen of Charles II, by whom in 1662 it was made a free port. The expense of maintaining it then fell on the Irish Exchequer.

King Street South
The Friends of Medieval Dublin map (1978) marks a bridge crossing the River Stein in this area. Speed's 1610 map of Dublin shows a street in the same vicinity of the modern one. De Gomme's map of 1673 calls the street 'Leather Lane'. The suspected line of the early medieval enclosure around the ecclesiastical settlement site of Duiblinn runs along the western end of King Street South and therefore this may have been a route of some antiquity. The Irish Historic Towns Atlas for Dublin City lists King Street South as being known as 'King's pavement' in 1553. The first use of the name King Street South occurs in the eighteenth century. The street is best known for the Gaiety Theatre which was designed in the 1860s and is one of the last surviving Victorian theatres in the city.

St. Stephen's Green
St. Stephen's Green is named after a church and leper hospital which was located nearby from 1224 to 1639. The Green was a marshy commons on the edge of the city in medieval times and was used for grazing. In the seventeenth century the park was enclosed with a wall and the land around the perimeter was sold for building. In 1814 the park was redesigned and its walls were replaced with railings. However, it was not until 1877 that St. Stephen's Green became open to the public. The Green was laid out in its current form in 1880. During the Easter Rising of 1916, a group of insurgents confiscated motor vehicles to establish road blocks on the streets that surround the park and dug defensive positions in the park itself. In response, the British Army took up positions in the Shelbourne Hotel and after finding themselves in a vulnerable position they were forced to withdraw to the Royal College of Surgeons on the west side of the Green. St Stephen's Green is a National Monument. Notable Dublin landmarks and cultural heritage sites on and near to The Green include:

- The Fusilier's Arch at the Grafton Street corner, commemorating the Royal Dublin Fusiliers who died in the Second Boer War;
- A sculpture of the Three Fates just inside the Leeson Street Gate which was presented by Germany to Ireland as a token of thanks for the country's assistance to refugees of World War II;
- On the western side of the park there is a statue of Lord Ardilaun, who donated the Green to the city;
- The memorial garden to Yeats in which stands a sculpture by Henry Moore;
- A bust of the famous author James Joyce;
- A memorial to Jeremiah O'Donovan Rossa, the leader of the Fenians, close to the Grafton Street entrance;
- A bronze statue of Theobald Wolfe Tone, the leader of the 1798 Rebellion, flanked by monoliths at the Merrion Row corner of the Green;

- A famine memorial by Edward Delaney;
- A bust of Constance Markievicz to the south of the central garden;
- A statue of Robert Emmet opposite the house at Number 24 which was his but which has since been demolished;
- The Bandstand;
- A large lake fed by an artificial water fall whose source is the Grand Canal. The lake is spanned by O'Connell Bridge, is fronted by a gazebo and is home to ducks and other water fowl;
- A memorial bust of Mangan sculpted by Oliver Sheppard;
- The African Rose Bowl, a bronze memorial to all the people in Africa who have died of AIDS;
- Iveagh House, which is on the on the south side of the Green, now houses the Irish Department of Foreign Affairs, but was home to the Guinness family from the 1860s;
- Newman House (No's 85 and 86) and University Church on the south side of St. Stephen's Green which were the Catholic University of Ireland founded in the 19th century. Notable students and scholars involved with University include James Joyce and Gerard Manley Hopkins;
- The Unitarian Church on the West side of St. Stephen's Green;
- The Royal College of Surgeons in Ireland (No. 123) which still has bullet holes visible from its use in the 1916 Rising;
- The Shelbourne Hotel;
- The United Services Club and the Kildare Street and University Club;
- No. 86 was the residence of Thomas 'Buck' Whaley;
- The old St. Vincent's Hospital buildings on the east side of St. Stephen's Green and on Leeson Street;
- Thomas Kettle is also commemorated.

23.2.1.6 Suburban areas

The proposed development traverses a number of suburbs of Dublin City. Many of these suburbs are centred on earlier rural villages, which through the years have grown and developed their own unique sense of community and distinct cultural heritage.

Swords

Swords, known as Sord Cholm Cille in Irish, can trace its origins back to 560AD. The settlement is thought to have been founded by Saint Colmcille who blessed a local well, and gave the town its name Sord meaning 'clear' or 'pure'. An Sord has also been translated as meaning 'the water source', possibly indicating the existence of a large communal drinking well here at some point in antiquity. Historical figures who have been associated with Swords include: Dean Jonathan Swift, who often visited the area; and Sean O'Casey, who discussed the area in the play Shadow of a Gunman. Notable landmarks and cultural heritage sites near to Swords include:

- Swords Castle, which has undergone a phased restoration project and contains a tourism information centre.
- St. Colmcille's monastic settlement.
- The bridge at Knocksedan, over the River Ward to the west of Swords on the Naul Road, was used as a meeting place before the 1916 rising and bears a plaque commemorating the volunteers involved in this event.
- Beyond the bridge at Knocksedan is the road along which Cromwell's army marched on their way to Drogheda.
- A granite monument to the memory of Andrew J. Kettle, who was Parnell's 'right-hand man', stands in the graveyard at St. Colmcille's Church.

Santry

The name Santry comes from the Irish, Shean Treabh, meaning 'Old dwelling'. Santry developed around an estate and later a small village but it is now a modern suburb. Most of the old village has now vanished. There are now housing estates, an athletics stadium, a shopping complex, industrial parks and busy roads to Dublin Airport where fields and woodlands once dominated.

An 18th century house and gardens, which was once the largest house in North County Dublin, previously stood on the site of the new Santry Demesne public park and was owned by the Barry family. The foundations, front steps, tree-avenue and walled garden associated with the house can still be seen today. The small bend in the Santry River marks the boundary of the park and was widened during the Georgian period to create a small pond for boating.

During the 1798 Rebellion, United Irishmen from Fingal marched south towards Dublin but were massacred by a company of Government militia from Santry Village. As a result of this, the area at the northern gateway to Santry Demesne, which is now located near the Little Venice Restaurant, was known as 'Bloody Hollows' for some years to come. Notable landmarks and cultural heritage sites near to Santry include:

- One of the original eleven Swiss Cottages built in 1702 by Lady Domville who built them to accommodate visiting gentry after being inspired by the architecture of Switzerland. The surviving cottage was adapted into an office block in 1984 and now houses a pharmacy.
- Morton Stadium and the new Santry Demesne Park which now stand on the site of the Barry house and gardens.
- At the top of Ballymun Road a hedge maze in the shape of a shamrock has been visible to many air passengers arriving and departing Dublin Airport

Ballymun

Ballymun, nicknamed 'The Mun', is a suburb near to Dublin Airport. Interestingly, no part of the Ballymun estate, for which the area is known, is located within the townland of Ballymun. The estate is situated within the townlands of Stormanstown, Balbutcher and Balcurris.

The area is infamous for the Ballymun flats, which became a symbol of poverty, alienation from the state and social problems in Ireland from the 1970s. The Ballymun flats were designed as a quick fix solution to housing problems in Dublin in the 1960s which was brought about by a growing population, overcrowding and a series of building collapses in the city's tenements. There were three types of flats: seven fifteenth-storey towers; seventeen eight-storey blocks; and five four-storey blocks. The first tenants moved in between August 1966 and December 1966. The flat units were originally in great demand. Compared to the squalid tenements which the new residents left behind, the flats were spacious and equipped with rare luxuries such as central heating and hot running water. The problems soon began however. The area never received the planned amenities and there was a profound lack of services and facilities for a suburb of 20,000 people. This created a set of circumstances in which poverty and a number of related social problems were allowed to develop. Ballymun became a transition point for families looking for better accommodation. The recession of the 1980s compounded the problems with social and economic instability fostering a growing drug culture. Negative media coverage meant that the area became synonymous with the flats; areas previously contained within Ballymun lobbied to have their addresses re-designated into neighbouring districts.

However, despite its problems, Ballymun has developed a strong sense of community. This is largely a result of the many residents groups and associations established due to years of neglect by the Government and Dublin Corporation of the tenants of Ballymun. A need therefore arose for community action to fight for improved facilities and to combat the cycle of disadvantage that had set in. Today Ballymun is undergoing a multi-billion euro renewal, with a renovated village centre surrounded by estates of houses and apartments. Ballymun Regeneration Ltd was set up in 1997 by Dublin Corporation to facilitate community consultation in the regeneration project.

Phibsborough

Phibsborough is a residential suburb which developed around the crossroads (Doyle's Corner) of the old road to Finglas and the North Circular Road. The name derives from the Phibb's family who were landowners here in the late eighteenth century. In the early 1800's Phibsborough was home to many thousands of people living in misery and squalor. Their homes were mud huts, the incidence of disease was high and crime was rampant. The area began to develop following the laying out of the North Circular Road in the 1780s and several large institutions were established in the area including the Female Orphan House, Mountjoy Gaol and the Mater Hospital. The construction of the Royal Canal and more particularly the Broadstone Branch and Harbour in the first decade of the nineteenth century was an impetus to residential development. Further growth was stimulated by the arrival of the Midland and Great Western Railway in 1842. By 1900 this former semi-rural village had become a burgeoning city suburb. The area retains much of its Victorian architecture, including terraces of red-brick houses and the impressive St. Peter's Church. Notable landmarks and cultural heritage sites near to Phibsborough include:

- The Royal Canal was commissioned in 1789. A harbour built on Constitution Hill, connected to the main canal at Phibsborough by a spur. The branch line was completed by 1796 but it was ten years before the harbour was opened. The harbour's location was chosen for its proximity to the markets and the law courts. By 1807 a regular passage boat service was operating to Mullingar. The area subsequently became a hive of industry with many hotels and inns and the trade boats using the wharfage and stores at the harbour.

- Broadstone Station: in 1845 the Royal Canal was purchased by the Midland Great Western Railway Company with a view to using the land to construct a railway line from Dublin to the west. Their new headquarters and railway terminus at Broadstone Harbour was completed in 1850. The railway company soon lost interest in the canal business and in 1877 received powers to close 150 yards of the branch and fill in the harbour to construct a new forecourt for the station. Broadstone Station was finally closed in 1961 following the amalgamation of the Midland Great Western Railway Company and the Great Southern and Western Railway. The building is now used as offices by Bus Éireann and the rest of the site as a parking and service area for buses. The remainder of the Broadstone Branch of the Royal Canal was filled in in 1956 and is now partially covered by a tree lined linear park running alongside the road. This park is known as The Royal Canal Bank.
- The Blessington Basin is now a public park but was once the reservoir for the north city, drawing its water from the Broadstone Branch of the Royal Canal. It was first commissioned by Dublin Corporation in 1810, but was superseded by the Vartry reservoir in 1868. For the next century the basin was used to service the distilleries at Smithfield.
- The Mater Hospital was opened in 1861 by the Sisters of Mercy as a hospital for the sick poor of the city's northside. It has grown gradually and now occupies virtually the whole block between Eccles Street and the North Circular Road.
- Mountjoy Prison was opened in 1850. The prison was designed by the most prominent prison architect of the time, Sir Joshua Jebb, whose plan for a 'Model Prison' at Pentonville in London had put into effect the dominant nineteenth century prison philosophy of separate confinement. Mountjoy Prison was designed originally as a holding point for prisoners as they carried out nine months of separation before being transported to the colonies. The female convict prison at Mountjoy was constructed between 1855 and 1858.
- Dalymount Park was originally common land with a large vegetable plot and was known as Pisser Dignam's Field until it was taken over by Bohemian FC. It hosted its first game on September 7th 1901 between Shelbourne FC and Bohemians.

Glasnevin

The name Glasnevin comes from the Irish Glas Naíon or Glas Na'on, meaning 'Stream of the Infants'. The settlement was originally established on the northern bank of the River Tolka and was an important monastic centre in the early medieval period associated with St. Columba. Glasnevin, which was known as the residence of many families of distinction, became a township in 1878 and became part of the City of Dublin in 1900. When the neighbouring area of Drumcondra began to expand in the late 19th century the inhabitants of Glasnevin objected to the suburbs being merged. One of the chief objectors was the father of the Irish poet, Oliver St. John Gogarty, whose family owned substantial property in the area. The present shape of the suburb was not in place until 1930, after efforts had been made by the Dublin Corporation to expand the area. Notable landmarks and cultural heritage sites near to Glasnevin include:

- The Botanic Gardens, the land of which was originally the property of the poet Thomas Tickell, but was sold to the Irish Parliament in 1790. The land was then given to the Royal Dublin Society who established Ireland's first Botanic Gardens. It was in these gardens that the infection responsible for the potato famine was first identified. Research to stop the spread of the infection was carried out at the gardens throughout the course of the famine.
- Prospect Cemetery which opened in 1832 is better known as Glasnevin Cemetery. This cemetery is the most historically notable burial place in Ireland. Some of the famous people buried here include: Gerard Manley Hopkins; James Clarence Mangan; Michael Collins; Charles Stewart Parnell; and Arthur Griffith as well as many Irish patriots.
- Glasnevin House was built by Sir John Rogerson and was occupied by the Bishop of Kildare, Charles Lindsay, son of the Earl of Crawford. Their names are preserved in the local thoroughfares, Lindsay Road and Crawford Road.
- Delville House was built in the eighteenth century and was on the site of the present Bons Secours hospital. The couple, who eventually owned this house, Dr. Patrick Delany and his wife Mary Pendarves, were friends of Dean Jonathan Swift, who once lived across the road from the Glasnevin Educate Together School.
- Alexander Pope also lived in this area and created Ireland's first naturalistic garden, w hich was a contemporary fashion in England. The house became a centre of intellectual life in the city.

- The new headquarters of Met Éireann opened near Glasnevin Hill in 1975. It is recognised as one of the most significant, smaller commercial buildings, to be constructed in the 1970's and was designed by Liam McCormick.

Griffith Avenue is the longest tree-lined avenue with no retail outlets in the Northern Hemisphere. The Avenue runs through Glasnevin, Drumcondra and Marino. Its namesake is Arthur Griffith, the founder and third leader of Sinn Féin, who is buried in Glasnevin cemetery.

Drumcondra
Drumcondra is a residential suburb located to the north of Phibsborough and the Royal Canal. Although incorporated into a Township in 1878, it was largely undeveloped at that time with the exception of a few houses along Drumcondra Road. The main feature of Drumcondra Road was Hollybank House and grounds. This road was one of the main highways leading out of Dublin since at least the late medieval period. The Cat and Cage Pub on the Drumcondra Road was the site of an old postal stop and the point at which rebels, during the 1798 rebellion, seized a postal cart in order to signal to others in north Co. Dublin to revolt.

Around the late eighteenth and early nineteenth centuries the area was a popular resort, well-known for its teahouses. However, these establishments later had to be closed on account of the many disorderly scenes which took place in them. In a poem by Thomas Dermody, published in 1806, the following reference is made to Drumcondra:-

'But ah! my dearest, let not gypsies lead,

Thy vagrant wand'ring to the rural mead,

Let dire Drumcondra e'er unheeded lie,

Though teapots, cups and saucers court the eye.'

Following its incorporation as a township the area was developed in a piecemeal fashion by a number of different developers throughout the late-nineteenth and twentieth centuries. Today it is famous as being the birthplace and residence of the Taoiseach Bertie Ahern, TD. Notable landmarks and cultural heritage sites near to Drumcondra include:

- The Royal Canal
  (see entry above under Phibsborough);
- The Palace of the Archbishop of Dublin;
- There are three colleges in Drumcondra: All Hallows College, the Mater Dei Institute of Education and St. Patrick's College of Education;
- Croke Park was originally an Athletics Course known variously as the City and Suburban Racecourse and 'Jones Road' sports ground. From the foundation of the Gaelic Athletic Association (GAA) in 1884 this sports ground was used regularly for Gaelic Games and Athletics, most notably the annual finals of the All-Ireland Senior Football and Hurling Championships. The GAA bought the grounds in 1913 and called it Croke Park in honour of Archbishop Thomas Croke, one of the GAA's first patrons. In 1917 the rubble from the Easter Rising of 1916 was used to construct a grassy hill, called Hill 16, on the railway end of the park. This afforded patrons a better view of the pitch. During the War of Independence on November 21st 1920, Croke Park was the scene of a massacre when the British Auxiliary Division entered the ground during a Dublin-Tipperary Gaelic football match and opened fire on the crowd. The shootings were a reprisal for the assassination if 14 British intelligence officers by Michael Collin's squad earlier that day. The day has become known as 'Bloody Sunday';
- Tolka Park is a football ground situated on the northern banks of the River Tolka. Over the years seven different League of Ireland clubs have used Tolka Park for home league matches on a regular basis: Drumcondra, Shelbourne, Dolphin, Home Farm, Dublin City, Shamrock Rovers and St. James Gate FC. The football ground was acquired by Shelbourne in 1989.

23.2.1.7 Description of significant features along the proposed alignment

Belinstown to Balheary Demesne
The study area starts in the townland of Belinstown, where a number of recorded monuments are situated (**HC#1-7** - DU007:036, DU008:056, DU011:007, DU011:00701, DU011:00702, DU012:001 & DU012:002 & **HC#350** DU012:003 – see maps (Baseline Archaeology, Architectural and Cultural Heritage) included as Volume 3, Book 1 of 2). Situated in level tillage these sites were shown in aerial photographs (CUCAP, BDS 50-56) as four circular crop marks (c. 60m in diameter) with associated field systems. Test excavations in 1999 revealed no archaeological deposits. In the townland of Lissenhall Little there are two sites of archaeological potential - a curving cropmark (**HC#8**) was identified from aerial photography (Aerial Photograph (AP) No. 2925-09). Another site of archaeological potential was visible to the west of the study area (**HC#10**). The site was identified from aerial photography (AP No. 2925-14) and consisted of two circular cropmarks. The northernmost cropmark is depicted on the 1st Edition Ordnance Survey map as a circular tree-covered enclosure or 'tree-ring'. A Protected Structure, Lissen Hall (**HC#9**) is situated in the townland of Lissenhall Little.

Two sets of outbuildings at Belinstown were observed through fieldwalking (HC#410 & 411). Lissenhall Bridge (HC#11, DU011:081) is a recorded archaeological monument and Protected Structure located at Balheary Demesne. This structure is constructed of limestone masonry and is believed to date to the later medieval period (1450-1550). It is marked on the Down Survey map of 1656. The bridge is built of mortared limestone masonry has three abutting sections, the middle section has slightly pointed arches with wattle marks. The up river cutwaters are triangular with semi-pyramidal cutwater cappings. The metro will sever the townland boundary between Belinstown and Lissenhall Little in two places (HC#412 & 413) and between Lissenhall Little and Balheary Demesne (HC#414).

Balheary Demesne to Seatown

There is one recorded archaeological monument to the east of the study area, namely the site of an unclassified earthwork (HC#12, DU011:036). The earthwork was titled 'moat' on Duncan's map of 1821 and has been impacted by local road development.

Seatown to Swords

No features of archaeological, architectural or cultural significance were identified in this area of the baseline.

Swords to the northern boundary of Dublin Airport

One site of archaeological potential (HC#13), a possible earthwork, was identified from aerial photography (AP No. 2994-13) to the east of the study area in the townland of Fosterstown North. Another site of archaeological potential (HC#14) was also identified from aerial photography (AP No. 2994-18) in the townland of Fosterstown South. A series of cropmarks including a circular enclosure was visible to the north and south of the entrance to Fosterstown House. Archaeological artefacts recovered from Fosterstown include a polished stone axehead (Annex H, Section 1.2, NMI I 959: B). One recorded archaeological monument in the townland of Cloghran is recorded as the site of a ringfort (HC#15, DU011:046). The site was marked 'fort' on the 1st Edition OS map of 1837 and was cleared away in 1873 (Healy, 1975). There is no visible surface trace of the site. The metro will sever the townland boundary between Fosterstown South and Cloghran (HC#417), Nevinstown West and Fosterstown South (HC#416) and Miltonsfields and Crowscastle (HC#415).

Northern boundary of Dublin Airport to Dardistown

Corballis House (HC#16) is included in the Record of Protected Structures for Fingal. Corballis House is situated on the main road leading to the airport terminal. This structure has been demolished for the development of Terminal 2 of Dublin airport. Adams suggests it was erected in the early part of the 17th century (Adams 1883, 54), though the Civil Survey of 1654-56 lists only two stone houses within Corballis townland (Simington 1945, 186-187). Rocque's map of 1762 marks a house within a substantial demesne or garden. Buildings on this site can be traced back to the 14th century; which at that time was in the possession of the Taillour family. Adams noted that a circular tower about 3m high with a castled parapet was formerly located adjacent to the house (Adams 1883, 54). Archaeological artefacts recovered from Corballis include skeletal remains and a struck pebble (Annex H, Section 1.2, NMI P 1950:34-35). A recorded archaeological monument to the south, Corballis Castle (HC#17, DU014:011), is marked on the 1837 OS map as 'Corballis Castle in ruins'. In the townland of Ballystruan a site of archaeological potential (HC#18) was identified from aerial photography (AP No. 3064-16) to the west of the study area. The potential site could be a moated site, a type of manorial settlement, dating back to late medieval times. These monuments are usually square in shape with a flooded moat giving protection. An extant example in the Dublin region is Drimnagh Castle, which still has a fully functioning moat.

