

# GLENAMUCK DISTRICT DISTRIBUTOR ROAD



Dún Laoghaire-Rathdown  
County Council Comhairle Contae  
Dhún Laoghaire-Ráth an Dúin

## CONSTRAINTS STUDY

JULY 2007


RPS





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# 1 INTRODUCTION

## 1.1 GLENAMUCK DISTRICT DISTRIBUTOR ROAD

Dun Laoghaire-Rathdown's County Council's Development Plan 2004-2010 contains a six-year road objective to upgrade the Glenamuck Road corridor between the Enniskerry Road and the Carrickmines Interchange Southern Roundabout. The area is rural in character, however the existing road will not service the transportation needs arising from the extensive residential and commercial zoning set out in the County's Development Plan. With the completion of the South Eastern Motorway further demand will be placed on this corridor, as it will be a direct strategic link to the motorway off the already heavily trafficked Enniskerry Road.

In addition to catering for the predicted increase in traffic, the proposed improvement will provide better access to the road network of the area, thus promoting development in the area of agriculture, industry, housing and tourism. The proposed scheme will also promote the development of the lands in the Glenamuck Road area.

## 1.2 APPOINTMENT OF CONSULTANTS

Dun Laoghaire-Rathdown County Council engaged the services of RPS-MCOS in November 2004 to advise on the options available for the improvement of the Glenamuck District Distributor Road between the Golden Ball Junction and the Southern Glenamuck Roundabout and to: -

- Prepare a traffic report on the future traffic assignment to the corridor;
- Liaise with all relevant statutory bodies, utilities and Council Departments;
- Carry out an Environmental Impact Study on feasible solutions;
- Prepare cost estimates for the works to include general costings for the feasible solutions produced;
- Be available to report on and address meetings of the County Council or sub committees in support of the scheme but not liaison with individual elected members outside these meetings. It is anticipated that the Consultant will address 3 no meetings.
- Produce a Preliminary Stage Design Report on an optimum solution;
- Prepare a Part 8 Submission and Compulsory Purchase Order (CPO) Documentation;
- Preparation of land mapping in connection with the Compulsory Purchase Order and ensure that the land mapping meets the requirement of the relevant legislation. It is envisaged that in the order of 50 no. separate plot maps shall be required.
- Use of computer and other forms of modern technology.
- Provide special geotechnical advice and calculations including assessment of geological and groundwater conditions;
- Fulfil the role of Project Supervisor (Design Stage) to ensure that the requirements of the Safety, Health and Welfare at Work (Construction) Regulations 1995 in so far as they apply to the design of the project are implemented.

- Advise the client on the need to commission special investigations or reports securing the approval of the client to such commissions and arranging procurement of such.

Consultation with third parties shall take place under the auspices of the County Council.

### **1.3 APPROACH TO CONSTRAINTS STUDY**

The Constraints Study is concerned with the physical, environmental, procedural, and legal constraints that exist and which affect the choice and design of a route for the scheme. These constraints, if not properly identified at an early stage, could cause subsequent delay to the progress, and influence the overall cost of the scheme. The Constraints Study was compiled from planning records, drawings and mapping and involved a desktop study of:

- Planning
- Protected Areas – National Heritage Areas (NHA's) and Special Areas of Conservation (SAC's);
- Existing road network
- Water features (rivers, streams, lakes etc.);
- Landholdings;
- Community facilities – sports grounds, schools, churches etc.
- Landscape features
- Cultural heritage – archaeology and architecture
- OS Mapping showing Development (Dwellings, Farmyards etc.);
- Procurement of Aerial Photography;
- Topography
- Utilities (Electricity, Communication, Gas, Watermains, Foul and Surface Water); and
- Geology and Hydrogeology.

### **1.4 PREPLANNING STAGE (PHASE 1)**

Prior to commencement of the Constraints Study, Dun Laoghaire-Rathdown County Council undertook the Preplanning Stage of the project. This stage involved the following:

- Define the road need,
- Set out to incorporate the need in the County Development Plan,

The need for the project has been identified in the Dun Laoghaire-Rathdown County Development Plan (2004-2010) and is covered in Section 2 of this report.

## 1.5 CONSTRAINTS STUDY (PHASE 2)

The Constraints Study will focus on constraints (physical, environmental, procedural, and legal) that exist affecting the design of the scheme, which could delay the progress and influence the cost of the scheme. This study forms the basis for the Route Selection phase of the scheme, which is presently underway. In addition the Constraints Study will be used as a desk study for the Appraisal Report on the preferred route, once the preferred route has been chosen for the Glenamuck District Distributor Road scheme.

The Constraint Study Report format is as follows: -

Chapter 1	Introduction
Chapter 2	The need for the project
Chapter 3	Resources used in assessing the constraints
Chapter 4	Identified constraints
Chapter 5	Traffic

## 1.6 CONSTRAINTS STUDY TEAM

RPS-MCOS carried out this Constraint Study with the assistance of the Dun Laoghaire-Rathdown County Council. The findings of the Constraint Study are presented hereunder as the Constraints Report.

## 1.7 STUDY AREA

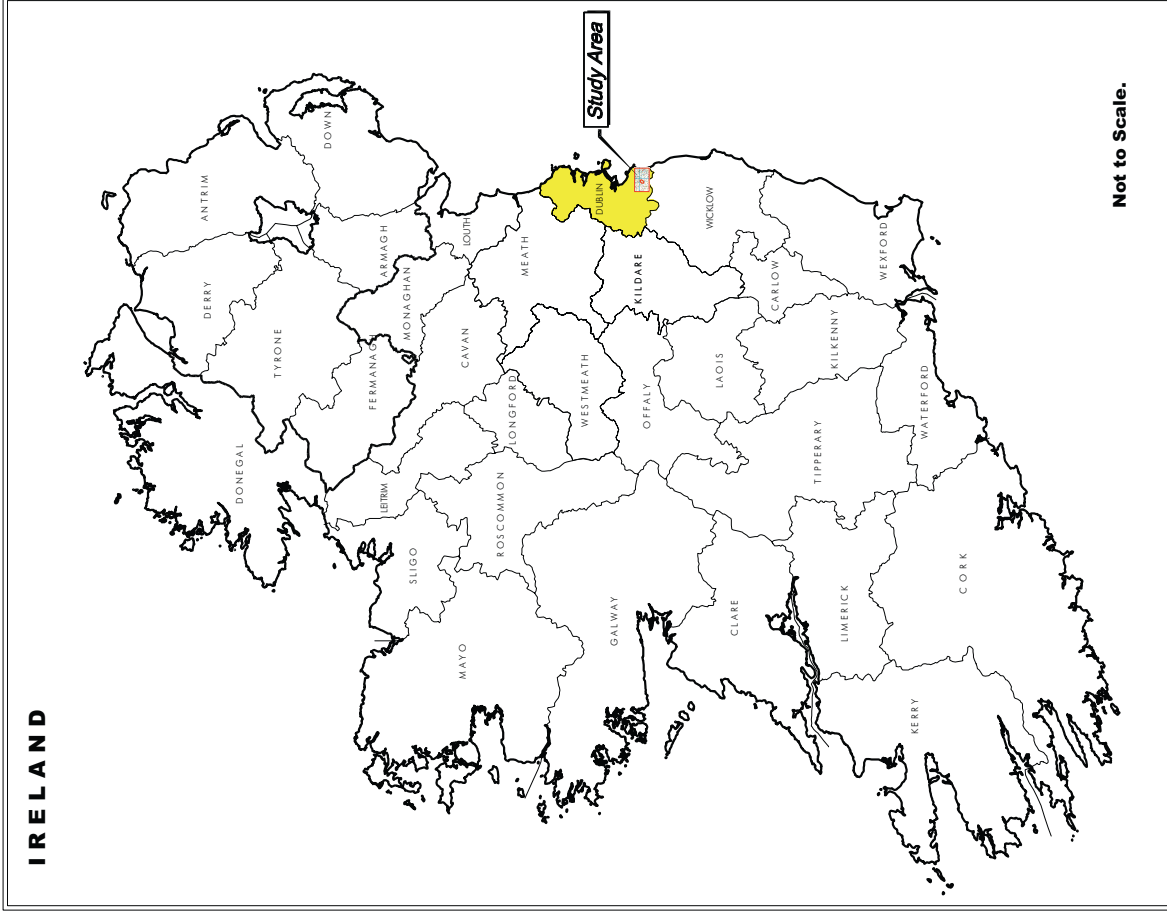
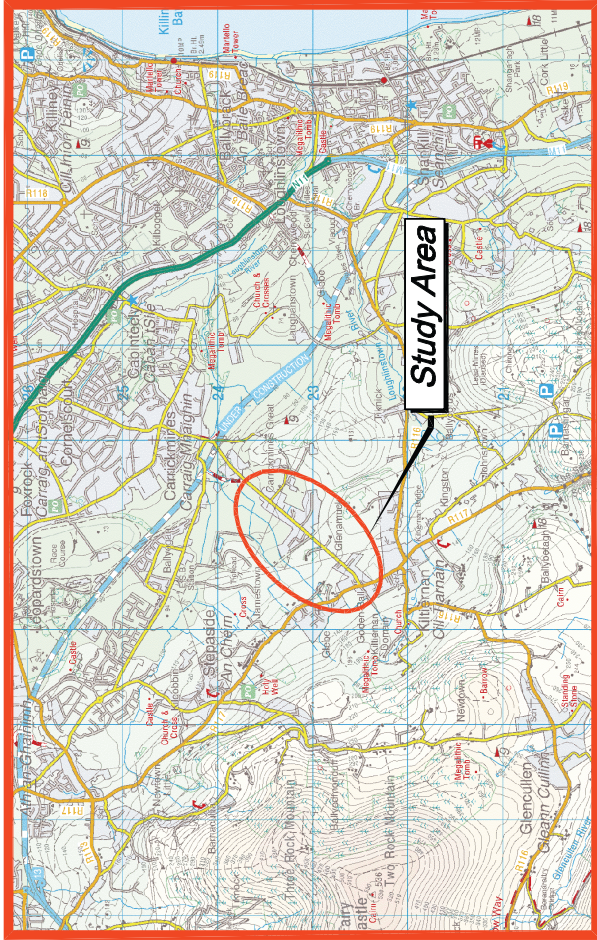
The existing 1.5 km section of the Glenamuck Road within the road network under review is between the Enniskerry Road at Kiltiernan and the recently constructed South Eastern Motorway Carrickmines Interchange Southern Roundabout. Figure 1.1 shows the scheme in the national context while Figure 1.2 shows the extent of the study area and the existing road network. Figure 2.1 shows the townland boundaries in the vicinity of the existing Glenamuck Road.

## 1.8 GLENAMUCK ROAD OVERVIEW

The existing Glenamuck Road alignment is rural in character, generally constructed with a 5.5m carriageway, a 1.5m footpath to the east and a verge of varying width. The road has been realigned and widened where it ties into Carrickmines Interchange Southern Roundabout and comprises a 9m carriageway (including 2 no. 0.5m hardstrips), 2 no. 2.0m wide cycleways, 2 no. 1.5m footpaths and 2 no. 1.5m verges.

The existing road profile falls at a reasonable gradient from approximate 138m OD from the Enniskerry Road to 86m OD at the Carrickmines Interchange Southern Roundabout. There are gullies collecting surface water run off to the east of the existing road at Glenamuck Cottages where the road is kerbed. The road drainage to the west of the road appears to be collected in a shallow ditch running at the back of the verge. This ditch outfalls to a tributary of the Glenamuck Stream, which runs parallel to the existing Glenamuck Road.

