EIRCODE ADDRESS FILE PRODUCT GUIDE



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www.eircode.ie

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Using the Eircode Address File Product Guide

Introduction

This is the product guide to the Eircode Address File (ECAF) data product. The document is structured in two sections.

The Code of Practice available at www.eircode.ie outlines the acceptable usage of Eircodes.

1. General Information

This section covers the following topics:

- What is an Eircode
- The structure of an Eircode
- Recommendation for storage and presentation
- Describes the ECAF data product
- · Describes the postal address in the ECAF
- Describes how Irish language is included in the ECAF

2. Data Provision and Updates

This section covers the following topics:

- Data supply format and options for receiving updates
- Business process considerations



1. General Information

1.1 Background

In July 2015 all 2.2 million residential and business addresses in Ireland received a letter notifying them of the Eircode for their address. Eircode is a public database of unique identifiers for all properties in Ireland that assists citizens, businesses and public bodies to locate every individual address in the country.

Unlike other countries, where postcodes define clusters or groups of addresses, an Eircode identifies an individual address – rural or urban - and shows exactly where it is located. An Eircode is much more than just a postcode; it is a smart location code for all Irish addresses.

People and businesses do not need to change their address; they just add the Eircode to the end of their current address. The use of Eircode is not mandatory on mail, but many organisations and businesses ask people to provide their Eircode as a normal part of doing business (e.g. to capture address details faster and more accurately, to improve delivery accuracy).

1.2 What is an Eircode?

An Eircode is a smart location code for all Irish addresses. An Eircode is assigned to every residential and business address in Ireland that receives post, as defined by the Universal Service Provider for postal services in Ireland. Throughout this document the term "Postal Address" always refers to a delivery address as defined by Irish Standard - I.S. EN 14142-1:2011 (Postal services. Address databases), as operated by the Universal Service Provider, An Post.

One or more Eircodes are assigned per building depending on the number of unique addresses within the building. For multi-occupancy residential premises, each individual address, e.g. "Apartment 1" receives its own Eircode. For multi-occupancy business premises unique address information is required, e.g. "Unit 1", otherwise the businesses are assigned the same Eircode.

For multi-occupancy mixed use buildings Eircodes are not shared between residential and non-residential addresses. The only exception to this rule is where the entire address is both residential and non-residential, e.g. a farm house.

1.3 Who supplies Eircode?

Eircode (the company), part of Capita Business Support Services (Ireland) Ltd is the Postcode Management Licence Holder (PMLH) and was awarded the government licence to design, launch and manage a postcode system for Ireland. This included the design and assignment of the postcode – now called "Eircode.

Find out more by visiting the Eircode website www.eircode.ie



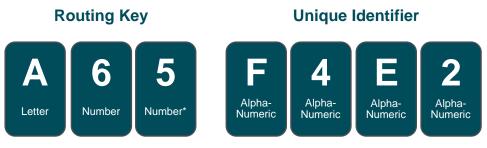
1.4 Sources of Data

The source data is supplied by An Post GeoDirectory Limited, which sources information from Ordnance Survey Ireland, The Placenames Branch (Department of Arts, Heritage and the Gaeltacht) and the Universal Service Provider for postal services in Ireland, An Post.

1.5 Eircode Structure and Presentation

An Eircode is a seven-character postcode consisting of two elements:

- 1. Three-character Routing Key
- 2. Four-character Unique Identifier



* "W" allowed for only in D6W

1.5.1 Recommendations for Storage and Presentation

- An Eircode should always be stored as a single string of seven upper case characters in IT systems, i.e. A65F4E2.
- An Eircode should always be presented in upper case as two parts separated by a space, on stationary, mail items, computer forms, etc. i.e. A65 F4E2 and never A65F4E2.

1.5.2 Routing Key

The Routing Key is the first part of an Eircode and is consistently three characters long. The Universal Service Provider identified principal post towns through which mail is distributed and Eircode assigned Routing Key codes to those principal post towns. The Routing Key format is Letter-Number-Number with the single exception of D6W for the Dublin 6W postal district. The existing Dublin Postal Districts 1 to 24 have been retained as D01 to D24. The Routing Key letter and numbers assigned to the remainder of the 139 Routing Keys are not directly linked to counties, towns or any other geographic boundaries. A Routing Key will be shared by many properties in an area. Routing keys are fixed once assigned to an address and do not change.

1.5.3 Unique Identifier

The Unique Identifier is the second part of an Eircode and consistently comprises four characters. The Unique Identifier is unique within each Routing Key, but not across Routing Keys. Unique Identifiers are not assigned in any sequence order, nor is there any hierarchical grouping information contained in the Unique Identifier. Unique Identifiers are fixed once generated to an Eircode, and are only retired if there is a change of building use,



e.g. A Georgian House is converted into a block of apartments.