Dardistown to Collins Avenue

In the townland of Ballymun a site of archaeological potential (HC#19) was identified through aerial photographs (AP No. 11 3063-20). This site appears as a pair of linear cropmarks running parallel for a distance of approximately 300m. The cropmarks appear to represent a tree-lined field boundary and a possible laneway marked on the 1st Edition Ordnance Survey map, 1837 and run in an east-west direction towards Ballymun House. Located to the south of this, is the site of a former Charter School (HC#20). The school was opened in early 18th century and functioned for over 100 years. The buildings associated with the school were later renamed Santry Lodge. These buildings are not Protected Structures but are of architectural merit and therefore have been considered as part of this baseline assessment. The buildings include the main block and outbuildings (HC#407) as well as a gate lodge with limestone gateposts (HC#408). Beside the gate lodge lies a fine Victorian period house (HC#409). Two Protected Structures (St. Pappin's Church and Domville House) occur to the south of the study area in Ballymun (HC#21-22). The metro will sever the townland boundary between Ballystruan and Ballymun (HC#418) and Ballymun and Balcurris (HC#401).

Collins Avenue to Griffith Avenue
A number of structures in this area are included in the Record of Protected Structures. These include Elmhurst House and Hampstead House (**HC#23-26**). Westfield House (**HC#390**), recorded in the field survey, lies directly in the path of the metro as does the gate lodge for what was originally known as Hampstead House (**HC#388**) and some outbuildings of Elmhurst House (**HC#389**). Hampstead Castle (**HC#372**) was identified through cartographic sources as a site of archaeological potential.

Griffith Avenue to the Mater Hospital
A number of buildings to the south of this area are included in the Record of Protected Structures. Examples include the convent, chapel, university foundation stone and surrounding walls of St. Alphonsus monastery, Glenarm Avenue (**HC#27-29**) and Synott Place (**HC#378**). HC#29 consists of three individual buildings as shown on maps (Baseline Archaeology, Architectural and Cultural Heritage) included in Volume 3, Book 1 of 2. To the east of the proposed alignment there are a number of buildings included in the Record of Protected Structures to the southeast of the study area including a house on Drumcondra Road Lower (**HC#34**). A number of properties recorded in the field survey lie in the area of the proposed stop at Drumcondra (**HC#391-400 & 419**). Across the canal other structures lie in the way of the proposed stop at Mater Hospital (**HC#402-406**). Archaeological artefacts recovered from Drumcondra include an Iron Pike (possibly 8th Century), an undated copper coin and prehistoric lithics (Annex H, Section 1.2, NMI 1929:80-82). A site of archaeological potential is centred between Eccles Street, Dorset Street and the North Circular Road (**HC#35**). In the 18th century, most of the area is shown in fields under agricultural activity. The development that took place in the mid 18th century in north Dublin saw the laying out of Eccles Street (a pre-existing roadway) as well as the proposed alignment of Dorset Street and the construction of the North Circular Road. Behind Eccles Street were laneways - Eccles Lane Lower, Dispensary Lane and Synnot Place - which gave access to coach houses as well as tenements. Archaeologically the type of material likely to be uncovered would probably consist of 18th century coach houses or tenements. However the area has been severely disturbed by modern works associated with the construction of the hospital, and it is possible that some of the archaeological material may have been removed. The Royal Canal (**HC#380**) is a Conservation Area.

The Mater Hospital to Parnell Square
This area, which borders the Mater Hospital to the west, contains a number of houses included in the Record of Protected Structures for Dublin City. These include houses on Eccles Street (**HC#36-47, 377 & 383-384**), Blessington Street (**HC#52-59 & 381-382**), Dorset Street (**HC#49-51 & 60-61**), Frederick Street North (**HC#62-69, 75-91**), Hardwicke Street (**HC#70-74**), Parnell Square (**HC#92-97, 104-119 & 379**), Gardiner Row (**HC#98-103**), Cavendish Row including the Gate Theatre (**HC#120-126**), and Denmark Street Great (**HC#349**). Cavendish Row was laid out before the square was created proper, around 1750. The area does not appear to have been developed prior to this. Indeed the lands on which Cavendish Row was laid out were known as the wheat fields, and Rocque's map of 1756 shows the surrounding fields in agricultural use. Interestingly Brooking's earlier 1728 map appears to show that the land had been marked out for development but Cavendish Row had not yet been laid out. Pratt's map of 1708 shows the area as commonage under forest. A recorded archaeological monument, a well known as the 'Stone Well', is located on Dorset Street (**HC#48**, DU018:024). It was located at the intersection of North Frederick Street and Dorset Street Upper. The site shown on the Down Survey maps and noted as a landmark in the riding of the franchise in 1603 (Daly 1957, 513-24). Dorset Street is one of the oldest streets in Dublin and acted as a roadway between Dublin and Fingal. Rocque's map of 1756 shows Dorset Street developed up to Blessington Street and just beyond. A site of archaeological potential (a possible Norse cemetery - **HC#116**) is located on the east side of Parnell Square. An article by Patrick Traynor in the Irish Builder points to remains encountered around North Great Georges Street, Summerhill, Gardiner's Row, Mountjoy Square and the surrounding area. The assemblages discovered consisted of human remains, spears and swords and may be the remains of the battle of Clontarf (Traynor, 1897). An essay published in Dublin magazine in June of 1763 refers to human remains, spears, rivets and swords discovered during construction associated with the Rotunda gardens and along Cavendish Row and Granby Row. Excavations carried out at 29 Parnell Square in 1996 did not reveal anything earlier than the cellars of the original mid-18th century buildings (Annex H, Section 1.1, 1998:106). However remains were also encountered during archaeological monitoring of an extension to the Rotunda Hospital in 1997. Parnell Square is also a Conservation Area (**HC#345**).

Parnell Square to Henry Street

There are a number of Protected Structures in this area including properties along Parnell Street and the Rotunda Hospital (**HC#127-129, 132-133, 136 & 374-376**), a fountain and water trough (**HC#130**), the Parnell Monument (**HC#131**) and properties along O'Connell Street Upper (134-135 & 137-157). O'Connell Street is a site of archaeological potential (**HC#187**) and is also an Architectural Conservation Area (**HC#347**). O'Connell Street started life as Drogheda Street, a small insignificant street parallel to Liffey Street. With the development of the whole area in the 18th century the street gradually grew in importance. It was the Duke of Ormonde who decided to widen Drogheda Street. Around 1740 he demolished all the buildings on the western side and created a space 150 feet wide. This was called The Mall. Later the street was pushed downwards towards the Liffey, renamed Sackville Street and Carlisle Bridge was built to connect with Dame Street. After independence it was renamed O'Connell Street. O'Connell Street Upper probably contains well preserved remains of the entire west side of Drogheda Street The remains would probably be situated under the central reservation, under the trees. The position of the remains would also allow it to be postulated that very little disturbance from services and other modern activity has affected these remains. Excavations of the foundations of Nelson's Pillar in 2001 revealed basements from late 17th century houses surviving to some depth, especially under the central median of the road (Annex H, Section 1.1, 2001:0397). Excavations at the north-eastern corner of Moore Street and Parnell Street identified 4 phases of archaeology, from the medieval period up to modern times, with the principle phase dating to 1750-1770 (Annex H, Section 1.1, 2003:0557). Animal bones were recovered from the basement of 50 O'Connell Street Upper in 1965 (NMI IA/15/65). Cartographic evidence from Brooking's map of 1726 and Rocque's map of 1756 all point to significant structures in this area. The remains are likely to date from the late 17th century up to around 1740. It is unlikely that anything earlier would be discovered, and the likelihood of cellars being uncovered would have in all probability removed earlier material.

Henry Street to River Liffey

The study area encompasses a number of structures included in the Record of Protected Structures. These are located on O'Connell Street Lower including: the GPO, O'Connell Bridge, the O'Connell Monument and statuary (**HC#158-173, 178-179, 182-186, 189-190 & 208**). The O'Connell Monument is a National Monument. The William Smith O'Brien statue is under consideration for National Monument status. Structures are also located on Abbey Street Middle (**HC#174-177**), Abbey Street Lower (**HC#30-31 & 180-181**), Eden Quay (**HC#191-195 & 370-371**), Bachelor's Walk (**HC#196-205 & 341**) and Litton Lane (**HC#373**). O'Connell Street is a site of archaeological potential (**HC#187**) and is also an Architectural Conservation Area (**HC#347**). The River Liffey is also a Conservation Area (**HC#346**). There are three recorded archaeological monuments in the vicinity of O'Connell Bridge. The site of a glasshouse (**HC#188**, DU018:020154) is recorded on Rocque's map of 1756 at O'Connell Street Lower/Harbour Court. A ferry site (**HC#207**, DU018:020155) is recorded immediately to the east of O'Connell Bridge between Eden Quay and Burgh Quay on Rocque's map of 1756. Eden Quay (**HC#206**, DU018:020461) is also a recorded monument. In 1733 the city ordered that a quay be built on its own land to the east of Bachelor's Walk. It was shown by Rocque's map of (1756) to be c. 30m and is thought to lie under the junction of Eden Quay and Marlborough Street. In 2003, a human skull was recovered from the river gravels (Annex H, Section 1.1, 2003:0527).. O'Connell Street Lower has been shown to contain the remains of 17th & 18th century occupation from Great Abbey Street, The Lotts, Batchelor's Lane and Batchelor's Walk as well as an early quay wall located directly under the central reservation. Excavations in the centre of O'Connell Street have indicated that the former quay wall associated with the Amory grant of 1675 was located along the alignment of the south edge of what is today The Lotts (Annex H, Section 1.1, 2003:0561).

River Liffey to Grafton Street

A number of buildings in this area are included in the Record of Protected Structures for Dublin City. These are located at Burgh Quay (**HC#213-216**), Aston Quay (**HC#209-211 & 342**), D'Olier Street (**HC#217-227 & 367-369**), Westmoreland Street (**HC#212, 228-241, 245 & 247-251**), Fleet Street (**HC#242-244 & 348**), College Street including the Thomas Moore monument (**HC#340, 244 & 254**) and College Green including Trinity College, Parliament House and statuary (**HC#262-266**). Recorded archaeological monuments are also located on Westmoreland Street/College Green (**HC#252**, DU018:020385), College Street (**HC#253 & 246**, DU018:02065 & DU018:020487), College Green (**HC#255-261** DU018:020430, DU018:020431, DU018:020432, DU018:020433, DU018:020434, DU018:020435, DU018:02099). Immediately to the south of O'Connell Bridge the land has been reclaimed and in the Viking period the shoreline lay as far south as Trinity College. Indeed for centuries a large standing stone called the 'Long Stone' was situated just at the top of D'Olier Street. The Long Stone was erected by the Vikings in c.841 at the confluence of the River Stein and River Liffey. Similar stones are recorded on the Orkneys and Isle of Man and it is thought the Long Stone was either an offering to Thor, a symbol of ownership or a naval demarcation (or possibly all three). The stone was said to be un-inscribed and to have stood 3.6 - 4.2m in height. The Stein River rose near Harcourt Terrace or Lennox Street and flowed towards the southwest corner of St Stephen's Green. It continued northward close to the line of Clarendon Street and passed the west side of Trinity College where it joined the Liffey near the junction of D'Olier Street, College Street and Pearse Street. Speed (1610) shows the course from St Stephen's Green to Trinity with a large sheltered area where it meets the Liffey. No later map shows the river. It was directed into a culvert on the construction of Hawkins Wall, through which it still flows today. The original Norse landing was probably where the Long Stone was erected. This area continued in use as a harbour right up through the ages despite the development of Wood Quay. In 1662-3 Hawkins Wall placed 150 metres between the long stone and the new shoreline, leading to the stones re-naming as the 'longe stone over against the Colledge'. It continued in use as a surveyors point until at least 1679 before it was removed by persons unknown c.1700. It was probably buried as part of the reclamation project. In 1662 William Hawkins started construction on a new river wall. The wall, which was completed in 1663, ran eastward from Temple Bar to Corn Exchange Place and then turned at right angles to Lazars Hill (Townsend Street). The reclamation led to the culverting of the River Stein and the obliteration of any traces of the medieval harbour at the Stein confluence. Completed in 1663 the area was referred to as Hawkins Ground in De Gomme's map of 1673. Hawkins Wall is described in the Calendar of State Papers as 'a double wall and a fair bank between'.

The 'Commission for Making Wide and Convenient Ways, Streets and Passages in the city of Dublin' was established by an act of parliament in 1757. The Commission realised many great projects during its lifetime before it was abolished by the Dublin Improvement Act of 1849. Among these projects was the extension of Sackville Street down to the river, and the construction of a new bridge and road extending passage to College Green. O'Connell Street Lower, Westmoreland Street and D'Olier Street were born in the late 1790's as part of this 'Grand Design'. Their construction saw the destruction of many older buildings and streets and the new street level raised to provide a level surface to the newly opened Carlisle Bridge. Later in 1880 the bridge was widened to the same width as Sackville Street.

The present Bank of Ireland on College Green occupies the site of a hospital for maimed soldiers known as Carew's Hospital (DU018:020430) This was built after 1602 and appears on Speed's map of 1610. Its use as a home for soldiers was short-lived and from 1605 to 1612 it was occupied by Sir Thomas Ridgeway and later by Sir Arthur Bassett 'as a large mansion'. In 1612 it was acquired by Sir Arthur Chichester, baron of Belfast and lord deputy from 1604 to 1615. By 1615 it had a gatehouse, court and enclosing wall. The first parliament in Ireland was held in this building in 1661. The present building was erected on the site in 1729. It was described as a large mansion c. 33m squared. By 1615 it had a gate house, court and enclosing wall.

Trinity College was founded by Elizabeth I in 1591 on the site of the Augustinian Monastery of All Saints and was known as the College of the Holy Trinity. The original church was around the present campanile around Library Square. Only the tower of the priory church survives incorporated into the new college buildings. All other standing buildings are believed to be later than 1700. Monuments within the college grounds include 17t century tomb of Dr Challuner located in the enclosure behind College Chapel, 17th century tomb of Dr Seelve and John Sterne (d 1664) located in the enclosure behind College Chapel and 17th century tomb of George Browne (d 1699) located in the enclosure behind College Chapel.

The Augustinian priory 'All Hallows' was established by Diarmuit Mac Murchada, High King of Leinster in 1166 and the foundation charter still survives (Gwynn and Hadcock 1970, 171). It was initially situated in Baldoyle but in 1234 the convent was granted lands in the Steyn near the priory. In 1370 Pope Gregory XI granted 100 day indulgence to all who helped in the rebuilding of the church. The priory was dissolved by Henry VIII in 1538 and in 1539 the possessions were granted to the citizens of Dublin in recognition of their loyalty in the Silken Thomas Rebellion (1534).

St Patrick's well is also located in the college grounds (see DU018:02060). Archaeological artefacts recovered from Trinity College include a bronze axehead, dating back to the Bronze Age (Annex H, Section 1.2, 1905:270), the cut of an antler tine found on campus (Annex H, Section 1.2, NMI 1973:215), a bronze unlooped palstave also dating to the Bronze Age (Annex H, Section 1.2, NMI IA/119/86) and medical specimen human bones found adjacent to the medical school dating to the late 17th century (NMI IA/119/86)

The risk of finding archaeology in this area is high. What is certain is that excavation would undoubtedly reveal a whole series of wooden revetments and quay walls, laid down as more and more land was reclaimed over the centuries. Remains of this sort have already been discovered in Townsend Street (Annex H, Section 1.1, 1997 and 1998), but Westmoreland Street and O'Connell Street Lower, being closer to the historic city centre, would most likely contain more concentrated deposits. On top of this reclaimed land sat a whole series of buildings and streets, later demolished by the Wide Street Commissioners to make way for Westmoreland Street. These streets and buildings can be relatively accurately traced from Brooking's and Rocque's maps of 1726 and 1756 respectively. Portion of a medieval tiled floor was revealed in the 1860s during the building of the Provincial Bank. Test trenching in 1997 produced evidence for a cesspit and possible revetment wall. Excavation on the site of the Weston Hotel at College Green and Westmoreland Street revealed the presence of these structures, even though the cellars of the later buildings removed much of the remains (Annex H, Section 1.1, 1999). The only disturbance likely to have been suffered by the remains under Westmoreland Street would be from modern services. Depending on the depth of the remains it is possible that significant structures survive in a reasonable state of preservation. A further risk involves the possibility of discovering a shipwreck. In medieval and early medieval times the general area, although more focused on D'Olier Street, was a harbour. It is entirely possible that a wreck could be discovered. Given the rarity of such a find in Ireland it would be of national importance. It is important to note that often at the confluence of rivers prehistoric material is discovered. This material can be found well down in river gravels and consist of fish traps, platforms and sometimes settlement remains all preserved by the wet environment.

Grafton Street to St. Stephen's Green

A number of buildings in this area are included in the Record of Protected Structures for Dublin City. These are located on Grafton Street (**HC#273-281, 289-291, 293-295, 298-303, 305-308, 311, 315 & 318-319**). St. Andrew's church is located on St. Andrew's Street (**HC#284**). Protected Structures are also located on Harry Street (**HC#312-313, 309-310**), Wicklow Street (**HC#296 & 362**), Clarndon Street (**HC#297, 304 & 361**), Suffolk Street (**HC#286-287**), Chatham Street (**HC#314, 316-317**), the Gaiety Theatre on King Street South (**HC#320**), Nassau Street (**HC#292**), College Green including Trinity College Provost's House (**HC#268-272, 288**) and at Church Lane (**HC#363-366**). Grafton Street is a Conservation Area (**HC#344**). Recorded archaeological monuments occur at St. Andrew Street (**HC#285**, DU018:02047/72), College Green (**HC#267**, DU018:020401) and Suffolk Street (**HC#282 & 283**, DU018:020386 & DU018:020132). In 1655 the medieval parish church of St. Andrew's was re-created by an Act of Parliament. A church was built in 1670-74 almost on the site of the present church, near the Danish Thingmount. It was round in form and the architect was William Dodson (Craig & Wheeler 1948, 9-10). In 1793 the church was re-built on the old walls, from sill-level upwards. The present church was built in 1866. Arroasian Convent of St Mary de Hogges. Founded c. 1146 by Diarmait mac Murchada, king of Leinster, it was initially subject to Clonard, the principal house of the order in Ireland. Sometime after 1495 it became independent but little is known of it during the latter middle ages. It was supposed to have been rebuilt in the reign of John who is said to have endowed it with several churches. It was situated in the vicinity of the present St Andrew's church and the appelation 'de hogges' is derived from the Viking burial mounds which were located nearby. These mounds also gave their name to Hoggen Green, later College Green. After the Dissolution of the Monasteries the church and other buildings were demolished by William Brabazon, under-treasurer of Ireland, and the materials were used to repair Dublin Castle. In 1550 the site was granted to Richard Fyant and others that they might establish six 'loumes of lynnen and wollen yarne' which were intended to employ weavers, spinners, and others who would otherwise be idle. The convent seems to have owned a considerable stretch of land, extending from College Green to Merrion Square and from Stephen's Green North to Nassau Street (Donnelly 1905, ii, 128).

St. Stephen's Green

St. Stephens Green itself and everything within it is a National Monument (**HC#338**). It also has individual elements which are listed as Protected Structures. These are the railings surrounding the park as well as the fountains, bandstand, water troughs and statuary (**HC#331-333, 335-337 & 387**), a statue of Lord Ardilaun (**HC#336**) and memorials to Robert Emmet (**HC#335**), James Clarance Mangan (**HC#385**) and Countess Markeivicz (**HC#386**). A number of Protected Structures surround St. Stephen's Green. These are located on St. Stephens Green South (**HC#351-356**), St. Stephens Green North (**HC#321-330, 358-360**) and St. Stephens Green West (**HC#339**). There are five recorded archaeological monuments in the area. These are **HC#334 & 338** (DU018:020166 & DU018:020334), **HC#32, 33 & 357** (DU018:020244, DU018:020520 & DU018:020243). Cartographic evidence backed up by historical writings suggest that St Stephen's Green was an open commonage, being enclosed c.1610 by a wall and ditch, with a road constructed around the four sides and plots allocated for development outside this road. The origins of St Stephen's Green, named after a church of St. Stephen which was the chapel of a leper hospital, can be traced back to the medieval times when it was an open marshy common. It was used by the citizens of Dublin as grazing lands for their livestock.