# CONSTRAINTS REPORT



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Mr. Eamon O'Hare  
 Director  
 DUN LAOGHAIRE RATHDOWN COUNTY COUNCIL  
 County Hall, Marine Road, Dun Laoghaire, Co. Dublin  
 Phone: 01 2867011 Fax: 01 2869999

**RPS** **MOOS**  
 RPS-MOOS Ltd., West Pier Business Campus,  
 T: +353 1 284 4499 F: +353 1 282 5676  
 E: rpsmoos@rpsgroup.ie W: www.rpsmoos.ie

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Project:

**GLENAMUCK DISTRICT  
 DISTRIBUTOR ROAD**

Title:

**SCHEME IN NATIONAL CONTEXT**

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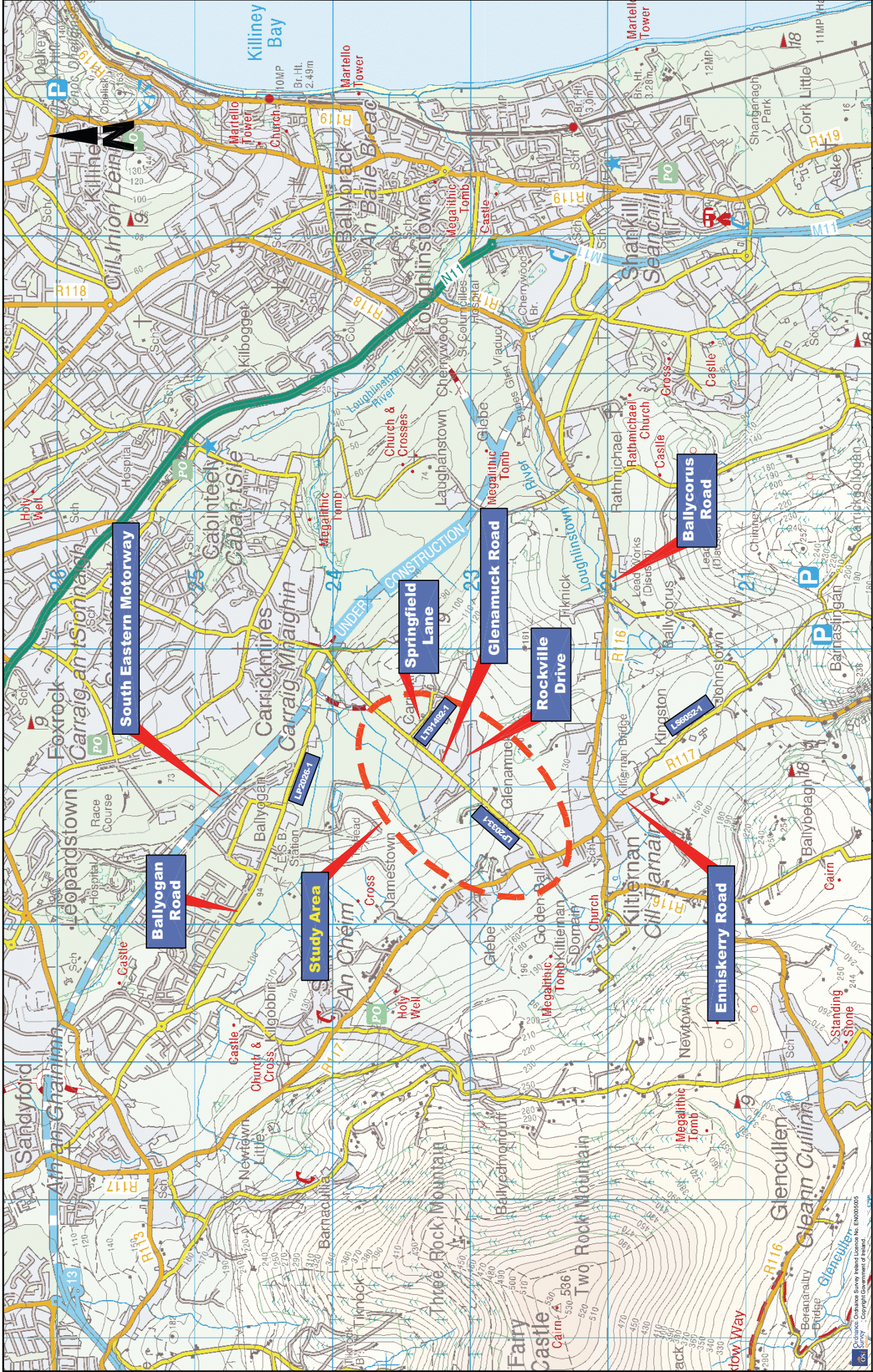
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Figure No. 1.1



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**STUDY AREA &  
EXISTING ROAD NETWORK**

**GLENAMUCK DISTRICT  
DISTRIBUTOR ROAD**

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**RPS MCOOS**

RPS-MCOOS Ltd., West Pier Business Campus,  
T: +353 1 285 4499, F: +353 1 283 5676  
E: rps@mcoos.ie, W: www.rpsmcoos.ie

Mr. Eamon O'Hare  
 Director  
**DUN LAOGHAIRE RATHDOWN COUNTY COUNCIL**  
 County Hall, Marino Road, Dun Laoghaire, Co. Dublin  
 Phone: 01 2867070 Fax: 01 2869899

**Dun Laoghaire-Rathdown**  
 County Council  
 Dun Laoghaire-Rathdown  
 Co. Dublin

Figure No. 1.2

Although the road is rural in nature there is a significant concentration of residential housing both with existing road frontage and set back from the existing road along both the existing Glenamuck Road and the Enniskerry Road. Rockville Drive provides an access from Glenamuck Cottages to the existing Glenamuck Road and a second public road, Springfield Lane is also located 400m north of Rockville Drive. There is currently a speed limit of 50kph on the Glenamuck Road, which changes to 60kph on the approach to the Carrickmines Interchange Southern Roundabout.

The Glenamuck Road connects to the Enniskerry road at a simple T-junction controlled by a Stop Sign, in close proximity to Palmers Public House. Accident figures show that there have been several accidents at or close to this junction. The Enniskerry Road is very heavily trafficked and sight distances are sub-standard to the left towards Kiltiernan when turning from the Glenamuck Road. The speed limit on the Enniskerry Road is 50kph. Similar to the Glenamuck Road there is a high concentration of residential housing both with existing road frontage and set back from the existing road along the Enniskerry Road. However the road frontage to the west of the road corridor is a rural/wooded area.

To the north the Glenamuck Road ties into the Carrickmines Interchange Southern Roundabout, which has an ICD of 60m. The roundabout currently has 3 arms, but has sufficient capacity spatially for a fourth arm, if an off-line realignment was adopted, or if access is required into adjoining commercially zoned lands. Planning permission has recently been granted for Glenamuck Road Development, Phase 1, Carrickmines, Dublin 18 – Patrick Mooney. This development proposes to gain access to the Glenamuck Road at the east side of this roundabout. Phase 1 of Park Developments, which is currently under construction gains access to the new Link Road connecting Glenamuck Road to the Carrickmines Interchange, approximately 100m north of the Carrickmines Interchange Southern Roundabout

The land profile within the study area falls from approximately 140m OD to the South East towards the Glenamuck Stream at 90m OD. There are some areas where the road frontage of properties along the east of the existing Glenamuck Road has steep embankments.

There are currently no listed National Monuments within the study area. The corridor is largely rural in character and environmental considerations will be examined in full as part of the EIS. The road is currently used as a public amenity for walking, cycling and equestrian activities.

## 2 THE NEED FOR THE PROJECT

### 2.1 EXISTING ROAD NETWORK

The existing Glenamuck Road has an average width of approximately 11 m with a generally satisfactory horizontal and vertical alignment. The horizontal alignment the Golden Ball junction is however unsatisfactory and does not comply with current design standards in relation to sight distance, traffic volumes and safety. This junction is often congested and is a cause of delay for traffic turning onto the Enniskerry Road. The level of the traffic congestion frequently experienced often hampers the use of the road by local people for commercial, community and amenity purposes.

There are currently a number of large-scale commercial and residential developments at both construction and planning phase within the study area. Many of these developments will be seeking access from the Glenamuck Road thereby placing further demand on the road.

The Glenamuck Road will become more important at a regional level as a distributor road from the Enniskerry Road to the South Eastern Motorway once the South Eastern Motorway has been completed. It is anticipated that the capacity of the Glenamuck Road will have to be increased in order to cater for this demand.

The need for improvement of this section of road has been identified in the Dun Laoghaire-Rathdown County Development Plan (2004-2010).

### 2.2 DUN LAOGHAIRE-RATHDOWN COUNTY DEVELOPMENT PLAN (2004-2010)

The need for the project has been identified under Dun Laoghaire-Rathdown's County Council's Development Plan (2004-2010) which contains a six-year road objective to upgrade the Glenamuck Road corridor between the Enniskerry Road and the Carrickmines Interchange Southern Roundabout.

The land use proposed under the Dun Laoghaire-Rathdown County Development Plan (2004-2010) within the study area is mixed but consists predominantly of: 'economic development and employment'; 'protect or improve residential amenity'; 'protect and improve rural amenity and to provide for the development of agriculture'. The land use zoning objective areas located within the study area are shown in Figure 4.1. The high proportion of land zoned for 'economic development and employment' within the study area would suggest that further demand will be placed on the Glenamuck Road with the development of these areas. The fact that a large proportion of the land within the study area is zoned 'protect and/or improve residential amenity' could lead to large residential developments being built in the future. This development would also lead to further pressure being put on the Glenamuck Road.

Within the study area there are also a number of specific local objectives of the council laid out in the Dun Laoghaire-Rathdown County Development Plan (2004-2010). The specific local objectives shown on Map 9 of the development plan include the following:

- Local Objective 5: To provide for a proposed LUAS stop, on race days only, adjacent to Leopardstown Racecourse.
- Local Objective 6: To provide for a proposed LUAS stop at Ballyogan Wood.
- Local Objective 7: To provide for a proposed LUAS stop at Carrickmines.

- Local Objective 9: To provide for the development of a neighbourhood centre at Park Developments, west of the Carrickmines Interchange Southern Roundabout.
- Local Objective 10: To provide for the future extension of the Stepside public golf course onto adjoining lands owned by the Council, to enlarge it into an 18 hole public golf course.
- Local Objective 12: To protect and enhance the community infrastructure of the Church of Ireland community in Kiltiernan.
- Local Objective 13: To provide for residential development as part of an enhanced Kiltiernan Village, which will include provision of playing pitches on the 8.5 hectares area zoned F “Open Space”, located on the south side of Glenamuck Road. No residential or other development to take place until these pitches are in operation.
- Local Objective 14: To prepare a Local Area Plan for Kiltiernan. That no development takes place until a local Area Plan is approved.
- Local Objective 15: To encourage the provision of incubator units for craft industries in Kiltiernan.

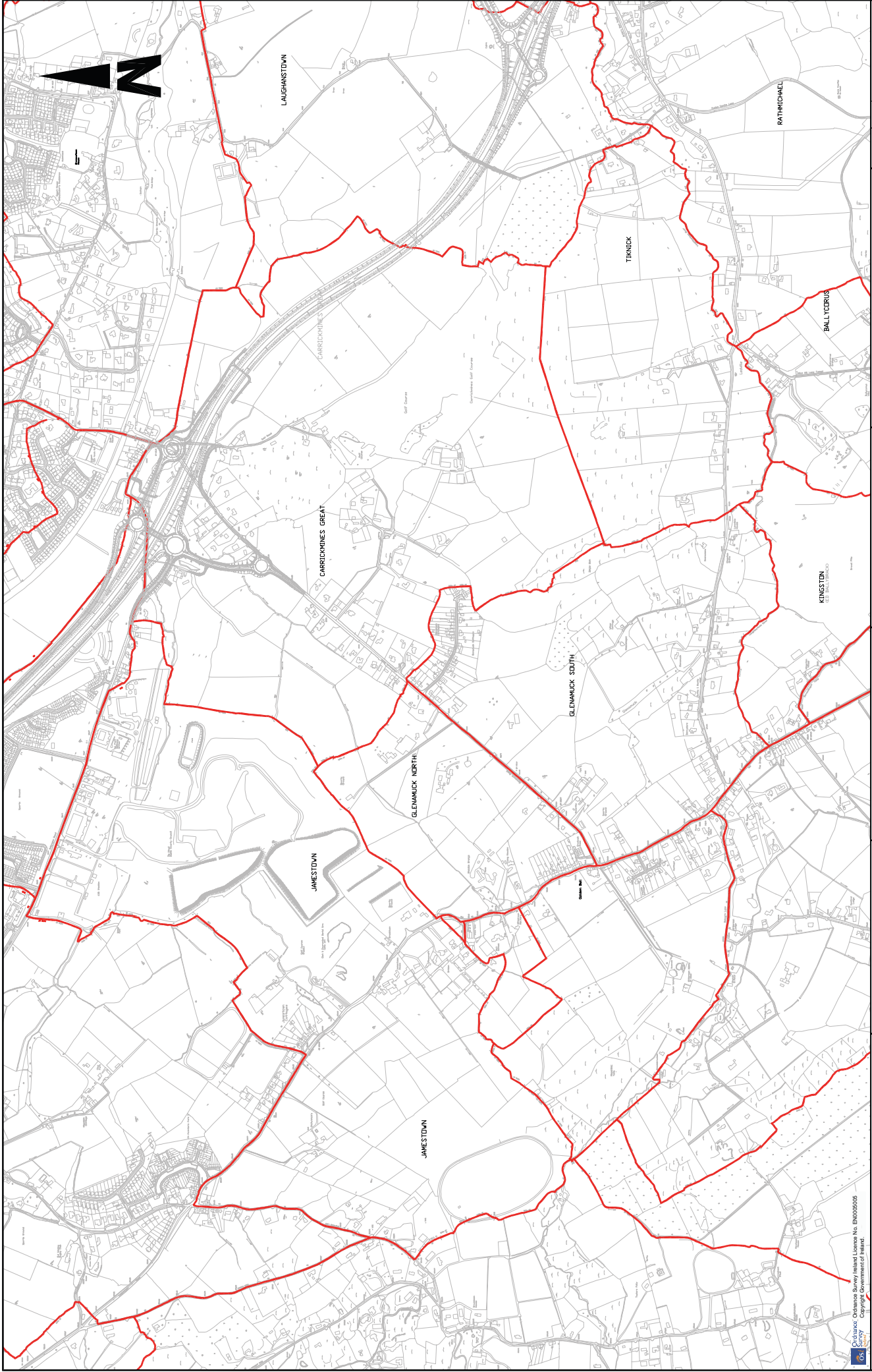
The locations of these specific local objectives are shown in Figure 4.1. The above listed local objectives suggest a large amount of development within the study area. The introduction of the LUAS network in the area will potentially bring further development thereby putting a further demand on the road network in the area.

