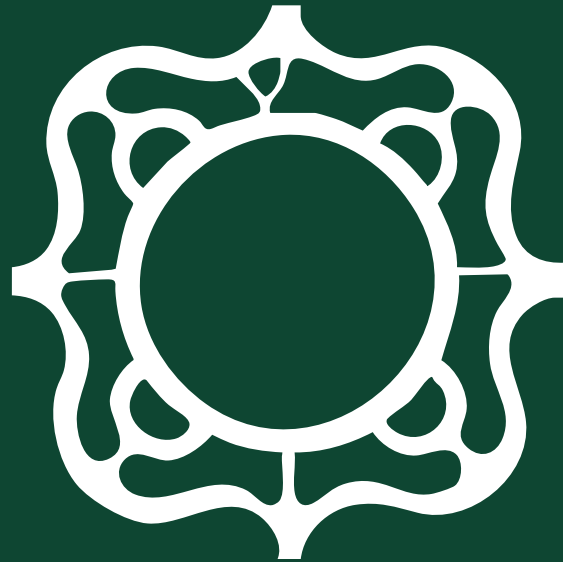


Mountjoy Square Park



1802

2025



Re-imagining Mountjoy Square

ECOLOGY REPORT

Ecology Report for Mountjoy Square, Dublin 1

Compiled by OPENFIELD Ecological Services

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For Dublin City Council



www.openfield.ie

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1 INTRODUCTION

This Ecology Report has been prepared by Pádraic Fogarty of OPENFIELD Ecological Services. Pádraic Fogarty has worked for over 25 years in the environmental field and in 2007 was awarded an MSc from Sligo Institute of Technology for research into Ecological Impact Assessment (EclA) in Ireland. OPENFIELD is a full member of the Institute of Environmental Management and Assessment (IEMA). Pádraic has been a practicing ecologist since 2007.

2 SITE CONTEXT

Best practice guidance suggests that an initial zone of influence be set at a radius of 2km for non-linear projects (IEA, 1995). However some impacts are not limited to this distance and so sensitive receptors further from the project footprint may need to be considered as this assessment progresses. This is shown in figure 1.

