GeoBuilding Intel Technical Guide

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1. Introduction

1.1 GeoDirectory

GeoDirectory is a collaboration between An Post and Ordnance Survey Ireland (OS*i*), the experts in postal and geographic addressing in Ireland. The purpose of GeoDirectory is to create a definitive reference directory of addresses in Ireland and to assign to them accurate postal and geographic addresses.

1.2 Eircodes

Eircodes is the branded name given to Postcodes in Ireland and they are now available in GeoDirectory. GeoDirectory is the source for Eircodes and Eircodes were devised, created and are maintained using GeoDirectory's main database which combines data acquired from An Post and Ordnance Survey Ireland. The codes are individual, seven-character postcodes assigned to every residential or business building in the country.

This document provides technical information for the users or potential users of the GeoDirectory product GeoBuilding Intel. It only describes data or fields not already described in GeoDirectory technical guide.

2. Data source

2.1 Ordnance survey Ireland (OSi)

The OSi provides building height data, ground height data and building footprint (Area). The area is shown in meters squared.

2.2 GeoDirectory

2.2.1 Year of build data

GeoDirectory provides the accurate year of build for all buildings built after 2002 and for heritage sites. For buildings before 2002 year of build is estimated using 10 or 30 years' cycle.

2.2.2 Floors

The number of floors in the building.

2.2.3 Estimated Number of Bedrooms and Bathrooms

Source data used for building supervised algorithm was collected from publicly available sources. Different algorithms were used for bedroom and bathrooms calculations.
The assumption is that neighbourhood residential buildings\ units with the same building type, similar square footage area and similar building age should have similar number of bedrooms\bathrooms.
Estimations were build using county, building type, locality type, year of build, sq. footage area, floors, small area, socio demographic profile of the area etc.

2.3 Sustainable Energy Ireland (SEI)

Median BER for small area is supplied by Sustainable Energy Ireland. The BER Mode is provided on the building level for residential units when data was available. In all other cases BER Mode was estimated

with the most frequent BER mode in small area for specific building type. SEI also provides building structure data, water and space heating fuel data and roof type.

Further information: https://www.seai.ie/technologies/seai-maps/ber-map/

2.4 Property service regulatory authority (PSRA)

Property sale price: The product contains the sale price for the property sold in the previous year. If the house was sold more than once only the last sale price is stored.

Date of property sold: The actual date of property sold.

Further information: http://psr.ie/en/PSRA/Pages/Re-Use_of_Information

2.5 Society of Chartered Surveyors Ireland (SCSI)

The rebuild cost in 2022 was estimated for residential units using building cost by square meter for rural and urban areas supplied by SCSI, building area and number of floors. The rebuild cost presents the minimum cost to reconstruct the structure with the same dimensions.

Further information: https://scsi.ie/

2.6 EPA-Environmental Protection Agency

EPA agency provides information on the Soil Association type and Radon Risk for the Ireland area. The Soil Map was the result of the Irish Soil Information System Project which main objective was to conduct a programme of structured research into the national distribution of soil types. The area's Soil Type and Radon Risk were determined using EPA Soil Association and Radon Risk Maps along with the location of the building.

Further information: https://gis.epa.ie/GetData/Download

2.7 Geological Survey Ireland

The Landslide Maps were prepared by GSI under the Landslide Susceptibility Project. The main aim was to assist in the identification of areas that are likely to experience land sliding and develop a model for susceptibility mapping on a national basis. The Landslide Risk level of the area was determined using the Landslide Maps with the location of the building.

Further information: https://www.gsi.ie/en-ie/data-and-maps/Pages/default.aspx

3. Maintenance of GeoBuilding Intel

Data is updated twice a year.

4. Data supply

Data is supplied as a flat CSV file.

- The first row has column names
- A comma is used as the field delimiter
- Dates in the CSV files are of the form DD/MM/YYYY
- The Euro symbol € is found in the PROPERTY_SALE_PRICE field