St Stephen's Green is the only one of the three Commons of Dublin to have remained a green open space. In 1663 the City Assembly or Corporation decided to develop St Stephen's Green, then about 60 acres in extent in such a way that it would provide some income for the city while still serving the people as an open space. By 1664 a central area of 27 acres had been marked out to be preserved. The remainder was divided into 90 building lots, each with about 60 feet frontage to be 'disposed of for walling in the whole greene and for paving the rodes or streetes'. Each lessee was also required to plant 6 sycamore trees near the wall. It appears that the plots were not immediately developed, but took some time before buildings were erected. In 1818 the Green was replanted and railings replaced the perimeter wall. Further redevelopment was undertaken in the late 19th century at the instigation of Arthur E. Guinness (Casey, 2005) who commissioned the rock landscaping architect James Pullman to create the main landscape features. The park was also used by the insurgents during the 1916 Easter uprising. Archaeological artefacts recovered from St Stephen's Green include shells, bones and post-medieval pottery found during digging of a pipe trench in the green (Annex H, Section 1.2, NMI IA/18/79) and a glazed portion of a 13th-14th century vessel (Annex H, Section 1.2, NMI 1965:23).

In 1998 test bore holes around three sides of St. Stephen's Green were monitored (Annex H, Section 1.1, 1998:187). The holes only penetrated to a depth of up to 0.5m, but showed the underlying material to relate to modern pavement works carried out over the years. It would seem unlikely that anything of significance would be discovered in this area, given its past usage and that fact that it was laid out so early in the development of the modern city. Monitoring of boreholes within the green itself in 2007 did not reveal any archaeological material (Fallon, 2007).

O'Connell Bridge Stop (ticket hall)

Table 23.5 Baseline categorisation

HC No.	Location	Legal Status	Site Description	Evaluation
1	Belinstown OS DN 007	RMP DU007:036	**Archaeological Complex** See DU012:002	(V)
2	Belinstown OS DN 008	RMP DU008:056	**Archaeological Complex** See DU012:002	(V)
3	Belinstown OS DN 011	RMP DU011:007	**Archaeological Complex** See DU012:002	(V)
4	Belinstown OS DN 011	RMP DU011:00701	**Castle Site** See DU012:002	(V)
5	Belinstown OS DN 011	RMP DU011:00702	**Earthworks Site** See DU012:002	(V)
6	Belinstown OS DN 012	RMP DU012:001	**Archaeological Complex** Situated in level tillage. Aerial photographs (CUCAP, BDS 50-56) show four circular crop marks (Diameter average c.60m) with associated field systems. These are probably levelled ringforts. Test excavations in 1999 revealed no archaeological deposits. 08/10/1992 (Stout and Stout 1992, 17-18; Lynch 2002, 70)	(V)
7	Belinstown OS DN 012	RMP DU012:002	**Potential site (aerial photo)/ Enclosure site (ringfort site possible)** Highest point in a very poor field under corn. Very patchy crop. No visible trace at time of visit. An aerial photograph taken by Fairey survey of Ireland 1971 (3 577/6) shows a roughly circular cropmark of a single ditched enclosure (diameter c.40m). This is probably a levelled ringfort. The site is located on the highest point of the field which was under corn at time of inspection. No visible surface remains. 04/04/93. (Fairey Survey of Ireland, October 1971 3. 557/6)	(V)
8	Lissenhall Little OS DN 011	-	**Site of Archaeological Potential** The site was identified from aerial photography (sheet no. 2925-09) and consisted of a curving cropmark. The site is depicted on the 1st edition OS map as a roughly circular tree-covered enclosure. (Aerial Photograph 2925-09; 1st edition OS map 1837).	(IV)
9	Lissenhall Little OS DN 011	RPS 342 (Fingal)	**House** Lissen Hall, Lissenhall Little (Fingal County Development Plan, RPS).	(IV)
10	Balheary Demesne OS DN 011	-	**Site of Archaeological Potential** The site was identified from aerial photography (sheet no. 2925-14) and consisted of two circular cropmarks. The northernmost cropmark is depicted on the 1st edition OS map as circular tree-covered enclosure or tree-ring. (Aerial Photograph 2925-14; 1st edition OS map 1837).	(IV)