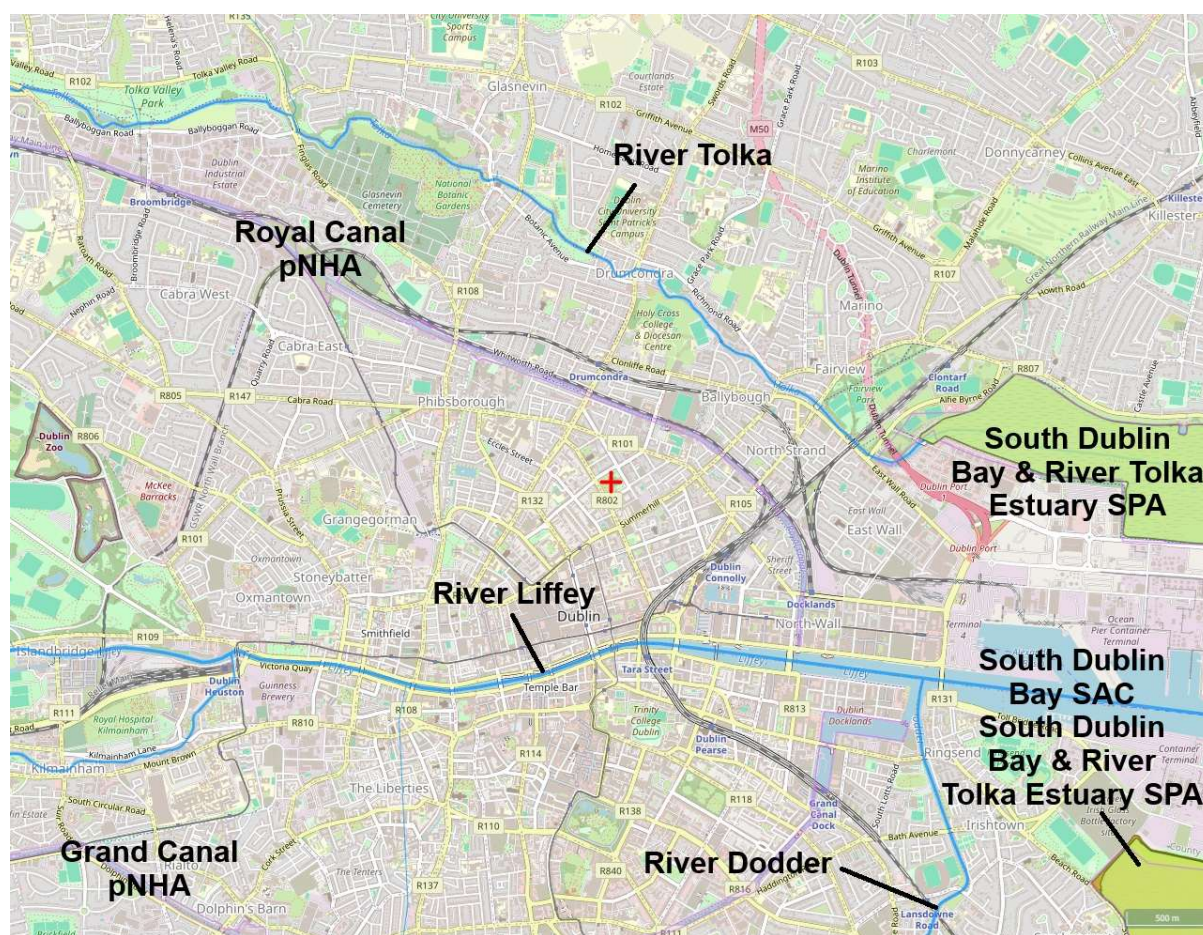


Figure 1 – Vicinity of Mountjoy Square (red cross) showing water courses and areas designated for nature conservation (from www.epa.ie).

There are a number of designations for nature conservation in Ireland including National Park, National Nature Reserve, RAMSAR site, UNESCO Biosphere reserves, Special Protection Areas (SPA – Birds

Directive), Special Areas of Conservation (SAC – Habitats Directive); and Natural Heritage Areas. The mechanism for these designations is through national or international legislation. Proposed NHAs (pNHA) are areas that have yet to gain full legislative protection. They are generally protected through the relevant County Development Plan. There is no system in Ireland for the designation of sites at a local, or county level.

The following areas were found to be located in the vicinity of Mountjoy Square:

Royal and Grand Canals pNHA (site codes: 2104/2103): The Royal and Grand Canals were constructed in the 18th century and link Dublin to the River Shannon. They are nationally valuable wildlife corridors and are home to a wide range of plants and animals, many of conservation value, including the Otter *Lutra lutra* and Kingfisher *Alcedo atthis*.

South Dublin Bay SAC (side code: 00210) is concentrated on the intertidal area of Sandymount Strand. It has one qualifying interest (i.e. feature which qualifies the area as being of international importance) which is mudflats and sandflats not covered by seawater at low tide.

South Dublin Bay and Tolka Estuary SPA (side code: 004024) is largely coincident with the SAC boundary with the exception of the Tolka Estuary. The North Bull Island SPA (site code: 0206) is largely coincident with the North Dublin Bay SAC with the exception of the terrestrial portion of Bull Island. Table 1 lists the features of interest for these SPAs.

Table 1 – Features of interest for the South Dublin Bay and Tolka Estuary SPA and the North Bull Island SPA in Dublin Bay (EU code in square parenthesis)

Species	Long-term trend ¹
Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]	Stable or increasing
Shelduck (<i>Tadorna tadorna</i>) [A048]	Stable or increasing
Pintail (<i>Anas acuta</i>) [A054]	Stable or increasing
Teal (<i>Anas crecca</i>) [A052]	Stable or increasing
Shoveler (<i>Anas clypeata</i>) [A056]	Moderate decline
Oystercatcher (<i>Haematopus ostralegus</i>) [A130]	Stable or increasing
Golden Plover (<i>Pluvialis apricaria</i>) [A140]	Stable or increasing
Ringed Plover (<i>Charadrius hiaticula</i>) [A137]	Intermediate decline