The Unique Identifier has the same allowable characters in each position, twenty five characters in total defined from the following available list of numbers and letters:

NUMBERS:	0,1,2,3,4,5,6,7,8,9
LETTERS:	A,C,D,E,F,H,K,N,P,R,T,V,W,X,Y

This provides $25 \times 25 \times 25 \times 25$ possible combinations, which allows a maximum of 390,625 Eircodes per Routing Key.

1.5.4 Character Set

The characters allowed in each position in an Eircode are as below:

Component	Position	Allowed Characters
Routing Key	1	A,C,D,E,F,H,K,N,P,R,T,V,W,X,Y
	2	0-9
	3	0-9 with the exception of W for D6W
Unique Identifier	4	0-9 and A,C,D,E,F,H,K,N,P,R,T,V,W,X,Y
	5	
	6	
	7	



1.6 Eircode Address File (ECAF)

ECAF is the Eircode Address File which contains one record for each Postal Address. English language and Irish language versions are available. It is distributed as a flat file, details of data provision and updates are provided in *section 2*.

Address information in the ECAF is currently stored in upper case only.

The ECAF file layout is as follows:

Address Group	ECAF field	Max. field length
Unique Identifier	ECAF_ID	10
Premises Elements	Department	60
	Organisation	60
	Sub Building Name (e.g. 'Flat 1')	60
	Building Name (e.g. 'Rose Cottage')	60
	Building Number (e.g. 22)	40
Thoroughfare Elements	Building Group (e.g. 'Marian Terrace')	60
	Primary Thoroughfare (e.g. 'Griffith Road')	40
	Secondary Thoroughfare (e.g. Navan Road')	40
Locality Elements	Primary Locality (e.g. 'Cookstown Industrial Estate')	40
	Secondary Locality (e.g. 'Manorhamilton')	40
	Tertiary Locality (e.g. 'Dublin 14')	40
	Post County (e.g. 'Cork')	30
Eircode	Eircode (e.g. 'A65R2AF')	7
Address	Address Line 1	200
	Address Line 2	200
	Address Line 3	200
	Address Line 4	200
	Address Line 5	200
	Address Line 6	200
	Address Line 7	200
	Address Line 8	200
	Address Line 9	200
AN POST GEODIRECTORY ID	Address Reference	16

The unique identifier in the ECAF is the ECAF_ID. This unique identifier allows each address



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in the ECAF to be uniquely identified. It can also be used as index once the data has been imported into a relational database. This is a numeric field that can store values from 0 to 2,147,483,647. It is represented as a number up to 10 digits long. All other fields are alphanumeric.

The ADDRESS_REFERENCE is the An Post GeoDirectory address reference identifier used by the Universal Service Provider.

The Eircode is always the last line of a Postal Address generated within the state, e.g. if an address has four lines then the Eircode will be on its own on Address Line 5. For inbound international mail the country name IRELAND should be appended as the last line of the Postal Address.

1.7 Postal Address

The postal address as defined by Irish Standard - I.S. EN 14142-1:2011 (Postal services. Address databases), as operated by the Universal Service Provider, An Post, is the address used in the ECAF.

An Post, the Universal Service Provider, prompts postal users to use the addressing format required to maximise the effectiveness and efficiency of the postal service. Their addressing guides comply with the Universal Postal Union's (UPU) (the United Nations body responsible for promoting standards in the postal industry across the World) addressing guidelines.

The Postal Address is made up of a number of parts as outlined in the table below.

Address Parts		
Department		
Organisation		
Sub Building Name (e.g. 'Flat 1')		
Building Name (e.g. 'Rose Cottage')		
Building Number (e.g. 22)		
Building Group (e.g. 'Marian Terrace')		
Primary Thoroughfare (e.g. 'Griffith Road')		
Secondary Thoroughfare (e.g. Navan Road')		
Primary Locality (e.g. 'Cookstown Industrial Estate')		
Secondary Locality (e.g. 'Manorhamilton')		
Tertiary Locality (e.g. 'Dublin 14')		
Post County (e.g. 'Cork')		
Eircode (e.g. 'A65F4E2')		

There are twelve possible address parts but no Postal Address contains more than eight address lines. A set of rules is applied to the twelve possible address parts to construct an address with a maximum of eight lines plus a line for the Eircode. The results are stored in the ECAF as described in *section 1.6*.



1.8 Irish language in ECAF

The ECAF is bilingual by design.

If a translation is not available the English version of the address is used.