Many of the above listed specific local objectives are to be incorporated into the Kiltiernan/Glenamuck-Local Area Plan which is to be prepared on foot of the Council objective to prepare a Local Village Plan for Kiltiernan and will have regard to the following additional principles:

- To facilitate the provision of a pitch for Wayside Celtic Football Club.
- To carry out road improvements on the Enniskerry Road/Kiltiernan junctions with Ballycorus Road and Bishop’s Lane.

The County Development Plan (2004-2010) along with the need to prepare a Kiltiernan/Glenamuck-Local Area Plan suggests that there will be significant development in the Glenamuck Road area in the future thereby increasing demand on the roads in the area and creating the need to improve the capacity of the Glenamuck Road.





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**TOWNLAND BOUNDARIES**

**GLENAMUCK DISTRICT  
DISTRIBUTOR ROAD**

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**RPS MCOOS**  
 RPS-MCOOS Ltd. - We're Here Business Companys.  
 T: +353 1 293 4499 - F: +353 1 293 5676  
 E: rps-mcoos@rpsgroup.ie W: www.rpsmcoos.ie

Mr. Eamon O'Hara  
 Chairman  
**DUN LAOGHAIRE RATHDOWN COUNTY COUNCIL**  
 County Hall, Marna Road, Dun Laoghaire - Rath an Duin  
 County Dublin, Leinster  
 Phone: 01 206 0000 Fax: 01 206 0009

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## **3 RESOURCES USED IN ASSESSING THE CONSTRAINTS**

### **3.1 AVAILABLE MAPPING**

Generally Constraints Studies are carried out using available mapping to identify features, including physical, environmental and cultural, which need to be identified within the study area. The available mapping consisted of 1:50,000 Ordnance Survey of Ireland (OSI) Discovery Series Mapping and six inch Ordnance Survey Vector Mapping.

### **3.2 AERIAL PHOTOGRAPHY**

In order to properly assess and design the project aerial photography was commissioned to produce digital colour photography. RPS-MCOS commissioned the aerial photograph services of Gerry O'Leary who took photographs of the study area on 21/12/2004. Aerial photography provides up to date information on existing physical features, in particular details of developments that have taken place since the available OS mapping was produced. The study area is shown in aerial photography on Figure 3.1. Additional aerial photography of the study area is shown in Figure 3.2.

### **3.3 WINDSHIELD SURVEY**

A number of field reconnaissances were undertaken to compliment and verify details on the ground as to their form. As part of these surveys photographs were taken along public roads and at various vantage points. Figure 3.3 gives examples of these photographs.

### **3.4 GEOLOGICAL SURVEY OF IRELAND INFORMATION**

The geological database supplied by the Geological Survey of Ireland (GSI) was used to determine the geology and hydrogeology of the area. The geology and hydrogeology within the study area are discussed in Section 4.4.

### **3.5 PRELIMINARY STUDIES**

Initial traffic, archaeology, planning, landuse, ecology, geology/hydrogeology and utilities studies were carried out to assess their significance as constraints.



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**AERIAL PHOTOGRAPHY**

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**RPS MCOSS**

RPS MCOSS Ltd. - Weather Business, Campus,  
T. +353 1 289 4499 - F. +353 1 289 5876  
E. rps.mco@rpsgroup.ie W. www.rpsmco.ie

Mr. Eamon O'Shea, Chairman  
**DUN LAOGHAIRE RATHDOWN COUNTY COUNCIL**  
County Hall, Marine Road, Dun Laoghaire, Co. Dublin  
Phone: 01 289 0700 Fax: 01 289 0699

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Figure No. 3.1



View looking south along the Glenamuck Road showing the Carrickmines Interchange Southern Roundabout to the middle centre. The South Eastern Motorway is under construction to the bottom of the photograph.



View looking west across Glenamuck Road showing Park Developments under construction to the top right and Springfield Lane running from bottom centre to middle centre.



View looking east across Glenamuck Road showing the Glenamuck Cottages to the top-centre and Ashford Farm and the entrance to Bective Rangers FC to the bottom-right.



View looking south along the Glenamuck Road showing the Golden Ball junction to the bottom left/centre and High Voltage ESB services to the top centre. Wayside Celtic sports ground is to be relocated to the top right.

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View looking south along Glenamuck Road showing Golden Ball junction where the Glenamuck Road meets the Enniskerry Road.



View looking west along the Enniskerry Road showing the Kiltiernan Church of Ireland in the background.



View looking east from the Glenamuck Road at Rockville Drive showing the entrance to Glenamuck Cottages.



View looking west from the Glenamuck Road showing Park Developments under construction and High Voltage ESB lines leading to Carrickmines Powerstation.



View looking East along the Enniskerry Road showing Golden Ball junction where the Glenamuck Road meets the Enniskerry Road.



View looking south along the Glenamuck Road showing a footpath to the east and a grass verge to the west.

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## 4 IDENTIFIED CONSTRAINTS

### 4.1 PLANNING SEARCH

Information on the planning applications in Dun Laoghaire-Rathdown County Council is maintained on a Planning Register. Planning information contained in the register includes planning applications within the study area for the years between 1/1/1999 and 17/12/2004.

The planning search results are shown in Figure 4.1. This drawing illustrates the high density of planning applications within the area of interest. The planning applications are constraints to be considered.

There are at present a number of large Residential and Commercial Developments which have received planning permission in the study area and are under construction or will be constructed in the near future. These are:

1. The Park – Phase 1 (Planning Reference: D02A / 0558 – permission granted)

This committed development is situated to the west of the Glenamuck Roundabout and to the south of Ballyogan Road. The proposed development consists of the following:

- Car Showrooms in Motor Malls (2,894 sqm);
- Hotel (9,837 sqm);
- Offices (23,489 sqm); and
- Retail Warehouses (14,998 sqm)

The two access routes into this development are a bus/pedestrian/cycle access on Ballyogan Road and a general vehicular access on the new Link Road connecting Glenamuck Road to the Carrickmines Interchange. Phase 1 of the development was approved in April 2003 and is currently under construction.

The Park – Phase 2 (Planning Reference: D03A / 1239 – permission pending)

The proposed development involves a mixture of car sales, an apart-hotel, offices, enterprise centres and retail/retail warehouses. In addition, 'local' facilities are proposed in the form of shops, a crèche and a restaurant. Vehicular access will be from the link road between Glenamuck Road and the Carrickmines interchange on the M50, which will be upgraded to a dual carriageway

2. Glenamuck Road, Phase 1, Carrickmines, Dublin 18 – Patrick Mooney (Planning Reference: D04A / 0327 – permission granted)

This development consists of a residential development which will provide a total of 227 residential units, a crèche and retail units on 3.9 hectares. There are five types of residential units including:

- 115 no. 2 and 3 bed duplex units;

**County Council Use Zoning Objectives**

- Objective A To protect and/or improve residential amenity
- Objective A1 To provide for new residential communities in accordance with approved local area plans
- Objective A2 To provide for a special development area
- Objective B To protect and improve rural amenity and to provide for the development of agriculture
- Objective NC To protect, provide for and/or improve neighborhood centre facilities
- Objective E To provide for economic development and employment
- Objective F To preserve and provide open spaces and recreation amenities
- Objective G To protect and improve high amenity areas

**County Council Objectives**

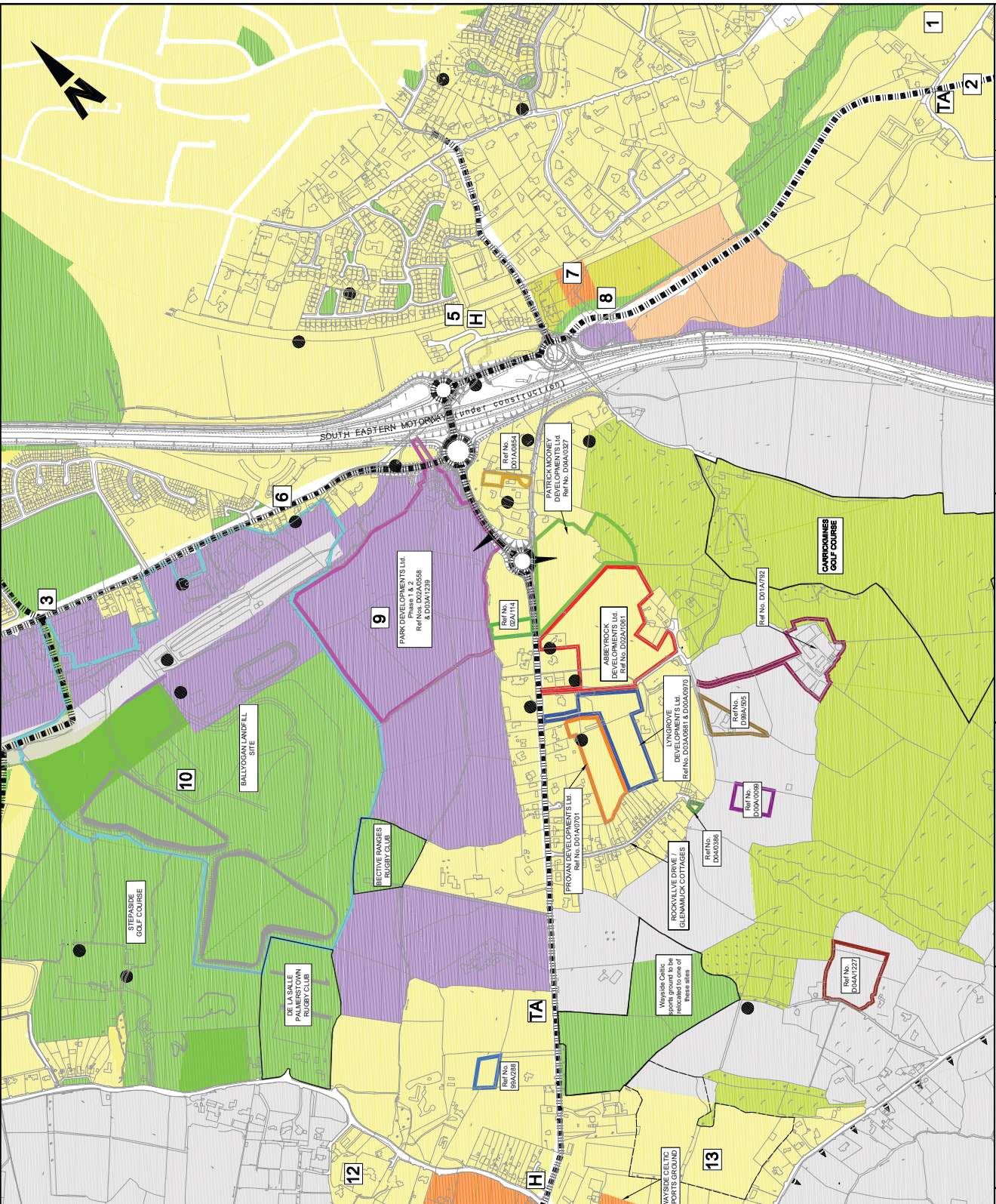
- To preserve Views
- To protect and preserve Trees and Woodland

**Specific Local Objectives**

- 13 To provide accommodation for the Travelling Community
- TA County Council Housing Program Site
- H Proposed Cycle Route Objectives

**Other**

- Access



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**Zoning Map With Future Developments  
& Specific Local Objectives**

**GLENAMUCK DISTRICT  
DISTRIBUTOR ROAD**

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**RPS MCOOS**

RPS/MCOOS Ltd. - West Pier Business Campus,  
County Hall, Marine Road, Dun Laoghaire, Co. Dublin  
T: +353 1 298 4499 - F: +353 1 293 5676  
E: rps/mcoos@rpsgroup.ie W: www.rpsmcoos.ie

**Mr. Eamon O'Hara**  
County Engineer  
**DUN LAOGHAIRE RATHDOWN COUNTY COUNCIL**  
County Hall, Marine Road, Dun Laoghaire - Rath an Duin  
County Council Civic Centre  
Dun Laoghaire - Rath an Duin  
Phone: 01 2847070 Fax: 01 2868889

**Din Laoghaire - Rathdown**  
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Figure No. 4.1

- 92 no. 2 and 3 bed apartments; and
- 20 no. 4 bed terraced houses

The overall proposed development will consist of 405 units arranged within 7 sectors.