¹ https://birdwatchireland.ie/app/uploads/2022/04/iwebs_trends_0U404_Dublin_Bay.html

Grey Plover (<i>Pluvialis squatarola</i>) [A140]	Large decline
Knot (<i>Calidris canutus</i>) [A143]	Stable or increasing
Sanderling (<i>Calidris alba</i>) [A144]	Stable or increasing
Dunlin (<i>Calidris alpina</i>) [A149]	Stable or increasing
Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]	Stable or increasing
Black-tailed Godwit (<i>Limosa limosa</i>) [A156]	Stable or increasing
Redshank (<i>Tringa totanus</i>) [A162]	Stable or increasing
Curlew (<i>Numenius arquata</i>) [A160]	Intermediate decline
Turnstone (<i>Arenaria interpres</i>) [A169]	Stable or increasing
Black-headed Gull (<i>Croicocephalus ridibundus</i>) [A179]	-
Roseate Tern (<i>Sterna dougallii</i>) [A192]	-
Common Tern (<i>Sterna hirundo</i>) [A193]	-
Arctic Tern (<i>Sterna paradisaea</i>) [A194]	-
Wetlands & Waterbirds [A999]	

Bird counts from BirdWatch Ireland are taken from Dublin Bay as a whole and are not separated between the two SPAs in this area.

Dublin Bay is recognised as an internationally important site for water birds as it supports over 20,000 individuals. Table 2 shows the most recent count data available (Crowe et al., 2011).

Table 2 – Annual count data for Dublin Bay from the Irish Wetland Birds Survey (IWeBS)

Year	2010/11	2011/12	2012/13	2013/14	2014/15	Mean
Count	27,931	30,725	30,021	35,878	33,486	31,608

There were also internationally important populations of particular birds recorded in Dublin Bay (i.e. over 1% of the world population): Light-bellied brent geese *Branta bernicula hrota*; Black-tailed godwit *Limosa limosa*; Knot *Calidris canutus* and Bar-tailed godwit *L. lapponica*.

North Dublin Bay pNHA (site code: 0206). This are stretches north along the Dublin coast as far as Howth Head and east to the waters around (but not including) Bull Island. Much of the pNHA is now within the North Dublin Bay SAC (site code: 00206) while that portion that falls within the Tolka estuary is within the aforementioned SPA.

North Dublin Bay SAC/North Bull Island SPA

The North Dublin Bay SAC (site code: 00206) is focussed on the sand spit on the North Bull island. The qualifying interests for it are shown in table 3. The status of the habitat is also given and this is an assessment of its range, area, structure and function, and future prospects on a national level and not within the SAC itself.

Table 3 – Qualifying interests for the North Dublin Bay SAC

Code	Habitat/Species	Status
1140	Mudflats and sandflats not covered by seawater at low tide	Inadequate
1320	Salicornia and other annuals colonizing mud and sand	Favourable
1330	Atlantic salt meadows	Inadequate
1410	Mediterranean salt meadows	Inadequate
1210	Annual vegetation of drift lines	Inadequate
2110	Embryonic shifting dunes	Inadequate
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	Inadequate
2130	Fixed coastal dunes with herbaceous vegetation (grey dunes)	Bad
2190	Humid dune slacks	Inadequate
1395	<i>Petalophyllum ralfsii</i> Petalwort	Favourable

