Edition 7
Version 6

Programmers Guide

Technical specifications for users of PAF®
and associated raw data products

Royal Mail

Royal Mail Programmers' Guide

Contents

Using the Programmers' Guide

Introduction

This is the technical guide to all Royal Mail's raw data products based on the Postcode Address File (PAF®) or Postzon™. Computer programmers need this information to incorporate raw data into their computer system. This guide describes all the raw data formats available. It is structured in six sections.

Section 1 – General information

We recommend you always read Section 1 alongside the information on the products you're interested in, because it
- describes the structure of a Postcode and a PAF address
- talks about the PAF file and the structure of PAF database
- explains the use of Address and Organisation Keys
- gives the formatting rules that can be applied to PAF addresses for printing of labels.

Sections 2 – 4

These sections describe all the raw data products, including full product descriptions and file structures. We have split the sections to keep related products together.

Section 2 – PAF products in a RELATIONAL format
'Relational' means products based on PAF Mainfile™ There is a chapter on Mainfile itself, plus chapters on other products in the same format which may be of interest to Mainfile users, i.e.:
- Alias®
- Keychain ™
- Changes and Single Changes™

Section 3 – PAF products in a TEXT BASED format
'Text-based' means products based on the Compressed Standard™ file. There is a chapter on the Compressed Standard file, plus chapters on other products in the same format, which may be of interest to Compressed Standard file users, i.e.:
- Ranges™
- Expanded Changes and Expanded Single Changes™

Section 4 – other products

This section includes all other products which can be bought as stand-alone, or which can be bought alongside either Mainfile or Compressed Standard:

- Postcode Information File (PIF™) and PIF Changes
- Unique Delivery Point Reference Number (UDPRN™)
- BFPO Postcode data

And those products which aren't based on PAF®:

- Just Built™
- Multiple Residence™
- Not Yet Built™
- Postzon™ 100m

Sections 5

This section describes all products that are available in CSV format.

Section 6 – Appendices

This section lists appendices and useful references.

Edition 7, version 6

This is edition 7, version 6 of the PAF® Digest, now renamed the Programmers' Guide. The information it contains is correct at the time of publication in 2013.

New products added

- BFPO Postcode Data
- All products now available in CSV format

Information deleted on products no longer available:

- No deletions since previous version

What is PAF®?

PAF® stands for Postcode Address File. It's a database containing all known addresses and Postcodes in the United Kingdom, including England, Scotland, Wales, Northern Ireland, Jersey, Guernsey, and the Isle of Man. PAF® holds over 29 million addresses and 1.8 million Postcodes.

- PAF® **includes** Small User Residential, Small User Organisation and Large User Organisation details

- PAF® **excludes** the Republic of Ireland and some of the Delivery Point information in a small part of Northern Ireland. British Forces Post Office addresses, along with addresses which do not have a Delivery Point (i.e. letterbox) are not held on PAF®. Examples of those not held on PAF® are churches, telephone exchanges, substations etc.

Who supplies PAF®?

Royal Mail Group Ltd owns and maintains PAF® data in which it has copyright. The data is available to external organisations as raw data.

Software applications are also available from third party suppliers who provide a variety of products and services using PAF data. Find out more about the range of products and services available at www.poweredbypaf.com.
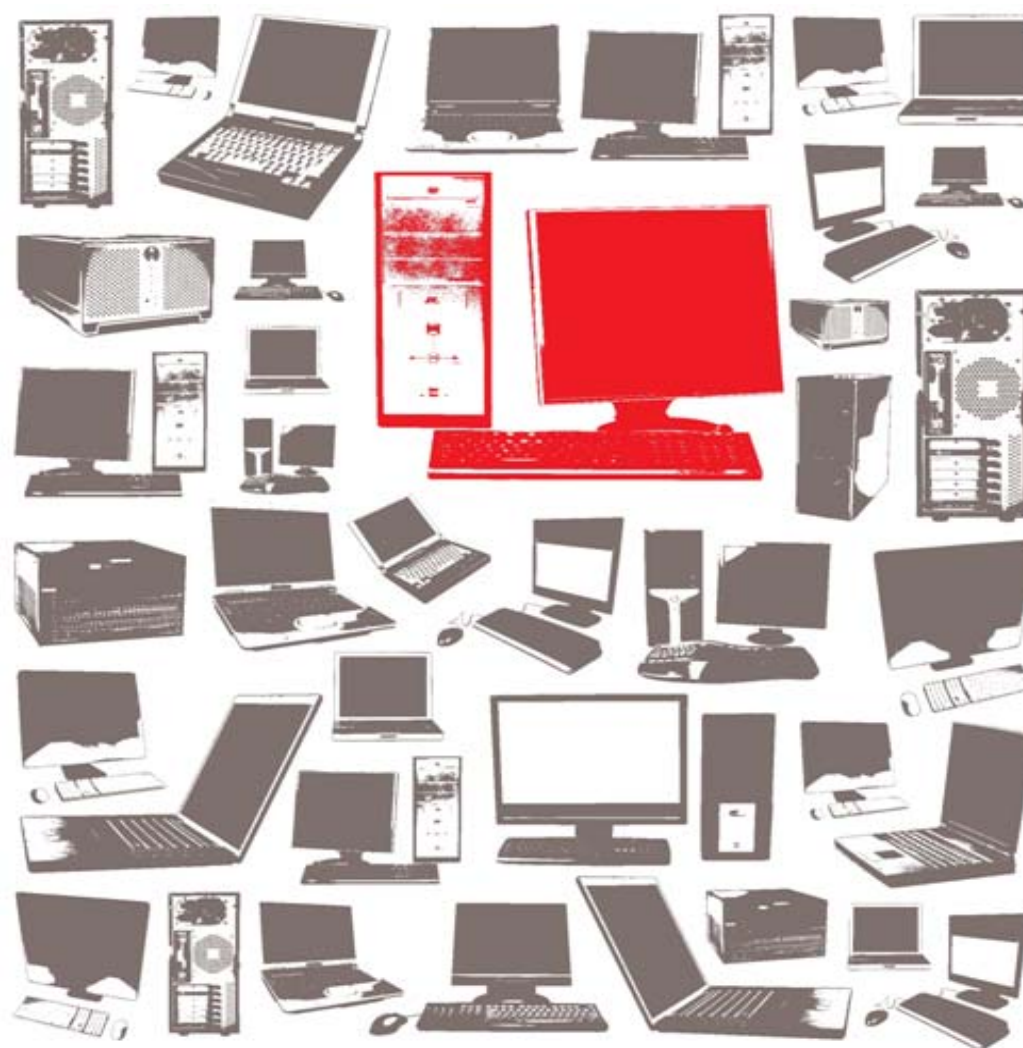
Section 1
General information on PAF®

Chapter 1 Structure of a PAF® address
Chapter 2 Structure of the PAF® database
Chapter 3 Formatting a PAF® address for printing
Chapter 4 Information on files & tables

Structure of a PAF® address

Introduction

PAF® gives you direct access to essential information about Delivery Points.

This chapter describes each of the different address elements. No one single address has all elements populated on PAF®. This chapter is in two parts:
1. Names (including surnames, complexities of residential addresses, Organisation Names and PO Boxes)
2. Address details (including premises, Thoroughfares, localities and Postcode)

Please note that address text on PAF® is always in upper case.

The examples of different types of address in this guide are fictional unless otherwise stated.

The numbered tables show the name of each PAF® field in the left hand column, an example of that field in the right hand column and, below that, how the address example would look on an envelope.

Surnames

You won't find the names of private individuals on PAF®, except in instances where they're the only method of identifying a Delivery Point. Any surnames on PAF® will be in brackets (-) in the Building or Sub Building Name fields.

Tables 1 and 2 below show how surnames are held on PAF®:
- Table 1 with the surname in the Sub Building field
- Table 2 with the surname in the Building field.

Table 1: Surname in Sub Building field

Field on PAF®	Fictional example
Sub Building	(SMITH)
Building	ROSE COTTAGE
Thoroughfare	PACKHOUSE LANE
Post Town	BIRMINGHAM
Postcode	B39 0DH

(Smith)
Rose Cottage
Packhouse Lane
BIRMINGHAM
B39 0DH

Table 2: Surname in building field

Field on PAF®	Fictional example
Building Name	(HYNES)
Thoroughfare	CROMPTON ROAD
Post Town	BRADLEY HEATH
Postcode	S64 5BB

(Hynes)
Crompton Road
BRADLEY HEATH
S64 5BB
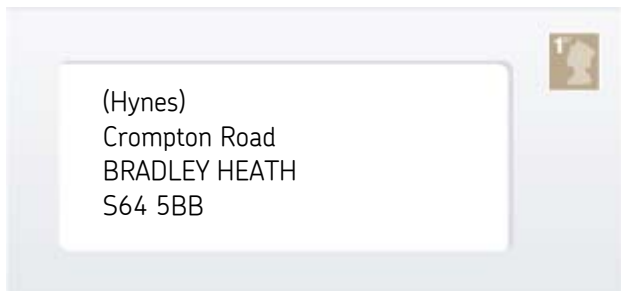
Residential addresses

Some residential addresses don't receive a direct delivery of mail; for example, buildings sub-divided into two or more apartments, but with only one front door. If we have an address structure for these premises, they are captured on PAF® with a count of how many households are behind the front door. This figure is known as 'Multi-occupancy'. If we have additional address details for these types of premises (e.g. Flats 1-24), this information is available as a separate product called Multiple Residence. See the Multiple Residence chapter in this guide for more information.