HC No.	Location	Legal Status	Site Description	Evaluation
11	Balheary Demesne/ Lissenhall Great OS DN 011	RMP DU011:081 RPS 340 (Fingal) RPS 341 (Fingal)	**Bridge** This five-arched bridge appears to be part of a much larger structure containing at least 8 arches, located off the Dublin-Belfast road north of Swords Village where it crosses the Broad Meadow River. It is marked on the Down Survey map (1656). Built of mortared limestone masonry. The structure has three abutting sections in all 8 arches, the middle section has slightly pointed arches with wattle marks. The upriver cutwaters are triangular with semi-pyramidal cutwater cappings. It has been dated to the period 1450-1550 with later additions (Date of field record 05/10/1992). (SMR Archives; O'Keefe & Simington 1991, 186-188; Down Survey Map of 1656).	(V)
12	Seatown West OS DN 011	RMP DU011:036 RPS 355 (Fingal)	**Earthwork, unclassified site** Shown on Duncan's map of 1821 as earthwork titled 'moat'. No visible surface trace. This was affected by roundabout development. Located on the outskirts of Swords Village (date of field record 21/10/92). (SMR Archives; Duncan's map of 1821).	(V)
13	Fosterstown North OS DN 011	-	**Site of Archaeological Potential** The site was identified from aerial photography (sheet no. 2994-13) and consisted of a possible earthwork. (Aerial Photograph 2994-13)	(IV)
14	Fosterstown South OS DN 011	-	**Site of Archaeological Potential** The site was identified from aerial photography (sheet no. 2994-18) and consisted of a series of cropmarks to the north and south of the entrance lane to Fosterstown House. The cropmark to the north of the entrance lance consists of a circular enclosure with a number of linear cropmarks to the northwest. (Aerial Photograph 2994-18)	(IV)
15	Cloghran (Coolock Barony) OS DN 011	RMP DU011:046 RPS 610 (Fingal)	**Ringfort, site** Marked fort on the OS 1837 edition. It was partly demolished in 1822 and cleared away in 1873 (Healy 1975, 24). There is no visible surface trace on the site. The area has been incorporated into the extension the recent runway at Dublin Airport (date of field record 21/10/1993). (SMR Archives; Adams 1881, 493; Bowen 1963, 69; Healy 1975, 24).	(V)
16	Corballis OS DN 014	RPS 613 (Fingal)	**House** Seven-bay, two-storey, 19th century house. (Fingal County Development Plan; 1st edition OS map 1837).	(V)
17	Corballis (Coolock Barony) OS DN 014	RMP DU014:011	**Castle, site** This site is marked 'Corballis Castle in ruins' on 1837 O.S. 6' map. Situated under buildings in Dublin Castle near International Hotel. There are no standing remains of this castle (date of field record 27/05/1993). (SMR Archives; Healy 1975, 26).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
18	Ballystruan OS DN 014	-	**Site of archaeological potential** The potential site was identified through aerial photography (Aerial Photograph 3064-16) and could be a moated site, a type of manorial settlement, dating back to late medieval times. It appears as a rectangular cropmark (measurements). (Aerial Photograph 3064-16).	(IV)
19	Ballymun OS DN 014	-	**Site of archaeological potential** The potential site was identified through aerial photography (Aerial Photograph 3063-20) and appears as a pair of linear cropmarks running parallel for a distance of approximately 300m. The cropmarks appear to represent a tree-lined field boundary and a laneway marked on the 1st edition OS map, 1837 and run in an east-west direction across the field towards Ballymun House. (Aerial Photograph 3063-20; 1st edition OS map 1837)	(IV)
20	Ballymun OS DN 014	-	**Site of archaeological potential** Site of mid-18th century Charter School marked on 1st edition OS map, 1837. (1st edition OS map, 1837)	(IV)
21	Ballymun OS DN 014	RPS 491 (DCC)	**Church** St. Pappin's Church (Dublin City Development Plan, RPS)	(V)
22	Ballymun OS DN 014	RPS (DCC – Map only)	**Domville House** Ballymun Road, Dublin 9 (Dublin City Development Plan – This structure is marked on the development plan maps but does not appear on the list of Protected Structures)	(V)
23	Ballymun Road / Hampstead Avenue OS DN 018	RPS 489 (DCC)	**House** Cuilin House, Ballymun Road / Hampstead Avenue, Albert College (former) now DCU (Dublin City Development Plan, RPS)	(V)
24	Ballymun Road OS DN 018	RPS 492 (DCC)	**House** 114 Ballymun Road, Dublin 9 (Dublin City Development Plan, RPS)	(V)
25	Ballymun Road / Hampstead Avenue OS DN 018	RPS 485 (DCC)	**Hampstead House** Ballymun Road, Hampstead Avenue, Dublin 9 (Dublin City Development Plan, RPS)	(V)
26	Ballymun Road / Hampstead Avenue OS DN 018	RPS 487 (DCC)	**Elmhurst House** Ballymun Road, Hampstead, Hillside Farm (Dublin City University) Avenue, Dublin 9 (Dublin City Development Plan)	(V)
27	Glenarm Avenue OS DN 018	RPS 3259 (DCC)	**Hollybank House** Glenarm Avenue, Dublin 9 (former Drumcondra Town Hall) (Dublin City Development Plan, RPS)	(V)
28	Glenarm Avenue OS DN 018	RPS 3258 (DCC)	**Glenarm House** Glenarm Avenue, Dublin 9 (Dublin City Development Plan, RPS)	(V)
29	St. Alphonsus Road Lower OS DN 018	RPS 7727 (DCC)	**St. Alphonsus Monastery** St. Alphonsus Road Lower, Dublin 9 - including convent, chapel, university foundation stone and surrounding walls (Dublin City Development Plan, RPS)	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
30	Abbey Street Lower OS DN 018	RPS 1 (DCC)	**Ormond Quay & Scots Presbyterian Church** Abbey Street Lower Dublin 1 (Dublin City Development Plan)	(V)
31	Abbey Street Lower OS DN 018	RPS 2 (DCC)	**Dublin Central Mission (Veritas House)** 7-8 Abbey Street Lower 1 (Dublin City Development Plan)	(V)
32	St. Stephen's Green OS DN 018	RMP DU018:020244	**Dwelling** Site of building shown on early maps	(V)
33	St. Stephen's Green OS DN 018	RMP DU018:020520	**Dwelling** Site of building shown on early maps	(V)
34	Drumcondra Road Lower OS DN 018	RPS 2412 (DCC)	**Georgian terraced house** 82 Drumcondra Road Lower, Dublin 9 including railings, entrance gates and plinth wall (Dublin City Development Plan, RPS)	(V)
35	Eccles Street / Leo Street / North Circular Road OS DN 018	-	**Site of archaeological potential** Mater Hospital For a detailed description of this site, please refer to 'Dublin City Centre to Airport Archaeological Assessment' (CRDS, 2003)	(IV)
36	Eccles Street OS DN 018	RPS 2494 (DCC)	**House** 61 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
37	Eccles Street OS DN 018	RPS 2495 (DCC)	**House** 62 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
38	Eccles Street OS DN 018	RPS 2496 (DCC)	**House** 63 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
39	Eccles Street OS DN 018	RPS 2497 (DCC)	**House** 64 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
40	Eccles Street OS DN 018	RPS 2498 (DCC)	**House** 65 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
41	Eccles Street OS DN 018	RPS 2499 (DCC)	**House** 66 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
42	Eccles Street OS DN 018	RPS 2500 (DCC)	**House** 67 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
43	Eccles Street OS DN 018	RPS 2501 (DCC)	**House** 70 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
44	Eccles Street OS DN 018	RPS 2502 (DCC)	**House** 71 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
45	Eccles Street OS DN 018	RPS 2503 (DCC)	**House** 72 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
46	Eccles Street OS DN 018	RPS 2504 (DCC)	**House** 73 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
47	Eccles Street OS DN 018	RPS 2505 (DCC)	**House** 74 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
48	Frederick Street North / Dorset Street Upper OS DN 018	RMP DU018:024	**Site of a Well** A well known as the 'Stone Well' was located at the intersection of North Frederick Street and Dorset Street Upper. The site shown on the Down Survey maps and noted as a landmark in the riding of the franchise in 1603 (Daly 1957, 513-24). There is a housing estate on the site. (SMR Archives; Anon 1928, JRSAI 1928, Vol 69. 159-161; Daly 1957 DHR Vol 17. 513-24).	(V)
49	Dorset Street OS DN 018	RPS 2387 (DCC)	**House** 89 Dorset Street Upper, Dublin 1 (Dublin City Development Plan, RPS).	(V)
50	Dorset Street OS DN 018	RPS 2388 (DCC)	**House** 90 Dorset Street Upper, Dublin 1 (Dublin City Development Plan, RPS).	(V)
51	Dorset Street OS DN 018	RPS 2389 (DCC)	**House** 91 Dorset Street Upper, Dublin 1 (Dublin City Development Plan, RPS).	(V)
52	Blessington Street OS DN 018	RPS 774 (DCC)	**House** 10 Blessington Street, Dublin 7 House (Dublin City Development Plan, RPS).	(V)
53	Blessington Street OS DN 018	RPS 773 (DCC)	**House** 9 Blessington Street, Dublin 7 House (Dublin City Development Plan, RPS).	(V)
54	Blessington Street OS DN 018	RPS 772 (DCC)	**House** 8 Blessington Street, Dublin 7 House (Dublin City Development Plan, RPS).	(V)
55	Blessington Street OS DN 018	RPS 771 (DCC)	**House** 7 Blessington Street, Dublin 7 House (Dublin City Development Plan, RPS).	(V)
56	Blessington Street OS DN 018	RPS 770 (DCC)	**Georgian-style house** 6 Blessington Street, Dublin 7, including railings and steps (Dublin City Development Plan, RPS).	(V)
57	Blessington Street OS DN 018	RPS 769 (DCC)	**Georgian-style house,** 5 Blessington Street, Dublin 7 including railings and steps (Dublin City Development Plan, RPS).	(V)
58	Blessington Street OS DN 018	RPS 768 (DCC)	**Georgian-style house** 4 Blessington Street, Dublin 7, including railings and steps (Dublin City Development Plan, RPS).	(V)
59	Blessington Street OS DN 018	RPS 829 (DCC)	**Georgian Style House** 73 Blessington Street, Dublin 7 (Dublin City Development Plan, RPS).	(V)
60	Dorset Street OS DN 018	RPS 2378 (DCC)	**House** 41 Dorset Street Upper, Dublin 1 (Dublin City Development Plan, RPS).	(V)
61	Dorset Street OS DN 018	RPS 2379 (DCC)	**House** 43 Dorset Street Upper, Dublin 1 (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
62	Frederick Street OS DN 018	RPS 3001 (DCC)	**House** 20 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
63	Frederick Street OS DN 018	RPS 3002 (DCC)	**House** 21 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
64	Frederick Street OS DN 018	RPS 3003 (DCC)	**House** 22 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
65	Frederick Street OS DN 018	RPS 3004 (DCC)	**House** 23 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
66	Frederick Street OS DN 018	RPS 3000 (DCC)	**House** 15 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
67	Frederick Street OS DN 018	RPS 2999 (DCC)	**House** 14 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
68	Frederick Street OS DN 018	RPS 2998 (DCC)	**House** 13 Frederick Street North, Dublin 1 Houses, shops and corner to Hardwicke Street (Dublin City Development Plan, RPS).	(V)
69	Frederick Street OS DN 018	RPS 2997 (DCC)	**Houses, shops** 12 Frederick Street North, Dublin 1 and corner to Hardwicke Street (Dublin City Development Plan, RPS).	(V)
70	Hardwicke Street OS DN 018	RPS 3645 (DCC)	**House** 47 Hardwicke Street, Dublin 1 House (Dublin City Development Plan, RPS).	(V)
71	Hardwicke Street OS DN 018	RPS 3644 (DCC)	**House** 4 Hardwicke Street, Dublin 1 House (Dublin City Development Plan, RPS).	(V)
72	Hardwicke Street OS DN 018	RPS 3643 (DCC)	**House** 3 Hardwicke Street, Dublin 1 House (Dublin City Development Plan, RPS).	(V)
73	Hardwicke Street OS DN 018	RPS 3642 (DCC)	**House** 2 Hardwicke Street, Dublin 1 House (Dublin City Development Plan, RPS).	(V)
74	Hardwicke Street OS DN 018	RPS 3641 (DCC)	**House** 1 Hardwicke Street, Dublin 1 House (Dublin City Development Plan, RPS).	(V)
75	Frederick Street OS DN 018	RPS 3005 (DCC)	**Ground floor and first floor** 28 Frederick Street North, Dublin 1 including entrance steps, railings and doors (Dublin City Development Plan, RPS).	(V)
76	Frederick Street OS DN 018	RPS 3006 (DCC)	**House** 29 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
77	Frederick Street OS DN 018	RPS 3007 (DCC)	**House** 30 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
78	Frederick Street OS DN 018	RPS 3008 (DCC)	**House** 31 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
79	Frederick Street OS DN 018	RPS 3009 (DCC)	**House** 32 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
80	Frederick Street OS DN 018	RPS 3010 (DCC)	**House** 33 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
81	Frederick Street OS DN 018	RPS 3011 (DCC)	**House** 34 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
82	Frederick Street OS DN 018	RPS 2996 (DCC)	**Georgian House** 10 Frederick Street North, Dublin 1 including entrance doors, steps and upper-floor façade (Dublin City Development Plan, RPS).	(V)
83	Frederick Street OS DN 018	RPS 2995 (DCC)	**House** 9 Frederick Street North, Dublin 1 House (Dublin City Development Plan, RPS).	(V)
84	Frederick Street OS DN 018	RPS 2994 (DCC)	**House** 8 Frederick Street North, Dublin 1 House (Dublin City Development Plan, RPS).	(V)
85	Frederick Street OS DN 018	RPS 2993 (DCC)	**House** 7 Frederick Street North, Dublin 1 House (Dublin City Development Plan, RPS).	(V)
86	Frederick Street OS DN 018	RPS 2992 (DCC)	**House** 6 Frederick Street North, Dublin 1 House (Dublin City Development Plan, RPS).	(V)
87	Frederick Street OS DN 018	RPS 2991 (DCC)	**House and shop** 5 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
88	Frederick Street OS DN 018	RPS 2990 (DCC)	**House and shop** 4 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
89	Frederick Street OS DN 018	RPS 2989 (DCC)	**House and shop** 3 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
90	Frederick Street OS DN 018	RPS 2988 (DCC)	**House and shop** 2 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
91	Frederick Street OS DN 018	RPS 2987 (DCC)	**House and shop** 1 Frederick Street North, Dublin 1 (Dublin City Development Plan, RPS).	(V)
92	Parnell Square OS DN 018	RPS 6511 (DCC)	**Hugh Lane Gallery (Charlemont House)** 22 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
93	Parnell Square OS DN 018	RPS 6510 (DCC)	**House** 21 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
94	Parnell Square OS DN 018	RPS 6509 (DCC)	**House** 20 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
95	Parnell Square OS DN 018	RPS 6508 (DCC)	**House** 19 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
96	Parnell Square OS DN 018	RPS 6507 (DCC)	**House** 18 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
97	Parnell Square OS DN 018	RPS 6506 (DCC)	**House** 16 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
98	Gardiner Row OS DN 018	RPS 3066 (DCC)	**House** 1 Gardiner Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
99	Gardiner Row OS DN 018	RPS 3067 (DCC)	**House** 2 Gardiner Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
100	Gardiner Row OS DN 018	RPS 3068 (DCC)	**House** 3-4 Gardiner Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
101	Gardiner Row OS DN 018	RPS 3069 (DCC)	**House** 5 Gardiner Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
102	Gardiner Row OS DN 018	RPS 3070 (DCC)	**House** 6 Gardiner Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
103	Gardiner Row OS DN 018	RPS 3071 (DCC)	**House** 7 Gardiner Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
104	Parnell Square OS DN 018	RPS 6505 (DCC)	**House** 15 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
105	Parnell Square OS DN 018	RPS 6504 (DCC)	**House** 14 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
106	Parnell Square OS DN 018	RPS 6503 (DCC)	**House** 13 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
107	Parnell Square OS DN 018	RPS 6502 (DCC)	**House** 12 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
108	Parnell Square OS DN 018	RPS 6501 (DCC)	**House** 11 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
109	Parnell Square OS DN 018	RPS 6500 (DCC)	**House** 10 Parnell Square (Dublin City Development Plan, RPS).	(V)
110	Parnell Square Chainage OS DN 018	RPS 6499 (DCC)	**House** 9 Parnell Square (Dublin City Development Plan, RPS).	(V)
111	Parnell Square OS DN 018	RPS 6498 (DCC)	**House** 8 Parnell Square (Dublin City Development Plan, RPS).	(V)
112	Parnell Square OS DN 018	RPS 6497 (DCC)	**House** 7 Parnell Square (Dublin City Development Plan, RPS).	(V)
113	Parnell Square OS DN 018	RPS 6496 (DCC)	**House** 6 Parnell Square (Dublin City Development Plan, RPS).	(V)
114	Parnell Square OS DN 018	RPS 6495 (DCC)	**House** 5 Parnell Square (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
115	Parnell Square OS DN 018	RPS 6494 (DCC)	**House** 4 Parnell Square (Dublin City Development Plan, RPS).	(V)
116	Parnell Square OS DN 018	-	**Site of archaeological potential** Parnell Square. For a detailed description of this site, please refer to 'Dublin City Centre to Airport Archaeological Assessment' (CRDS, 2003)	(IV)
117	Parnell Square OS DN 018	RPS 6493 (DCC)	**House** 3 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
118	Parnell Square OS DN 018	RPS 6492 (DCC)	**House** 2 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
119	Parnell Square OS DN 018	RPS 6491 (DCC)	**House** 1 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS).	(V)
120	Cavendish Row OS DN 018	RPS 1345 (DCC)	**Georgian house** 9 Cavendish Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
121	Cavendish Row OS DN 018	RPS 1344 (DCC)	**Commercial premises/offices** 6 Cavendish Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
122	Cavendish Row OS DN 018	RPS 1339 (DCC)	**Gate Theatre and Assembly Rooms** Cavendish Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
123	Cavendish Row OS DN 018	RPS 1343 (DCC)	**Commercial premises/offices** 5 Cavendish Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
124	Cavendish Row OS DN 018	RPS 1342 (DCC)	**Commercial premises/offices** 4 Cavendish Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
125	Cavendish Row OS DN 018	RPS 1341 (DCC)	**Commercial premises/offices** 3 Cavendish Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
126	Cavendish Row OS DN 018	RPS 1340 (DCC)	**Bank building** 1-2 Cavendish Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)
127	Parnell Street OS DN 018	RPS 6548 (DCC)	**Ambassador Cinema (former Rotunda)** Parnell Street, Dublin 1 (Dublin City Development Plan, RPS).	(V)
128	Parnell Street OS DN 018	RPS 6547 (DCC)	**Rotunda Hospital: main hospital,** Parnell Street, Dublin 1 including all ground-floor flanking arcades. (for west wing see Parnell Square) (Dublin City Development Plan, RPS).	(V)
129	Parnell Square OS DN 018	RPS 6546 (DCC)	**Rotunda Hospital** Parnell Square, Dublin 1: west wing excluding ground floor arcade, (for which see Parnell Street), façades of Plunkett Cairns wing (three-storey façade) (Dublin City Development Plan, RPS).	(V)
130	Cavendish Row OS DN 018	RPS 1338 (DCC)	**Fountain and water trough** Cavendish Row, Dublin 1 (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
131	O'Connell Street Upper OS DN 018	RPS 6127 (DCC)	**Parnell Monument and four cast iron bollards** O'Connell Street Upper, Dublin 1 adjoining Parnell Monument on O'Connell Street Mall (Dublin City Development Plan, RPS).	(V)
132	Parnell Street OS DN 018	RPS 6556 (DCC)	**Licensed premises** 76 Parnell Street, Dublin 1 (Dublin City Development Plan, RPS).	(V)
133	Parnell Street OS DN 018	RPS 6555 (DCC)	**Former hotel building** 77 Parnell Street, Dublin 1 (Dublin City Development Plan, RPS).	(V)
134	O'Connell Street Upper OS DN 018	RPS 6133 (DCC)	**Commercial premises** 37 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
135	O'Connell Street Upper OS DN 018	RPS 6134 (DCC)	**Commercial premises** 38 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
136	Parnell Street OS DN 018	RPS 6553 (DCC)	**Licensed premises** 72-74 Parnell Street, Dublin 1 (Dublin City Development Plan, RPS).	(V)
137	O'Connell Street Upper OS DN 018	RPS 6135 (DCC)	**Commercial premises** 42 O'Connell Street Upper, Dublin 1 (Dublin City Development Plan, RPS).	(V)
138	O'Connell Street Upper OS DN 018	RPS 6136 (DCC)	**Commercial premises** 43 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
139	O'Connell Street Upper OS DN 018	RPS 6137 (DCC)	**Commercial premises** 44 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
140	O'Connell Street Upper OS DN 018	RPS 6132 (DCC)	Gresham Hotel 20-23 O'Connell Street Upper, Dublin 1 (Dublin City Development Plan, RPS).	(V)
141	O'Connell Street Upper OS DN 018	RPS 6131 (DCC)	**Shops and offices** 17 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
142	O'Connell Street Upper OS DN 018	RPS 6138 (DCC)	**Commercial premises** 52 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
143	O'Connell Street Upper OS DN 018	RPS 6139 (DCC)	**Commercial premises** 53 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
144	O'Connell Street Upper OS DN 018	RPS 6140 (DCC)	**Commercial premises** 54 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
145	O'Connell Street Upper OS DN 018	RPS 6128 (DCC)	**Father Mathew Monument** O'Connell Street Upper, Dublin 1 (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
146	O'Connell Street Upper OS DN 018	RPS 6141 (DCC)	**Commercial premises** 57 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
147	O'Connell Street Upper OS DN 018	RPS 6142 (DCC)	**Commercial premises** 58 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
148	O'Connell Street Upper OS DN 018	RPS 6143 (DCC)	**Commercial premises** 60 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
149	O'Connell Street Upper OS DN 018	RPS 6144 (DCC)	**Commercial premises** 61 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
150	O'Connell Street Upper OS DN 018	RPS 6145 (DCC)	**Commercial premises** 62 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
151	O'Connell Street Upper OS DN 018	RPS 6146 (DCC)	**Commercial premises** 63-64 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
152	O'Connell Street Upper OS DN 018	RPS 6147 (DCC)	**Bank** 65 O'Connell Street Upper, Dublin 1 (Dublin City Development Plan, RPS).	(V)
153	O'Connell Street Upper OS DN 018	RPS 6148 (DCC)	**Bank** 66 O'Connell Street Upper, Dublin 1 (Dublin City Development Plan, RPS).	(V)
154	O'Connell Street Upper OS DN 018	RPS 6149 (DCC)	**Commercial premises** 67 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
155	O'Connell Street Upper OS DN 018	RPS 6150 (DCC)	**Commercial premises** 68 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
156	O'Connell Street Upper OS DN 018	RPS 6130 (DCC)	**Shops and offices** 2 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
157	O'Connell Street Upper OS DN 018	RPS 6129 (DCC)	**Shops and offices** 1 O'Connell Street Upper, Dublin 1: upper floor façade (Dublin City Development Plan, RPS).	(V)
158	O'Connell Street Lower OS DN 018	RPS 6122 (DCC)	**Commercial premises** 34 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
159	O'Connell Street Lower OS DN 018	RPS 6121 (DCC)	**Commercial premises** 33 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
160	O'Connell Street Lower OS DN 018	RPS 6120 (DCC)	**Commercial premises** 32 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
161	O'Connell Street Lower OS DN 018	RPS 6119 (DCC)	**Commercial premises** 30-31 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
162	O'Connell Street Lower OS DN 018	RPS 6118 (DCC)	**Commercial premises** 29 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
163	O'Connell Street Lower OS DN 018	RPS 6117 (DCC)	**Bank** 28 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
164	O'Connell Street Lower OS DN 018	RPS 6102 (DCC)	**Bollards** O'Connell Street Lower, Dublin 1 Two upright bollards and six dome-head bollards at GPO kerbline (Dublin City Development Plan, RPS).	(V)
165	O'Connell Street Lower OS DN 018	RPS 6101 (DCC)	**The General Post Office** O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
166	O'Connell Street Lower OS DN 018	RPS 6116 (DCC)	**Department store (Clerys)** 18-27 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
167	O'Connell Street Lower OS DN 018	RPS 6115 (DCC)	**Commercial premises** 17 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
168	O'Connell Street Lower OS DN 018	RPS 6114 (DCC)	**Commercial premises** 16 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
169	O'Connell Street Lower OS DN 018	RPS 6113 (DCC)	**Commercial premises** 14-15 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
170	O'Connell Street Lower OS DN 018	RPS 6112 (DCC)	**Commercial premises** 12-13 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
171	O'Connell Street Lower OS DN 018	RPS 6123 (DCC)	**Shop/offices** 40-42 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
172	O'Connell Street Lower OS DN 018	RPS 6124 (DCC)	**Commercial premises** 43-44 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
173	O'Connell Street Lower OS DN 018	RPS 6104 (DCC)	**Sir John Gray monument** O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
174	Abbey Street Middle OS DN 018	RPS 17 (DCC)	**The Oval** 78 Abbey Street Middle, Dublin 1, façade only (Dublin City Development Plan, RPS).	(V)
175	Abbey Street Middle OS DN 018	RPS 18 (DCC)	**Independent House** 87-90 Abbey Street Middle, Dublin 1 including roof and roof pavilions (Dublin City Development Plan, RPS).	(V)
176	Abbey Street Middle OS DN 018	RPS 15 (DCC)	**Upper floors of commercial premises** 69 Abbey Street Middle, Dublin 1, faience surrounding central pedimented Venetian-type window, faience parapet mouldings (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
177	Abbey Street Middle OS DN 018	RPS 16 (DCC)	**Upper floors of commercial premises** 70 Abbey Street Middle, Dublin 1, faience surrounding central pedimented Venetian-type window, faience parapet mouldings (Dublin City Development Plan, RPS).	(V)
178	O'Connell Street Lower OS DN 018	RPS 6125 (DCC)	**Commercial premises** 45-46 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
179	O'Connell Street Lower OS DN 018	RPS 6111 (DCC)	**Commercial premises** 10-11 O'Connell Street Lower, Dublin 1 / 38-39 Abbey Street Lower (Dublin City Development Plan, RPS).	(V)
180	Abbey Street Lower OS DN 018	RPS 7 (DCC)	**Hotel (Wynns)** 36-38 Abbey Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
181	Abbey Street Lower OS DN 018	RPS 6 (DCC)	**CIE offices** 35 Abbey Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
182	O'Connell Street Lower OS DN 018	National Monument RPS 6105 (DCC)	**William Smith O'Brien monument** O'Connell Street Lower, Dublin 1 The Willian Smith O'Brien Monument is a National Monument. (Dublin City Development Plan, RPS).	(V)
183	O'Connell Street Lower OS DN 018	RPS 6110 (DCC)	**Commercial premises** 8 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
184	O'Connell Street Lower OS DN 018	RPS 6109 (DCC)	**Bank** 6-7 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
185	O'Connell Street Lower OS DN 018	RPS 6108 (DCC)	**Shop and offices** 5 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
186	O'Connell Street Lower OS DN 018	RPS 6107 (DCC)	**Bank** 2-4 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)
187	O'Connell Street Lower / Westmore-land Street OS DN 018		**Site of archaeological potential** O'Connell Street Lower and Westmoreland Street. Archaeological material was discovered during construction of the Luas and the erection of the Dublin Spire. For a detailed description of this site, please refer to 'Dublin City Centre to Airport Archaeological Assessment' (CRDS, 2003)	(IV)
188	O'Connell Street Lower/ Harbour Court OS DN 018	RMP DU018:020154	**Glasshouse, site** (Glasshouse site shown on Rocque (1756). Depicted and labelled Glass House). (SMR Archives).	(V)
189	O'Connell Street Lower OS DN 018	National Monument RPS 6103 (DCC)	**O'Connell monument** O'Connell Street Lower The Daniel O'Connell Monument has been declared a National Monument. (Dublin City Development Plan, RPS).	(V)
190	O'Connell Street Lower OS DN 018	RPS 6106 (DCC)	**Commercial premises** 1 O'Connell Street Lower, Dublin 1 (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
191	Eden Quay OS DN 018	RPS 2513 (DCC)	**Commercial premises** 1 Eden Quay, Dublin 1 (Dublin City Development Plan, RPS).	(V)
192	Eden Quay OS DN 018	RPS 2514 (DCC)	**Commercial premises** 2 Eden Quay, Dublin 1 (Dublin City Development Plan, RPS).	(V)
193	Eden Quay OS DN 018	RPS 2515 (DCC)	**Façade of licensed premises** 3 Eden Quay, Dublin 1 (Dublin City Development Plan, RPS).	(V)
194	Eden Quay OS DN 018	RPS 2516 (DCC)	**Business premises** 9 Eden Quay, Dublin 1 (Dublin City Development Plan, RPS).	(V)
195	Eden Quay OS DN 018	RPS 2517 (DCC)	**Business premises** 10 Eden Quay, Dublin 1 (Dublin City Development Plan, RPS).	(V)
196	Bachelor's Walk/ O'Connell Street Lower OS DN 018	RPS 331/6126 (DCC)	**Commercial premises** Four storey corner building at Bachelor's Walk / 56 O'Connell Street Lower (Dublin City Development Plan, RPS).	(V)
197	Bachelor's Walk OS DN 018	RPS 330 (DCC)	**Commercial premises** 35 Bachelor's Walk (Dublin City Development Plan, RPS).	(V)
198	Bachelor's Walk OS DN 018	RPS 329 (DCC)	**Façade, excluding signs** 34 Bachelor's Walk (Dublin City Development Plan, RPS).	(V)
199	Bachelor's Walk OS DN 018	RPS 328 (DCC)	**Façade, excluding signs** 33 Bachelor's Walk (Dublin City Development Plan, RPS).	(V)
200	Bachelor's Walk OS DN 018	RPS.326 (DCC)	**House** 31 Bachelor's Walk, Dublin 1 Commercial premises (Dublin City Development Plan, RPS).	(V)
201	Bachelor's Walk OS DN 018	RPS 325 (DCC)	**House** 30 Bachelor's Walk, Dublin 1 Upper floors façade (Dublin City Development Plan, RPS).	(V)
202	Bachelor's Walk OS DN 018	RPS 324 (DCC)	**Commercial premises** 28 Bachelor's Walk, Dublin 1 (Dublin City Development Plan, RPS).	(V)
203	Bachelor's Walk OS DN 018	RPS 323 (DCC)	**Pierrot Club - façade only** 25 Bachelor's Walk, Dublin 1 (Dublin City Development Plan, RPS).	(V)
204	Bachelor's Walk OS DN 018	RPS 322 (DCC)	**Upper-floor façade** 24 Bachelor's Walk, Dublin 1 (Dublin City Development Plan, RPS).	(V)
205	Bachelor's Walk OS DN 018	RPS 321 (DCC)	**Upper-floor façade** 23 Bachelor's Walk, Dublin 1 (Dublin City Development Plan, RPS).	(V)
206	Eden Quay OS DN 018	RMP DU018:020461	**Eden Quay** Quay (SMR Archives).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
207	River Liffey / Eden Quay / Burgh Quay OS DN 018	RMP DU018:020155	**Ferry, site** Ferry site running from Eden Quay to Burgh Quay. Although ferries were probably in operation in Dublin from the 10th / 11th century they were first mapped by Roque in 1756. He shows 'Old Ferry' which ran from Hawkins Wall to Ferryboat Lane (Burgh Quay to Eden Quay). A ferry is recorded in this location in 1675 in the Amory lease. At this time Nathaniel Folkes, a member of the guild of tailors and captain of the city militia, had achieved a monopoly on all the city's ferry services following a grant in 1652. It is possible that at the time of the Amory grant in 1675 the 'old ferry' was the only operational ferry in the city, (De Courcy 1996, 152-155). (SMR Archives; De Courcy 1996, 56, 152-156).	(V)
208	Bridges: Rivers OS DN 018	RPS 895 (DCC)	**O'Connell Bridge** Bridges: Rivers (Dublin City Development Plan, RPS).	(V)
209	Aston Quay OS DN 018	RPS 280 (DCC)	**Business premises** 14-18 Aston Quay, Dublin 2 (Dublin City Development Plan, RPS).	(V)
210	Aston Quay OS DN 018	RPS 281 (DCC)	**Business Premises** 19 Aston Quay (Dublin City Development Plan, RPS).	(V)
211	Aston Quay OS DN 018	RPS 282 (DCC)	**Business Premises** 22 Aston Quay (Dublin City Development Plan, RPS).	(V)
212	Westmoreland Street OS DN 018	RPS 8747 (DCC)	**Shop and office** 22 Westmoreland Street, Dublin 4 (Dublin City Development Plan, RPS).	(V)
213	Burgh Quay OS DN 018	RPS 1016 (DCC)	**Upper floors façade excluding signs** 1 Burgh Quay, Dublin 2 (Dublin City Development Plan, RPS).	(V)
214	Burgh Quay OS DN 018	RPS 1017 (DCC)	**Façade including ground floor shopfront** 2 Burgh Quay, Dublin 2 (Dublin City Development Plan, RPS).	(V)
215	Burgh Quay OS DN 018	RPS 1018 (DCC)	**Commercial premises** 3 Burgh Quay, Dublin 2 (Dublin City Development Plan, RPS).	(V)
216	Burgh Quay OS DN 018	RPS 1019 (DCC)	**Commercial premises** 4 Burgh Quay, Dublin 2 (Dublin City Development Plan, RPS).	(V)
217	D'Olier Street OS DN 018	RPS 2354 (DCC)	**Dublin Gas** 26 D'Olier Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
218	D'Olier Street OS DN 018	RPS 2341 (DCC)	**House and shop** **6 D'Olier Street, Dublin 2** (Dublin City Development Plan, RPS).	(V)
219	D'Olier Street OS DN 018	RPS 2342 (DCC)	**House and shop** 7 D'Olier Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
220	D'Olier Street OS DN 018	RPS 2343 (DCC)	**Commercial building,** 8 D'Olier Street, Dublin 2 excluding fascia sign on ground floor (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
221	D'Olier Street OS DN 018	RPS 2344 (DCC)	**House and shop** 9 D'Olier Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
222	D'Olier Street OS DN 018	RPS 2345 (DCC)	**Façade** 10 D'Olier Street, Dublin 2, excluding shop fascia sign (Dublin City Development Plan, RPS).	(V)
223	D'Olier Street OS DN 018	RPS 2346 (DCC)	**Commercial premises** 11-12 D'Olier Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
224	D'Olier Street OS DN 018	RPS 2347 (DCC)	**Houses and shops** **13-14 D'Olier Street, Dublin 2** (Dublin City Development Plan, RPS).	(V)
225	D'Olier Street OS DN 018	RPS 2348 (DCC)	**Shop and house** 15 D'Olier Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
226	D'Olier Street OS DN 018	RPS 2349 (DCC)	**Commercial building** 16 D'Olier Street, Dublin 2 excluding fascia sign on ground floor (Dublin City Development Plan, RPS).	(V)
227	D'Olier Street OS DN 018	RPS 2350 (DCC)	**Façade (D'Olier Chambers)** 161/2 D'Olier Street, Dublin 2 and façade to Fleet Street (Dublin City Development Plan, RPS).	(V)
228	Westmoreland Street OS DN 018	RPS 8748 (DCC)	**Commercial premises** 26 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
229	Westmoreland Street OS DN 018	RPS 8749 (DCC)	**Commercial premises** 27 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
230	Westmoreland Street OS DN 018	RPS 8750 (DCC)	**Commercial premises** 28 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
231	Westmoreland Street OS DN 018	RPS 8751 (DCC)	**Commercial premises** 29 Westmoreland Street, Dublin 4 (Dublin City Development Plan, RPS).	(V)
232	Westmoreland Street OS DN 018	RPS 8746 (DCC)	**Commercial premises** 16 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
233	Westmoreland Street OS DN 018	RPS 8745 (DCC)	**Commercial premises** 15 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
234	Westmoreland Street OS DN 018	RPS 8744 (DCC)	**Shop and office** 14 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
235	Westmoreland Street OS DN 018	RPS 8743 (DCC)	**Commercial premises** 13 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
236	Westmoreland Street OS DN 018	RPS 8742 (DCC)	**Commercial premises** 12 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
237	Westmoreland Street OS DN 018	RPS 8741 (DCC)	**Commercial premises** 11 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
238	Westmoreland Street OS DN 018	RPS 8740 (DCC)	**Commercial premises** 10 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
239	Westmoreland Street OS DN 018	RPS 8739 (DCC)	**Commercial premises** 9 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
240	Westmoreland Street OS DN 018	RPS 8738 (DCC)	**Commercial premises** 8 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
241	Westmoreland Street OS DN 018	RPS 8752 (DCC)	**EBS Building Society** 32 Westmoreland Street, Dublin 2: façade of former La Fayette building (Dublin City Development Plan, RPS).	(V)
242	Fleet Street OS DN 018	RPS 2947 (DCC)	**Bewley's Chambers** 19-20 Fleet Street, Dublin 2: commercial premises (Dublin City Development Plan, RPS).	(V)
243	Fleet Street OS DN 018	RPS 2948 (DCC)	**Bewley's Chambers** 21 Fleet Street, Dublin 2: commercial premises (Dublin City Development Plan, RPS).	(V)
244	College Street OS DN 018	RPS 2022 (DCC)	**Allied Irish Bank** 5 College Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
245	Westmoreland Street OS DN 018	RPS 8753 (DCC)	**Bank** 35-36 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
246	College Street / Fleet Street OS DN 018	RMP DU018:020487	**Ecclesiastical remains** Portion of a medieval tiled floor was revealed in the 1860s during the building of the Provincial Bank. Test trenching in 1997 produced evidence for a cesspit and possible revetment wall. (SMR Archives; Bennet (ed.) 1997).	(V)
247	Westmoreland Street OS DN 018	RPS 8737 (DCC)	**Shop and offices** 7 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
248	Westmoreland Street OS DN 018	RPS 8736 (DCC)	**Shop and offices** 6 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
249	Westmoreland Street OS DN 018	RPS 8735 (DCC)	**Shop and offices** 5 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
250	Westmoreland Street OS DN 018	RPS 8734 (DCC)	**Shop and offices** 4 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
251	Westmoreland Street OS DN 018	RPS 8754 (DCC)	**Buildings: façade only** 40-41 Westmoreland Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
252	Westmoreland Street/ College Green OS DN 018	RMP DU018:020385	**Bridge, site** SMR Archives; Walsh, on his map names a bridge across the Stein near the Thomas Moore statue in College Street as St. James's Bridge. (Walsh 1997; De Courcy 1996, 342).	(V)
253	College Street OS DN 018	RMP DU018:02065	**Chapel Site** College Street (SMR Archives)	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
254	College Street OS DN 018	RPS 2020 (DCC)	**Thomas Moore monument** College Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
255	College Green OS DN 018	RMP DU018:020430	**Hospital, site** The present bank of Ireland on College Green occupies the site of a hospital for maimed soldiers known as Carew's Hospital. This was built after 1602 and appears on Speed's map of 1610. Its use as a home for soldiers was short-lived and from 1605 to 1612 it was occupied by Sir Thomas Ridgeway and later by Sir Arthur Bassett 'as a large mansion'. In 1612 it was acquired by Sir Arthur Chichester, baron of Belfast and lord deputy from 1604 to 1615. By 1615 it had a gatehouse, court and enclosing wall. The first parliament in Ireland was held in this building in 1661. The present building was erected on the site in 1729. It was described as a large mansion c. 33m squared. (SMR Archives; De Courcy 1996, 20-22; Somerville-Large, P. 1996, 89).	(V)
256	College Green OS DN 018	RMP DU018:020431	**Dwelling, site** See DU018:020430 above. (SMR Archives; De Courcy 1996, 20-22; Craig 1982, 151).	(V)
257	College Green OS DN 018	RMP DU018:020432	**Gatehouse, site** Gatehouse of Chichester House (see DU018:020430 above) (SMR Archives; De Courcy 1996, 20-22).	(V)
258	College Green OS DN 018	RMP DU018:020433	**Bawn, site** Part of Chichester House (see DU018:020:430 above) (SMR Archives; DeCourcy 1996, 20-22).	(V)
259	College Green OS DN 018	RMP DU018:020434	**Parliament House, site** The first parliament held in Ireland after the Restoration of Charles II opened in Chichester House in May 1661 (see DU018:020430 above). (SMR Archives; Craig 1982, DeCourcy 1996, 20-22).	(V)
260	College Green OS DN 018	RMP DU018:020435	**Parliament House** Post 1700 (DU018:020434 above). (SMR Archives; De Courcy 1996, 20-22).	(V)
261	College Green OS DN 018	RMP DU018:02099	**Watermill, site** This watermill was situated on the former River Steine, just outside the present west front of Trinity College. No visible surface remains. (SMR Archives; FMD map 1978 (N9). Bradley & King, 40; Clark 1978).	(V)
262	College Green OS DN 018	RPS 2011 (DCC)	**Buildings fronting on Parliament Square** College Green: Trinity College, , including (Dublin City Development Plan, RPS).	(V)
263	College Green OS DN 018	RPS 2012 (DCC)	**Statues of Oliver Goldsmith and Edmund Burke** College Green: Trinity College, Dublin 2 (Dublin City Development Plan, RPS).	(V)
264	College Green OS DN 018	RPS 2013 (DCC)	**Entrance gates and railings with granite bases** College Green: Trinity College, Dublin 2 Grafton Street, facing College Green; railings with granite walls on College Street and the western end of Pearse Street; railings with granite walls on Nassau Street and Leinster Street South. (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
265	College Green OS DN 018	RPS 1996 (DCC)	**Bank of Ireland (old Parliament House)** College Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
266	College Green OS DN 018	RPS 1997 (DCC)	**Henry Grattan monument** College Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
267	College Green OS DN 018	RMP DU018:020401	**Millpond, site** Marked on the Friends of Medieval Dublin map. (SMR Archives; FMD map).	(V)
268	College Green OS DN 018	RPS 2008 (DCC)	**Bank buildings** 35 College Green, Dublin 2, Regent House, the Chapel, the Examination Hall, the Dining Hall and the 1937 Reading Room (Dublin City Development Plan, RPS).	(V)
269	College Green OS DN 018	RPS 2007 (DCC)	**Bank of Ireland - (branch)** 34 College Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
270	College Green OS DN 018	RPS 2006 (DCC)	**Ulster Bank** 32-33 College Green, Dublin 2: façade including front domed roof and flanking chimneys (Dublin City Development Plan, RPS).	(V)
271	College Green OS DN 018	RPS 2009 (DCC)	**Bank buildings** 36 College Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
272	College Green OS DN 018	RPS 2010 (DCC) RPS 3294 (DCC)	**Shops and offices** 37 College Green, Dublin 2: & 119 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
273	Grafton Street OS DN 018	RPS 3293 (DCC)	**Shop and offices** 118 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
274	Grafton Street OS DN 018	RPS 3292 (DCC)	**Shop** 117 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
275	Grafton Street OS DN 018	RPS 3291 (DCC)	**Shop** 116 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
276	Grafton Street OS DN 018	RPS 3290 (DCC)	**Restaurant** 115 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
277	Grafton Street OS DN 018	RPS 3289 (DCC)	**Bank** 114 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
278	Grafton Street OS DN 018	RPS 3288 (DCC)	**Bank** 113 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
279	Grafton Street OS DN 018	RPS 3287 (DCC)	**Shop** 112 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
280	Grafton Street OS DN 018	RPS 3286 (DCC)	**Shop** 110 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
281	Grafton Street OS DN 018	RPS 3285 (DCC)	**Shop** 108 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
282	Suffolk Street OS DN 018	RMP DU018:020386	**Bridge, site** Marked on the Friends of Medieval Dublin map (1978). (SMR Archives; FMD map).	(V)
283	Suffolk Street/ Church Lane/ College Green OS DN 018	RMP DU018:020132	**Mound Site** Suffolk Street/Church Lane/College Green (SMR Archives)	(V)
284	St. Andrew Street OS DN 018	RPS 7728 (DCC)	**Dublin Tourism office (former St. Andrew's Church)** St. Andrew Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
285	Suffolk Street/ St. Andrew Street OS DN 018	RMP DU018:02047/72	**Parish Church & Graveyard/Convent Site** Suffolk Street/St. Andrew Street (SMR Archives)	(V)
286	Suffolk Street OS DN 018	RPS 8035 (DCC)	**Commercial premises** 22 Suffolk Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
287	Suffolk Street OS DN 018	RPS 8036 (DCC)	**Commercial premises** 23 Suffolk Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
288	College Green OS DN 018	RPS 2018 (DCC)	**The Provost's House** College Green: Trinity College, Dublin 2, boundary walls, gate piers and gates (Dublin City Development Plan, RPS).	(V)
289	Grafton Street OS DN 018	RPS 3283 (DCC)	**Department Store** 102 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
290	Grafton Street OS DN 018	RPS 3284 (DCC)	**Department Store** 103 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
291	Grafton Street OS DN 018	RPS 3265 (DCC)	**Shop** 2 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
292	Nassau Street OS DN 018	RPS 5902 (DCC)	Shop and offices 2 Nassau Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
293	Grafton Street OS DN 018	RPS 3282 (DCC)	**Shop,** 96 Grafton Street, Dublin 2 including 1-3 Wicklow Street (Dublin City Development Plan, RPS).	(V)
294	Grafton Street OS DN 018	RPS 3266 (DCC)	**Shop** 9 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
295	Grafton Street OS DN 018	RPS 3267 (DCC)	**Shop** 10 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
296	Wicklow Street OS DN 018	RPS 8767 (DCC)	**Shops** 38-46 Wicklow Street, Dublin 2 Including 1-3 Clarendon Street: shopfront window façade, from junction with Clarendon Street halfway to junction with Grafton Street (Dublin City Development Plan, RPS).	(V)