- **Annual vegetation of drift lines (1210)** This habitat of the upper shore is characterised by raised banks of pebbles and stones. They are inhabited by a sparse but unique assemblage of plants, some of which are very rare. The principle pressures are listed as gravel extraction, the building of pipelines and coastal defences.
- **Embryonic shifting dunes (2110).** As their name suggests these sand structures represent the start of a sand dune's life. Perhaps only a meter high they are a transient habitat, vulnerable to inundation by the sea, or developing further into white dunes with Marram Grass. They are threatened by recreational uses, coastal defences, trampling and erosion.
- **Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) (2120).** These are the second stage in dune formation and depend upon the stabilising effects of Marram Grass. The presence of the grass traps additional sand, thus growing the dunes. They are threatened by erosion, climate change, coastal flooding and built development.
- **Fixed coastal dunes with herbaceous vegetation (grey dunes) (2130 – priority habitat).** These are more stable dune systems, typically located on the landward side of the mobile dunes. They have a more or less permanent, and complete covering of vegetation, the quality of which depends

on local hydrology and grazing regimes. They are the most endangered of the dune habitat types and are under pressure from built developments such as golf courses and caravan parks, over-grazing, under-grazing and invasive species.

- **Humid dune slacks (2190).** These are wet, nutrient enriched (relatively) depressions that are found between dune ridges. During winter months or wet weather these can flood and water levels are maintained by a soil layer or saltwater intrusion in the groundwater. There are found around the coast within the larger dune systems.
- **Petalwort (1395).** There are 30 extant populations of this small green liverwort, predominantly along the Atlantic seaboard but also with one in Dublin. It grows within sand dune systems and can attain high populations locally.

The North Bull Island SPA (site code: 004006) is largely coincident with the North Dublin Bay SAC with the exception of the terrestrial portion of Bull Island.

The following species are qualifying interests of the two SPAs in Dublin Bay and summaries are taken from Balmer et al. (2013).

- **Oystercatcher.** Predominantly coastal in habit Oystercatchers are resident birds whose numbers continue to expand in Ireland.
- **Light-bellied Brent Goose.** There has been a 67% increase in the distribution of this goose which winters throughout the Irish coast. The light-bellied subspecies found in Ireland breeds predominantly in the Canadian Arctic.
- **Ringed Plover.** This bird is a common sight around the Irish coast where it is resident. They breed on stony beaches but also, more recently, on cut-away bog in the midlands.
- **Teal.** In winter this duck is widespread throughout the country. Land use change and drainage however have contributed to a massive decline in its breeding range over the past 40 years.
- **Grey Plover.** These birds do not breed in Ireland but winter throughout coastal estuaries and wetlands. Its population and distribution is considered to be stable.
- **Pintail.** Dabbling duck wintering on grazing marshes, river floodplains, sheltered coasts and estuaries. It is a localised species and has suffered a small decline in distribution in Ireland for unknown reasons.
- **Shoveler.** Favoured wintering sites for this duck are inland wetlands and coastal estuaries. While there have been local shifts in population and distribution, overall their status is stable in Ireland.
- **Knot.** These small wading birds do not breed in Ireland but gather in coastal wetlands in winter. Their numbers have increased dramatically since the mid-1990s although the reasons for this are unclear.
- **Sanderling.** This small bird breeds in the high Arctic and winters in Ireland along sandy beaches and sandbars. Its wintering distribution has increased by 21% in the previous 30 years.

- **Dunlin.** Although widespread and stable in number during the winter season, the Irish breeding population has collapsed by nearly 70% in 40 years. Breeding is now confined to just seven sites in the north and west as habitat in former nesting areas has been degraded.
- **Black-tailed Godwit.** Breeding in Iceland these waders winter in selected sites around the Irish coast, but predominantly to the east and southern halves. Their range here has increase substantially of late.
- **Bar-tailed Godwit.** These wetland wading birds do not breed in Ireland but are found throughout the littoral zone during winter months. They prefer estuaries where there are areas of soft mud and sediments on which to feed.
- **Curlew.** Still a common sight during winter at coastal and inland areas around the country it breeding population here has effectively collapsed. Their habitat has been affected by the destruction of peat bogs, afforestation, farmland intensification and land abandonment. Their wintering distribution also appears to be in decline.
- **Redshank.** Once common breeders throughout the peatlands and wet grasslands of the midlands Redshanks have undergone a 55% decline in distribution in the past 40 years. Agricultural intensification, drainage of wetlands and predation are the chief drivers of this change.
- **Turnstone.** This winter visitor to Irish coasts favours sandy beaches, estuaries and rocky shores. It is found throughout the island but changes may be occurring due to climate change.
- **Black-headed Gull.** Widespread and abundant in winter these gulls are nevertheless considered to be in decline. The reasons behind this are unclear but may relate to the loss of safe nesting sites, drainage, food depletion and increase predation.
- **Roseate Tern.** This tern breeds at only a few stations along Ireland's east coast. Most of these are in decline although at Dublin their colony is increasing.
- **Common Tern.** This summer visitor nests along the coast and on islands in the largest lakes. Its breeding range has halved in Ireland since the 1968-1972 period.
- **Arctic Tern.** These long-distance travellers predominantly breed in coastal areas of Ireland. They have suffered from predation by invasive mink and are declining in much of their range.