Table 3: Typical residential address

Field on PAF®	Fictional example
Building Number	16
Thoroughfare	VIXEN ROAD
Post Town	BRADOCK
Postcode	KT6 5BT

16 Vixen Road
BRADDOCK
KT6 5BT
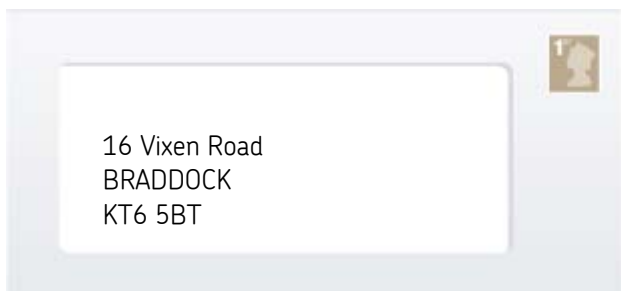
Organisations

PAF® holds the name of the Organisation. The maximum field length is 60 characters.

Delivery Points with organisation details are divided into Small or Large User Organisations:

- **Small User** Delivery Points are split into two parts: organisation and address. A number of Small User organisations and/or residential addresses can share a single Postcode. The minimum number of Delivery Points on a Postcode is one, the average is fifteen, and the maximum is ninety-nine.

- **Large User Organisations** are defined as receiving a minimum of a thousand or more items of mail a day. Large User Organisations have their own Postcode.

A new business moving into premises will either use the Small User Postcode, which is shared with other Delivery Points, or have their own unique Large User Postcode. For example, if company A with their own Large User Postcode moved to a new address, the new proprietors will not automatically assume the Postcode used by the previous occupant. Likewise, if company A relocates, it will not automatically retain the Large User Postcode.

Table 4 below shows an example of an organisation address.

Table 4: Typical Organisation address

Field on PAF®	Fictional example
Organisation Name	KATH'S CAKES
Building Name	VICTORIA HOUSE
Thoroughfare	HIGH STREET
Post Town	PORTSMOUTH
Postcode	PO1 1AF

Kath's Cakes
Victoria House
High Street
PORTSMOUTH
PO1 1AF
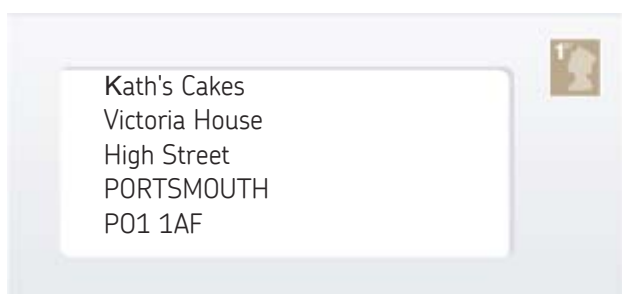
PO Box addresses

With a PO Box service, the customer receives a shortened, easy-to-remember address that provides a degree of anonymity. Customers either collect their own mail from their local delivery office or can arrange delivery. All PO Box Postcodes are classed as 'Large User' Postcodes (PO Box field has a maximum field length of 6)

Tables 5 and 6 below are examples of PO Box addresses – Table 5 using a name, and Table 6 without a name:

Table 5: PO Box address with a name

Field on PAF®	Fictional example
Name	ROBINSONS
PO Box	61
Post Town	FAREHAM
Postcode	PO14 1UX

Robinsons
PO Box 61
FAREHAM
PO14 1UX

Table 6: PO Box address without a name

Field on PAF®	Fictional example
PO Box	22
Post Town	FAREHAM
Postcode	PO14 3XH

PO Box 22
FAREHAM
PO14 3XH
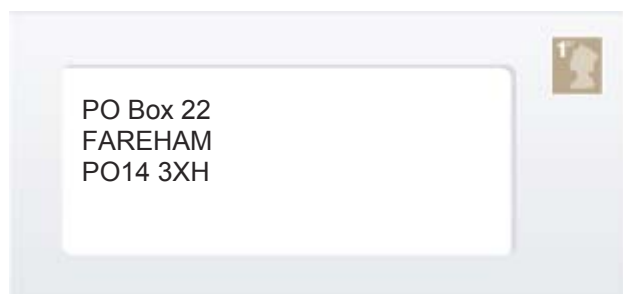
Address details

This section explains the format of each of the address elements on our products, along with typical examples.

An address is composed of four basic elements:
- Premises
- Thoroughfare
- Locality
- Postcode

Not all of the above are present for every address. Addresses on PAF® may be composed of different subsets of the elements. However, the Post Town (locality) and Postcode will be represented in all PAF addresses.

The table below shows all basic and sub-set address elements, an example of each, PAF® maximum field length of each and specifies whether it is required for mailing purposes.

Table 7: Address elements of PAF®

Address elements	Max. field length	Required for mailing
Premises elements		
Sub Building Name (e.g. 'Flat 1')	30	Yes, if applicable
Building Name (e.g. 'Rose Cottage')	50	Not required if there's a Building Number
Building Number (e.g. '22')	4	Yes, if available
Organisation Name (e.g. 'Kath's Cakes')	60	Yes, if applicable
PO Box number	6	Yes, if applicable
Thoroughfare elements		
Dependent Thoroughfare Name (e.g. 'Cheshunt')	60	Yes, if applicable
Dependent Thoroughfare Descriptor (e.g. 'Mews' or 'Court')	20	Yes, if applicable
Thoroughfare Name (e.g. 'Cypress')	60	Yes, if applicable
Thoroughfare Descriptor (e.g. 'Road' or 'Street')	20	Yes, if applicable
Locality elements		
Double Dependent Locality (e.g. 'Tyre Industrial Estate')	35	Yes, if applicable
Dependent Locality (e.g. 'Blantyre')	35	Yes, if applicable
Post Town (e.g. 'GLASGOW')	30	Yes, always
County * (e.g. 'Surrey)	30	No
Postcode (e.g. SW1P 3UX')	**7**	**Yes, always**

* The County is no longer required as part of a correct postal address provided the Post Town and Postcode are included – see County section of this chapter for more information on this.

Premises elements

The residential premises elements of a PAF® address are:
- Sub Building Name
- Building Name
- Building Number

A combination of these elements may be present, but a Sub Building Name cannot be present on its own. When a Sub Building is present, there will always be Building Name or Building Number data present.

In our products a zero may be present in the Building Number field. The table below shows an example of this, where PAF® lists 'Flat 1' in the Sub Building field, 'Holly House' in the Building Name field and a zero in the Building Number field.

Table 8: Building Number in the Building Name field

Field on PAF®	Fictional example
Sub Building Name	FLAT 1
Building Name	HOLLY HOUSE
Thoroughfare	OAK AVENUE
Locality	BIDDENDEN
Post Town	ASHFORD
Postcode	TN27 8BT

Flat 1, Holly House
Oak Avenue
Biddenden
ASHFORD
TN27 8BT
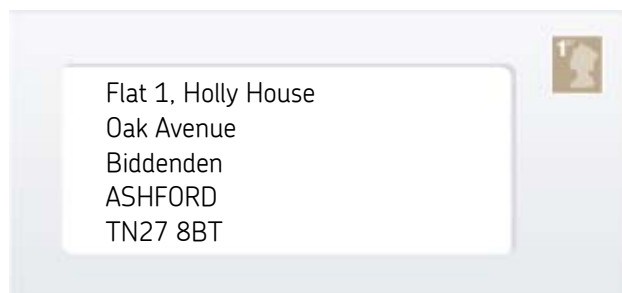
If the address relates to an Organisation Name or a PO Box there may be no premises elements present at all – see PO Box examples in Tables 4 and 5 above.

The tables below show how PAF holds addresses with Sub Building Name and Building Name addresses:

Table 9: Address with Sub Building Name and Building Name

Field on PAF®	Fictional example
Sub Building Name	FLAT 20
Building Name	VICTORIA HOUSE
Building Number	15
Thoroughfare	THE STREET
Post Town	CHRISTCHURCH
Postcode	BH23 6AA

Flat 20
Victoria House
15 The Street
CHRISTCHURCH
BH23 6AA

Table 10: Address with Sub Building Name, & using a range in Building Name field

Field on PAF®	Fictional example
Sub Building Name	CARETAKERS FLAT
Building Name	110-114
Thoroughfare	HIGH STREET WEST
Post Town	BRISTOL
Postcode	BS1 2AW

Caretakers Flat
110-114 High Street West
BRISTOL
BS1 2AW
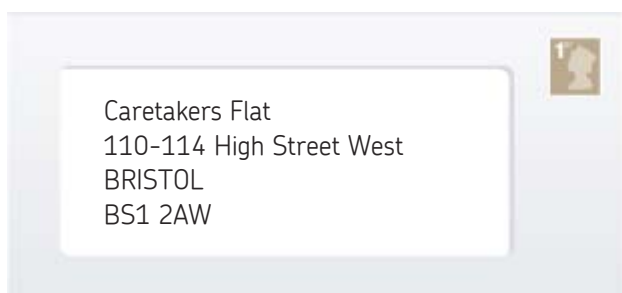
Thoroughfare elements

The four Thoroughfare elements on PAF are:

- Dependent Thoroughfare Name and Dependent Thoroughfare Descriptor
- Thoroughfare Name and Thoroughfare Descriptor

There should only be one Thoroughfare on a Postcode, although there are some anolmalies where existing Postcodes may contain more than one Thoroughfare. These will be corrected over time.