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297	Clarendon Street OS DN 018	RPS 1909 (DCC)	**Carmelite Church and Priory** 6-12 Clarendon Street , Dublin 2 (Dublin City Development Plan, RPS).	(V)
298	Grafton Street OS DN 018	RPS 3268 (DCC)	**Shop** 15 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
299	Grafton Street OS DN 018	RPS 3269 (DCC)	**Shop** 16 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
300	Grafton Street OS DN 018	RPS 3270 (DCC)	**Shop** 17 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
301	Grafton Street OS DN 018	RPS 3271 (DCC)	**Shop** 18 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
302	Grafton Street OS DN 018	RPS 3272 (DCC)	**Shop** 19 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
303	Grafton Street OS DN 018	RPS 3273 (DCC)	**Shop** 20 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
304	Clarendon Street OS DN 018	RPS 1911 (DCC)	**Business premises** 45 Clarendon Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
305	Grafton Street OS DN 018	RPS 3274 (DCC)	**Shop and offices** 24 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
306	Grafton Street OS DN 018	RPS 3275 (DCC)	**Shop and offices** 25 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
307	Grafton Street OS DN 018	RPS 3281 (DCC)	**Bewley's Café** 78-79 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
308	Grafton Street OS DN 018	RPS 3276 (DCC)	**Shop and offices** 30 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
309	Harry Street OS DN 018	RPS 3687 (DCC)	**Licensed premises** 7-8 Harry Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
310	Harry Street OS DN 018	RPS 3688 (DCC)	**Shop** 9-10 Harry Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
311	Grafton Street OS DN 018	RPS 3280 (DCC)	**Shop** 71 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
312	Harry Street OS DN 018	RPS 3686 (DCC)	**Former Weights and Measures building** 4 Harry Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
313	Harry Street OS DN 018	RPS 3685 (DCC)	**Licensed premises** 3 Harry Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
314	Chatham Street OS DN 018	RPS 1471 (DCC)	**Sheehan's licensed premises** Chatham Street/5 Balfe Street,Dublin.2 (Dublin City Development Plan, RPS).	(V)

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315	Grafton Street OS DN 018	RPS 3279 (DCC)	**Bank** 64 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
316	Chatham Street OS DN 018	RPS 1473 (DCC)	**Shop** 2 Chatham Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
317	Chatham Street OS DN 018	RPS 1472 (DCC)	**Licensed premises** 1 Chatham Street, Dublin 8 (Dublin City Development Plan, RPS).	(V)
318	Grafton Street OS DN 018	RPS 3278 (DCC)	**Shop** 59 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
319	Grafton Street OS DN 018	RPS 3277 (DCC)	**Shop** 58 Grafton Street, Dublin 2 (Dublin City Development Plan, RPS).	(V)
320	King Street South OS DN 018	RPS 4358 (DCC)	**Gaiety Theatre** King Street South, Dublin 2 (Dublin City Development Plan, RPS).	(V)
321	St. Stephen's Green OS DN 018	RPS 7932 (DCC)	**Commercial premises** 3 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
322	St. Stephen's Green OS DN 018	RPS 7933 (DCC)	**Shops and houses** 4 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
323	St. Stephen's Green OS DN 018	RPS 7934 (DCC)	**Shops and houses** 5 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
324	St. Stephen's Green OS DN 018	RPS 7935 (DCC)	**Shop/offices** 6 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
325	St. Stephen's Green OS DN 018	RPS 7936 (DCC)	**Shop/offices** 7 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
326	St. Stephen's Green OS DN 018	RPS 7937 (DCC)	**House** 8 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
327	St. Stephen's Green OS DN 018	RPS 7938 (DCC)	**House** 9 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
328	St. Stephen's Green OS DN 018	RPS 7939 (DCC)	**House** 10 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
329	St. Stephen's Green OS DN 018	RPS 7940 (DCC)	**House** 11 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
330	St. Stephen's Green OS DN 018	RPS 7941 (DCC)	**Bank** 12 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
331	St. Stephen's Green OS DN 018	RPS 7928 (DCC)	**Surrounding bollards and traditional-style lamp-posts** St. Stephen's Green (Dublin City Development Plan, RPS).	(V)
332	St. Stephen's Green OS DN 018	RPS 7929 (DCC)	**Fountain and horse trough (facing Dawson Street)** St. Stephen's Green (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
333	St. Stephen's Green OS DN 018	RPS 7927 (DCC)	**Railings, gates and plinth walls of perimeter boundary on St. Stephen's Green** St. Stephen's Green (Dublin City Development Plan, RPS).	(V)
334	York Street / St. Stephen's Green West OS DN 018	RMP DU018:020166	**Graveyard, site** Graveyard recorded on Rocque (1756) as the 'Quakers Burying Ground'. The Royal College of Surgeons was built on the site. No further information. (SMR Archives; Rocque's map of Dublin 1756).	(V)
335	St. Stephen's Green OS DN 018	RPS 7926 (DCC)	**Robert Emmet memorial** St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS).	(V)
336	St. Stephen's Green OS DN 018	RPS 7923 (DCC)	**Statue of Lord Ardilaun and statue plinth** St. Stephen's Green (Dublin City Development Plan, RPS).	(V)
337	St. Stephen's Green OS DN 018	RPS 7922 (DCC)	**Ornamental granite fountains with florid feature** (two in number) St. Stephen's Green (Dublin City Development Plan, RPS).	(V)
338	St. Stephen's Green OS DN 018	National Monument RMP DU018:020334	**Park** The origins of St. Stephen's Green, named after a church of St. Stephen which was the chapel of a leper hospital, can be traced back to the medieval times. It was then an unenclosed and marshy common. Along with two other open commons (Oxmantown Green and Hoggen Green) was used by the citizens of Dublin as grazing lands for their livestock. St. Stephen's Green is the only one of the three to have remained a green open space. In 1663 the City Assembly or Corporation decided to develop St. Stephen's Green, then about 60 acres in extent in such a way that it would provide some income for the city while still serving the people as an open space. By 1664 a central area of 27 acres had been marked out to be preserved. The remainder was divided into 90 building lots, each with about 60 feet frontage to be 'disposed of for walling in the whole greene and for paving the rodes or streetes'. Each lessee was also required to plant 6 sycamore trees near the wall. Bradley and King mention it as the findspot of archaeological objects. (SMR Archives; Somerville-Large 1996, 102; De Breffney and Folliott 1975, 58; Craig 1980, 2-4; Duigan 1967, 223; Maclysaght 1979, 208-235; Bradley & King).	(V)
339	St. Stephen's Green OS DN 018	RPS 7985 (DCC)	**Royal College of Surgeons** 123 St. Stephen's Green, Dublin 2 Excluding modern building (Dublin City Development Plan, RPS).	(V)
340	College Street OS DN 018	RPS 2021 (DCC)	**Buildings** 1, 2 College Street, Dublin 2: façade only (Dublin City Development Plan, RPS).	(V)
341	Bachelor's Walk OS DN 018	RPS 327 (DCC)	**Commercial premises** 32 Bachelor's Walk, Dublin 1 (Dublin City Development Plan, RPS).	(V)
342	Aston Quay OS DN 018	RPS 283 (DCC)	**Business Premises** 26 Aston Quay (Dublin City Development Plan, RPS).	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
343	Central Dublin OS DN 018	(DCC development plan)	**Historic city, Zone of Archaeological Potential** Historic city, Zone of Archaeological Potential for Dublin City (SMR Archives, Dublin City Development Plan)	(V)
344	Grafton Street OS DN 018	(DCC development plan)	**Conservation Area** Grafton Street Area is designated as a Conservation Area (Dublin City Development Plan)	(V)
345	Parnell Square OS DN 018	(DCC development plan)	**Conservation Area** Parnell Square Area is designated as a Conservation Area (Dublin City Development Plan)	(V)
346	River Liffey OS DN 018	(DCC development plan)	**Conservation Area** The river Liffey and its quays is designated as a Conservation Area (Dublin City Development Plan)	(V)
347	O'Connell Street OS DN 018	(DCC development plan)	**Architectural Conservation Area** O'Connell Street Area is designated as an Architectural Conservation Area (Dublin City Development Plan)	(V)
348	Fleet Street OS DN 018	RPS 2953 (DCC)	**Allied Irish Bank (Former)** 33-36 Fleet Street, Dublin 2 (Dublin City Development Plan, RPS)	(V)
349	Denmark Street Great OS DN 018	RPS 2331 (DCC)	**Hotel** 1-2 Denmark Street Great, Dublin 1 (Dublin City Development Plan, RPS)	(V)
350	Lissenhall Little OS DN 012	RMP DU 012:003	**Ring-Ditch** Site of a ploughed out ring-ditch. Part of this site may have been removed by construction of the M1 motorway. (SMR Archives)	(V)
351	St. Stephen's Green OS DN 018	RPS 7964 (DCC)	**House** 83 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS)	(V)
352	St. Stephen's Green OS DN 018	RPS 7965 (DCC)	**House** 84 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS)	(V)
353	St. Stephen's Green OS DN 018	RPS 7966 (DCC)	**House** 85 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS)	(V)
354	St. Stephen's Green OS DN 018	RPS 7967 (DCC)	**House** 86 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS)	(V)
355	St. Stephen's Green OS DN 018	RPS 7968 (DCC)	**House** 87 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS)	(V)
356	St. Stephen's Green OS DN 018	RPS 7969 (DCC)	**House** 88 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS)	(V)
357	St. Stephen's Green OS DN 018	RMP DU018:020243	**Dwelling** Site of a dwelling as shown on early cartographic sources prior to the laying out of the green (SMR Archives)	(V)
358	St. Stephen's Green OS DN 018	RPS 7942 (DCC)	**House** 13 St. Stephen's Green, Dublin 2 (Dublin City Development Plan, RPS)	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
359	Dawson Street OS DN 018	RPS 2303 (DCC)	**Commercial premises** 25 Dawson Street, Dublin 2 (Dublin City Development Plan, RPS)	(V)
360	Dawson Street OS DN 018	RPS 2304 (DCC)	**Commercial premises** 26 Dawson Street (Dublin City Development Plan, RPS)	(V)
361	Clarendon Street OS DN 018	RPS 1910 (DCC)	**Business premises** 44 Clarendon Street, Dublin 2 (Dublin City Development Plan, RPS)	(V)
362	Wicklow Street OS DN 018	RPS 8766 (DCC)	**Business premises** 31 Wicklow Street, Dublin 2 (Dublin City Development Plan, RPS)	(V)
363	Suffolk Street OS DN 018	RPS 8034 (DCC)	**Licensed premises** 1-2 Suffolk Street, Dublin 2 (Dublin City Development Plan, RPS)	(V)
364	Church Lane OS DN 018	RPS 1546 (DCC)	**Shop** 2 Church Lane, Dublin 2 (Dublin City Development Plan, RPS)	(V)
365	Church Lane OS DN 018	RPS 1547 (DCC)	**Licensed premises** 3 Church Lane , Dublin 2 (Dublin City Development Plan, RPS)	(V)
366	Church Lane OS DN 018	RPS 1548 (DCC)	**Licensed premises** 4 Church Lane , Dublin 2 (Dublin City Development Plan, RPS)	(V)
367	D'Olier Street OS DN 018	RPS 2351 (DCC)	**Commercial premises** 17 D'Olier Street, Dublin 2 (Dublin City Development Plan, RPS)	(V)
368	D'Olier Street OS DN 018	RPS 2352 (DCC)	**Commercial premises** 18 D'Olier Street, Dublin 2 (Dublin City Development Plan, RPS)	(V)
369	D'Olier Street OS DN 018	RPS 2353 (DCC)	**Commercial premises** 19-20 D'Olier Street, Dublin 2, including 3-4 Hawkins Street (Dublin City Development Plan, RPS)	(V)
370	Eden Quay OS DN 018	RPS 2518 (DCC)	**Business premises** 11 Eden Quay, Dublin 1 (Dublin City Development Plan, RPS)	(V)
371	Eden Quay OS DN 018	RPS 2519 (DCC)	**Seaman's Institute** 12 Eden Quay, Dublin 1 (Dublin City Development Plan, RPS)	(V)
372	Hamstead Avenue OS DN 014	-	**Hamstead Castle** **(Site of Archaeological Potential)** 1st Edition OS maps (Cartographic)	(IV)
373	Litton Lane/ The Lotts OS DN 018	RPS 4915 (DCC)	**Warehouse** Litton Lane/The Lotts, Dublin 4 Stone warehouse with brick trimming (Dublin City Development Plan, RPS)	(V)
374	Parnell Street OS DN 018	RPS 6556 (DCC)	**Former hotel building** 78 Parnell Street, Dublin 1 (Dublin City Development Plan, RPS)	(V)
375	Parnell Street OS DN 018	RPS 6564 (DCC)	**Commercial premises** 157 Parnell Street, Dublin 1 (Dublin City Development Plan, RPS)	(V)