The NPWS web site (www.npws.ie) contains a mapping tool that indicates historic records of legally protected species within a selected Ordnance Survey (OS) 10km grid square. Mountjoy Square is located within the square O13 and six species of protected flowering plant are highlighted. These species are detailed in Table 4. It must be noted that this list cannot be seen as exhaustive as suitable habitat may be available for other important and protected species.

In summary it can be seen that of the six species only three records remain current. Opposite-leaved Pondweed was recorded as being 'common in the Grand Canal' in the *Flora of County Dublin* (Doogue et al., 1998). This source elaborates that the plant was "scattered along the Grand Canal at Dolphin's Barn from Portobello to Charlemont Bridge, and between Drimnagh and Kilmainham."

Table 4 – Known records for protected species within the O13 10km square

Species	Habitat ²	Current status ³
<i>Groenlandia densa</i> Opposite-leaved Pondweed	Rivers, canals and estuarine mud	Current
<i>Galeopsis angustifolia</i> Red Hemp-nettle	Calcareous gravels	Record pre-1970
<i>Hordeum secalinum</i> Meadow Barley	Upper parts of brackish marshes, chiefly near the sea	
<i>Puccinellia fasciculata</i> Borrer's salt-marsh grass	Muddy inlets on the coast	
<i>Hypericum hirsutum</i> Hairy St. John's-wort	Woods and shady places	Current
<i>Viola hirta</i> Hairy Violet	Sand dunes, grasslands, limestone rocks	

Water quality in rivers, canals and estuaries is monitored on an on-going basis by the Environmental Protection Agency (EPA). Mountjoy Square is not located adjacent to any water course and is approximately 860m from the banks of the River Liffey. The river is tidally influenced throughout its length in Dublin city centre. The riverbanks at this location (Eden Quay) are composed of artificial quay walls while water is assessed as 'good status'. The 'ecological potential' of canals is assessed by the EPA as these are artificial water bodies. The Royal Canal and the Grand Canal are achieving 'good ecological potential'. The Lower Liffey Estuary is assessed as 'moderate' status under the Water Framework Directive reporting period 2016-2021 while the estuary of the River Tolka is 'moderate' and Dublin Bay is 'good'.

2.1 Site Survey

Aerial photography from the OSI and historic mapping shows that this area has long been a part of the built environment of Dublin City. The canals were constructed in the 18th Century to facilitate trade between Dublin and the rest of Ireland. Their subsequent decline left behind a semi-natural corridor that is now recognised for its wildlife value. The immediate vicinity of the site is predominantly composed of buildings and artificial surfaces and there are few significant areas of open green space or clusters of mature trees within 100m of the site (away from Mountjoy Square itself).

Mountjoy Square was surveyed in accordance with best practice methodology (Smith et al., 2011) on April 8th 2025 and habitats are described as per standard classifications (Fossitt, 2000).

² Parnell et al., 2012

³ Preston et al., 2002

April lies within the optimal survey period for general habitat surveys (Smith et al., 2010). It was therefore possible to classify all habitats on the site to Fossitt level 3. April is also within the optimal season for breeding birds. It is within the optimal season for surveying large mammals and amphibians. Nevertheless, the lack of semi-natural habitats means suitable habitats for many species is not present.