Dependent Thoroughfares

When a Dependent Thoroughfare is present, there will always be Thoroughfare data as well. A Dependent Thoroughfare cannot be present on its own.

The table below gives an example:

Table 11: Address with Dependent Thoroughfare

Field on PAF®	Fictional example
Building Name	1A
Dependent Thoroughfare	SEASTONE COURT
Thoroughfare	STATION ROAD
Post Town	HOLT
Postcode	NR25 7HG

1a Seastone Court
Station Road
HOLT
NR25 7HG

Thoroughfares

The '**Name**' part of the Thoroughfare and Dependent Thoroughfare applies to the first part of the text, for example:

Acacia	the first part of 'Acacia Avenue'
High	the first part of 'High Street'
Tye Valley Business	the first part of 'Tye Valley Business Centre'

The '**Descriptor**' part of the Thoroughfare and Dependent Thoroughfare applies to the last word in the Thoroughfare text. PAF contains a standard list of approximately 200 Descriptor words, which are held separately from the rest of the text. For example:

Avenue	the last part of 'Acacia Avenue'
Street	the last part of 'High Street'
Centre	the last part of 'Tye Valley Business Centre'.

The Descriptor list doesn't include 'North', 'South', 'East' or 'West'. The Descriptor won't be split from the Thoroughfare text if this would result in the single word 'The' being held as the Thoroughfare (e.g. 'The Lane').

A Descriptor can't be present on its own – there must be a Thoroughfare or Dependent Thoroughfare present.

The table below shows an example of an address with a Thoroughfare Name and Descriptor.

Table 12: Address with Thoroughfare Name and Descriptor

Field on PAF®	Fictional example
Building Number	16
Thoroughfare Name	ANGELICA
Thoroughfare Descriptor	WAY
Post Town	EMSWORTH
Postcode	NR25 7HG

16 Angelica Way
EMSWORTH
NR25 7HG
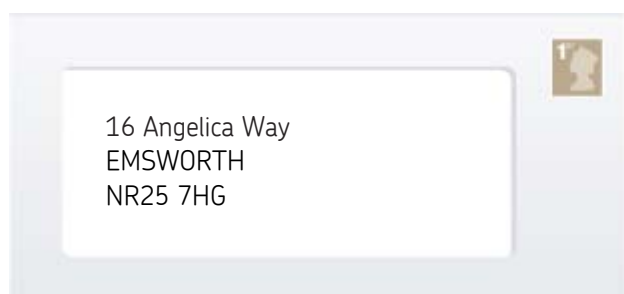
Addresses with no Thoroughfare information

For some addresses there may be no Thoroughfare information present at all. This usually occurs in rural areas, when the Locality information identifies the location of the address. The tables below show two examples – one with a house name and one with an Organisation Name:

Table 13: Address with HOUSE name and no Thoroughfare information

Field on PAF®	Fictional example
Building Name	THE MANOR
Dependent Locality	NORWOOD
Post Town	HORLEY
Postcode	RH6 0HP

The Manor
Norwood
HORLEY
RH6 0HP
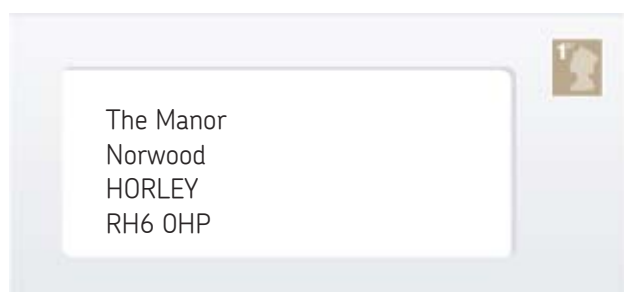
Table 14: Address with ORGANISATION name and no Thoroughfare information

Field on PAF®	Fictional example
Organisation	LEDA ENGINEERING LTD
Dependent Locality	APPLEFORD
Post Town	ABINGDON
Postcode	OX14 4PG

Leda Engineering Ltd
Appleford
ABINGDON
OX14 4PG

Locality elements

The combination of the following four elements identifies a geographical area known as a Locality:
- Double Dependent Locality
- Dependent Locality
- Post Town
- County (although postally not required)

Currently PAF holds details of just over 30,000 Localities in the UK.
There can be only one Locality per Postcode. This means all addresses in a Postcode have the same Locality.

Dependent Localities and Double Dependent Localities
If need be, Dependent Localities and Double Dependent Localities further define the geographic area. A Double Dependent Locality can be present only when a Dependent Locality is present. For example:

Double Dependent Locality	–	Netherthong
Dependent Locality	–	Lockwood
Post Town	–	HUDDERSFIELD

Post Towns
There are 1661 Post Towns. A Post Town is mandatory for delivery of mail to a Delivery Point. This is not necessarily the nearest town geographically, but a routing instruction to the Royal Mail delivery office sorting mail for that Delivery Point. A Post Town will always be present in every address, and for some Localities the Post Town will be the only locality element present.

Counties

The county is not required as part of a correct postal address. We removed the Former Postal County field from PAF raw data products in December 2000.

Former Postal County, Traditional County and Administrative County data is still available on our Alias product. The Alias chapter gives further details on counties.

The Postcode

What is a Postcode?

The Postcode is part of a coding system created and used by the Royal Mail across the United Kingdom for sorting mail. In other words, Postcodes are an abbreviated form of address, and enable a group of Delivery Points to be specifically identified.

When originally created, the Postcode was 'designed' around the capability of Royal Mail sorting equipment to read and interpret typed or handwritten text on mail. This is why Royal Mail prefers the Postcode to be separate and on the last line of an address. The format and rules concerning Postcode layout, in particular which letters can or cannot be used, stem from the fact that certain letters or combinations of letters could be confused (e.g. 'O' and 'Q', or 'V' next to 'V' being misread as 'W').

Breakdown of a Postcode

A Postcode is a combination of letters and numbers (see Table 15 below – Valid Postcode formats). A Postcode defines four different levels of geographic unit (see Table 14 below – Breakdown of a Postcode). Each Postcode consists of two parts, called the Outward Code (e.g. 'PO1') and the Inward Code (e.g. '1AF'). The first part, or Outward Code, is separated from the second part, the Inward Code, by a single space.

Outward Code

- Enables mail to be sorted to the correct local area for delivery. This part of the code contains the area and the district to which the mail is to be delivered, e.g. 'PO1', 'SW1A' or 'B23'
- The letters Q, V and X are not used in the first alpha position
- The letters I and Z are not used in the second alpha position
- The only letters to appear in the third alpha position are A, B, C, D, E, F, G, H, J, K, P, R*****, S, T, U, V, W and X.

  * = R in the third position is only used in one Postcode, namely GIR 0AA, which is the traditional Postcode of Girobank, now part of the Santander group. This Postcode appears on the Postzon product but not on PAF® nor on other raw data products.

Inward Code

- The second part is known as the Inward Code because it is used to sort the mail INTO the local area delivery office
- This part is one number followed by two letters. The number identifies the sector in the postal district. The letters then define one or more properties in that sector.
- The letters C I K M O V are not used in the second part of the Postcode.

Using 'PO1 1AF' as an example, the table below explains each part of the Postcode.

Table 15: Breakdown of a Postcode

Postcode			
Outward Code		**Inward Code**	
PO	**1**	**1**	**AF**
Postcode Area	**Postcode District**	**Postcode Sector**	**Unit Postcode**
PO refers to the Postcode Area An Area Code can be one or two letters, e.g. 'B' or 'BA' There are 124 Postcode Areas on PAF	**PO1** refers to the Postcode District There are approximately 2,980 Postcode Districts	**PO1 1** refers to the Postcode Sector There are approximately 11,159 Postcode Sectors	**PO1 1AF** The last two letters define the 'Unit Postcode', which identifies one or more Small User Delivery Points or an individual Large User There are approximately 1.8million Unit Postcodes in the UK

The table below gives an example of each valid Postcode format, where A = alpha character and N = numeric character.

Table 16: Valid Postcode formats

First Part or Outward code	Second Part or Inward code	Example
AN	NAA	M1 1AA
ANN	NAA	M60 1NW
AAN	NAA	CR2 6XH
AANN	NAA	DN55 1PT
ANA	NAA	W1P 1BB
AANA	NAA	EC1A 1BB

Types of Postcode

Large User Postcodes
These are assigned to one single address either due to the large volume of mail received at that address, or because a PO Box or Selectapost service has been set up.

Small User Postcode
These identify a group of Delivery Points. On average there are 15 Delivery Points per Postcode. However this can vary between 1 and, in some cases, 100. There will never be more than 100 Delivery Points on a Postcode.