COLUMN NAMES	COLUMN TYPE	Column Description
ADDRESS_REFERENCE	VARCHAR2(17 BYTE)	Unique reference for every address in Ireland. Combination of the Building_id and the Address_Point_ID. If the Address_Point_ID is null then the Address_Reference is padded with zero's. ("`" is added to ADDRESS_REFERENCE column to avoid excel transformation. e.g:`1897586532614562)
BUILDING_ID	NUMBER(8,0)	Unique 8 digit identification number for the building.
ADDRESS_POINT_ID	NUMBER(8,0)	Unique 8 digit identification number for the Address Points (sub-building units)
ADDR_LINE_1	VARCHAR2(200 BYTE)	Standardized addresses in Fields ADDR_LINE_1 .. ADDR_LINE_10
ADDR_LINE_2	VARCHAR2(200 BYTE)	
ADDR_LINE_3	VARCHAR2(200 BYTE)	
ADDR_LINE_4	VARCHAR2(200 BYTE)	
ADDR_LINE_5	VARCHAR2(200 BYTE)	
ADDR_LINE_6	VARCHAR2(200 BYTE)	
ADDR_LINE_7	VARCHAR2(200 BYTE)	
ADDR_LINE_8	VARCHAR2(200 BYTE)	
ADDR_LINE_9	VARCHAR2(200 BYTE)	
ADDR_LINE_10	VARCHAR2(200 BYTE)	
POSTAL_ADDR_LINE_1		The official Postal address in fields POSTAL_ADDR_LINE_1 .. POSTAL _ADDR_LINE_10
POSTAL_ADDR_LINE_2		
POSTAL_ADDR_LINE_3		
POSTAL_ADDR_LINE_4		
POSTAL_ADDR_LINE_5		
POSTAL_ADDR_LINE_6		
POSTAL_ADDR_LINE_7		
POSTAL_ADDR_LINE_8		
POSTAL_ADDR_LINE_9		
POSTAL_ADDR_LINE_10		
COUNTY_NAME	VARCHAR2(40 BYTE)	
EIRCODE	VARCHAR2(7 BYTE)	The Eircode associated with the address
LATITUDE	VARCHAR2(100 BYTE)	Geocode of the Building expressed as a Latitude
LONGITUDE	VARCHAR2(100 BYTE)	Geocode of the Building expressed as a Longitude
BUILDING_HEIGHT	NUMBER(10,2)	Height of the building above ground level
GROUND_HEIGHT	NUMBER(10,2)	Height of the ground above Mean Sea Level
AREA(SQ.METERS)	NUMBER(10,2)	The square footage area of the building in square meters
FLOORS	NUMBER(3)	The number of floors in the building
UNIT_USE	VARCHAR2(1 BYTE)	Unit use column indicates whether this unit is residential (R), commercial (C) or unknown (U)
BUILDING_USE	VARCHAR2(1 BYTE)	Building use column indicates whether this building is residential (R), commercial (C), both residential & commercial (B) or unknown (U)
BUILDING_TYPE_NAME	VARCHAR2(50 BYTE)	The Type of Building e.g. Bungalow, Detached etc.
PROPERTY_SALE_PRICE_(€)	NUMBER(30,2)	The value of the sale price of the property in euros.
DATE_OF_SALE	DATE	The actual property date of sale.
SMALL_AREA	VARCHAR2(100 BYTE)	The Small Areas associated with a building location
BER_ENERGY_MEDIAN	NUMBER(30,2)	The Median energy rating expressed in KWh/m²/year for each small area
BER_RATING_HIGH_(%)	VARCHAR2(100 BYTE)	Percentage of buildings in the range from A1-C3
BER_RATING_LOW_(%)	VARCHAR2(100 BYTE)	Percentage of buildings in the range from D1-G
BER_RATING_MODE	VARCHAR2(2 BYTE)	BER rating of the building if it is available \ most frequent BER in specified small area by building type
YEAR_OF_BUILD	VARCHAR2(100 BYTE)	For building built after 2002 - year of build For most of heritage sites – year of build For buildings with unknown year of build- 10 years band or 30 years band
EST_BEDROOMS	VARCHAR2(10)	Estimated number of bedrooms 3|4 → building\unit can have 3 or 4 bedrooms
EST_BATHROOMS	VARCHAR2(10)	Estimated number of bathrooms 2|3 → building\unit can have 2 or 3 bathrooms
EST_REBUILD_COST	NUMBER(10,2)	Estimated Rebuild Cost in 2022
LANDSLIDE RISK	VARCHAR2(20)	Landslide Risk classification associated with the building location
EST_STRUCTURE_TYPE	VARCHAR2(40)	ST of the building if it is available \ most frequent ST in specified small area by building type
EST_WATER_HEATING_FUEL	VARCHAR2(40)	WHF of the building if it is available \ most frequent WHF in specified small area by building type
EST_SPACE_HEATING_FUEL	VARCHAR2(40)	SHF of the building if it is available \ most frequent SHF in specified small area by building type
EST_PREDOMINANT_ROOF_TYPE	VARCHAR2(40)	PRT of the building if it is available \ most frequent PHT in specified small area by building type
RADON RISK	VARCHAR2(20)	Radon Risk Classification associated with the building location

COLUMN NAMES	COLUMN TYPE	Column Description
SOIL_GROUP_NAME	VARCHAR2(200)	Soil Great Group Names associated with building location Scheduled for inclusion in Q1 2023
SOIL_DEFINITION	VARCHAR2(300)	Brief description of the Soil type associated with each building location Scheduled for inclusion in Q1 2023
SOIL_ASSOCIATION	VARCHAR2(100)	Soil Association code associated with the building location (Soil Type) Scheduled for inclusion in Q1 2023

(Varchar is an Oracle description of the data where “short text” and “integer” are used in Access)

5. Ordering GeoBuilding Intel

GeoBuilding Intel data is not provided in the standard GeoDirectory products. Further information or ordering details, please contact GeoDirectory by any of the following methods:

Mail: GeoDirectory
GPO,
O’Connell St. Lower,
Dublin 1.

Phone: (01) 7057005 or from outside Ireland at +353 1 7057005
Fax: (01) 7057160 or from outside Ireland at +353 1 7057160
E-Mail: geodirectory@geodirectory.ie
Web: www.geodirectory.ie