HC No.	Location	Legal Status	Site Description	Evaluation
376	Parnell Street OS DN 018	RPS 6565 (DCC)	**Commercial premises** 158 Parnell Street, Dublin 1 (Dublin City Development Plan, RPS)	(V)
377	Eccles Street OS DN 018	RPS 2506 (DCC)	**House** 75 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS)	(V)
378	Synnot Place OS DN 018	RPS 8154 (DCC)	**House** 12 Synnott Place, Dublin 7 (Dublin City Development Plan, RPS)	(V)
379	Parnell Square OS DN 018	RPS 6512 (DCC)	**House** 23 Parnell Square, Dublin 1 (Dublin City Development Plan, RPS)	(V)
380	Royal Canal OS DN 018	(DCC development plan)	**Conservation Area** The Royal Canal is designated as a Conservation Area (Dublin City Development Plan, RPS)	(V)
381	Blessington Street OS DN 018	RPS 775 (DCC)	**House** 11 Blessington Street, Dublin 7 House excluding shopfront (Dublin City Development Plan, RPS)	(V)
382	Blessington Street OS DN 018	RPS 776 (DCC)	**House** 12 Blessington Street, Dublin 7 Georgian-style house, including steps and railings (Dublin City Development Plan, RPS)	(V)
383	Eccles Street OS DN 018	RPS 2492 (DCC)	**House** 59 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS)	(V)
384	Eccles Street OS DN 018	RPS 2493 (DCC)	**House** 60 Eccles Street, Dublin 7 (Dublin City Development Plan, RPS)	(V)
385	St. Stephen's Green OS DN 018	RPS 7924 (DCC)	**James Clarance Mangan statue** Stature within St. Stephen's Green (Dublin City Development Plan, RPS)	(V)
386	St. Stephen's Green OS DN 018	RPS 7925 (DCC)	**Countess Markeivicz Statue** Stature within St. Stephen's Green (Dublin City Development Plan, RPS)	(V)
387	St. Stephen's Green OS DN 018	RPS 7920 (DCC)	**Bandstand** Structure within St. Stephen's Green (Dublin City Development Plan, RPS)	(V)
388	Hamstead Avenue OS DN 014	-	**Gate Lodge** Gate Lodge for Elmhurst nursing home, Hamstead Avenue, Ballymun, Dublin 9 Single storey red brick gate lodge with slate roof and two chimney stacks. (Field Survey)	(IV)
389	Hamstead Avenue OS DN014	-	**Outbuildings** Converted outbuildings, Elmhurst House Hamstead Avenue, Ballymun, Dublin 9 Pair of single-storey outbuildings built into walled garden. Rendered walls, with some rendered removed to expose random rubble construction materials. Single-span tiled roofs. (Field Survey)	(IV)

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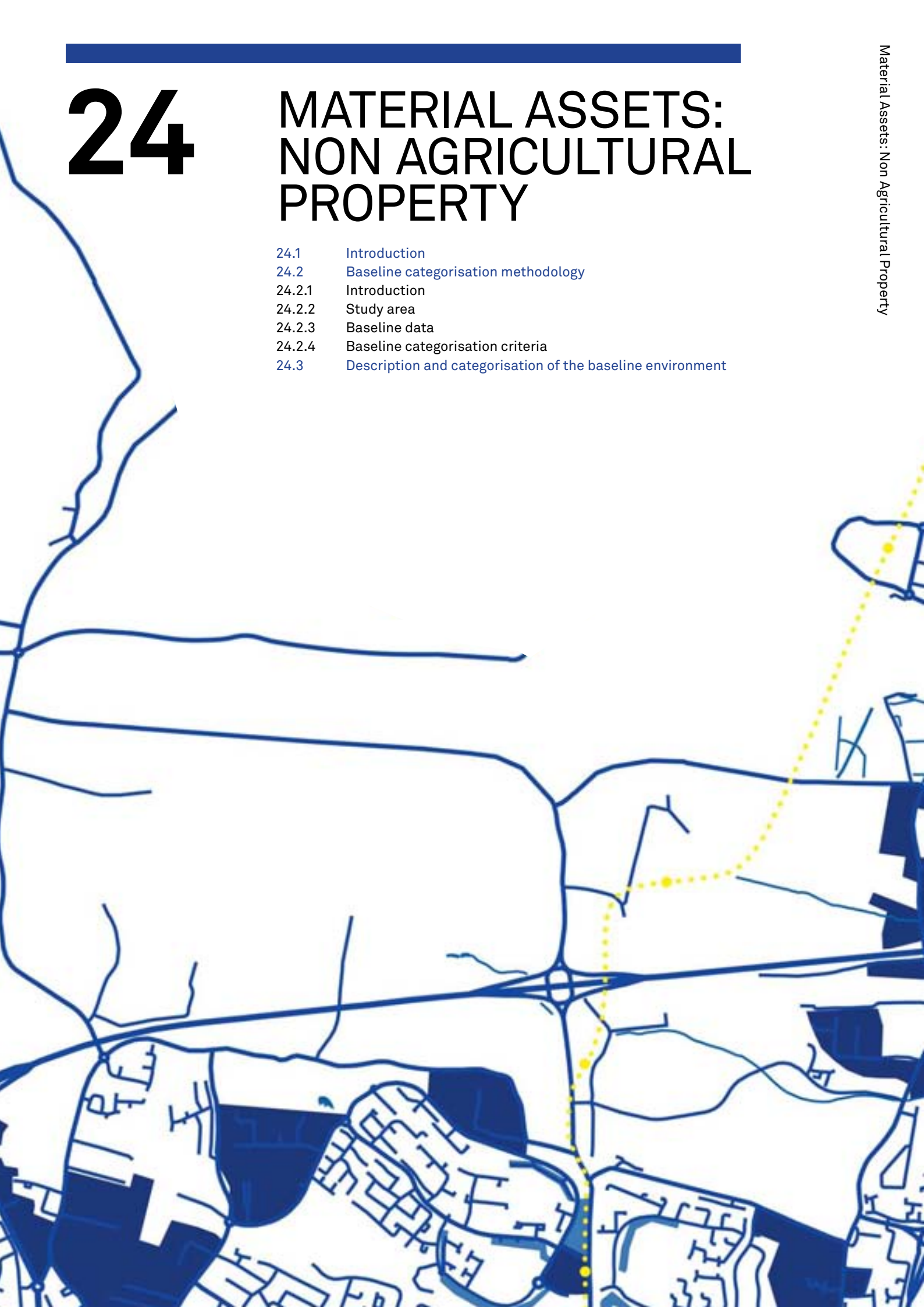
390	Ballymun Road OS DN 014	-	**Westfield House** Ballymun Road, Dublin 9 Three-bay, two storey detached house in own walled garden. Rendered walls with cement moulded doorframe and square-headed openings with concrete sills and cement moulded surrounds. (Field Survey)	(IV)
391	St. Alphonsus Road OS DN 018	-	**House** 12 St. Alphonsus Road, Drumcondra, Dublin 9 Two-bay, two-storey red brick terraced house with canted-bay window to the front, and large two storey return to rear. Entrance in round-headed opening with plate glass fanlight and timber panelled door. Forms part of a terrace along the whole street. Small garden to front with cast iron railings and a gate. (Field Survey)	(IV)
392	St. Alphonsus Road OS DN 018	-	**House** 14 St. Alphonsus Road, Drumcondra, Dublin 9 Two-bay, two-storey red brick terraced house with canted-bay window to the front, and large two storey return to rear. Entrance in round-headed opening with plate glass fanlight and timber panelled door. Forms part of a terrace along the whole street. Small garden to front with cast iron railings and a gate. (Field Survey)	(IV)
393	St. Alphonsus Road OS DN 018	-	**House** 16 St. Alphonsus Road, Drumcondra, Dublin 9 Two-bay, two-storey red brick terraced house with canted-bay window to the front, and large two storey return to rear. Entrance in round-headed opening with plate glass fanlight and timber panelled door. Forms part of a terrace along the whole street. Small garden to front with cast iron railings and a gate. (Field Survey)	(IV)
394	St. Alphonsus Road OS DN 018	-	**House** 18 St. Alphonsus Road, Drumcondra, Dublin 9 Two-bay, two-storey red brick terraced house with canted-bay window to the front, and large two storey return to rear. Entrance in round-headed opening with plate glass fanlight and timber panelled door. Forms part of a terrace along the whole street. Small garden to front with cast iron railings and a gate. (Field Survey)	(IV)
395	St. Alphonsus Road OS DN 018	-	**House** 20 St. Alphonsus Road, Drumcondra, Dublin 9 Two-bay, two-storey red brick terraced house with canted-bay window to the front, and large two storey return to rear. Entrance in round-headed opening with plate glass fanlight and timber panelled door. Forms part of a terrace along the whole street. Small garden to front with cast iron railings and a gate. (Field Survey)	(IV)

HC No.	Location	Legal Status	Site Description	Evaluation
396	St. Alphonsus Avenue OS DN 018	-	**House** 2 St. Alphonsus Avenue, Drumcondra, Dublin 9 Two-bay, single-storey artisan cottage with window and door. Has been rendered with a slate roof and chimney. Part of a terrace of cottages. (Field Survey)	(IV)
397	St. Alphonsus Avenue OS DN 018	-	**House** 3 St. Alphonsus Avenue, Drumcondra, Dublin 9 Two-bay, single-storey artisan cottage with window and door. Has been rendered with a slate roof and chimney. Part of a terrace of cottages. (Field Survey)	(IV)
398	St. Alphonsus Avenue OS DN 018	-	**House** 4 St. Alphonsus Avenue, Drumcondra, Dublin 9 Two-bay, single-storey artisan cottage with window and door. Has been rendered with a slate roof and chimney. Part of a terrace of cottages. (Field Survey)	(IV)
399	St. Alphonsus Avenue OS DN 018	-	**House** 5 St. Alphonsus Avenue, Drumcondra, Dublin 9 Two-bay, single-storey artisan cottage with window and door. Has been rendered with a slate roof and chimney. Part of a terrace of cottages. (Field Survey)	(IV)
400	St. Alphonsus Avenue OS DN 018	-	**House** 6 St. Alphonsus Avenue, Drumcondra, Dublin 9 Two-bay, single-storey artisan cottage with window and door. Painted brickwork with a slate roof and chimney. Part of a terrace of cottages. (Field Survey)	(IV)
401	Ballymun OS DN 014	-	**Townland Boundary** Ballymun / Balcurris – Earthen bank boundary between the two townlands. (Cartographic, Field Survey)	(IV)
402	Leo Street OS DN 018	-	**House** 24 Leo Street, Dublin 7 Terraced red brick two-bay, two-storey house. Single-span pitched slate roof with red brick chimneystack to party wall. Segmental-headed openings with replacement windows and stone sills. Entrance in segmental-headed opening with timber door and overlight. (Field Survey)	(IV)
403	Leo Street OS DN 018	-	**House** 25 Leo Street, Dublin 7 Terraced red brick two-bay, two-storey house. Single-span pitched slate roof with red brick chimneystack to party wall. Segmental-headed openings with replacement windows and stone sills. Entrance in segmental-headed opening with timber door and overlight. (Field Survey)	(IV)

HC No.	Location	Legal Status	Site Description	Evaluation
404	Leo Street OS DN 018	-	**House** 26 Leo Street, Dublin 7 End of terrace red brick two-bay, two-storey house. Single-span pitched slate roof with red brick chimneystack to end wall. Segmental-headed openings with two-over-two pane sash windows and stone sills. Entrance in segmental-headed opening with overlight. (Field Survey)	(IV)
405	North Circular Road OS DN 018	-	**House** 398 North Circular Road, Dublin 7 Two-bay, two-storey red brick terraced house with canted-bay window to the front. Single-span pitched slate roof with red brick chimney stack to end wall. Entrance in segmental-headed opening with plate glass fanlight and timber panelled door. Small front garden enclosed by railings and a gate. (Field Survey)	(IV)
406	North Circular Road OS DN 018	-	**House** 400 North Circular Road, Dublin 7 Two-bay, two-storey red brick terraced house with canted-bay window to the front. Single-span pitched slate roof with red brick chimney stack to end wall. Entrance in segmental-headed opening with plate glass fanlight and timber panelled door. Small front garden enclosed by railings and a gate. (Field Survey)	(IV)
407	Ballymun Road OS DN 014	-	**Charter School (Santry Lodge)** Ballymun Road, Dublin 9 Nine-bay, two-storey rendered building with single-span pitched slate roof and four brick chimney stacks. Gabled limestone porch to front. Large dressed limestone gateposts with low wall along avenue to house. Associated two-storey outbuildings with corrugated iron roofs may be earlier structures (mill buildings?). Originally set up as a Charter School (incorporating earlier buildings including a tower house) it was converted into a private residence and re-named Santry Lodge. Avenue contains with modern conifers on south side, with remnants of a double row of deciduous trees to the north. (Field Survey)	(IV)
408	Ballymun Road OS DN 014	-	**Gate Lodge** Charter School (Santry House) Gate Lodge, Ballymun Road, Dublin 9 Small single-story gate lodge. Rendered walls, slate roof and small porch opening to the main avenue. (Field Survey)	(IV)
409	Ballymun Road OS DN 014	-	**House** Ballymun Road, Dublin 9 Three-bay, two-storey house. Rendered walls with exposed red brick surrounds. Single-span pitched slate roof with red brick chimney stacks to end walls and terracotta ridge tiles. Segmental-headed openings with timber single-pane sash windows. Entrance consisting of a segmental-headed opening in projecting red brick porch. (Field Survey)	(IV)

HC No.	Location	Legal Status	Site Description	Evaluation
410	Belinstown OS DN 011	-	**Outbuildings** Belinstown, County Dublin Group of buildings, present on 1st Edition OS map. Sited at entrance to modern farm. Used as outbuildings but may represent the original farm buildings. Consists of large single-bay, single storey farm building with loft and steep pitched roof and a larger four-bay, two storey extension to the end. (Field Survey)	(IV)
411	Belinstown OS DN 011	-	**Outbuildings** Belinstown, County Dublin Group of buildings, present on 1st Edition OS map. Sited at entrance to modern farm on opposite side of road to HC#411. Consists of a stone building with brick arch forming entrance directly onto road. Very overgrown. (Field Survey)	(IV)
412	Belinstown OS DN 011	-	**Townland Boundary** Belinstown / Lissenhall Little – Earthen bank with small stream (Cartographic, Field Survey)	(IV)
413	Belinstown OS DN 011	-	**Townland Boundary** Belinstown / Lissenhall Little (Cartographic, Field Survey)	(IV)
414	Lissenhall Little OS DN 011	-	**Townland Boundary** Lissenhall Little / Balheary Demesne – Stone wall running most of the length of Balheary Road. The wall has been broken in places and modern repairs made. For most part it is approximately 1.5-2m high and constructed of limestone rubble stone bonded by a cement mortar. (Cartographic, Field Survey)	(IV)
415	Miltonsfields OS DN 011	-	**Townland Boundary** Miltonsfields / Crowscastle – Earthen bank (Cartographic, Field Survey)	(IV)
416	Nevinstown West OS DN 011	-	**Townland Boundary** Nevistown West / Fosterstown South – Earthen bank (Cartographic, Field Survey)	(IV)
417	Fosterstown South OS DN 011	-	**Townland Boundary** Fosterstown South / Cloghran – Earthen bank & ditch with small stream (Cartographic, Field Survey)	(IV)
418	Ballystruan OS DN 014	-	**Townland Boundary** Ballystruan / Ballymun – Earthen bank (Cartographic, Field Survey)	(IV)
419	Drumcondra Road Lower OS DN 018	-	**Buildings** Former St Josephs school for the deaf buildings, which include a chapel. (Cartographic, Field Survey)	(IV)

24 MATERIAL ASSETS: NON AGRICULTURAL PROPERTY



Section 39(2)(b) of the Railway Infrastructure Act, 2001 specifies that an environmental impact statement must contain a description of the aspects of the environment that are likely to be significantly affected by the proposed scheme. This chapter of the EIS has been prepared in order to fulfil this requirement with respect to non agricultural property (excluding publically owned property).

24.1 INTRODUCTION

This chapter describes and evaluates the existing environment in the area of the proposed scheme.

Prior to compiling this chapter, a number of planning and policy documents were reviewed to ascertain if the documents contain any plans, policies or objectives relating to property. The following documents have been reviewed:

- Fingal County Development Plan 2005-2011;
- Airport Local Area Plan (2006);
- Dublin City Development Plan 2005-2011;
- Masterplan for the new Ballymun, (1998 (as amended)).

None of the planning or policy documents contained any specific objectives relating to non agricultural property.

Non agricultural properties are considered to be valuable economic and social resources that, among other things, provide residential amenity for human beings. Such property is also viewed as an asset of economic importance. Other chapters within the EIS make reference to aspects of non agricultural property which are therefore not detailed in this chapter. These chapters include Landuse, Noise, Vibration, Soil and Geology, Air and Climatic Factors, Archaeology, Architectural Heritage and Cultural Heritage of this EIS (Volume 1, Chapters 10, 12, 13, 17, 20 and 23 respectively).

Other schedules submitted as part of this Railway Order application make reference to aspects of non agricultural property and therefore will not be detailed here including:

- Rights of way: Rights of way to be extinguished as part of the proposed scheme will be listed in the relevant Schedules of the draft Railway Order. All rights of way to be temporarily or permanently interrupted as a result of the proposed scheme will be recognised on the Railway Order drawings.

This chapter therefore describes the following topics:

- Non Agricultural properties which are to be acquired and permanently demolished;
- Non Agricultural properties, a portion of which are to be acquired on a permanent basis e.g. a property's garden;
- Non agricultural properties, a portion of which are to be acquired on a temporary basis;
- Non agricultural properties to which access will be directly restricted or altered as a result of the proposed scheme.

24.2 BASELINE CATEGORISATION METHODOLOGY

24.2.1 Introduction

The baseline evaluation comprised consultation with the RPA property department to determine where residential properties are to be directly impacted upon.

24.2.2 Study area

All of the residential properties to be impacted upon as part of the proposed scheme are located within 50m of the alignment.

24.2.3 Baseline data

The data used to compile the baseline for this chapter is shown in the Table 24.1.

24.2.4 Baseline categorisation criteria

Categorisation of the baseline environment involves the allocation of overall 'functional values' to discreet areas within the study area. The functional value of the area is determined with reference to the 'importance' and 'sensitivity' of the area as well as any 'existing adverse effects' that impact on the area.

All non agricultural properties are viewed as being very important to the individual owners and occupiers and are very sensitive to acquisition, demolition and other impacts. All non agricultural properties are therefore seen as having a Very high functional value.

Table 24.1 Baseline data

Information required	Data source
Location of residential properties to be impacted upon along the alignment	- Railway Order plans of the proposed works (RPA, 2008).

Table 24.2 Criteria for baseline categorisation

Criteria	Functional value
- Non Agricultural Properties	Very high (V)
- Not applicable	High (IV)
- Not applicable	Medium (III)
- Not applicable	Low (II)
- Not applicable	Very low (I)

24.3 DESCRIPTION AND CATEGORISATION OF THE BASELINE ENVIRONMENT

All of the non agricultural properties that may be impacted upon by the proposed scheme are described in Table 24.3. This includes non agricultural properties to which access will be directly restricted or altered as a result of the proposed scheme but does not include all rights of way to be affected. None of the properties listed are recorded as Protected Structures or are subject to a preservation order.