Non-Geographic Postcodes

Although, when the UK Postcode system was set up in the early 1970s, sufficient capacity was built in to cater for twenty years of development, it became obvious during the 1990s that in some areas demand for Postcodes was outstripping the availability of Postcode combinations. This meant recoding these areas to provide the additional capacity. Recoding was inconvenient for both customers in the affected areas and database users nationwide. So, as an alternative solution, we've introduced dedicated non-geographic Postcodes and sectors. The dedicated non-geographic sectors are used for PO Boxes and Postal Voting, and non-geographic Postcodes are allocated to the few large organisations which receive such high volumes of mail that they need to be extracted at the outward sorting stage, bagged and sent separately.

Here's a live example of a non-geographic Postcode:

Driver & Vehicle Licensing Agency
Driving Licence Renewals
Driver & Vehicle Licensing Centre
SWANSEA
SA99 1AA

An example of an address using a non-geographic PO Box postcode sector is shown below. In this case, the PO21 9 sector covers the PO21 and PO22 Outward Code areas of the Bognor Regis Post Town, both areas served by the Bognor Regis Delivery Office.

PO Box 276
BOGNOR REGIS
PO21 9AA
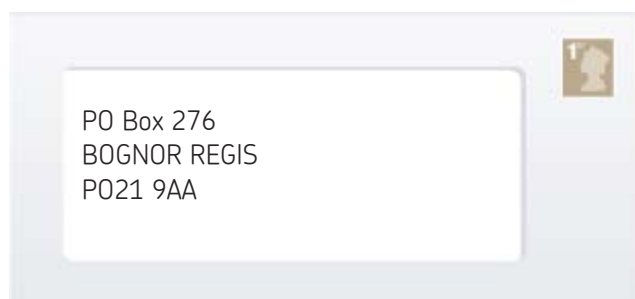
In some areas a non-geographic PO Box postcode sector may cover more than one Post Town.

The current list of non-geographic Postcodes and non-geographic PO Box sectors is on our webpage: www.poweredbypaf.com.

Postcode anomalies on PAF®

There are approximately 850 Postcodes on PAF® containing either a multiple Thoroughfare or Locality. Here's what this means:

Thoroughfares
The general principle for PAF® is that each Thoroughfare Name will have a separate Postcode, as will each individual number range on a Thoroughfare. Longer Thoroughfares with high number ranges often have multiple Postcodes covering the entire length of the road, with breaks at suitable points e.g. junctions or natural breaks in the road. However, there are some historic instances where a Postcode may contain more than one Thoroughfare.

Here's a live example of two separately numbered Thoroughfares on the same Postcode, HD8 8UF:

Coal Pit Lane   Denby Lane
Upper Denby   Upper Denby
HUDDERSFIELD   HUDDERSFIELD
HD8 8UF   HD8 8UF

Locality names
The general principle for PAF® is that a Postcode won't have more than one Locality name (unless it requires a combination of a Dependent and Double Dependent Locality to make the address unique within a Post Town). However, there are a small number of instances where a Postcode contains more than one Locality.

Here's a live example of a locality boundary splitting the Postcode DN6 8BP:

17 Edward Road   13 Edward Road
Carcroft   Skellow
DONCASTER   DONCASTER
DN6 8BP   DN6 8BP

If we make major address changes in any Postcode areas where these anomalies exist, we remove them.

Structure of the PAF® database

General information

The PAF® database structure is reflected in the structure of the Mainfile™ product.

Address and Organisation details are held separately. Each Address is identified by a numeric key, as is each Organisation. A Delivery Point is identified by the combination of the Address Key, Organisation Key and Postcode Type.

Addresses are held on PAF® in a relational format, i.e. they are held not as text but as a series of alpha-numeric keys, or pointers, which relate to supporting files of Address element text. The supporting text files are:

- **Localities File**
- **Thoroughfares File**
- **Thoroughfare Descriptor File**
- **Building Names File**
- **Sub Building Names File**
- **Organisations File**

Each record on these files has a numeric key. With the exception of the Localities file, the key started at 1 for the first record on a file. The key is incremented by 1 for each subsequent record. Within a file record numbers will not always be consecutive; there may be gaps in the sequence.

During the course of address maintenance new address elements are added to the text files. Address elements may be amended or deleted but, with the exception of the Organisations File, this is not a normal part of maintenance.

The chapter on Mainfile has more information on the reference files.

The Compressed Standard and Ranges products contain Address data in 'expanded' format. The keys to the supporting text files have been replaced by the Address element text.

However, the combination of the Postcode type, the Address key and the Organisation key will always uniquely identify a Delivery Point.

Here we describe the application of address keys for Small and Large Users.

Small users

Address keys

Each address on PAF® has an 8-digit number associated with it, known as the Address Key. When used in conjunction with the Organisation Key & Postcode Type the address can be uniquely identified. This number started at 1 for the first Address loaded onto PAF and is incremented by 1 for each subsequent Address added to PAF®.

When a Small User Address is deleted the Address Key is deleted; it cannot be reused for a different address. There is no correlation between address keys and Postcode. The addresses belonging to a Postcode may be added to or deleted from PAF® over a long period of time, as premises are built or demolished. Hence there may be a wide range of address keys associated with a Postcode. If an Address is recoded, i.e. the Postcode changes, then the Address Key is unaffected by the change in Postcode.

Here's an example:

> PAF® holds two Small User addresses for Postcode NG6 8AL. Address Key 00001000 identifies this address in this example:

> 10 Smith Street
> Bulwell
> NOTTINGHAM
> NG6 8AL
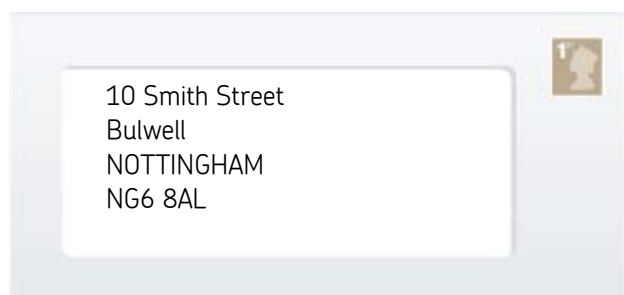
> and Address Key 02341509 identifies this address in this example:

> 12 Smith Street
> Bulwell
> NOTTINGHAM
> NG6 8AL
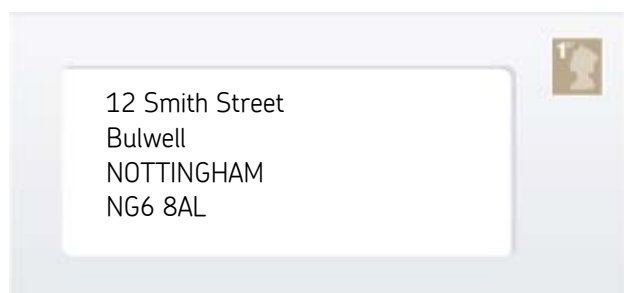
The Organisation key

There may be a number of Small User Organisations present at an address. The Address is held on PAF® only once. Each Organisation is given its own 8-digit Key. As with the Address Key, this is a number which started at 1 for the first Organisation loaded to PAF®, and which is incremented by 1 for each subsequent Organisation added to PAF®. When an Organisation is deleted then the Organisation Key is deleted from PAF; it cannot be reused for a different Organisation.

For Organisations with the same name that exist at a number of different addresses, e.g. Boots the Chemists Ltd, a new Organisation Key will be created each time the organisation is added to PAF®. They will not all share the same Organisation Key.

The combination of keys

A combination of the Address Key and the Organisation Key uniquely identifies each Small User Delivery Point on PAF®. If there is no Organisation associated with an Address then the Address appears once only on a PAF product with the Organisation Key set to zero. If there is a Small User Organisation associated with an Address then the Address Key is paired with the Organisation Key. An Address Key may occur several times, each time in combination with a different Small User Organisation Key.

To take the previous example of Postcode NG6 8AL, assume the following Small User Organisations are present on PAF

D.H.Wilson & Son	–	Organisation Key of 00001150
Adclif Engineers Ltd	–	Organisation Key of 00456120

Both Organisations are based at 10 Smith Street; there are no Organisations present at 12 Smith Street.

On a PAF product Address Key 00001000 would appear twice, once in combination with Organisation Key 00001150, and once in combination with Organisation Key 00456120. Address Key 02341509 would appear once in combination with an Organisation Key of zero.

An 'S' in any Postcode type indicates a Small User. Here's an example:

Table 17: Small User Address & Organisation keys

Address File			Organisation File			
Address example	Address Key	Organisation Key	Post-code Type	Organisation Key	Postcode Type	Organisation Key
12 Smith Street Bulwell NOTTINGHAM NG6 8AL	02341509	00000000	S	N/A	N/A	Residential
D H Wilson & Son 10 Smith Street Bulwell NOTTINGHAM NG6 8AL	00001000	00001150	S	00001150	S	Small User Organisation
Adclif Engineers Ltd 10 Smith Street Bulwell NOTTINGHAM NG6 8AL	00001000	00456120	S	00456120	S	Small User Organisation

Large Users

For all Large Users the Address Key in the Address File will form the reference to the Organisation Key in the Organisation File. The Organisation Key in the Address File will be set to zero and the Postcode Type will be set to 'L'. Here's an example:

Table 18: Large User Address & Organisation keys

Address File			Organisation File		
Address Key	Organisation Key	Postcode Type	Organisation Key	Postcode Type	Organisation Key
0032156	00000000	L	00032156	L	Large User (see Note)

Please note that in the Organisation File the uniqueness of a Large User is determined by the combination of the Organisation Key (in the Organisation File) and Postcode Type. The same Organisation Key may occur in the Organisation File for both a Small and Large User.