3. Lyngrove Developments Ltd. (Planning Reference: D03A / 0681; D00A / 0970 – permission granted)

This committed development is to the south of the proposed Glenamuck Road, Phase 1 – Patrick Mooney Development close to Springfield Lane. The proposed development consists of the following:

- 19 no. 3, 4 and 5 bed houses; and
- 50 no. apartments.

4. Provan Developments Ltd. (Planning Reference: D01A / 0701 – permission granted)

This committed development is also located off the Glenamuck Road. It is bounded to the south by Glenamuck Cottages, which front on to Rockville Drive. This residential development consists of the following:

- 54 no. apartments in four blocks;
- 2 no. terraced houses; and
- 12 no. detached houses

5. Abbeyrock Developments Ltd. (Planning Reference: D02A / 1061 – permission granted)

This committed development comprises 332 residential units and is situated off Glenamuck Road, immediately south of the proposed Glenamuck Road, Phase 1 – Patrick Mooney Development. The development has two proposed access points, using an existing access at Springfield Lane and a proposed new access at approximately 100m north of Springfield Lane, on Glenamuck Road South

There are also a number of smaller developments which have received planning permission, including:

- D99A/0505 - 1 No. Dormer bungalow with septic tank,
- D02A/0114 - 1 No. Two storey detached house with development roof space, granny flat, double garage and biocycle treatment plant.
- D00A/0099 - 1 No. Dormer bungalow with biocycle effluent treatment unit,
- D01A/0854 - 1 No. Single storey dwelling with garage to the rear,
- D99A/0288 - 1 No. Dormer bungalow with garage and septic tank.
- D04A/0386 - 1 No Two storey dwelling house to the side of existing,
- D04A/1227 - 1 No Fully serviced single storey house.



- DO1A/792 – 1 No Montessori School at Springfield House.
- Planning permission was also sought for a prefabricated unit as part of the playschool, Naionra Thaobh na Coille, on the 23 July 2002.

Outlines of the above developments are shown on Figure 4.1.

## 4.2 LAND SEARCH

RPS-MCOS undertook a preliminary search of the Land Registry and marked up a drawing of property boundaries. It was decided that this information is sufficient at this point and that the land and the full property ownership search will be carried out once the preferred route has been chosen.

A summary of the results of the Land Search is shown in Figures 4.3.

## 4.3 RIVERS AND STREAMS

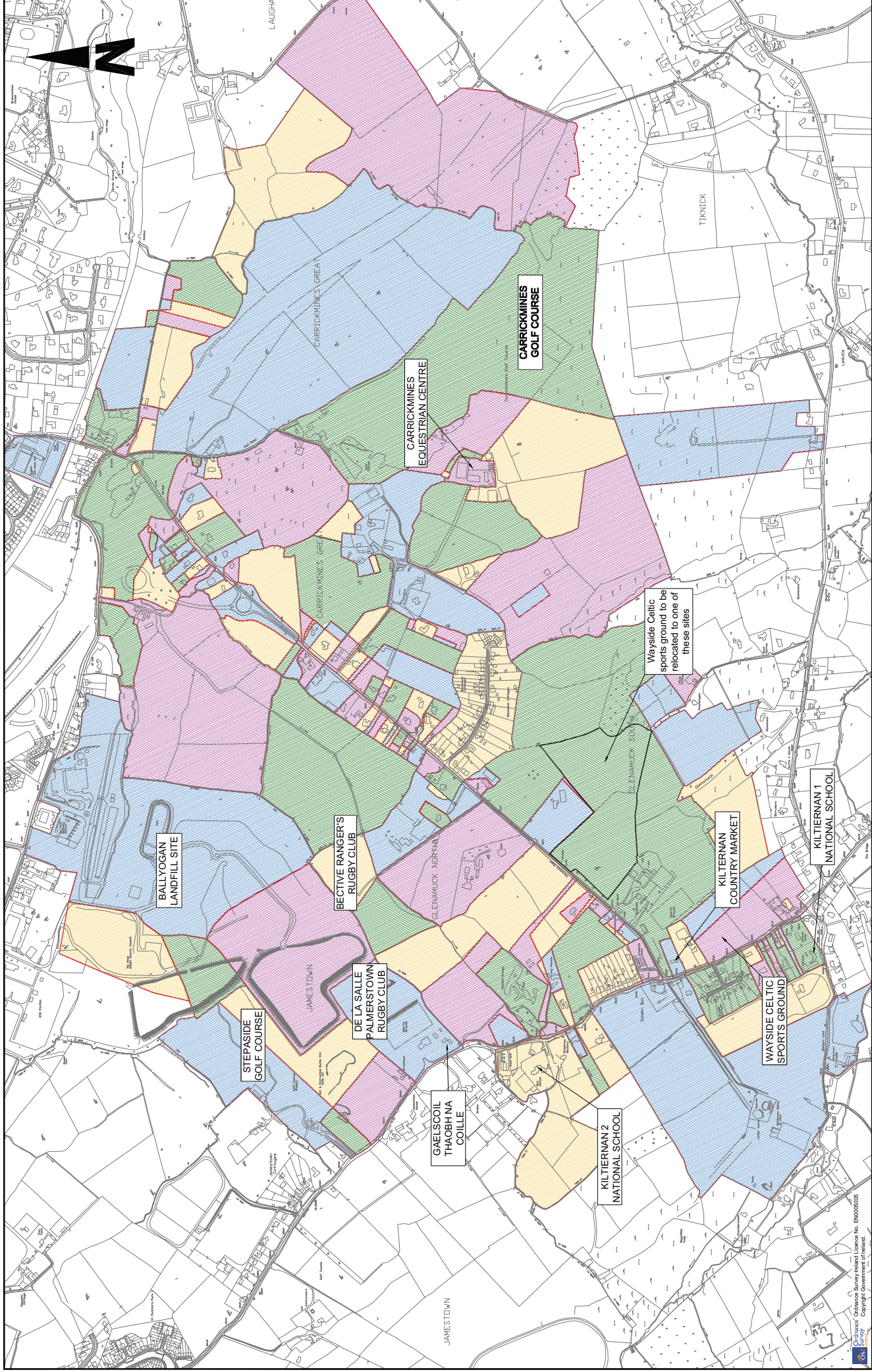
The Glenamuck River/Stream is located west of the Glenamuck Road. It is a tributary of the Ballyogan Stream and Carrickmines Stream. These watercourses connect with the Shanganagh River which is located south of the R116. The Shanganagh River flows out to sea to the west of Ballybrack. There are also some other smaller ditches, drains and culverts throughout the study area. The largest of these being the golf stream (a tributary of the Glenamuck stream) which flows around the boundary of the Ballyogan landfill. The identified rivers and streams within the study area are shown on Figure 4.2. In addition to the rivers and streams shown in figure 4.2 there are also a number of smaller interceptor ditches running alongside and parallel to the Glenamuck Road. It was noted on one of RPS-MCOS site visits that some of these ditches contained a notable flow.

Between the Ballyogan Stream Valley and the line of the South Eastern Motorway the landform is gently undulating, lying at between 93m and 100m OD. From the valley south towards Enniskerry Rd the land rises generally at a more moderate gradient (slopes 1:10 – 1:20). There are however localised pockets where steeper slopes dominate. These tend to be found south of Clay Farm, which is outside the study area.

With specific regard to the Carrickmines/Shanganagh river system the South Eastern Motorway Catchment Study reports that significant flooding occurs at Kilgobbin but primarily downstream of Carrickmines (and particularly in the stretch between the N11 and the coast. If in the future, significant urban development takes place within the remit of the Stepside Action Area Plan (see Section 6.0 and 7.0 of the plan) without the introduction of appropriate remedial/attenuation measures, downstream difficulties are likely to exacerbate. The study recommends a series of flood attenuation measures for the Carrickmines/Shanganagh system with a view to controlling and regulating the discharge of stormwater runoff to the system. The recommended approaches, which collectively fall under Best Practice, include:

- Provision of bypass culverts.
- Provision of off-line storage ponds.
- Use of french drains and swales for roadways and infiltration basins/porous surfacing for large car parking areas.





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**LANDOWNERSHIP BOUNDARIES**

**GLENAMUCK DISTRICT  
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**RPS MCOOS**

RPSMCOOS Ltd. - West Pier Business Campus  
 T: +353 1 236 4400 F: +353 1 236 5676  
 E: rpsmc0os@rpsgroup.ie W: www.rpsmc0os.ie

Client:

Mr. Eamon O'Hare  
 Director  
**DUN LAOGHAIRE RATHDOWN COUNTY COUNCIL**  
 County Hall, Marine Road, Dun Laoghaire, Co. Dublin  
 Phone: 01 284707 Fax: 01 286989

**Dun Laoghaire-Rathdown County Council**  
 Comhairle Contae Dúin Laoghaire - Ráth an Dúin  
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**Figure No. 4.3**

- Exclusion of development within the historic natural (Q50) floodplain together with maintenance of the natural river channel.
- Identification of a substantial riparian corridor to be retained along all significant rivers and streams.

The water quality in the stream will be investigated as part of the environmental impact study. The water quality of the golf stream (a tributary of the Glenamuck stream) which flows around the boundary of the landfill in a study for the waste licence application was found to be dominated by pollution tolerant Group C and Group D macroinvertebrate species. No data is available at present for the Glenamuck stream itself.

As part of the planning search RPS-MCOS noted photographs of significant flooding in the Glenamuck Road Area. Flood areas are regarded as a constructional constraint as they may give rise to unsuitable ground conditions and/or require some form of roadway crossing such as bridge or culvert structures.

Flood areas may result due to:

- Locally poor draining soils such as, basin peats, and clayey tills.
- River Flood: The drainage network within which the road route is located comprises of one main river/stream: the Glenamuck River/Stream.
- Rising of water table above land surface.