Where the timing of the survey was a constraint to assessing the biodiversity features of the development site, this is clearly stated where relevant.

2.1.1 Flora

The park is substantially composed of **buildings and artificial surfaces – BL3** with minimal vegetation cover. There are also open areas of **amenity grassland – GA2** which are mown to a short sward.

Remaining areas can be described as **scattered trees and parkland – WD5** which are amenity grassland with trees. Tree species include Cherry *Prunus sp.*, Sycamore *Acer pseudoplatanus*, Maple *Acer sp.*, Weeping Willow *Salix sp.*, Birch *Betula sp.*, Rowan *Sorbus aucuparia* and Oak *Quercus sp.* These are predominantly non-native species and/or of horticultural origin. Other plants include flower beds with ornamental species and some shrubbery around the childcare building including Elder *Sambucus nigra*, Cotoneaster *Cotoneaster sp.*, Beech *Fagus sylvatica* hedging, Ivy *Hedera helix* and stands of Spanish Bluebell *Hyacinthoides hispanica*. The latter is an alien invasive plant listed on SI 477 of 2011.

There are no waterways on, near or under the development site. There are no ponds or bodies of open water.

In summary, Mountjoy Square is of low biodiversity value due to the predominance of highly managed or artificial surfaces as well as non-native trees and shrubs. There are no pathways to any Natura 2000 sites or any sites which are designated for nature conservation.

2.1.2 Fauna

The site survey included incidental sightings or proxy signs (prints, scats etc.) of faunal activity, while the presence of certain species can be concluded where there is suitable habitat within the known range of that species. Table 5 details those mammals that are protected under national or international legislation in Ireland. Cells are greyed out where suitable habitat is not present or species are outside the range of the study area.

Table 5 – Protected mammals in Ireland and their known status within the zone of influence⁴. Those that are greyed out indicate either that suitable habitat is not present or that there are no records of the species from the National Biodiversity Data Centre.

Species	Level of Protection	Habitat ⁵	
Otter <i>Lutra lutra</i>	Annex II & IV Habitats Directive; Wildlife (Amendment) Act, 2000	Rivers and wetlands	
Lesser horseshoe bat <i>Rhinolophus hipposideros</i>		Disused, undisturbed old buildings, caves and mines	
Grey seal <i>Halichoerus grypus</i>	Annex II & V Habitats Directive; Wildlife (Amendment) Act, 2000	Coastal habitats	
Common seal <i>Phocaena phocaena</i>			
Whiskered bat <i>Myotis mystacinus</i>	Annex IV Habitats Directive; Wildlife (Amendment) Act, 2000	Gardens, parks and riparian habitats	
Natterer's bat <i>Myotis nattereri</i>		Woodland	
Leisler's bat <i>Nyctalus leisleri</i>		Open areas roosting in attics	
Brown long-eared bat <i>Plecotus auritus</i>		Woodland	
Common pipistrelle <i>Pipistrellus pipistrellus</i>		Farmland, woodland and urban areas	
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>		Rivers, lakes & riparian woodland	
Daubenton's bat <i>Myotis daubentonii</i>		Woodlands and bridges associated with open water	
Nathusius' pipistrelle <i>Pipistrellus nathusii</i>		Parkland, mixed and pine forests, riparian habitats	
Irish hare <i>Lepus timidus hibernicus</i>		Annex V Habitats Directive; Wildlife (Amendment) Act, 2000	Wide range of habitats
Pine Marten <i>Martes martes</i>			Broad-leaved and coniferous forest
Hedgehog <i>Erinaceus europaeus</i>	Wildlife (Amendment) Act, 2000	Woodlands and hedgerows	
Pygmy shrew <i>Sorex minutus</i>		Woodlands, heathland, and wetlands	
Red squirrel <i>Sciurus vulgaris</i>		Woodlands	