Table 24.3 Non Agricultural properties to be impacted upon by the proposed scheme

Non agricultural properties	Functional value
Area MN101 – Belinstown to South of Swords	
Land behind cottage immediately north of Lissenhall Bridge	(V)
Footbridge over the R132 north of Estuary Roundabout	(V)
Footbridge over the R132 north of Seatown Roundabout	(V)
Industrial property east of R132 between Seatown and Malahide Roundabouts	(V)
Footbridge over the R132 between Seatown and Malahide Roundabouts	(V)
Footbridge over the R132 south of Malahide Roundabout	(V)
Lands to the east of the R132 (development lands) south of Malahide Roundabout	(V)
Area MN102 - South of Swords to Dublin Airport Boundary	
Lands part of Airside Business Park to the east of the R132	(V)
Two fields to the east of the R132 (fallow lands) north of Pinnock Hill Roundabout	(V)
Part of Airside Retail Park delivery road	(V)
Field and front garden associated with veterinary clinic at Pinnock Hill Roundabout	(V)
Two fields to east of R132 at Fosterstown Park & Ride site	(V)
Telecommunications mast at Fosterstown Park & Ride site	(V)
Rear of Airside Retail Park to east of R132 at Fosterstown Park & Ride site	(V)
Part of field to west of R132 at Fosterstown Park & Ride site	(V)
Part of Airside Retail Park car park	(V)
Cottage at Nevinstown, Swords	(V)
Cottage at Nevinstown, Swords	(V)
Texaco Filling Station at to west of the R132 south of Nevinstown Lane	(V)
Cottage at Fosterstown South, Swords	(V)
Cottage at Fosterstown South, Swords	(V)
Scrap yard at Fosterstown South, Swords	(V)
Access road to precast concrete works	(V)

Non agricultural properties	Functional value
Area MN103 – Dublin Airport	
Dublin Airport lands	(V)
Access road and entrance to meat packing plant at Ballystruan	(V)
Whitehall GAA sports grounds east of Ballystruan Lane	(V)
Parnell GAA sports grounds east of Ballystruan Lane	(V)
Cottage on Ballystruan Lane	(V)
Cottage on Ballystruan Lane	(V)
Airport Lands south of Southern Perimeter Road	(V)
Starlight GAA sports grounds (Airport Lands) west of Ballystruan Lane and south of Southern Perimeter Road	(V)
Stables at Ballystruan	(V)
Access road and entrance to meat packing plant at Ballystruan	(V)
Private garden at St. Anne's House south of M50	(V)
Entrance to Tesco Lands east of Old Ballymun Road	(V)
Lands west of Old Ballymun Road	(V)
Lands west of Old Ballymun Road	(V)
Lands west of Old Ballymun Road	(V)
Lands to east of R108 at Charter School Hill (4 holdings)	(V)
Santry Lodge, Charter School Hill	(V)
Lands to the west of Old Ballymun Road	(V)
Lands to the west of the R108	(V)
Area MN105 - South of Northwood to Dublin City University	
Part of garden at 173 Ballymun Road	(V)
Part of garden at 171a Ballymun Road	(V)
Part of garden at 2 Glasnevin Avenue	(V)
Part of garden of Victory Credit Union, 171 Ballymun Road	(V)
Strip of land at Our Lady of Victories School, Ballymun Road	(V)
Part of garden at 160 Ballymun Road	(V)
Part of garden at 158 Ballymun Road	(V)
Part of front lawn of Our Lady of Victories Church, Ballymun Road	(V)
Strip of land at Albert College Court	(V)
Strip of land at Scout Hall	(V)
Westfield House, Ballymun Road, Dublin 9	(V)
1 Albert College Lawn, Glasnevin, Dublin 9	(V)
2 Albert College Lawn, Glasnevin, Dublin 9	(V)

Non agricultural properties	Functional value
Area MN106 - Dublin City University to South of Mater Hospital	
Various properties situated above bored tunnel alignment as listed in the Railway Order	(V)
DCU lands at Griffith Avenue Stop	(V)
Part of grounds of St. Patrick's College, Drumcondra	(V)
12 Alphonsus Road Drumcondra, Dublin 9	(V)
14 Alphonsus Road Drumcondra, Dublin 9	(V)
16 Alphonsus Road Drumcondra, Dublin 9	(V)
18 Alphonsus Road Drumcondra, Dublin 9	(V)
20 Alphonsus Road Drumcondra, Dublin 9	(V)
Dunbeg, Saint Alphonsus Avenue, Drumcondra, Dublin 9	(V)
2 Saint Alphonsus Avenue, Drumcondra, Dublin 9	(V)
3 Saint Alphonsus Avenue, Drumcondra, Dublin 9	(V)
4 Saint Alphonsus Avenue, Drumcondra, Dublin 9	(V)
5 Saint Alphonsus Avenue, Drumcondra, Dublin 9	(V)
6 Saint Alphonsus Avenue, Drumcondra, Dublin 9	(V)
Access road to Quinn's public house, Drumcondra, Dublin 9	(V)
Saint Vincent's Centre For The Deaf Drumcondra Road Lower, Drumcondra, Dublin 9	(V)
Access road to rear of commercial premises at 32 – 38 Lower Drumcondra Road, Drumcondra, Dublin 9	(V)
Iarnród Éireann railway, Drumcondra, Dublin 9	(V)
398 North Circular Road, Dublin 7	(V)
400 North Circular Road, Dublin 7	(V)
Part of grounds of Mater Misericordiae Hospital,	(V)
24 Leo Street, Phibsborough, Dublin 7	(V)
25 Leo Street, Phibsborough, Dublin 7	(V)
26 Leo Street, Phibsborough, Dublin 7	(V)
Area MN107 - South of Mater Hospital to St. Stephen's Green	
Various properties situated above bored tunnel alignment as listed in the Railway Order	(V)
Various basements on Parnell Square East	(V)
Part of grounds of Rotunda Hospital	(V)
Part of St. Stephen's Green	(V)

25 MATERIAL ASSETS: UTILITIES

Section 39(2)(b) of the Railway Infrastructure Act, 2001 specifies that an environmental impact statement must contain a description of the aspects of the environment that are likely to be significantly affected by the proposed scheme. This chapter has been prepared in order to fulfil this requirement with respect to utilities.

25.1 INTRODUCTION

This chapter describes and evaluates the existing utilities environment in the area of the proposed scheme.

Prior to preparing this chapter, a number of planning and policy documents were reviewed to ascertain if the documents contain any plans, policies or objectives relating to utilities. The following documents have been reviewed:

- Fingal County Development Plan 2005-2011;
- Airport Local Area Plan (2006);
- Dublin City Development Plan 2005-2011;
- Masterplan for the new Ballymun (1998 (as amended)).

The results of this review are detailed in the Planning and Policy Context chapter of this EIS (Volume 1, Chapter 4).

25.2 BASELINE CATEGORISATION METHODOLOGY

25.2.1 Introduction

This chapter considers all utilities along the alignment that are operated by public and private utility companies and authorities. Substantial consultation has taken place with all relevant utility companies and authorities to ensure that all services that are needed to provide continuity of service are known.

The importance of continuity of service to receptors within the study area is recognised by RPA.

25.2.2 Study area

This study area encompasses all areas where utilities could potentially be affected by elements associated with the proposed scheme. The study area encompasses a minimum of 84m either side of the central line of the proposed alignment. In some areas the study area extends to more than 84m from the alignment in order to take into consideration elements of the proposed scheme that are located away from the main alignment.

25.2.3 Baseline data

The data used to compile the baseline for this chapter is shown in Table 25.1.

Table 25.1 Baseline data

Information required	Data source
- Gas services - Water services - Electricity services - Cable services - Drainage services	- Utilities maps provided by RPA (2007) as compiled by RPA based on consultation with relevant utilities authorities, radar mapping and slit trench surveys.

25.2.4 Baseline categorisation criteria

Categorisation of the baseline environment involves the allocation of overall 'functional values' to areas within the study area. The functional value of the area is determined with reference to the 'importance' and 'sensitivity' of the area as well as any 'existing adverse effects' that impact on the area. Each of these terms are explained in detail in this section.

Importance
All utilities are considered to be highly important. The utilities infrastructure ensures that power (electricity/gas), water and amenity services are provided to all individuals in a reliable consistent manner. The day-to-day lives of all individuals are highly dependent on this supply. Disruption of supply can have a significant impact on fundamental components of any community including manufacturing, provision of services, transport and individual quality of life. RPA recognises the importance of ensuring that disruption of any utilities is minimised.

Sensitivity
All utilities are considered to be highly sensitive. Disruption of utilities at single point locations can often significantly impact on the functionality of the infrastructure over a large area. Relatively minor impacts can therefore affect a large number of receptors and these receptors are highly sensitive to disruption because they are accustomed to, and dependent on, a continuous reliable supply.

Existing adverse effects
Existing adverse effects do not occur within the study area. There are no areas within the study area where utilities are already disrupted and will continue to be disrupted for the duration of the lifespan of the proposed scheme.

Functional value
The functional value of the baseline environment is evaluated by means of a number of specific criteria to take into account the importance and sensitivity of different features of the environment. The criteria that have been defined are described in Table 25.2.

Table 25.2 Criteria for baseline categorisation

Criteria	Functional value
All utilities: - Gas distribution pipework (<16bar) - Gas transmission/high pressure pipework (>16 bar) - Communication cables such as telephone and voice data cables, cable television networks, signalling and traffic cables and other control cables (e.g. Luas and other private services) - Water pipes for drinking water, surface water, storm water, foul water and trade effluent - Electricity cables including underground cables and overhead lines All wayleaves associated with utilities	Very high (V)
- Not applicable	High (IV)
- Not applicable	Medium (III)
- Not applicable	Low (II)
- Not applicable	Very low (I)

The results of the baseline categorisation in terms of functional value are shown in Table 25.3.

25.3 DESCRIPTION AND CATEGORISATION OF THE BASELINE ENVIRONMENT

25.3.1 Description of the baseline environment

A summary description of the types of utilities found in each of the seven sections of the alignment is provided in Table 25.3. A general description of the types of utilities occurring along the alignment is provided in this section.

Gas distribution pipes are expected to occur as either polyethylene (PE) or PE inserted into cast iron pipes. High pressure (>16bar) gas transmission pipes are usually made of coated steel and are provided with cathodic protection.

The communication cables within the study area are expected to occur in plastic ducts, and accessed from chambers at surface level. Earthing arrangements are provided in the vicinity of any telephone exchanges.

The majority of the water supply pipes are expected to occur as cast or ductile iron pipes. Some of the older mains pipes occur as concrete asbestos ducts. Old sewers within the study area are typically constructed with brick or blockwork manholes and are generally located in quite deep areas where they are difficult to move. Some of these old sewers have been re-lined in recent years. Newer sewers are constructed using concrete pipes.

Underground electricity cables are present in a number of locations within the study area. These cables occur at various voltage levels including low voltage (LV), 10kV, 38kV, 110kV and 220kV. Most cables have an aluminium core with a plastic coating but some older distribution and transmission cables have oil-impregnated paper as a coating. A number of overhead electricity lines also occur within the study area. These lines occur at various voltage levels including 10kV and 38kV lines in the vicinity of the alignment.

25.3.2 Categorisation of the baseline environment

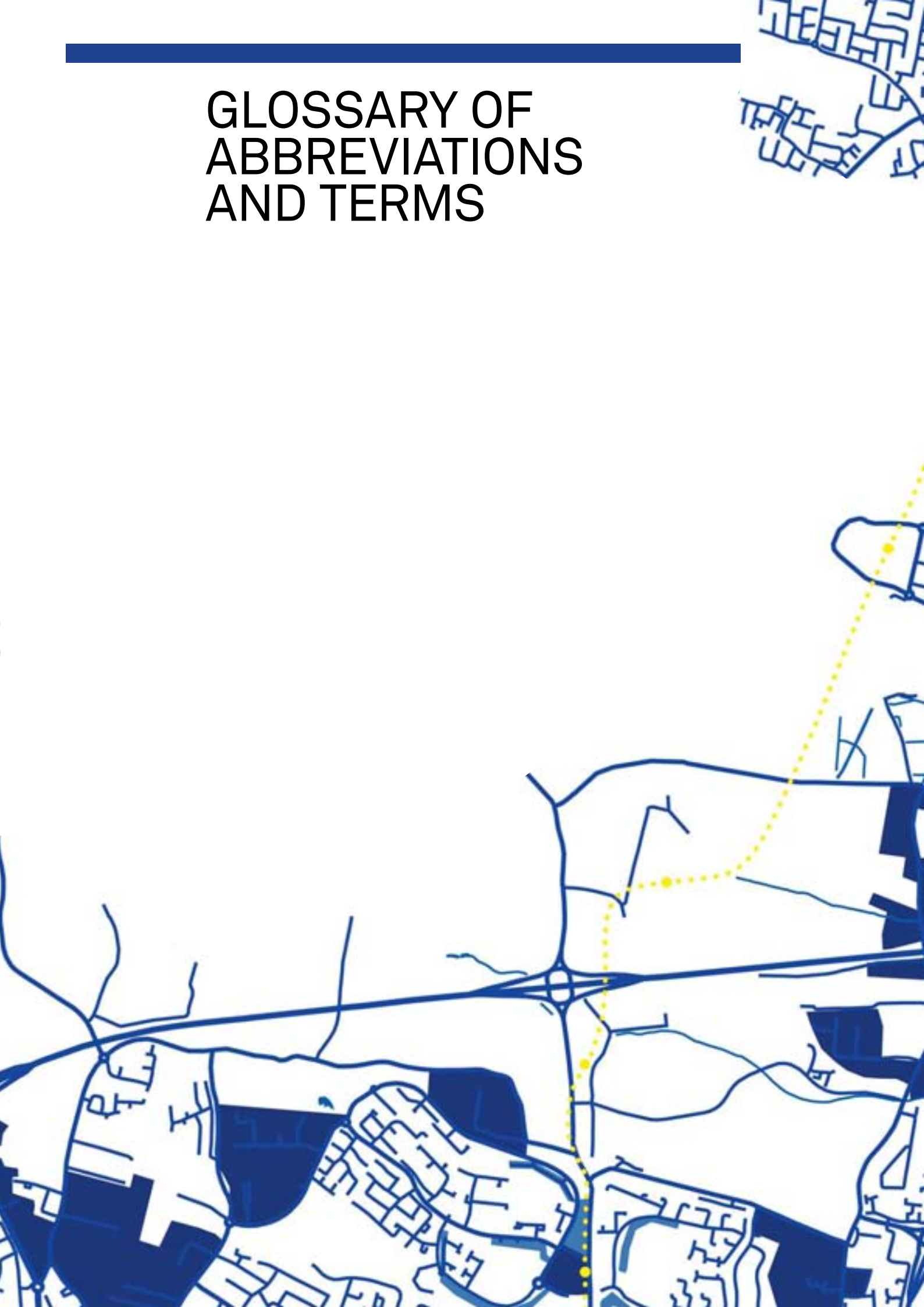
A summary of the baseline categorisation is provided in Table 25.3.

Table 25.3 Baseline categorisation

Area	Summary description	Functional value
MN101	- Stormwater and foul water drainage along the R132 - Fingal County Council 30 inch water pipe located in Lissenhall area - Two 38kV overhead electricity lines - Electrical distribution network - Gas distribution network - Telecommunications network - Fingal County Council water distribution network	Very high (V)
MN102	- Drainage along R132 - Electrical distribution network - Gas distribution network - Telecommunications network and masts - Two ESB substations in close proximity to the alignment near Airside Retail Park	Very high (V)
MN103	- Internal services to Dublin Airport - Surface water drainage - Electrical distribution network - Telecommunications network	Very high (V)
MN104	- 10kV overhead electricity lines - Telecommunications networks and masts - Fingal County Council water distribution network	Very high (V)

Area	Summary description	Functional value
MN105	- Stormwater drainage along the M50 - Dublin City Council traffic network - Gas distribution network - Telecommunications network - Water distribution and arterial works - Drainage network - 40bar gas transmission pipe - Overhead electricity lines (110kV and 38kV) - Drainage network including arterial watermains at Ballymun	Very high (V)
MN106	- Electrical distribution network - Gas distribution network - Telecommunications networks including Irish Rail signalling cables - Water distribution and arterial works - Drainage network - 220kV ESB powerline located near the Collins Avenue/ Ballymun Road intersection - Two 40bar gas transmission pipes just outside construction zone - Two 38kV ESB power lines - Internal services to Mater Hospital	Very high (V)
MN107	- Services feeding local businesses hospital and residents in the area of Parnell Square. - Major sewer in the area of Parnell Square - Electrical distribution network including ESB substation - Gas Distribution network - Telecommunications network - Water distribution and arterial works - Multiplicity of services feeding local businesses and residents in the area of O'Connell Bridge - Luas substation - Distribution mains and multiplicity of communications around main access areas of St. Stephen's Green - Drainage network including arterial watermains at Parnell Square, O'Connell Street, North Circular Road and St. Stephen's Green.	Very high (V)

GLOSSARY OF ABBREVIATIONS AND TERMS



1 GLOSSARY OF ABBREVIATIONS

Acronym	Definition
AADT	Annual Average Daily Traffic (total annual traffic flow divided by 365)
AAP	Area Action Plan
AD	Anno Domini (Medieval Latin: 'in the year of our lord') a designation used to number years in the Julian and Gregorian calanders.
AEC	Areas of Ecological Constraint
ALSAA	Aer Lingus Sports and Athletics Association
AP	Aerial Photograph
At-grade	At public carriageway level (as opposed to tunnel or elevated).
BAP	Biodiversity Action Plan
BOD	Biological Oxygen Demand
BRE	Building Research Establishment
BRL	Ballymun Regeneration Ltd.
CBA	Cost Benefit Analysis
CCVM	City Centre Vissim (Micro-simulation) Models
CIRIA	Construction Industry Research and Information Association
CLR	Contaminated Land Report
CRDS	Cultural Resource Development Services Ltd.
cSAC	Candidate Special Area of Conservation
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CPO	Compulsory Purchase Order
CRT	Cathode Ray Tube
CSO	Central Statistics Office
DART	Dublin Area Rapid Transit
dB (Decibel)	The basic unit for sound measurement. Decibels are measured on a linear scale which defines a logarithmic amplitude scale, thereby compressing a wide range of amplitude values into a small set of numbers
dB(A)	A frequency weighting applied to sound measurements which approximates to the frequency response of the human ear
DC	Direct current
DCC	Dublin City Council
DCU	Dublin City University
DEIS	Delivering Equality of Opportunity in Schools
DIT	Dublin Institute of Technology
DMRB	Design Manual for Roads and Bridges, UK
DoE	Department of Environment (in the UK)
DoEHLG	Department of Environment, Heritage and Local Government (in Ireland)
DoT	Department of Transport
DTI	Dublin Transportation Initiative
DTO	Dublin Transportation Office
DTOTM	Dublin Transportation Office Traffic Model
DTS	(Environmental) Desktop Study

Acronym	Definition
EA	Environmental Agency (UK)
ED	Electoral Division
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EM	Electromagnetic
EMC	Electromagnetic Compatibility
EMI	Electromagnetic Interference
EPA	Environmental Protection Agency
ERFB	Eastern Regional Fisheries Board
ERSA	European Regional Science Association
ESB	Electricity Supply Board
EU	European Union
FAQ	Frequently Asked Questions
FCC	Fingal County Council
FTE	Full-time employment
GAA	Gaelic Athletic Association
GAC	Generic Assessment Criteria
GDA	Greater Dublin Area
GPO	General Post Office
GQRA	Generic Quantitative Risk Assessment
GRP	Glass Reinforced Plastic
GSI	Geological Survey Ireland
HAP	Habitat Action Plan
HC#	Heritage Constraint Number
HGV	Heavy Goods Vehicle
IEEM	Institute of Ecology and Environmental Management
IEMA	Institute of Environmental Management and Assessment
InfraCo	Infrastructure Company appointed to design, construct and operate the proposed scheme
IPPC	Integrated Pollution Prevention and Control
IR	Irish Rail
kph	Kilometres per hour
L_{Aeq}	The equivalent continuous noise level. The notional steady dB(A) level that would produce the same A-weighted sound energy level as the actual, time varying sound, over a stated period
L_{A10}/L_{A90}	The noise levels in dB(A) that are equalled or exceeded for the 10%/90% of the sample time
L_{Amax}	Maximum peak noise level
LAP	Local Area Plan
LGV	Light Goods Vehicle
LI	Landscape Institute
LLCA	Local Landscape Character Areas