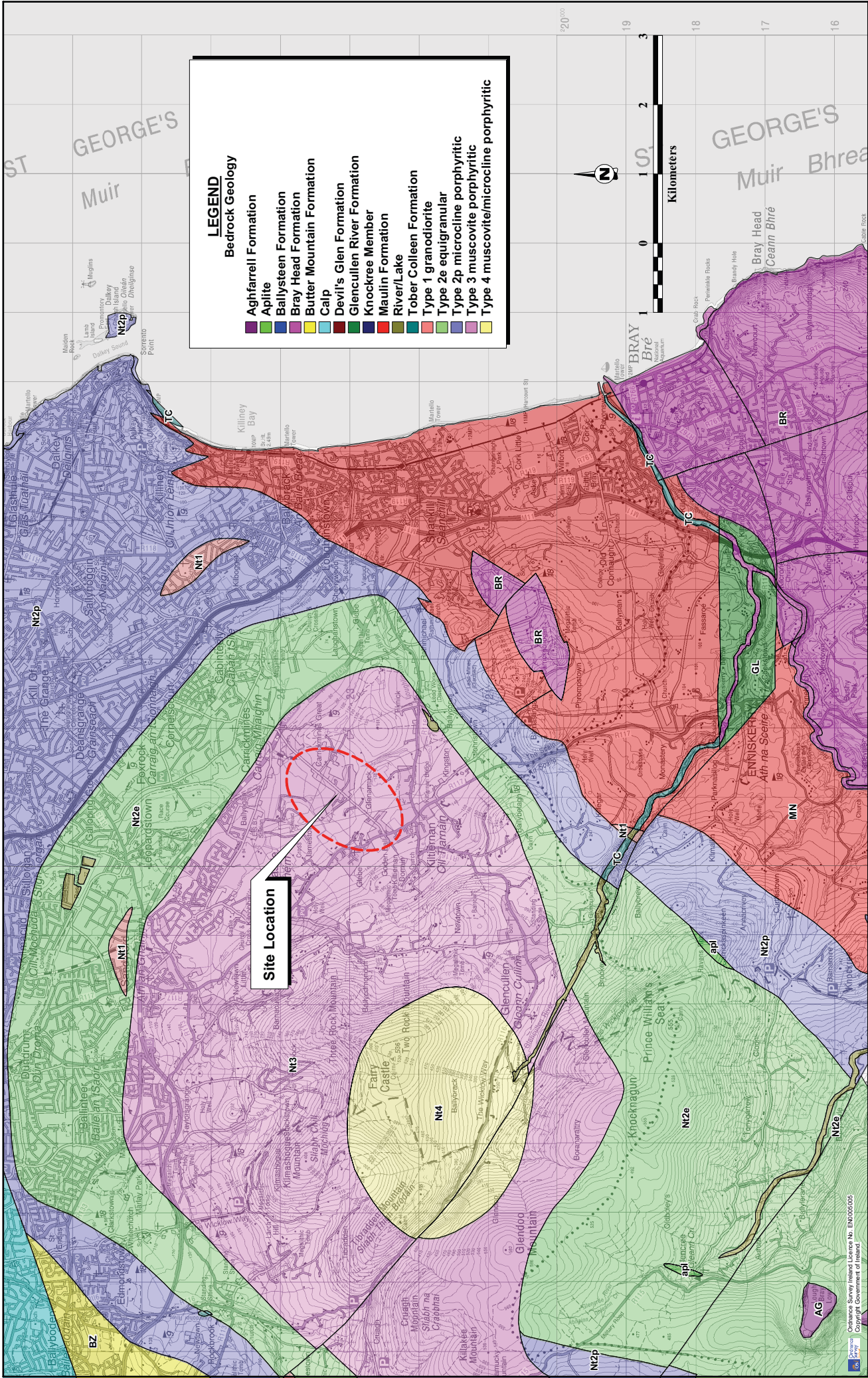
## **4.4 SOILS, GEOLOGY AND HYDROGEOLOGY**

### **4.4.1 Methodology**

The assessment of the soil, geology and hydrogeological environment in the Glenamuck Study Area involves interpretation of available information from the following sources:

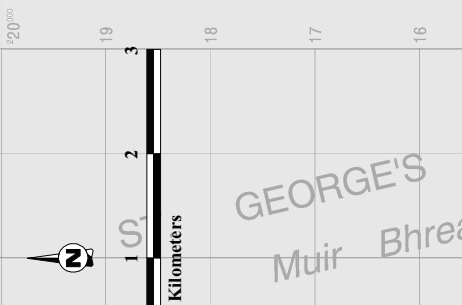
- Geology of Kildare-Wicklow Sheet 16. Geological Survey of Ireland (GSI).
- Ballyogan Landfill Site Ground Investigation (Dec 2003) IGSL Ltd – west of Glenamuck Road.
- South Eastern Motorway Ground Investigation (Oct 2001) Norwest Holst Soil Engineering Ltd – north of Glenamuck Road route.
- GSI online groundwater maps.
- GSI well database.

The constraints of the soils, geology and hydrogeology on the proposed Glenamuck District Distributor Road are assessed. GSI information on the bedrock geology for the Glenamuck Road study area is shown in Figure 4.4.



**LEGEND**  
Bedrock Geology

- Aghfarrell Formation
- Aplite
- Ballysteen Formation
- Bray Head Formation
- Butter Mountain Formation
- Calp
- Devil's Glen Formation
- Glencullen River Formation
- Knockree Member
- Maulin Formation
- River/Lake
- Tober Colleen Formation
- Type 1 granodiorite
- Type 2e equigranular
- Type 2p microcline porphyritic
- Type 3 muscovite porphyritic
- Type 4 muscovite/microcline porphyritic



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**Bedrock Geology**

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**RPS MCOOS**  
RPS-MCOOS, West Pier Business Campus,  
Dun Laoghaire, Co. Dublin, Ireland.  
T: +353 1 206 4669 F: +353 1 206 9796  
E: geology@rps.co.uk, www.rps.co.uk

**Client:**  
Mr. Eamonn O'Hare  
Director of Transportation  
DUN LAOGHAIRE-RATHDOWN COUNTY COUNCIL  
County Council Corporate Centre,  
County Hall, Marine Road, Dun Laoghaire, Co. Dublin  
Phone: 01 2069700 Fax: 01 2069909

## 4.4.2 Description of Existing Environment

### 4.4.2.1 Soils and Sub Soils (Quaternary Geology)

Topsoils are likely to be present in the study area to depths of generally 0.2-0.3m. Along the South Eastern Motorway made ground was encountered in 5 boreholes with only one borehole showing made ground with a depth greater than 0.4m. There was more evidence of made ground in the Ballyogan Landfill region, particularly at the landfill gas barrier where it reached depths of up to 4.3m below ground level (bgl). In other areas of the site it remained at a consistent depth of about 1.0m.

The subsoils underlying the Glenamuck Road Study Area are comprised of sediments of variable thickness and lithology and are described as Quaternary aged Glacial Till (boulder clay).

In the Ballyogan Landfill site there is much evidence of clay deposits ranging in depth from 1.4m bgl to 7.2m bgl. Along the South Eastern Motorway (SEM), clay and sometimes silt are the predominant material overlying the granite bedrock. There is little evidence of boulders and cobbles.

Some sand and gravel deposits are also present, in the Ballyogan Landfill area – generally gravel of average thickness of 1.5m. There are no consistent deposits of sands and gravel along the SEM, only in two isolated areas. The larger deposit is located at the two roundabouts at the north westerly end of the stretch of the SEM under consideration, with the layer ranging in thickness from 4.5m to 8.5m. Sand of about 1.0m thickness, within 0.5 to 1.0m of ground level is evident in an area located near the south easterly end.

At the south east end the ground conditions change dramatically. The clay, or silt layer in some instances, reaching depths of between 5.0m to 25.0m.

### 4.4.2.2 Bedrock Geology

Reference to the Geological Survey of Ireland (GSI) Sheet 16 “Geology of Kildare-Wicklow” Scale 1:100,000 indicates that bedrock geology along the Glenamuck Road is Leinster Granite.

The Glenamuck Road is located to the north of the Glencullen Fracture in the northern Pluton of the Leinster Granite. The Northern Pluton is a rounded body with a broadly concentric internal zonation of granite types (Bruck and O’Connor 1977). The granite in the region of the Glenamuck Road is of Type 3, namely Muscovite Porphyritic, i.e. with large crystals of muscovite, a platy mineral.

Bedrock lithologies encountered along the South Eastern Motorway generally concurs with published data. Granite was the dominant bedrock. It is generally described as moderately weak to moderately strong, coarse to fine grained, slightly to severely weathered, with medium to extremely closely spaced slightly to severely weathered joints generally dipping at low to moderately high angles. Depth to bedrock varies across the South Eastern Motorway from 0.5m to >40.0m bgl.

### 4.4.2.3 Quaternary Hydrogeology

The hydrogeological significance of the Quaternary sediments is a function of their permeability, thickness and extent. The principal soil types of the Quaternary strata in the Glenamuck Road Study Area are clays and tills with minor sands and gravels. The low permeability material (clays and tills) protects underlying bedrock aquifers, restricts recharge and where sufficiently thick may confine them. The high permeability material (sands and gravels) allows a high level of recharge, provides additional

storage to the underlying bedrock aquifers and where sufficiently thick can be an aquifer in its own right. According to the information obtained from the Ballyogan landfill site and South Eastern Motorway ground investigations, there does not seem to be any significant thick deposits of sands and gravels in the region of the Glenamuck Road and hence there is little evidence to support the presence of an aquifer within the overburden above the bedrock.

According to the Geological Survey of Ireland the range of well yield is 100-200m<sup>3</sup>/d and the range of specific capacity is between 10 to 1000m<sup>3</sup>/d/m for the Quaternary stratum around the Dublin/Wicklow Mountains region.

The nearest aquifer is classified as a minor aquifer (35-42m) and is located in Tallaght, Co. Dublin, about 11km to the north west of the Glenamuck Road. There is also a sand/gravel deposit of up to 45m in the Dargle Valley region (to the south) and this is also classified as a minor aquifer. The Dargle River rises in the Wicklow Mountains and flows east for 12 miles to enter the Irish Sea at Bray. Dublin City, located to the north of the Glenamuck Road, also has a sand/gravel deposit of 10-20m, which acts as a minor aquifer.

The majority of standpipes installed during the ground investigations are recorded as dry. Water strikes noted are generally within gravel layers of the overburden and at top of bedrock.

#### **4.4.2.4 Bedrock Hydrogeology**

The Leinster Granite is impermeable and considered to be aquitard (unproductive in terms of well yield). Most groundwater in this area moves either in the upper weathered zone, more permeable beds of limited extent, fault or fracture zones. The flow is generally in localised systems with little continuity between them. The Leinster Granite is classified by the Geological Survey of Ireland as a Poor Aquifer which is generally unproductive.

The low storage in this rock type is usually balanced by the higher rainfall of the uplands. However, during long dry spells baseflow to streams can be reduced significantly as many springs and the seepages that feed them dry up. Well yields are generally only sufficient for domestic or farm supplies and range from 20-50m<sup>3</sup>/d (wells 30-60m deep) except along faults where they may be in excess of 200m<sup>3</sup>/d. Well yields are greatest in the low-lying or weathered parts of the granites and the least in the higher grade metamorphic rocks.

Well yields in the Glenamuck Road Study Area region should be about 100-200m<sup>3</sup>/d as these yields are quite common in the South Dublin region. The rainfall varies from 700-950mm/y along the coast (east of Glenamuck Road) to over 2000mm/y in the Dublin/Wicklow Mountains (south of Glenamuck Road). Potential recharge ranges from 325-550mm/y depending on the elevation and location. The bulk of the recharge occurs between late October and early March.

#### **4.4.3 Hydrogeological Constraints**

In terms of aquifers there does not seem to be any constraints as the Leinster Granite is a poor aquifer. There does not appear to be any source protection areas for public supply wells as there are no known public supply wells in this area.

## 4.5 FLORA AND FAUNA

It is a policy of Dun Laoghaire-Rathdown County Council that trees, groups of trees or woodlands which form a significant feature in the landscape or, are important in setting the character or ecology of an area shall be preserved wherever possible. Certain trees, groups of trees and woodlands have been identified on the Development Plan Maps and are shown in Figure 4.1. It is intended that these trees be protected and maintained.

The initial desktop survey on flora and fauna was based on the information provided by the National Parks and Wildlife Service (NPWS) of the Department of Environment, Heritage and Local Government (formerly known as Duchas). One pNHA (proposed Natural Heritage Area) has been identified under Natura 2000 and is situated partially on the southern boundary of the study corridor referred to as *Dingle Glen 001207* as shown on Figure 4.5 of this report. This is considered to be of local ecological importance. It is a dry valley formed as a glacial lake overflow channel. This site formerly cleared of vegetation, a woodland cover is now regenerating. The importance in this site lies in the variety of habitats within a relatively small area. The site is secluded and not subject to much disturbance. This would indicate that there is unlikely to be any species of particular importance within the study area, however there are some groups of trees and woodlands identified in the County Development Plan (9.2.10 of Plan) and shown on Figure 4.1. The site synopsis information of Dingle Glen as provided by NPWS is shown below:

### **SITE SYNOPSIS**

#### **SITE NAME: DINGLE GLEN**

#### **SITE CODE: 001207**

*Dingle Glen is situated approximately 5 km west of Killiney. It is a dry valley formed as a glacial lake overflow channel.*

*Formerly cleared of vegetation, a woodland cover is now regenerating, with pioneer species of Holly (*Ilex aquifolium*), Blackthorn (*Prunus spinosa*), and Willows (*Salix spp.*). Individual trees of Ash (*Fraxinus excelsior*), Hazel (*Corylus avellana*), Oak (*Quercus patraea*) and Spindle (*Euonymus europaeus*) occur. The woodland ground flora is represented by Foxglove (*Digitalis purpurea*), Wood Aven (*Geum urbanum*), Wood Melic (*Melica uniflora*) and Bugle (*Ajuga reptans*).*

*Trees and shrubs are mostly restricted to the valley bottom. On the slopes above a heathy vegetation is dominated by Gorse (*Ulex europaeus*) and Bracken (*Pteridium aquilinum*). Other species include Wood Sage (*Teucrium scorodonia*), Bell Heather (*Erica cinerea*), Navelwort (*Umbilicus rupestris*), English Stonecrop (*Sedum anglicum*), Heath Bedstraw (*Galium saxatile*), Heath-grass (*Danthonia decumbens*), Wood-rush (*Luzula sylvatica*) and the Climbing Corydalis (*Corydalis claviculata*).*

*The importance in this site lies in the variety of habitats within a relatively small area. The site is secluded and not subject to much disturbance.*



## 4.6 ARCHAEOLOGY AND ARCHITECTURE

An initial desktop assessment was undertaken by RPS-MCOS to identify all the environmental constraints situated within or close to the study area. This scoping process involved the identification of all recorded sites and monuments and listed buildings. Most notable constraints identified within the study area were a cross base, possible linear earthworks, an enclosure site, ecclesiastical remains, a portal tomb, and a cemetery. It is a policy of Dun Laoghaire-Rathdown County Council to protect the archaeological heritage of the county, it is also council policy to protect Zones of Archaeological Potential. It is council policy to protect the special character of places, areas, groups of structures within the county that, have special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest or value, or that contributes to the appreciation of protected structures, by the introduction of Architectural Conservation Areas. Locations of Monuments and Places listed under Schedule 1 of the Dun Laoghaire-Rathdown County Development Plan (2004-2010) are shown in Figure 4.5.