The Address Key for a Large User can be reused. The Large User can be deleted and re-inserted without the Key changing because the Address Key for a Large User remains unchanged when a Postcode is not in service.

Address key change events

There are four events which cause PAF**®** address keys to change.

1. When a Large User Delivery Point has its Postcode recoded. This is because the Address key for a Large User Delivery Point is the Postcode key.

2. When an Organisation is added to a Small User Residential Delivery Point so that it becomes a Small User Organisational Delivery Point. The Delivery Point will now gain an Organisation key and may have a different Address key.

3. When an Organisation is removed from a Small User Organisational Delivery Point so that it becomes a Small User Residential Delivery Point. The Delivery Point will now lose its Organisation key and may have a different Address key.

4. When the Premises on a Small User Organisational Delivery Point is amended and other Organisations exist within the Postcode on the old or new Premises. The Address key and/or Organisation key will be changed.

As you can see, it's not a case of losing the address keys, so much as the definition changing when the elements change. This then means that a different set is applicable, e.g. in the residential to organisation example. Address keys were never intended to be absolutely permanent to an address, hence the introduction of the Unique Delivery Point Reference Number™ (UDPRN). See the UDPRN chapter for further information on this.

Delivery Points

Each Delivery Point held on PAF is identified by the combination of the Address Key, the Organisation Key and the Postcode Type (Large or Small User).

Small and Large User address keys alone are not unique as they use entirely different key sequences, which are not related to each other.

It is possible therefore for a Small and a Large User to have matching values for both the Address key and the Organisation key. This will occur if the address key values are the same and there is no organisation associated with the Small User (thereby giving an Organisation key of zero).

Formatting a PAF® address for printing

This chapter explains where each element of a PAF® address should appear on an envelope or address label.

Text on PAF®

All text on PAF® products is held in upper case.

Elements of a Delivery Point

A Delivery Point is composed of a combination of the elements listed below. Not all elements are present for each Delivery Point. Postcode and Post Town are the only two elements that are mandatory. County is no longer required as part of a correct postal address – the chapter on Structure of a PAF® address has further information on this.

Here are the elements which make up a Delivery Point:

Table 19: Delivery point elements

		NOTES
Premises elements	Sub Building Name	**(a)**
	Building Name	
	Building Number	
	Organisation Name	**(b)**
	Department Name	**(c)**
	PO Box Number	**(d)**
Thoroughfare elements	Dependent Thoroughfare Name	
	Dependent Thoroughfare Descriptor	
	Thoroughfare Name	
	Thoroughfare Descriptor	
Locality elements	Double Dependent Locality	
	Dependent Locality	
	Post Town	
Postcode element	Postcode	

NOTES overleaf

NOTES to Table 19: Delivery point elements

(a) – The 'Combinations of premises elements' table below shows the rules which apply depending on the combination of premises elements which occurs.

(b) – If an Organisation Name is present, it should appear on the first address line

(c) – If a Department Name is present, this should appear on the second line

(d) – If a PO Box number is present, this should appear on the first line if there aren't any Organisation/ Department details present. Otherwise, it should appear on the third line. The PO Box number itself must be preceded by the text 'PO Box'.

Table 20: Combinations of premises elements

Sub Building Name [(e)]	Name [(e)]	Number	Rules which apply in different circumstance
None	None	None	1 – Organisation Name
None	None	Occurs	2 – Building Number only
None	Occurs	None	3 – Building Name only
None	Occurs	Occurs	4 – Building Name & Building Number
Occurs	None	Occurs	5 – Sub Building Name & Building Number
Occurs	Occurs	None	6 – Sub Building Name & Building Name
Occurs	Occurs	Occurs	7 – Sub Building Name3, Building Name & Building Number

How to read this table:

Taking the first line of the table as an example: if the address has no Sub Building name, building name nor building number, then 'Rule 1 – Organisation Name' applies.

Taking line two: if the address has neither Sub Building name nor building name, but DOES have a building number then 'Rule 2 – building number only' applies.

NOTES & EXPLANATION OF RULES in Table 20

(e) Exception Rule. Some of these Building and Sub Building Names can appear on the same line as other address elements. They are identified by these three indicators:

Exception Rule indicators:
i) First and last characters of the Building Name are numeric (eg '1to1' or '100:1')
ii) First and penultimate characters are numeric, last character is alphabetic (eg 12A')
iii) Building Name has only one character (eg 'A')

Here are some examples illustrating the Exception Rule indicators:

Table 21: Exception Rule indicator i) First and last characters of the Building Name are numeric

Field on PAF®	Actual example
Building Name	1-2
Thoroughfare	NURSERY LANE
Dependent Locality	PENN
Post Town	HIGH WYCOMBE
Postcode	HP10 8LS

1-2 Nursery Lane
Penn
HIGH WYCOMBE
HP10 8LS
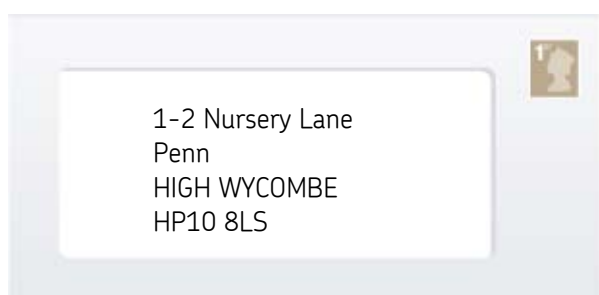
Table 22: Exception Rule indicator ii) First and penultimate characters are numeric, last character is alphabetic

Field on PAF®	Actual example
Building Name	12A
Thoroughfare	UPPERKIRKGATE
Post Town	ABERDEEN
Postcode	AB10 1BA

12A Upperkirkgate
ABERDEEN
AB10 1BA

Table 23: Exception Rule indicator iii) Building Name has only one character

Field on PAF®	Actual example
Building Name	K
Thoroughfare	PORTLAND ROAD
Post Town	DORKING
Postcode	RH4 1EW

K, Portland Road
DORKING
RH4 1EW

Table 24: Exception Rule indicator iv) Where the building name has a numeric range or a numeric alpha suffix, and is prefixed by the following keywords:

Back of, Block, Blocks, Building, Maisonette, Maisonettes, Rear Of, Shop, Shops, Stall, Stalls, Suite, Suites, Unit, Units.

Note: It is possible that other prefixes will need to be added to this list and as a result, you will need to ensure that your system is capable of processing any additional prefixes.

Example 1

Field on PAF®	Actual example
Organisation	The Tambourine Warehouse
Building Name	Unit 1-3
Dependant Thoroughfare	Industrial Estate
Thoroughfare	Tame Road
Post Town	LONDON
Postcode	E6 7HS

```
        The Tambourine Warehouse
        Unit 1-3
        Industrial Estate
        Tame Road
        LONDON
        E6 7HS
```
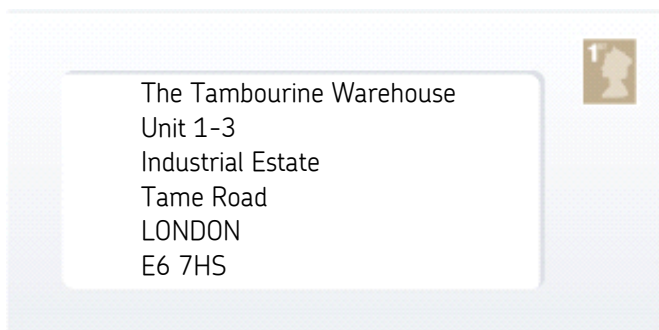
Example 2

Field on PAF®	Actual example
Organisation	Quirky Candles Ltd
Building Name	Stall 4-5
Thoroughfare	Market Square
Post Town	LIVERPOOL
Postcode	L8 1LH

```
        Quirky Candles Ltd
        Stall 4-5
        Market Square
        LIVERPOOL
        L8 1LH
```

Example 3

Field on PAF®	Actual example
Organisation	The Fudge Factory
Building Name	Unit 1a
Thoroughfare	Dyce Industrial Park
Dependant Locality	Dyce
Post Town	GLASGOW
Postcode	G21 7EZ

The Fudge Factory
Unit 1a
Dyce Industrial Estate
Dyce
GLASGOW
G21 7EZ

Example 4

Field on PAF®	Actual example
Organisation	Fiona's Flowers
Building Name	Rear Of 5a
Thoroughfare	High Street
Post Town	GATESHEAD
Postcode	NE8 1BH