2. Data Provision and Updates

A full version of the ECAF is supplied quarterly, with monthly updates supplied between the quarterly releases. These are available for secure download via the Eircode website **www.eircode.ie**

2.1 ECAF

There are two types of update available for the ECAF:

- Quarterly Full
- Monthly Update

The recommended way to update the ECAF is to take regular refreshes of the full dataset every quarter, and insert the new records supplied every month in between quarterly updates. This is low effort and guarantees that the version of the ECAF is fully up-to-date and correct.

The data is stored in text files that are tab delimited with column headers as the first line and each subsequent line is a row of data. The lines are separated by newline characters. The character encoding is Windows 1252.

Description	Character	Ascii values
Delimiter	Tab (\t)	0x09
Newline	Newline (\r \n)	0x0A , 0x0D

2.1.1 Quarterly Full

The Quarterly Full dataset consists of a single zip file with both English and Irish versions of a text file that contains the whole dataset for this quarterly release of the ECAF. The schema of the ECAF is described in *Section 1.6 Eircode Address File*. The file size estimate for the Complete Dataset zip file is 120Mb, the unzipped contents are approximately 600Mb.

When updating an ECAF with the complete dataset, the existing data for the ECAF table should be removed, leaving an empty table. Then import the new file into the table giving a fully updated ECAF table.

2.1.2 Monthly Update

The Monthly Update dataset consists of a single zip file with a list of records to delete, plus both English and Irish versions of a text file that contains all the new and changed addresses and Eircodes assigned this month. The schema is identical to the Quarterly Full File.

When updating an ECAF with the Monthly Update, delete the specified records and then import and append the new file into the existing table, giving a fully updated ECAF table.



2.1.3 Release Schedule

Month	Release
January	Monthly Update
February	Quarterly Full
March	Monthly Update
April	Monthly Update
May	Quarterly Full
June	Monthly Update
July	Monthly Update
August	Quarterly Full
September	Monthly Update
October	Monthly Update
November	Quarterly Full
December	Monthly Update

2.2 Change Processes

ECAF updates bring changes to addresses, and in certain cases, changes to Eircodes. Users should consider how their business processes will cater for the following:

- Changed Address Elements
 A thoroughfare, building name, etc. which previously had a different name to its current
 name
- Retired Address Elements
 A thoroughfare, locality, etc. that no longer exists in any Postal Address.
- Retired Eircodes

When buildings are demolished, or if a building is changed from multi-unit to a single unit, then associated Eircodes are retired.

Replacement Eircodes

There may be exceptional circumstances that require an Eircode to be retired and substituted with another Eircode. If this occurs it will most likely be driven by updated sub-building information for multi-unit buildings that results in these addresses being given their own unique Eircode. It is Eircode's policy not to change the Eircode once issued, however, if an issue is raised regarding an Eircode it will be reviewed against the Code of Practice.



2.3 Testing the Monthly Update Process

We are using file names with the following naming convention:

- The File naming convention for Quarterly release zip file is: <customer number>_ FULL_ECAF _<year>_<quarter>.zip
- The File naming convention for Monthly release zip file is:
 <customer number> MONTHLY ECAF <year> <month>.zip

The Monthly release will contain 3 files:

- ECAF_DELETE.dat
- ECAF_ENGLISH_INSERT.dat
- ECAF_IRISH_INSERT.dat

The DELETE file contains IDs of records that have either been removed or updated (the updated ones will also be in the INSERT files). Records with these IDs will need to be deleted from your existing version of ECAF_ENGLISH and ECAF_IRISH data.

The INSERT files contain new records that have been added since the previous Monthly or Quarterly data, as well as updated records as mentioned above, so these can simply be appended to your existing version of ECAF_ENGLISH and ECAF_IRISH data.

After applying the new Monthly ECAF update, the new record count should equal the previous count of records minus the count of removed/updated records contained in the supplied Monthly ECAF DELETE file, plus the count of new/updated records contained in the supplied Monthly ECAF INSERT file for each of English and Irish. n

When the Quarterly versions of these files are released, they will contain the full set of current ECAF records. This full record set will act as a replacement of your existing versions of ECAF_ENGLISH and ECAF_IRISH data. This process of deleting the old ECAF_ENGLISH and ECAF_IRISH data before replacing them with the new data is the same process that is used for the existing Quarterly process. After replacing your existing data, the new record count should equal the total count of records supplied in the Quarterly ECAF files.



Contact Information

Contact our Customer Account Management team if you would like more information, email sales@eircode.ie

Your Comments on This Guide

If you have any comments on this version of the Eircode Address File Product Guide we would be pleased to hear from you. Email your feedback to **sales@eircode.ie** and type 'ECAF Product Guide enquiry' in the subject line.

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