There are also a number of protected structures within the study area namely; Rockville House and Gate Lodge; Church of Ireland Parish Church (Church, school, Sexton's Lodge, Boundary Walls and Gates); House (formerly a cotton factory). The locations of protected structures, are shown in Figure 4.5.

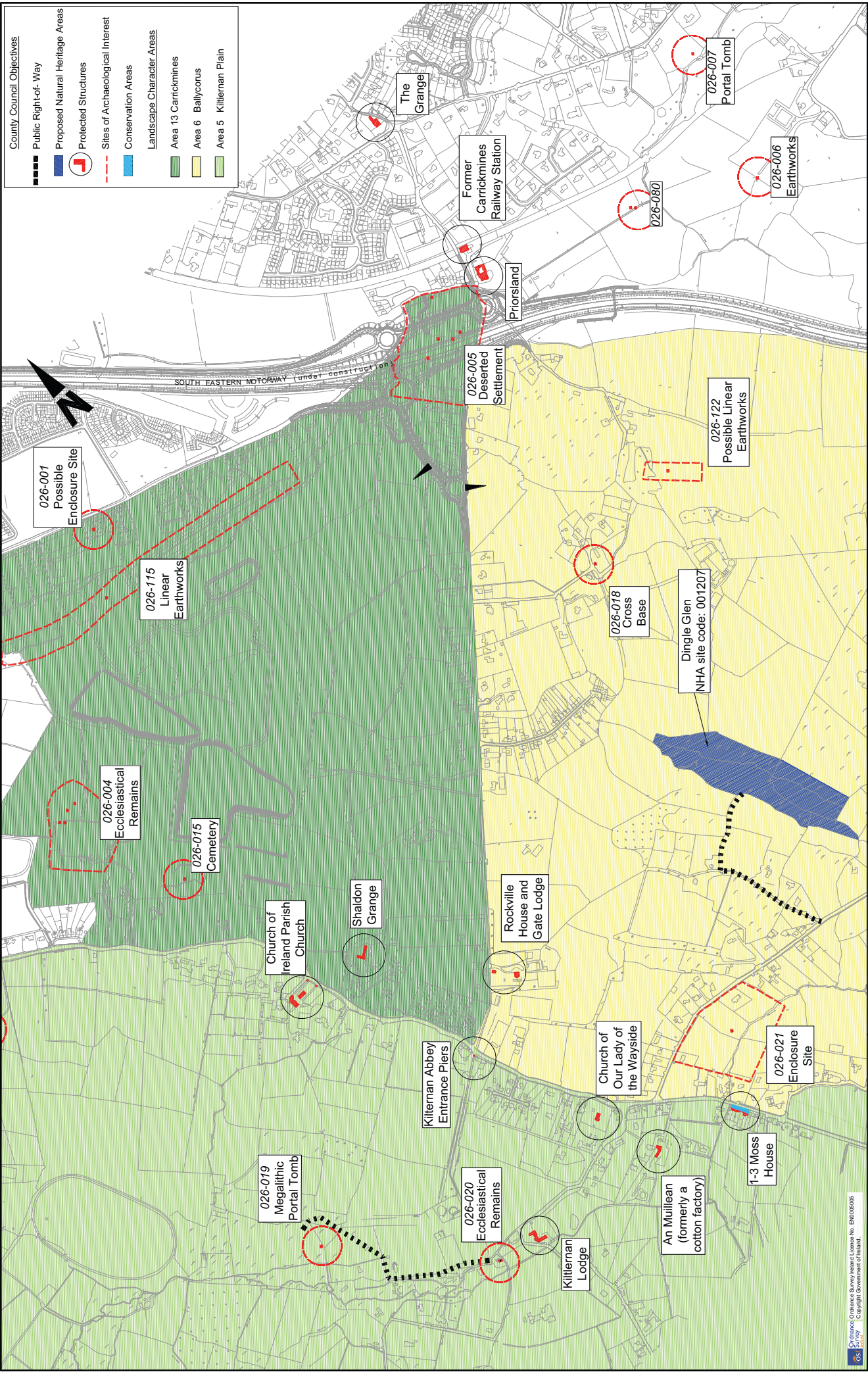
## 4.7 PROTECTED AREAS

There are no proposed or candidate Special Protection Areas or Special Areas of Conservation currently designated within the proposed study area. As stated in section 4.5, there is however one Proposed Natural Heritage Area under Natura 2000 that is situated partially on the southern boundary of the study corridor referred to as Dingle Glen 001207, refer to section 4.5 for details.

It is an objective of Dun Laoghaire-Rathdown County Council under the Development Plan (2004-2010) to ensure the retention of established public rights of way. The Glenamuck South Right of Way; Ballycorus to Dingle Glen is located north of the R116 which is located on the edge of the study area. The Glenamuck South Right of Way is indicated on Figure 4.5.

Another policy of the Dun Laoghaire-Rathdown County Development Plan (2004-2010) is to protect and encourage enjoyment of views and prospects of special amenity value or special interests. In the implementation of this policy it is the policy of the Council to prevent development which would block or otherwise interfere with a view which is designated for protection and preserve the prospects listed in the Development Plan. These include Carrickgollogan from Ballyman Rd and Carrickgollogan from the Enniskerry Road (south of Kiltiernan Village).

Dun Laoghaire-Rathdown has carried out a landscape Character Assessment study of the rural area of the County (May 2002), which identifies 13 Landscaped Character areas in addition to Cherrywood Rathmichael, along with a recommended strategy for each area. There are three Landscape Character Areas located within the Glenamuck study area. These Areas are shown in Figure 4.5 and include; No. 5 Kiltiernan Plain; No. 6 Ballycorus; and No. 13 Carrickmines. See Table 4.1: Landscape Character Areas.



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**MONUMENTS, PROTECTED AREAS & LANDSCAPE CHARACTER AREAS**

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**RPS MCOOS**

RPS-MCOOS Ltd., West Pier Business Campus,  
 T +353 1 238 4489 - F +353 1 233 3676  
 E rps.mcoos@rpsgroup.ie W www.rps.mcoos.ie

Client: **Mr. Eamonn O'Hare**  
**DUN LAOGHAIRE RATHDOWN COUNTY COUNCIL**  
 County Hall, Marine Road, Dun Laoghaire, Co. Dublin  
 Phone: 01 2847497 Fax: 01 2848889

**Dun Laoghaire-Rathdown County Council**  
 County Hall, Marine Road, Dun Laoghaire, Co. Dublin  
 Phone: 01 2847497 Fax: 01 2848889

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Description	Sensitivity/Strategy
<p><b>5. Kiltiernan Plain</b></p> <p>This is a large enclosure which comprises the hilly plain lying between Three Rock to the west, Newtown, Barnaslingan (The Scalp) and Carrickgollogan to the south, the disused lead mines and chimney to the east. The enclosure is curtailed to the north by the coniferous plantation on Three Rock. The edge of Stepside Area Action Plan and Ticknick also forms a boundary to the north east.</p> <p>This enclosure is characterised by a series of smaller hillocks within a plain. Roads run between the undulations most notably the main Enniskerry Road running north-south from Stepside and disappearing into the Scalp.</p> <p>This large hilly plain which was part of the foothills of the Dublin Mountains accommodates much of the rural development in the County (Kiltiernan and Stepside). Given its terrain and the number of routeways traversing this plain, it is likely to be subject to the most pressure for long-term development which would significantly alter the existing landscape.</p>	<ul style="list-style-type: none"> <li>The area has accommodated much change generated by the pressures of being adjacent to a large urban area. The village of Stepside will accommodate further change as detailed in the Area Action Plan. There is a risk that continued linear development along the road between Kiltiernan and Stepside will simply merge the two villages into a continuous built up strip. Settlement strategy shall ensure the consolidation of these villages along with the provision of an open space buffer zone between the two.</li> </ul>
<p><b>6. Ballycorus</b></p> <p>This enclosure encompasses the valley along which runs the Ballycorus Road and is bounded by the disused lead mines to the south and Ticknick and the Glenamuck Road to the north, Barnaslingan to the west with Three Rock in the background. The enclosure displays past and also present industrial/extractive works. The past is in the form of the old leadworks especially the lead mines chimney. Quarrying/extraction has continued into the present with the activities of Cement Roadstone in the valley.</p>	<ul style="list-style-type: none"> <li>Recognition of the important role of Ballycorus leadmines in the past.</li> <li>Dingle Glen is a sensitive landscape and shall be afforded protection due to its rarity</li> <li>Maintenance and restoration of field patterns and boundaries.</li> <li>Consideration of designation of Carrickgollogan Hill as an area for a Special Amenity Area Order</li> </ul>
<p><b>13. Carrickmines</b></p> <p>This enclosure encompasses the area east of the Stepside Action Area and is bounded by the motorway to the north, the Glenamuck Road to the south and the Enniskerry Road to the west. The most dominant visual feature of this enclosure is the Ballyogan landfill. The landforms of the area have been stripped. This enclosure is dominated by the fact that it is located at the edge of the built up area of Dun Laoghaire-Rathdown. It functions as a buffer between the more densely built-up area of Leopardstown/Stepside and the lower density suburban generated housing area of Kiltiernan.</p> <p>This enclosure is best viewed from a height adjacent to Dingle Glen NHA. From this viewpoint one gets a clear view of the enclosure. The impact of a multitude of urban uses – the tiphead, pylons and houses on the landscape are evident.</p>	<ul style="list-style-type: none"> <li>Following on from decommissioning of the existing tiphead it is probable that the landscape of this enclosure will alter. The decommissioning of the tiphead offers an opportunity to enhance and restore a portion of the landscape for an amenity type purpose. The enclosure site between the urban and rural landscapes and is capable of accommodating development.</li> </ul>

**Table 4.1 Landscape Character Areas.**

There are a number of Conservation Areas outlined by Dun Laoghaire-Rathdown County Council in the County Development Plan (2004-2010). Within these areas the Council will have particular regard to the impact of a proposed development on the character of the area in which it is to be placed. All proposals for new development should preserve or enhance the character and quality of the environment within a Conservation Area. One such Conservation Area, Moss Cottages, is located within the study area, to the east of Goldenball Junction along the Enniskerry Road.

## **4.8 AESTHETICS**

One of the policies of the Dun Laoghaire-Rathdown County Development Plan (2004-2010) is to protect and encourage enjoyment of views and prospects of special amenity value or special interests. In the implementation of this policy it is the policy of the Council to prevent development which would block or otherwise interfere with a view which is designated for protection and preserve the prospects listed in the Development Plan. These views are shown in Figure 4.1 and include: Carrickgollogan from Ballyman Rd and; Carrickgollogan from the Enniskerry Road (south of Kiltiernan Village).

## **4.9 LANDUSE AND AGRICULTURAL POTENTIAL**

Under the Dun Laoghaire-Rathdown County Development Plan (2004-2010) land use zoning is set out to indicate the planning control objectives of the Council for all lands in its administrative area. The land use zoning objectives within the study area are shown in Figure 4.1. Objective B seeks to protect and improve rural amenity and to provide for the development of agriculture. There is a segment of land south of Glenamuck Cottages zoned for this purpose along with a further section adjacent to the Ballycorus Road. A large portion of land west of the Enniskerry Road is also zoned under Objective B.