⁴ From the National Biodiversity Data Centre, excludes marine cetaceans

⁵ Harris & Yalden, 2008

Irish stoat <i>Mustela erminea hibernica</i>		Wide range of habitats
Badger <i>Meles meles</i>		Farmland, woodland and urban areas
Red deer <i>Cervus elaphus</i>		Woodland and open moorland
Fallow deer <i>Dama dama</i>		Mixed woodland but feeding in open habitat
Sika deer <i>Cervus nippon</i>		Coniferous woodland and adjacent heaths

Although a number of mammals are known to be present in Dublin city, most notably Fox *Vulpes vulpes*, there are no habitats on Mountjoy Square which are suitable for the majority of the species listed in table 5. The habitat is not suitable for Badgers or Otters. Buildings are of low suitability to host bat roosts while there are no very large/veteran trees with obvious cracks and holes. The low level of semi-natural vegetation in the immediate vicinity is a significant limiting factor in this location. Features on Mountjoy Square can be considered to be of low roost potential (Hundt, 2013).

Feral Pigeon *Columba livia* were noted during the survey and may be nesting, however no nests were found. No other nesting bird was recorded. Nesting cover for common, garden species is limited.

There are no suitable habitats for amphibians or fish.

Most habitats, even highly altered ones, are likely to harbour a wide diversity of invertebrates. In Ireland only one insect is protected by law, the Marsh Fritillary butterfly *Euphydryas aurinia*, and this is not to be found on built-up sites. Other protected invertebrates are confined to freshwater and wetland habitats and so are not present on this site.

2.2 Overall Evaluation of the Context, Character, Significance and Sensitivity of the Proposed Development Site

In summary it has been seen that Mountjoy Square is within a built-up area of Dublin city. There are no examples of habitats listed on Annex I of the Habitats Directive or records of rare or protected plants. Spanish Bluebell is present and this plant is listed as alien invasive as per SI 477 of 2011.

The buildings and vegetation at ground level may provide habitat for breeding birds.

Significance criteria are available from guidance published by the National Roads Authority (NRA, 2009). These are reproduced in table 6. From this an evaluation of the various habitats and ecological features on the site has been made and this is shown in table 7.

Table 6 Site evaluation scheme taken from NRA guidance 2009

Site Rating	Qualifying criteria
A - International importance	<p>SAC, SPA or site qualifying as such. Sites containing 'best examples' of Annex I priority habitats (Habitats Directive).</p> <p>Resident or regularly occurring populations of species listed under Annex II (Habitats Directive); Annex I (Birds Directive); the Bonn or Berne Conventions.</p> <p>RAMSAR site; UNESCO biosphere reserve;</p> <p>Designated Salmonid water</p>
B - National importance	<p>NHA. Statutory Nature Reserves. Refuge for Flora and Fauna. National Park.</p> <p>Resident or regularly occurring populations of species listed in the Wildlife Act or Red Data List</p> <p>'Viable' examples of habitats listed in Annex I of the Habitats Directive</p>
C - County importance	<p>Area of Special Amenity, Tree Protection Orders, high amenity (designated under a County Development Plan)</p> <p>Resident or regularly occurring populations (important at a county level, defined as >1% of the county population) of European, Wildlife Act or Red Data Book species</p> <p>Sites containing semi-natural habitat types with high biodiversity in a county context, and a high degree of naturalness, or populations of species that are uncommon in the county</p>
D - Local importance, higher value	<p>Sites containing semi-natural habitat types with high biodiversity in a county context, and a high degree of naturalness, or populations of species that are uncommon in the locality</p> <p>Sites or features containing common or lower value habitats, including naturalised species that are nevertheless essential in maintaining links and ecological corridors between features of higher ecological value.</p>
E - Local importance, lower value	<p>Sites containing small areas of semi-natural habitat that are of some local importance for wildlife;</p> <p>Sites or features containing non-native species that are of some importance in maintaining habitat links.</p>

Table 7 Evaluation of the importance of habitats and species on the development site

Buildings and artificial surfaces – BL3 Amenity grassland – GA2	Negligible ecological value
Scattered trees and parkland – WD5	Low importance, lower value



Figure 2 – Habitats of Mountjoy Square

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