Fiona's Flowers
Rear Of 5a
High Street
GATESHEAD
NE8 1BH
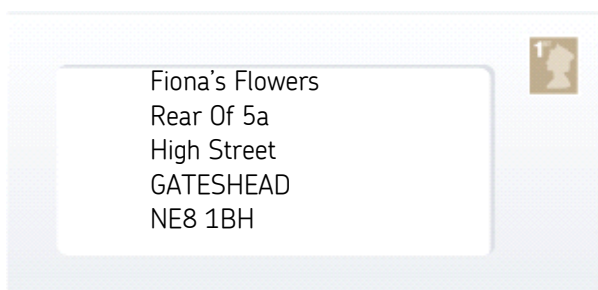
Example 5

Field on PAF®	Actual example
Organisation	Platinum Finance
Building Name	Suite 1-3
Thoroughfare	Station Road
Post Town	MUSSELBURGH
Postcode	EH21 7PB

Platinum Finance
Suite 1-3
Station Road
MUSSELBURGH
EH21 7PB
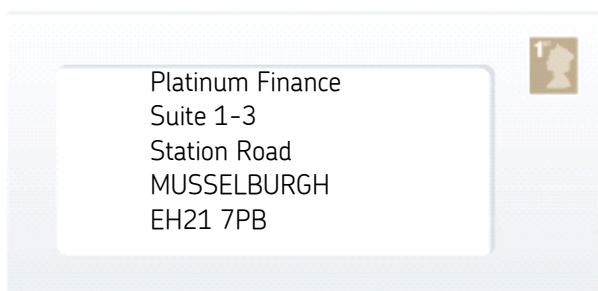
Explanation of Rules from Table 20: Combinations of premises elements

Rule 1 – Organisation name. This condition may occur when an Organisation Name is used to uniquely identify a Delivery Point.

Here's an example:

Table 25: Premises elements Rule 1: Organisation Name

Field on PAF®	Fictional example
Organisation	LEDA ENGINEERING LTD
Dependent Locality	APPLEFORD
Post Town	ABINGDON
Postcode	OX14 4PG

Leda Engineering Ltd
Appleford
ABINGDON
OX14 4PG

Rule 2 – Building Number only. The Building Number should appear at the beginning of the first Thoroughfare line. If there is no Thoroughfare information then the Building Number should appear at the beginning of the first Locality line.

Here's an example:

Table 26: Premises elements Rule 2: Building Number only

Field on PAF®	Fictional example
Building Number	1
Thoroughfare	ACACIA AVENUE
Post Town	ABINGDON
Postcode	OX14 4PG

1 Acacia Avenue
ABINGDON
OX14 4PG

Rule 3, Building Name only. Check format of Building Name (see note (a) above). If the Exception Rule applies, the Building Name should appear at the beginning of the first Thoroughfare line, or the first Locality line if there is no Thoroughfare information.

Here's an example:

Table 27a: Premises elements Rule 3: Building Name only

Field on PAF®	Fictional example
Building Name	1A
Dependent Thoroughfare	SEASTONE COURT
Thoroughfare	STATION ROAD
Post Town	HOLT
Postcode	NR25 7HG

```
1a Seastone Court
Station Road
HOLT
NR25 7HG
```

Otherwise the Building Name should appear on a line preceding the Thoroughfare and Locality information.

Here's an example:

Table 27b: Premises elements Rule 3: Building Name only

Field on PAF®	Fictional example
Building Name	THE MANOR
Thoroughfare	UPPER HILL
Post Town	HORLEY
Postcode	RH6 0HP

```
The Manor
Upper Hill
HORLEY
RH6 0HP
```
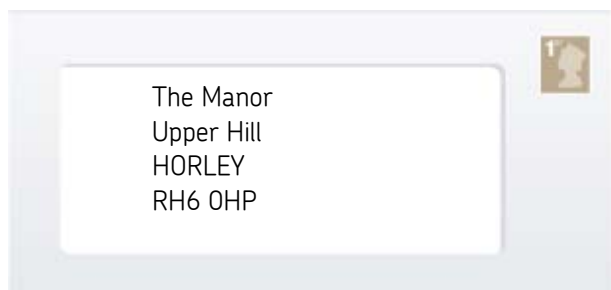
When a building has a name AND a number range, both must be held in the Building Name field because the Building Number field can only hold numeric characters.

If an address has a building name with text followed by a space and then completed by numerics/numeric ranges with the numeric part an exception (see Note (a) above), the numerics/numeric range are treated as a building number, and the text part is treated as the Building Name and the numerics/numeric range are split off to appear at the beginning of the first Thoroughfare line, or the first Locality line if there is no Thoroughfare.

Here's an example:

Table 27c: Premises elements Rule 3: Building Name only

Field on PAF®	Fictional example
Organisation	S D ALCOTT FLORISTS
Building Name	FLOWER HOUSE 189A
Thoroughfare	PYE GREEN ROAD
Post Town	CANNOCK
Postcode	WS11 5SB

S D Alcott Florists
Flower House
189a Pye Green Road
CANNOCK
WS11 5SB
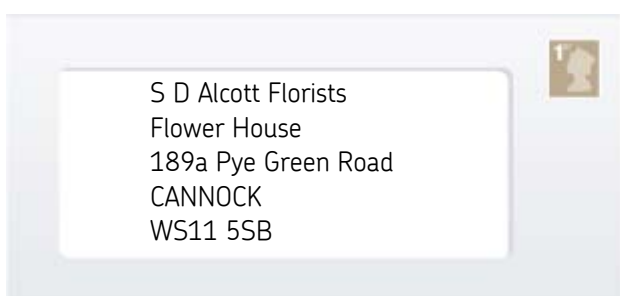
However, there is an exception to this rule. The Building Name is NOT split if the numeric part is simply a number between 1 and 9999 (i.e not a range like '1–77' and containing no letters such as '7a'). This is because the building number field would have been populated if it were a true building number, so it is assumed that this is an integral part of the building name.

Here's an example:

Table 27d: Premises elements Rule 3: Building Name only

Field on PAF®	Fictional example
Organisation	JAMES VILLA HOLIDAYS
Building Name	CENTRE 30
Thoroughfare	ST. LAURENCE AVENUE
Post Town	GRAFTON
Postcode	ME16 0LP

James Villa Holidays
Centre 30
St. Laurence Avenue
GRAFTON
ME16 0LP

Rule 4, Building Name and Building Number. The Building Name should appear on the line preceding the Thoroughfare and/or Locality information. The Building Number should appear at the beginning of the first Thoroughfare line. If there is no Thoroughfare information then the Building Number should appear at the beginning of the first Locality line. Here is an example:

Table 28: Premises elements Rule 4: Building Name and Building Number

Field on PAF®	Fictional example
Building Name	VICTORIA HOUSE
Building Number	15
Thoroughfare	THE STREET
Post Town	CHRISTCHURCH
Postcode	BH23 6AA

Victoria House
15 The Street
CHRISTCHURCH
BH23 6AA

Rule 5, Sub Building Name and Building Number. The Sub Building Name should appear on the line preceding the Thoroughfare and Locality information. The Building Number should appear at the beginning of the first Thoroughfare line. If there is no Thoroughfare information then the Building Number should appear at the beginning of the first Locality line. Here's an example:

Table 29a: Premises elements Rule 5: Sub Building Name and Building Number

Field on PAF®	Fictional example
Sub Building Name	FLAT 1
Building Number	12
Thoroughfare	LIME TREE AVENUE
Post Town	BRISTOL
Postcode	BS8 4AB

Flat 1
12 Lime Tree Avenue
BRISTOL
BS8 4AB

For Mainfile Product addresses, where the Concatenation Indicator is set, prefix the Sub Building Name with the Building Number. This should then appear at the beginning of the Thoroughfare line or the first Locality line if there is no Thoroughfare information. Here's an example:

Table 29b: Premises elements Rule 5: Sub Building Name and Building Number

Field on PAF®	Fictional example
Sub Building Name	A
Building Number	12
Thoroughfare	HIGH STREET NORTH
Dependent Locality	COOMBE BISSETT
Post Town	SALISBURY
Postcode	SP5 4NA

12A High Street North
Coombe Bissett
SALISBURY
SP5 4NA
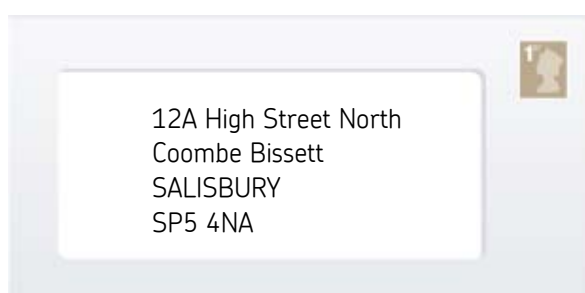
For a full explanation of the Concatenation Indicator please see the Address File details in the Mainfile chapter.

Rule 6, Sub Building Name and Building Name

Sub Building Name
Check the format of Sub Building Name (see Note (a) above). If the Exception Rule applies, the Sub Building Name should appear on the same line as, and before, the Building Name.