## **4.10 SETTLEMENTS AND AMENITIES**

There are several recreational areas within the study area including:

- Stepaside Golf Course
- Carrickmines Golf Course
- Wayside Celtic FC
- Bective Rangers FC
- De la Salle Palmerstown FC
- Carrickmines Equestrian Centre

There are a number of schools in close proximity to the study area these include:

- Kiltiernan 2 National School (beside Church of Ireland)
- Kiltiernan 1 National School (Bishops Lane)
- Gaelscoil Thaobh na Coille (national school beside De la Salle Palmerstown FC)
- Naionra Thaobh na Coille (playschool beside Gaelscoil)

There is one location on the Glenamuck Road approximately 300m from the Goldenball Junction with the Enniskerry Road, which is proposed as an area to provide for accommodation for the travelling community. The locations of these amenities / settlements are shown on Figure 4.1.

## **4.11 UTILITIES**

### **4.11.1 Electricity Supply Board**

#### **4.11.1.1 ESB High Voltage Cables**

The ESB have a number of High Voltage Cables in the Glenamuck Road Area. There are 3 No. high voltage ESB lines which originate from the Carrickmines 220 kV Station to the west of the Glenamuck Road. These three lines pass over the Carrickmines Interchange Southern Roundabout and continue east of the Glenamuck Road. The northern most of these lines is identified as the Carrickmines-Loughlinstown 110 kV line. The other two lines are both 38 kV lines. All three of these lines are proposed to be diverted under ground locally as part of Park Developments construction.

The Carrickmines-Fassaroe East 110 kV line emanates from Carrickmines 220 kV Station and crosses the Glenamuck Road at the entrance to Carrickmines Riding School. The Carrickmines-Fassaroe West 110 kV line also originates at the Carrickmines 220 kV Station and crosses the Glenamuck Road further south of the Carrickmines East line.

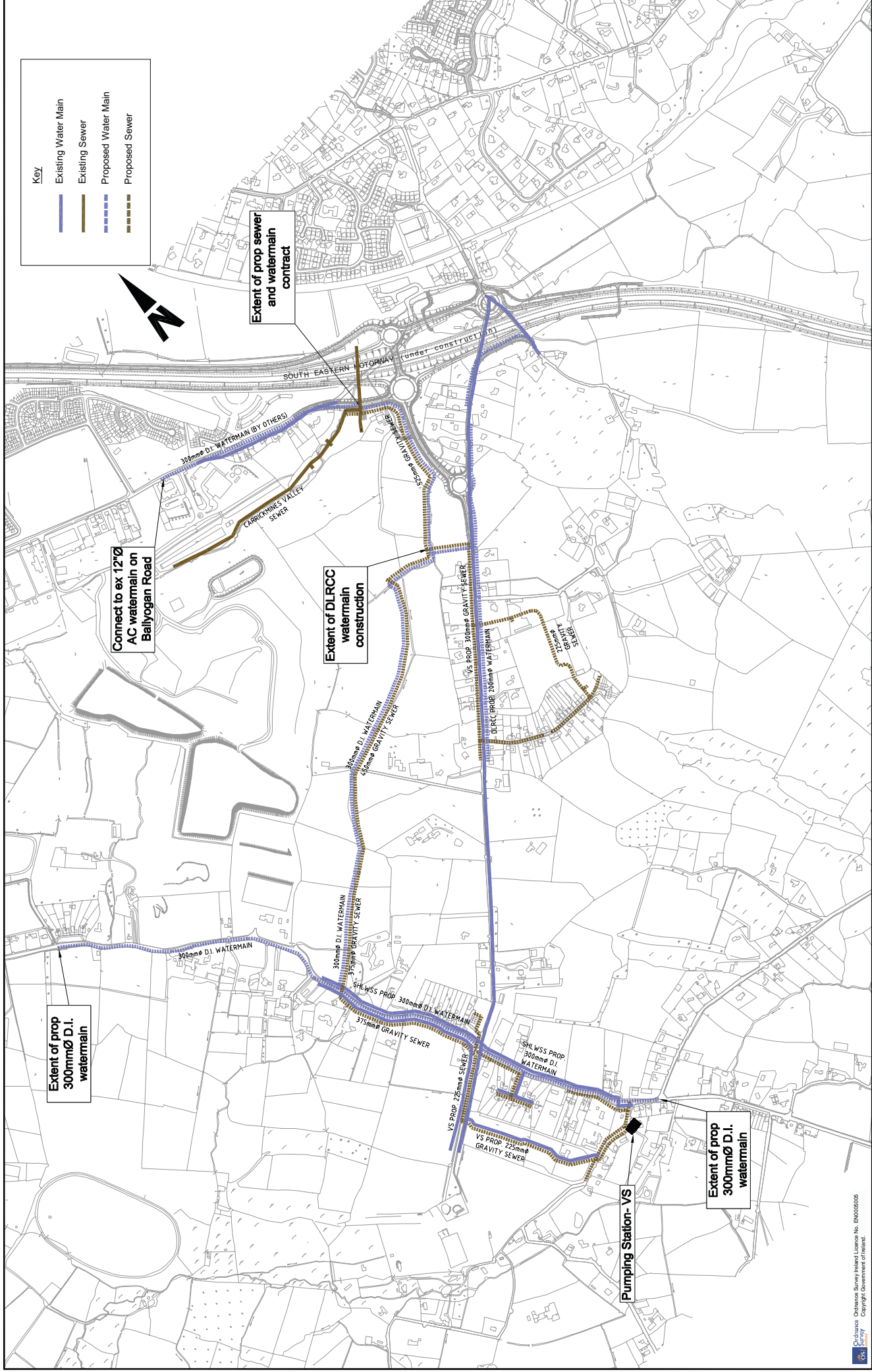
The Arklow Carrickmines 220 kV Double Circuit Line also originates from the Carrickmines 220 kV Station and crosses the Glenamuck Road close to the Golden Ball Junction. This is a major power line and could prove to be a major constraint for the scheme. The approximate locations of ESB high voltage cables within the study area are shown in Figure 4.7.

#### **4.11.1.2 ESB Low / Medium Voltage Cables**

The ESB have a number of services within the study area. To the south of the scheme there exists a low voltage overhead line running along the Enniskerry Road. An overhead low voltage line connects to this line at the Golden Ball junction and extends northwards along the Glenamuck Road until just before the Carrickmines Interchange Southern Roundabout. Low voltage lines connect to the Glenamuck line to feed areas such as Rockville Drive and 2 No. residential developments to the west of the Glenamuck Road and 1 No. to the east.

There are also a number of medium voltage overhead lines in the area. The first of these travels parallel to the Glenamuck Road some distance to the west until opposite Rockville Drive where it turns westward towards the Carrickmines powerstation. Before this turn westward a branch of this line extends East across the Glenamuck Road until just south of Rockville Drive. A section of medium voltage overhead cable also extends from the East of Rockville Drive at Cairnlea and proceeds in a northerly direction until Springfield where it turns westward towards Carrickmines Great, here it branches off, one branch travels west towards the Carrickmines powerstation while the other branch travels north parallel to Glenamuck Road North.

Underground ESB Cable Routes also exist in this area but they are located to the North of the Carrickmines Interchange Southern Roundabout along the Glenamuck Road North and so should not constrain the scheme. The approximate locations of ESB low/medium voltage cables are also shown in Figure 4.7.



**Key**

	Existing Water Main
	Existing Sewer
	Proposed Water Main
	Proposed Sewer

Job No: MDT0205	PH
File No: MDT0205CN009.dwg	ID
Checked by:	MN
Approved by:	MN
Scale: 1:1000 @ A3	Fig. No:
Date: Jan'05	Figure No. 4.6

Utilities  
**WATERMANS AND SEWERS**

**GLENAMUCK DISTRICT  
 DISTRIBUTOR ROAD**

**NOTES**

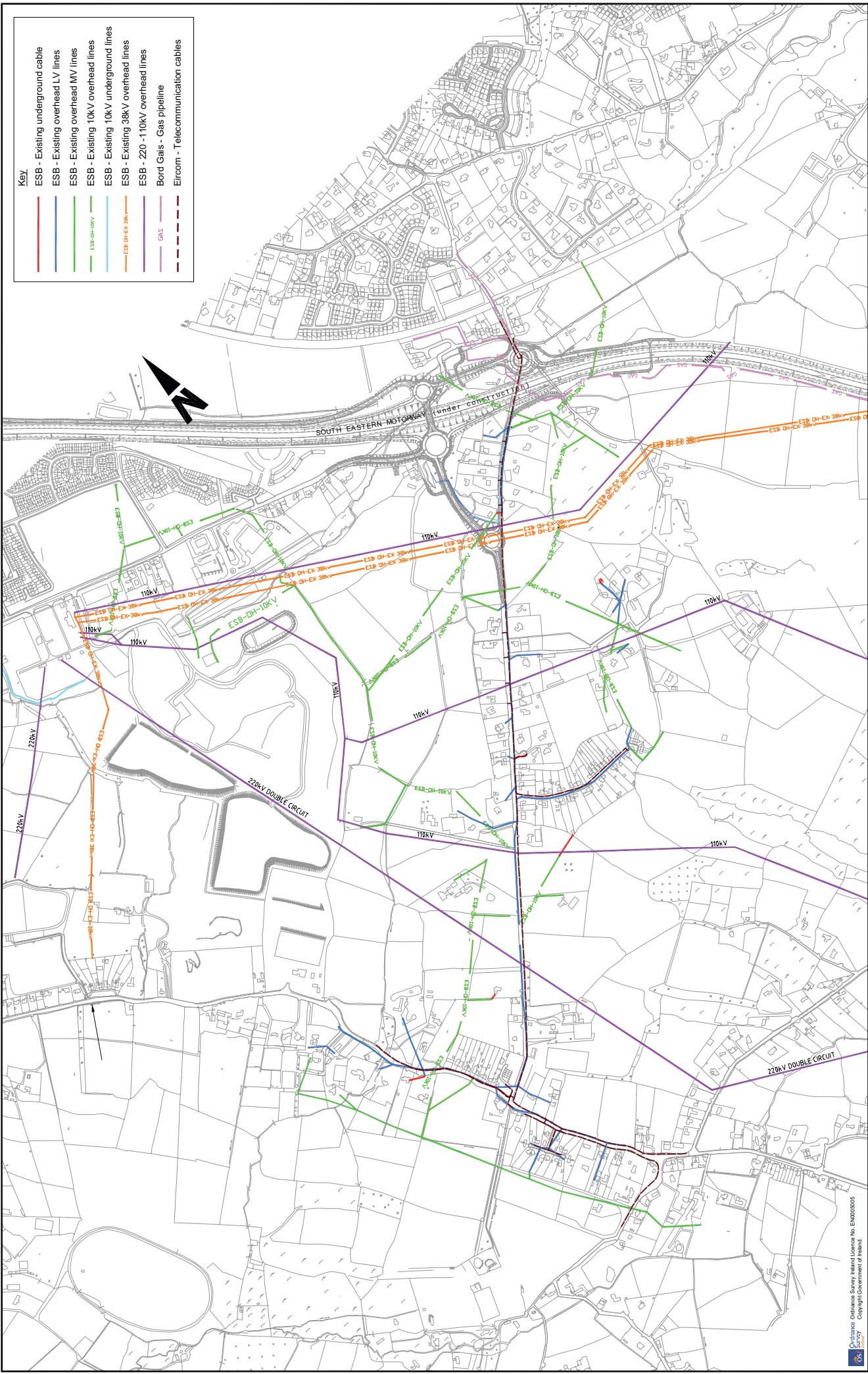
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RPS-MCOOS Ltd., West Pier Business Campus  
 T: +353 1 238 4499 F: +353 1 238 5676  
 E: rpsmc00s@rpsgroup.ie W: www.rpsmc00s.ie

Client: Mr. Eamonn O'Hare  
 Director  
 DUN LAOGHAIRE RATHDOWN COUNTY COUNCIL  
 County Hall, Marine Road, Dun Laoghaire, Co. Dublin  
 Phone: 01 2847070 Fax: 01 2808889

Dun Laoghaire-Rathdown  
 County Council  
 Dun Laoghaire-Rath an Duin

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Key	
	ESB - Existing underground cable
	ESB - Existing overhead LV lines
	ESB - Existing overhead MV lines
	ESB-DH-10kV
	ESB - Existing 10kV overhead lines
	ESB - Existing 10kV underground lines
	ESB - Existing 38kV overhead lines
	ESB - 220 - 110kV overhead lines
	Bord Gais - Gas pipeline
	Eircom - Telecommunication cables

Down by:	PH	Job No: MDT0205
Checked by:	JD	File No: MDT0205001010.dwg
Approved by:	MN	Fig No:
Scale:	1:10000 @ A3	
Date:	Jun.05	

UTILITIES  
**ESB, EIRCOM AND BORD GAIS**

**GLENAMUCK DISTRICT  
 DISTRIBUTOR ROAD**

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RPS MCOS  
 RPS/MCOS Ltd., West Pier Business Campus,  
 The Mall, Dublin 1, Co. Dublin  
 T: +353 1 234 5678 F: +353 1 234 5676  
 E: rpsmcos@rpsgroup.ie W: www.rpsmcos.ie

Client:  
 Mr. Eamonn O'Hare  
 Director of Operations  
 Director of Capital Projects  
 Director of Planning  
 County Wick, Main Road, Don Laoghaire, Rath a Duin  
 County Wick, Main Road, Don Laoghaire, Co. Dublin  
 Phone: 01 2847070 Fax: 01 2808889

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### 4.11.2 Bord Gais

Bord Gais Transmission have a high pressure gas main in the Glenamuck Road area. This main however runs to the north of the Carrickmines Interchange Southern Roundabout and approximately parallel to the south eastern motorway and should not constrain the scheme. The approximate location of this gas main is shown in Figure 4.7.