Acronym	Definition
LMV	Light Metro Vehicle
LRT	Light Rail Transit
Luas	Dublin's Light Rail Transit system
LV	Low Voltage
MGI	Main Ground Investigation
Mitigation	Measures designed to avoid, reduce or remedy adverse impacts
MID	Mobility Impaired/ Disabled
MNEC	Metro North Economic Corridor
MNTM	Metro North Traffic Model
MRP	Molybdate-Reactive Phosphate
NAQIA	National Air Quality Information Archive UK
NCCS	National Climate Change Strategy
NCT	National Car Test
NDP	National Development Plan
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NMI	National Museum of Ireland
NML	Noise Monitoring Location
NMS	National Monuments Services
NO_2	Nitrogen Dioxide
NO_x	Nitrous Oxides
NPWS	National Parks and Wildlife Service
NRA	National Roads Authority
NSS	National Spatial Strategy for Ireland
OCS	Overhead Catenary System
OPW	Office of Public Works
OS	Ordnance Survey
OSI	Ordnance Survey of Ireland
PAH	Polycyclic aromatic hydrocarbon
PCU	Passenger Car Units
P&R	Park & Ride
PE	Polyethylene
PM_{10}	Particulate Matter with diameter of a less than 10 microns
$PM_{2.5}$	Particulate Matter with diameter of a less than 2.5 microns
pNHA	Proposed Natural Heritage Area
ppb	Parts per billion
PPG	Pollution Prevention Guidelines
ppm	Parts per million
PPP	Public Private Partnership
pteg	Passenger Transport Executive Group
Public Utilities	Water supply, drainage, gas, electricity, telecommunications systems as controlled operated and maintained by statutory bodies such as local authorities, Bord Gais etc.
QBC	Quality Bus Corridor

Acronym	Definition
RAPID	Revitalising Areas by Planning, Investment and Development
RMP	Record of Monuments and Places
RPA	Railway Procurement Agency.
RPG	Regional Planning Guidelines
RPGDA	Regional Planning Guidance for the Greater Dublin Area
RPS	Record of Protected Structures
SAC	Special Area of Conservation
SGVs	Soil Guideline Values
SMR	Sites and Monuments Record (of the Department of Arts, Heritage, Gaeltacht and the Islands)
SO_2	Sulphur Dioxide
SPA	Special Protected Areas
SSG	St. Stephen's Green
Spp.	Species
SUDS	Sustainable Urban Drainage System
SVM	Swords Vissim Models
TAG	Transport Analysis Guidance
TBM	Tunnel Boring Machine
TCD	Trinity College Dublin
TD	Teachta Dála (Member of Parliament)
TPH	Total Petroleum Hydrocarbons
UCD	University College Dublin
µg/m³	Micrograms per cubic metre
UHI	Urban Heat Island
UK	United Kingdom
VOC	Volatile Organic Compound
WWTP	Waste water treatment plant

2 GLOSSARY OF TERMS

Term	Definition
Agronomy	The science of agriculture (soil management, land cultivation, and crop production).
Alignment	The position of the proposed schemes tracks relative to the surrounding topography.
Alignment design detail	Information pertaining to the various positions along the alignment.
Alternative route option	Route options which were considered other than the route decided upon.
Alternatives	The EIA Regulations giving effect to the 1985 and 1997 EIA Directives require an outline of the main alternatives studies by the road authority and an indication of the main reasons for its choice, taking into account the environmental effects. Alternatives typically relate to alternative routes, alternative designs and alternative processes (NRA).
An Bord Pleanála	An Bord Pleanála was established in 1977 under the Local Government (Planning and Development) Act, 1976 and is responsible for the determination of appeals and certain other matters under the Planning and Development Acts, 2000 to 2006, and with appeals under the Building Control Act, 1990, the Local Government (Water Pollution) Acts, 1977 and 1990 and the Air Pollution Act, 1987.
Aquifer	A water-bearing layer of soil, sand, gravel, or rock that yields water.
Archaeological Assessment	An archaeological assessment is the investigation of known, suspected or previously unidentified monuments, sites or areas of archaeological potential in order to assess the impact which the proposed development may have on them. Each assessment should contain a description of the archaeology known to survive in the development area and of the types of archaeological features, not yet identified, which could possibly exist in that location. These should be evaluated in terms of the impact of the proposed works on known or predicted archaeology. Assessments may indicate that archaeological test excavation is required. The assessment procedure also proposes a strategy designed to deal with the possible adverse effects of the development works on archaeology.
Archaeological Excavation	Archaeological excavation is the systematic recording and removal of layers of soil, deposits, structures and artefacts by a qualified archaeologist. As excavation is destructive by its nature it must be carried out with meticulous care so that all information, whether its relevance is immediately obvious or not, will remain available after the site has completely disappeared. This is why it is termed preservation by record. Post-excavation analysis e.g. radio carbon dating, conservation of archaeological finds, the proper storage of archaeological objects and publication of the results of the excavation are all integral parts of the process.
Archaeological Monitoring	Archaeological monitoring involves an archaeologist being present in the course of the carrying out of development works (which may include conservation works), so as to identify and protect archaeological deposits, features or objects which may be uncovered or otherwise affected by the works.
Archaeological site	This encompasses all upstanding and buried archaeological monuments, deposits, and features which pre-date the year 1700AD. All monuments which are listed in the Sites and Monuments Record of the Department of Arts, Heritage, Gaeltacht and the Islands (formerly OPW). All sites described and mapped by the SMR has the full protection of National Monuments legislation (1937-1995).
Archaeological Test Excavation	Archaeological test excavation is excavation of confined strips or areas of a site in order to establish the presence or absence of archaeology and to determine its nature and extent.

Term	Definition
At-grade section	A section of the proposed scheme at ground level (as opposed to tunnel or elevated).
Baseline environment	Environmental conditions that currently exist and against which any future changes can be assessed.
Baseline studies	Work done to determine and describe the baseline environmental conditions against which any future changes can be measured or predicted and assessed.
Bored tunnel	Tunnel constructed using the tunnel boring machine.
British and Irish Archaeological Bibliography	An online database containing datasets covering publications from AD 1695 to the present day on archaeology and the historic environment, historic buildings, maritime and industrial archaeology, environmental history, and the conservation of material culture - with a geographical focus on Britain and Ireland.
Brownfield	In town planning, Brownfield land is an area of land previously used or built upon or land that is or was occupied by a permanent structure, which has become vacant, underused or derelict and has the potential for development.
Building / Structure of Architectural Merit	A building or Structure which has no legal protection that is, in the opinion of the authors of the EIS, to be of architectural merit and therefore included in the study. N.B. Please see criteria for their inclusion in the archaeological chapters of this EIS.
Census of Ireland	A census of the population of the whole of Ireland, occurring every four years between 1821 and 2006.
Central median	Parcel of land between two carriageways.
Civil Survey letters	A detailed survey of landuse and land ownership in Ireland undertaken by the English Government in 1641.
Conservation Area	An area where the architectural design and scale of these areas is of sufficient importance to require special care in dealing with development proposals and works by the private and public sector alike.
Construction compounds	Site where construction equipment is to be stored and construction operation is to be managed from.
Construction phase	The period of time over which the scheme will be constructed.
Contamination	The act of contaminating or polluting; including (either intentionally or accidentally) unwanted substances or factors.
Culvert	A channel or conduit for passing water under a road or embankment.
Cumulative effects	The effect on the environment which results from the incremental impact of an action when added to other past, present or reasonably foreseeable actions regardless of what agency or person undertakes such actions.
Cumulative impacts	Impacts that occur as a result of the addition of the incremental impact of an action to other past, present or reasonably foreseeable actions.
Cut and cover techniques	The method of constructing tunnels.
Cut and cover tunnel	A tunnel that is excavated from the 'top down' (i.e. from the surface) and then covered over to reinstated the surface.
Demography	The study of the size, growth, and age and geographical distribution of human populations, and births, deaths, marriages, and migrations.
Dewatering	The removal of water.
Direct effects	The effects that will occur as a direct result of the project.

Term	Definition
Do-minimum scenario	The scenario that would exist in the future if the project were not to go ahead.
Dublin Transportation Office (DTO)	Statutory agency which provides transport and landuse advice to organisations operating in the Greater Dublin Area.
Eastern Regional Fishing Board (ERFB)	The statutory body responsible for maintaining and improving environmental quality and developing and protecting the fisheries resource in the eastern region of Ireland.
Ecosystem	A community of different plant and animal species interacting with one another and with their non-living environment.
EIA regulations	Collective name for the various statutory instruments through which the EC Council Directive on Environmental Assessment (Directive 85/337/EC as amended by Directive 97/11/EC) was implemented in Ireland.
Electoral Divisions (EDs)	The smallest administrative area for which population statistics are published.
Elevated section	A section of the scheme that is raised off the surface i.e. viaduct.
Environmental Impact Assessment (EIA)	The systematic, reproducible and interdisciplinary identification, prediction and evaluation, mitigation and management of impacts from a proposed development and its reasonable alternatives The process of examining the environmental effects of the proposed scheme development – from consideration of environmental aspects at design stage through to preparation of an Environmental Impact Statement, evaluation of the EIS by the competent authority and the subsequent decision as to whether the development should be permitted to proceed, also encompassing public response to that decision
Environmental Impact Statement (EIS)	A statement of the effects, if any, which proposed development, if carried out, would have on the environment. This document presents the findings of the EIA to the decision-makers and the public
Environmental Protection Agency (EPA)	Ireland's statutory body for the balanced and sustainable protection and management of the environment.
EPA Q-value	An Environmental Protection Agency classification concerning the biological status of a watercourse.
European Union (EU)	The economic and political union established in 1993 after the ratification of the Maastricht Treaty by members of the European Community, which forms its core.
Fáilte Ireland	Established under the National Tourism Development Authority Act, 2003, it provides strategic and practical support to develop and sustain Ireland as a high - quality and competitive tourist destination.
Fauna	All of the living animals.
Flora	All of the plants.
Functional Value	A term used to express the combined consideration of importance, sensitivity and existing adverse effects.
Geological Survey Ireland (GSI)	Founded in 1845 it is responsible for providing geological advice and information, and for the acquisition of data for this purpose.
Geotechnical investigation	Investigations performed by geotechnical engineers or engineering geologists to obtain information on the physical properties of soil and rock around a site to design earthworks tunnels, underground structures and foundations for proposed structures and for repair of distress to earthworks and structures caused by subsurface conditions.
Greater Dublin Area	The Greater Dublin Area comprises the Dublin and Mid-East Regions. The constituent counties are: Dublin County Borough and the Counties of Dun Laoghaire-Rathdown, Fingal, and South Dublin (Dublin Region) together with the counties of Kildare, Meath and Wicklow (Mid-East Region).

Term	Definition
Greenbelt	A policy or landuse designation used in landuse planning to retain areas of largely undeveloped, wild, or agricultural land surrounding or neighbouring urban areas.
Greenfield	Clean, undeveloped land.
Greenhouse gases	Components of the atmosphere that contribute to the greenhouse effect. Greenhouse gases include water vapour, carbon dioxide, methane, nitrous oxide, and ozone. The majority of greenhouse gases come mostly from natural sources but are also contributed to by human activity.
Groundborne noise	Sound that passes through the ground and is audible at the surface.
Groundwater	Groundwater is the water beneath the surface that can be collected with wells, tunnels, or drainage galleries, or that flows naturally to the earth's surface via seeps or springs. Groundwater is the water that is pumped by wells and flows out through springs
Groundwater flow	Movement of water beneath the ground surface facilitated by the types of subsurface materials, faulting and bedding, the slope and hydrological characteristics of the materials and the amount and location of water.
Habitat	The physical and living environment in which an organism or community of organisms live.
Hayes's Indices	A catalogue of all the articles, poems and reviews (apart from short notices) in the periodicals published in Ireland, which contain material likely to be of value for research whatever the intellectual or cultural activity.
Hydrocarbon pollution	The contamination of an environment with substances consisting only of carbon and hydrogen atoms.
Hydrological impacts	The effect on the water systems, river, lakes, groundwater, etc.
Impacted receptors	Those who are likely to experience a change in their environment as a result of the scheme.
Indirect effects	Effects that occur due to the project indirectly.
Indirect impact	Impacts on the environment which are not a direct result of the project, often produced away from the project or as a result of a complex pathway.
In-stream impacts	Impacts which occur within a watercourse.
Irish Rail Interconnector	A connection with a proposed 5.2 km underground line, connecting the Docklands and Hueston Station.
Landuse	The use or activities which occur within particular areas
Launch sites	The locations from which the tunnel boring machines are to be launched.
Light rail	Rail transport systems used to convey light or rapid speeds.
Linear scheme	A scheme that is linear in spatial design.
Long-term effects	Effects that will persist long into the future.
Luas	Dublin's light rail transport system.
M50	A C-shaped orbital motorway transport route around Dublin.
Magnitude of Impacts	Takes into account the quality, type and range of impact that will occur as well as the duration over which the impact will occur.
Medium-term effects	Effects that will persist for some time into the future, but will not be permanent.
Mining techniques	The methods used to extract soil from the ground.
Mitigation	The purposeful implementation of decisions or activities that are designed to reduce the undesirable impacts of a proposed action on the affected environment.

Term	Definition
Mitigation measures	Measures taken to avoid, reduce and, if possible, remedy significant adverse effects.
Modal share	The proportion of population that uses each mode of transport for their routine journeys.
Modal shift	The decision by people to discontinue using one particular mode of transport and to move to another for their routine journeys.
Monitoring	The repetitive and continues observation measurement and evaluation of environmental data to follow changes over a period of time, also used to assess the efficiency of control measures. Monitoring is the regular observation and recording of activities taking place in a project or programme. It is a process of routinely gathering information on all aspects of the project.
National Heritage Area (NHA)	An area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection.
National Monument	Section 2 of the National Monuments 1930 Act provides that 'national monument' 'means a monument or the remains of a monument the preservation of which is a matter of national importance by reason of the historical, architectural, traditional, artistic, or archaeological interest attaching thereto……, and the said expression shall be construed as including, in addition to the monument itself, the site of the monument and the means of access thereto and also such portion of land adjoining such site as may be required to fence, cover in, or otherwise preserve from injury the monument or to preserve the amenities thereof'.
National Roads Authority (NRA)	Ireland's statutory body for securing the provision of a safe and efficient network of national roads.
Negative effect	A result of the project that has made the situation worse than before
Negative impact	A change that reduces the quality of the environment
Non-statutory bodies	Organisations not established at the behest of Government.
Non-technical summary	Information for the non-specialist reader to enable them to understand the main environmental impacts of the proposal without reference to the main environmental impact statement
NO_x	Nitrogen Oxides
Open Space	Includes all areas of public realm, parks and squares, as well as incidental areas of open spaces peripheral to development and open space specific to residential development.
Operational phase	The period of time over which the proposed scheme will be in operation
Overhead cantenary system (OCS)	The system through which power is supplied to Metro.
Park & Ride sites	Facilities at public transport stops that allow commuters to leave their personal vehicles in a car park and transfer to a bus, rail system (rapid transit, light rail or commuter rail) or carpool for the rest of their trip.
Permanent effects	Effects that are non-reversible and will persist indefinitely
pH Index	A measure of the acidity or alkalinity of a solution. The pH scale commonly in use ranges from 0 to 14.
Phase 1 Habitat Survey	Standard ecological field survey methodology to identify, record and map the key habitats and species, in line with the Heritage Council's 2000 Guidelines. Recognised methodology used for collating information on the habitat structure of a particular site.
Positive impact	A result of the project that has made the situation better than before.
Proposed National Heritage Area (pNHA)	An area that is potentially considered important for the habitats present or which holds species of plants and animals whose habitat needs protection.

Term	Definition
Proposed scheme	The Metro North development proposals subject to the Railway Order.
Public realm	The space between and within buildings that are publicly accessible, including streets, squares, forecourts, parks and open spaces.
Public Utilities	Water supply, drainage, gas, electricity, telecommunications systems as controlled operated and maintained by statutory bodies such as local authorities, Bord Gais etc.
R132	A relatively new regional road that passes through Balbriggan and Swords and terminates at a junction with the N1 in Whitehall.
Railway infrastructure	Any land, buildings, structures, equipment, systems, vehicles, services or other thing used in connection with, or necessary or incidental to, the movement of passengers or freight by railway.
Railway Order	The authorisation given by An Bord Pleanála for a railway project to commence construction.
Railway Procurement Agency (RPA)	The independent statutory body responsible for securing the provision of, or provide, such light railway and metro infrastructure as may be determined from time to time by the Minister for Transport.
RAPID (Revitalising Areas by Planning, Investment and Development)	An initiative that is led by the Department of Community, Rural and Gaeltacht Affairs to focus investment into the most concentrated areas of disadvantage in the country.
Receiving environment	The extent of the existing environment within which the project is to be developed and any area that may be impacted upon as a result of the project.
Receptor	Any element in the environment which is subject to impacts.
Records of Monuments and Places (RMP)	A database of all archaeological monuments in the state compiled by the Archaeological Survey of Ireland.
Register of Historic Monuments (RHM)	The name, location and a brief description of all the historic monuments and archaeological areas in State compiled by the National Monuments Service of the Department of the Environment, Heritage and Local Government.
Residual impact	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
Retained cut	A cutting that is excavated but is not covered over after, generally the sections of the alignment where the proposed scheme descends to and rises e.g. from underground tunnels.
Risk	The likelihood of a specific effect occurring within a specified period or in specified circumstances
Route option	Prior to decision on the route of the proposed scheme there were various route options that were considered.
Royal Historical Society Bibliography	An authoritative guide to what has been written about British and Irish history from the Roman period to the present day. The Bibliography is hosted by the Institute of Historical Research, which is part of the University of London.
Severance	The separation/reduction in separation of population from facilities and services they use within their communities.
Scope	The spatial and temporal extent which the environmental impact assessment is to be evaluated over.
Scoping	The process of identifying the issues to be addressed by an EIA. It is a method of ensuring that an EIA focuses on the important issues and avoids those that are considered to be less significant.
Scoping stage	The stage of the EIA at which the scope is decided upon.
Secondary effects	The potential effects of additional changes that are likely to occur later in time or at a different place as a result of the implementation of a particular action.

Term	Definition
Sensitive receptors	Those who are likely to experience a change in their environment as a result of the construction of Metro due to their own nature.
Short-term effects	Effects that are only short lasting.
Significant impact	An impact which, by its character, magnitude, duration of intensity alters a sensitive aspect of the environment
Sites and Monuments Record (SMR)	Lists with accompanying maps and files of all certain or possible archaeological sites and monuments mainly dating to before 1700AD for all counties.
Soundscape	Any acoustic environment, whether it springs from natural urban or rural sources.
Source Protection Zones (SPZs)	The Environment Protection Agency identifies Source Protection Zones to protect groundwater (especially public water supply) from developments that may damage its quality.
Special Area of Conservation (SAC)	Sites included in Annex I and II of the EC Habitats Directive (92/43/EEC) due to them being considered to be of European interest following criteria given in the directive.
Special Protection Area (SPA)	Sites designated under the European Union directive on the Conservation of Wild Birds (79/409/CEE) to protect important bird species.
Species migration	The movement of species between habitats.
Spoil	The earth excavated during tunnelling and other construction works.
Stakeholders	Those who may be potentially affected by a proposal (e.g. local people, the proponent, Government agencies, NGOs, donors and others).
Statutory bodies	Organisations established at the behest of Government.
Stenotopic species	Species tolerant of only a narrow range of environmental factors.
Stop	Points at which passengers will be able to embark and disembark the proposed scheme.
Stop access points	The points via which the stops can be accessed.
Study Area	This study area encompasses all areas that may potentially be impacted upon by the proposed scheme.
Swords QBC	Bus service linking Swords with Dublin airport and Dublin city.
Temporary effects	Effects that will last for only a certain amount of time.
Temporary impact	Impacts that will last for only a certain amount of time.
Townscape	The urban landscape.
Track gauge	The distance between the two rails.
Traffic assessment	Consists of the collection of data, traffic census and the analysis of this data in order to make traffic flow predictions.
Traffic flow	The number of vehicles travelling along a particular route in a particular direction over a period of time.
Traffic impact model	A model, constructed from data that enables the determination of transportation demands of development proposals and provides for reduction of adverse impacts on the transportation system.
Transport 21	The capital investment framework through which the transport system in Ireland will be developed, over the period 2006 to 2015.
Tunnel Boring Machine (TBM)	The machine used to excavate earth and create the underground tunnels through which the proposed scheme will run.
Tunnel sections	Various lengths of the tunnel.
Twin tunnels	Two tunnels constructed side by side, but not connected other than by occasional cross-over passages.

Term	Definition
Urban Heat Island (UHI)	A microclimatic effect that is experienced in urban areas.
Utilities	Services provided such as water, gas, electricity and telecommunications.
Ventilation shaft	A construction which facilitates the movement of air in and out of the tunnel sections.
Verge	A small parcel of land of incidental use.
Vertical alignment	The positioning of the proposed scheme tracks relative to the ground surface.
Visual amenity	The value of views to a receptor in a particular area
Visual receptors	Those who are likely to experience a change in view.
Wildlife Corridors	A strip of habitat connecting wildlife populations separated by human activities.