Here's an example:

Table 30: Premises elements Rule 6: Sub Building Name and Building Name

Field on PAF®	Fictional example
Sub Building Name	10B
Building Name	BARRY JACKSON TOWER
Thoroughfare	ESTONE WALK
Post Town	BIRMINGHAM
Postcode	B6 5BA

10B Barry Jackson Tower
Estone Walk
BIRMINGHAM
B6 5BA
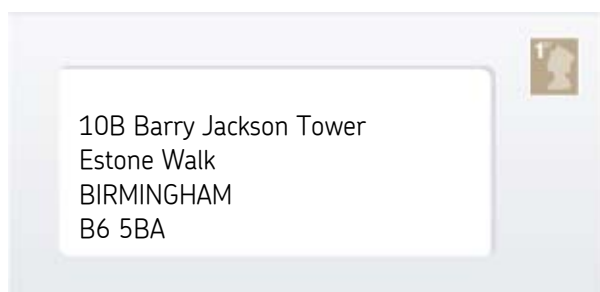
Otherwise, the Sub Building Name should appear on a line preceding the Building Name, Thoroughfare and Locality information

Building Name
Check format of Building Name (see note (a) above) If the Exception Rule applies, the Building Name should appear at the beginning of the first Thoroughfare line, or the first Locality line if there is no Thoroughfare information.

Here's an example:

Table 31a: Building Name

Field on PAF®	Fictional example
Sub Building Name	CARETAKERS FLAT
Building Name	110-114
Thoroughfare	HIGH STREET WEST
Post Town	BRISTOL
Postcode	BS1 2AW

Caretakers Flat
110-114 High Street West
BRISTOL
BS1 2AW
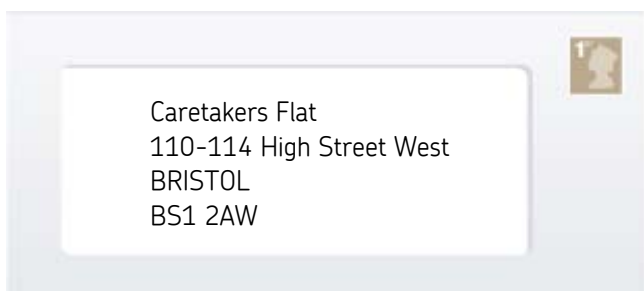
Otherwise, the Building Name should appear on a line preceding the Thoroughfare and Locality information.

Here's an example:

Table 31b: Building Name

Field on PAF®	Fictional example
Sub Building Name	STABLES FLAT
Building Name	THE MANOR
Thoroughfare	UPPER HILL
Post Town	HORLEY
Postcode	RH6 0HP

Stables Flat
The Manor
Upper Hill
HORLEY
RH6 0HP
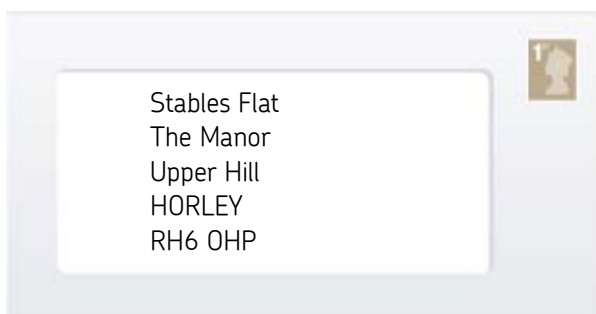
Rule 7, Sub Building Name, Building Name and Building Number. Check format of Sub Building Name (see note (a) above).

If the Exception Rule applies, the Sub Building Name should appear on the same line as and before the Building Name.

Here's an example:

Table 32a: Premises elements Rule 7: Sub Building Name, Building Name and Building Number

Field on PAF®	Fictional example
Sub Building Name	2B
Building Name	THE TOWER
Building Number	27
Thoroughfare	JOHN STREET
Post Town	WINCHESTER
Postcode	SO23 9AP


```
2B The Tower
27 John Street
WINCHESTER
SO23 9AP
```
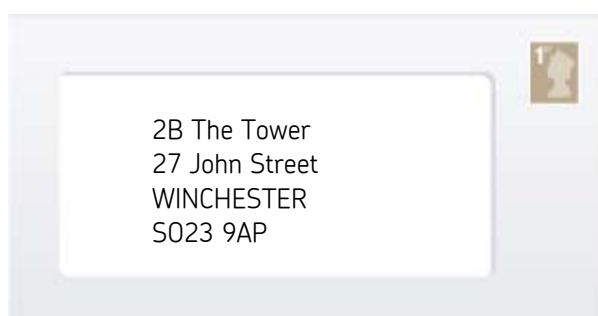
Otherwise, the Sub Building Name and the Building Name should appear on separate lines. Here's an example:

Table 32b: Premises elements Rule 7: Sub Building Name, Building Name and Building Number

Field on PAF®	Fictional example
Sub Building Name	BASEMENT FLAT
Building Name	VICTORIA HOUSE
Building Number	15
Thoroughfare	THE STREET
Post Town	CORYTON
Postcode	BP23 6AA

Basement Flat
Victoria House
15 The Street
CORYTON
BP23 6AA

The Building Number should appear at the beginning of the first Thoroughfare line, or the first Locality line if there is no Thoroughfare information.

Information on files & tables

Introducing record definition tables

Raw data products are not formatted or processed, they are provided as files. The majority of files have data fields of fixed record length, but the length of the record is different for each product.

At the end of each product chapter in this guide are tables defining the record lengths for that particular product or file. This chapter explains the layout of these tables and any terms common to all products and chapters. Product-specific file and record formats are dealt with in the relevant product chapter.

Each product/file contains three types of records:
1. Header Record – sits at the front of the raw data and describes the contents
2. Data record or record type – these records hold the 'meat on the bones' i.e. the addresses, aliases, etc.
3. Trailer Record - comes at the end & basically summarises specific information about the data e.g. a record count.

Each header, data or Trailer Record has a record definition table of five columns containing one or more field descriptions.

Explaining record definition tables

We'll use the example below to explain the different parts of the record definition table.

Table 33: Typical record definition table with several fields

RECORD NAME [a]   :   Trailer Record
RECORD LENGTH [b]   :   16

Field Name [c]	Level [g]	Data Type [h]	Size [i]	Occurs [j]
First Field [d]	1			
Sub field 1	2	Alpha-numeric	4	1
Sub field 2	2	Alpha-numeric	3	1
Second Field [e]	1	Alpha-numeric	1	1
Third Field [f]	1	Numeric	8	5

NOTES are overleaf

NOTES to Table 33

(a) –   'Record Name' e.g. Address Record, Trailer Record, etc. applies to that particular table

(b) –   'Record Length' is the sum of all the numbers in the 'Size' column

(c) –   Field Name column: The names appear in the same order as they occur in a physical record. The name given to the field is the name stored in the file e.g. Thoroughfare Name. Field names may be nested, which means the label appearing in the first column of a field description may be the name of a composite field containing two or more sub-fields. This is the case in the example table here:

(d) –   'First Field' is a composite field comprising two alphanumeric data items of length four characters and three characters respectively

(e) –   'Second Field' is a single character field

(f) –   'Third Field' is an 8-digit field, which is repeated five times in each record occurrence.

(g) –   'Level' column. This information tells the programmer which position the data sits in the hierarchy. The level numbers show the position of each field in this hierarchical structure (e.g. a 'level 1' field may be composed of two or more 'level 2' fields, which may be further divided into two or more 'level 3' fields etc.)

(h) –   'Data type' column refers to whether the type of data is:
- numeric (also known as integers)
- characters (which can be letters or symbols)
- or alpha-numeric (a combination of the two above)

(i) –   'Size' column. Refers to the number of characters in each field

(j) –   'Occurs' column indicates the number of times the field is repeated in each record.

Information common to all tables in this guide

Numeric fields – are held right justified zero padded, non-numeric fields are held left justified space padded. Numeric fields that are not required for an address will be zero filled. Non-numeric fields that are not required for an address will be space filled.

Sequence – all PAF® products are supplied in ascending sequence of Postcode Area, Postcode District, Postcode Sector. The Changes products are the only exception to this.

Record count – this is a field in the Trailer Record which contains the number of records on the file including the header and Trailer Records.