Bord Gais have indicated that they do not have any existing distribution gas apparatus within the Glenamuck study area. They do however have services located north of the study area towards Carrickmines. These services are shown in Figure 4.7 and should not constrain the scheme.

### 4.11.3 Telecommunications

Eircom have extensive existing underground (UG) telecommunications within the study area, and these are shown on Figures 4.7. There are 2 No. 100mm diameter PP and 1 No. 100mm diameter CD underground ducts in place along the northern pathway of the Enniskerry Road. A 100mm underground CD duct runs parallel to the existing Glenamuck Road along the Eastern pathway with several cables branching off to the various public roads and properties along the route, namely at Rockville Drive and again to a housing development some distance after Rockville Drive to the east also. At Carrickmines Great the service is increased from 1 No. 100mm diameter CD to 2 No. 100mm diameter PP and 1 No. 85mm diameter ST. This underground line continues north past the Carrickmines Interchange Southern Roundabout and along the east side of the Glenamuck Road North.

NTL has indicated that they do not have any existing plant or services within the study area.

Esat BT has also indicated that they do not have any existing plant or services within the study area.

### 4.11.4 Watermains

There are a number of existing watermains within the study area. There is currently a watermain running along the northern verge of the Enniskerry Road. A watermain also exists along the eastern verge of the Glenamuck Road. Details of the watermains in the study area are shown in Figure 4.6.

The proposed Glenamuck – Kiltiernan Water and Drainage Scheme was advertised for tender on the 18<sup>th</sup> of January 2005. The tender deadline is the 23<sup>rd</sup> of March 2005. This scheme incorporates a number of proposed watermains in the Glenamuck Road Area. See Figure 4.6 for details. The proposed scheme consists of a 300mm watermain running along the north side of the Enniskerry Road past the Golden Ball Junction. A 200mm watermain will also run along the east side of the Glenamuck Road from south of Rockville Drive to south of the Carrickmines Interchange Southern Roundabout. Here it turns west to connect into a 300mm diameter watermain which will run parallel to the Glenamuck Road at some distance to the west.



#### **4.11.5 Drainage and Sewers**

There are surface water drainage gullies collecting surface water run off to the east of the existing Glenamuck Road at Glenamuck Cottages where the road is kerbed. Elsewhere the road drainage collected in shallow ditches running at the back of the verge at either side of the Glenamuck Road. These ditches outfall to a tributary of the Glenamuck Stream. Refer to Figure 4.2 for details of the rivers and streams network.

As apart of the proposed Glenamuck – Kiltiernan Water and Drainage Scheme which is due for completion in 2005 the following drainage and sewer services are proposed. A 375mm gravity sewer is to be constructed along the south side of the Enniskerry Road past the Golden Ball junction. A 300mm gravity sewer will run along the centre of the Glenamuck Road from south of Rockville Drive to south of the Carrickmines Interchange Southern Roundabout where it turns west to connect into a 525mm gravity sewer which will run parallel to the Glenamuck Road at some distance to the west. See Figure 4.6 for details.

## 5 TRAFFIC

### 5.1.1 Existing Road Network

The existing road network is described in detail in the Traffic Appraisal Report – Existing Conditions

RPS-MCOS will conduct data collection that will include the use of all available DLRCC traffic data, the DTO (Dublin Transportation Office) SATURN model, as well as extracts from a number of Traffic Impact Assessments completed for large-scale developments within the specified study area.

Extracts from the Traffic Impact Assessments for the 'The Park' (Phase 1+2) Carrickmines and residential developments by Abbeyrock Developments Ltd, Lyngrove Developments Ltd, Provan Developments Ltd and Patrick Mooney Developments Ltd and the Lehaunstown Interchange Upgrade Scheme, representing the proposed development at Cherrywood will be used in the traffic assessment of the local road network.

In addition a full turning count traffic survey has been conducted on the priority junctions within the study area.

### 5.1.2 Traffic Counts

Abacus Transportation Surveys Ltd were commissioned to carry out full turning count traffic movements at three junctions including:

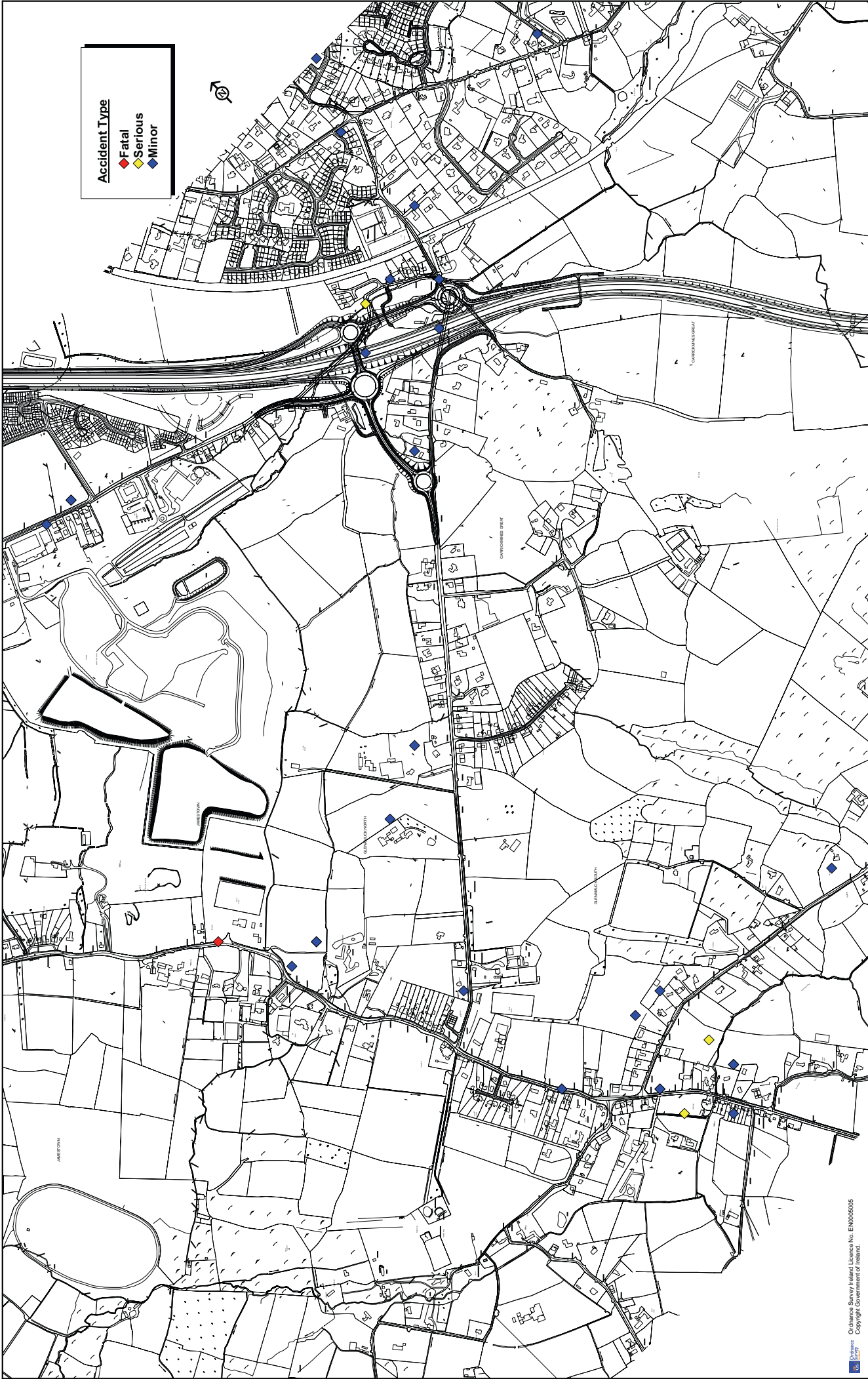
- Glenamuck Road / Enniskerry Road priority junction;
- Glenamuck Road / Ballyogan Road roundabout junction and;
- Glenamuck Road / Brighton Road / Claremont Road / Brennanstown Road signalised junction.

These counts were carried out on Wednesday 1<sup>st</sup> December 2004 from 07:00 to 19:00, which covered both the AM and PM peak traffic movements. It was found that the AM peak hour times were from 08:00 to 09:00 and the PM peak hour times were from 17:00 to 18:00. The results from the traffic survey are discussed in the traffic report.

### 5.1.3 Accident Data

A total of 376 people were killed in 346 fatal accidents on Irish roads in 2002 with a further 9,206 people received serious or minor injuries from road accidents. Of this total, 49 fatal accidents occurred in Dublin with a further 2,113 people receiving serious or minor injuries. Road Accident Facts Ireland 2002 (National Roads Authority, November 2003)

Accident data for a six year period, January 1996 to December 2002, for the sections of road in close proximity to the study area have been provided by the National Roads Authority (NRA) Accident Database 1996-2002. The accident locations and summary of the accident data is shown in Figure 5.1.



**Accident Type**

- ◆ Fatal
- ◆ Serious
- ◆ Minor

Drawn by:	SK	Job No:	MDT025
Checked by:	GK	File No:	MDT025/M000003
Approved by:	MN	Fig. No:	
Scale:	1:10,000 @ A3	<b>Figure No. 5.1</b>	
Date:	Jan 05		

**Accident Data**

**GLENAMUCK DISTRICT  
DISTRIBUTOR ROAD**

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**RPS** **mcos**

RPS/MCOS West Pier Business Campus,  
 100 West Pier Road, West Pier, Dublin 12.  
 T: +353 1 494 3000 F: +353 1 494 3001  
 E: rpsmcos@rpsmcos.ie W: www.rpsmcos.ie

**Client:**

Mr Eamon O'Hare  
 Director of Transportation  
**DÚN LAOGHAIRE RATHDOWN COUNTY COUNCIL**  
 County Hall, Chimes Road, Dún Laoghaire - Rath an Duin  
 Dún Laoghaire-Rathdown  
 Phone: 01206 96100 Fax: 01206 961099

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Note: The coordinates for accident locations received from the NRA database do not correspond exactly with the OS mapping. Therefore the information on accident locations is included for general information purposes only and is subject to change once more accurate data becomes available.

Analysis of the accident data shows that there were the following accidents on the road network within the study area. The results of the accident analysis are shown in Table 5.1.

Road section	Fatal	Serious injury	Minor injury	Material damage
Glenamuck Road North of the Interchange	0	0	4	-
Glenamuck Road South of the Interchange	0	0	1	-
Ballyogan Road	0	1	2	-
Enniskerry Road (North)	1	0	1	-
Enniskerry Road (South)	0	0	1	-
Brennanstown Road	0	0	0	-
Brighton Road	0	0	1	-
Claremont Road	0	0	0	-

**Table 5.1 Accident Data for Study Area Road Network. (NRA, 1996 - 2002)**

Current road design standards will be applied to the improvement scheme. The provision of a new road with increased cross-section and better forward visibility should offer a significant reduction of accidents on the route of the proposed improvement.

By applying the consumer price increase to the 2001 accident costs, outlined in Road Accident Facts 2001, it is estimated that the cost of a fatal accident in 2002 prices was €1,357,489.00 while serious and minor accident costs are estimated at €168,461 and €16,142 respectively. The total cost of road accidents in 2002 reported to and recorded by An Garda Síochána is estimated in the region of €728 million based on fatalities and injuries sustained. The reduction in accident rates would have significant positive cost benefit, as well as the personal implications, and further defines the need for the proposed improvement scheme.