Values – 'Low values' are represented by the HEX value 00, 'High values' are represented by the HEX value FF.
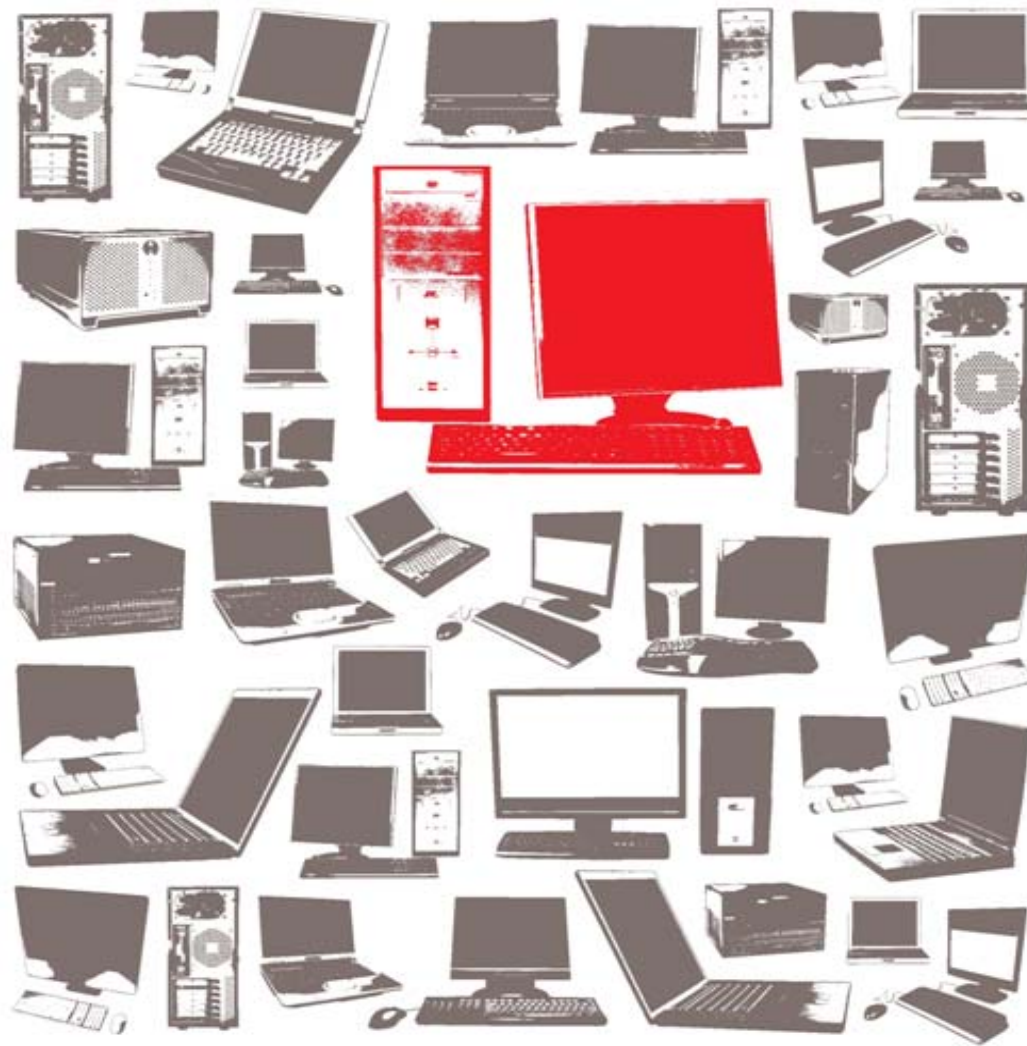
Section 2
PAF products in a RELATIONAL format

Chapter 5 Mainfile™
Chapter 6 Alias®
Chapter 7 Keychain™
Chapter 8 Changes & Single Changes

Mainfile^{TM}

In simple terms

The PAF® Mainfile™ is a master database containing complete Postcode and address information for over 28 million UK addresses. Mainfile contains no software; the raw data within it must be processed for use in IT applications.

A relational database means that addresses are held not as text but as a series of keys, or pointers, which relate to files of address element text. Mainfile is therefore supplied as a series of files:

Table 34: Mainfile file sizes

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)
Localities	41,314	625Kb
Thoroughfare	205,900	2.19Mb
Thoroughfare Descriptor	212	1.84Kb
Building Names	2,255,653	23.4Mb
Sub Building Names	151,434	1.39Mb
Organisation	1,390,433	22.5Mb
Address	28,524,452	360Mb
Business Mail (optional)	10,589	37.2Kb
Welsh Data (optional)	1,432,368	18.3Mb
Total Mainfile = 34,012,355 / 428Mb (approx.)		

- **Relational database format**
- **Each record at Delivery Point level**
- **Efficient database structure**
- **Uses the Changes or Single Changes Files to update (daily, monthly or quarterly)**

Product description

Mainfile contains complete PAF® address data, and holds each record at Delivery Point level (i.e. one record for every Delivery Point on the file – circa 29 million). It also contains the Business Mail® Standard Selection code for each Delivery Point and Delivery Point Suffix information (which is explained in the Notes to the Address File data record, further on in this chapter).

Mainfile contains PAF data in relational database format. Taking as an example 'High Street', which is a Thoroughfare. On PAF it is held like this. The PAF database includes one file that describes Thoroughfares (e.g. 'Acacia Avenue', 'Longton Lane' etc.). This Thoroughfare file has one column for Thoroughfare Names (e.g. 'High' and 'Main'). Another file holds Thoroughfare Descriptors with columns for Thoroughfare Descriptors (e.g. 'Street' and 'Road') and Approved Abbreviations (e.g. 'St' and 'Rd'). To describe 'High Street' as part of the address the record on the Address File will point to the entry for 'High' in the Thoroughfares File and to the entry for 'Street' in the Thoroughfare Descriptors File.

Taking the example address 'South Lanarkshire Council, Head Start, Unit 1, Block 3, Third Road, Blantyre Industrial Estate, Blantyre, GLASGOW, G72 0UP':

This will be held on PAF as follows:

Table 35: Mainfile relational database format

Field on PAF®	Fictional example
Organisation	SOUTH LANARKSHIRE COUNCIL
Department	HEAD START
Sub Building name	UNIT 1
Building Name	BLOCK 3
Thoroughfare Name	THIRD
Thoroughfare Descriptor	ROAD
Double Dependent Locality	BLANTYRE INDUSTRIAL ESTATE
Dependent Locality	BLANTYRE
Post Town	GLASGOW
Postcode	G72 0UP

On the Mainfile this would be held across a series of appropriate relational files, but in the Address File record itself the address would be represented as a string of alpha and alphanumeric characters referring to each element of the address, each held in a fixed width format. Here's an example:

G720UP18181822039258000002130001000000000000000000000052160067684900010189978552BY

Selectability/media

Available via:

CD-Rom
FTP

File details

The series of files on PAF Mainfile are described in more detail below:

Localities file

This file contains one record for each Locality held on PAF. The file is held in ascending sequence by Locality Key. The Post Town 'London' is held as one Locality for each London postal district.

Thoroughfares file

This file contains one record for each Thoroughfare on PAF. The file is held in ascending sequence by Thoroughfare Key.

Thoroughfare Descriptors file

This file contains one record for each Thoroughfare Descriptor held on PAF. The file is held in ascending sequence by Thoroughfare Descriptor Key.

Building Names file

This file contains one record for each Building Name held on PAF. The file is held in ascending sequence by Building Name Key.

Sub Building Names file

This file contains one record for each Sub Building Name held on PAF. The file is held in ascending sequence by Sub Building Name Key.

Organisations file

This file contains one record for each occurrence of an Organisation held on PAF. The file is held in ascending sequence of Postcode type followed by Organisation Key. The unique key to the Organisation File is the Organisation Key and Postcode Type fields.

Address file

This file contains one record for each Delivery Point held on PAF. The file is held in ascending sequence by Postcode/Address Key/Organisation Key. The unique key to the Address File is the Address Key, Organisation Key and Postcode Type fields.

Business Mail® file (optional)

Business Mail data is used by customers who pre-sort their mail to achieve discounts via products like Royal Mail's Business Mail and publishing mail®. The file contains one record for each Postcode sector. The record contains the sector and its associated Business Mail Standard Selection Code. The file is held in ascending sequence by Postcode Sector. This is a reference file only, i.e. no updates are provided with Changes files.

Welsh alternative file

If you require Welsh alternative addresses, use the Welsh Mainfile in combination with the standard Mainfile. This means that you use one set of reference files and the two address files, and note the following points:

- All the reference data for the Standard and Welsh Address files are held on the same set of reference files.

- The Welsh address file contains identical data to the Standard file for those addresses within the Welsh Principality for which no Alternative address exists.

- The addresses on the Welsh address file are only those in Sectors defined as being part of the Welsh principality. Appendix c) Cross-border Postcodes shows which sectors these are.

- For the addresses on the Welsh address file the one-to-one relationship between the standard and the Welsh files and PAF Key (Address Key, Organisation key, Postcode type) will allow the one-to-one match to be made between the two files.

- Where a Welsh Alternative address is defined on PAF the Standard Mainfile will contain the address as held on PAF, and the Welsh Mainfile will contain the same address with the Locality Key, Thoroughfare Key, Thoroughfare Descriptor Key, Dependent Thoroughfare Key, Dependent Thoroughfare Descriptor Key replaced as appropriate. The Welsh address files do not contain any Alternative Organisation, Department, Building Name and Sub Building Name information.

- Generally, it is anticipated that the Thoroughfare Descriptor on the Alternative address will not exist and this field will therefore be space filled. This is because there is no proposal to add any Descriptors and, in the case of Welsh Thoroughfares, the Descriptor element is at the start of the string.

- The file name for the Welsh Alternative Mainfile is WFMAINFL

Overleaf is an example:

Table 36: Welsh alternative addresses

Localities

3518	Northop Mold
3495	Mold
39389	Llaneurgain Yr Wyddgrug
11947	Llanrug Caernarfon

Thoroughfares

2	High
180670	Maes Ty Gwyn
112538	Nant Y Glyn
54	Church

Standard Address File

Postcode	Address Key	Org. Key	Type	Locality	Th'fare	Th'fare Descr.	Depend. Th'fare	Depend. Th'fare Descr.
CH7 1AZ	16334377	0	S	3495	2	2	0	0
LL55 4AH	22016190	0	S	11947	112538	0	0	0
CH7 6BS	19885162	0	S	3518	54	1	0	0

Welsh Address File

Postcode	Address Key	Org. Key	Type	Locality	Th'fare	Th'fare Descr.	Depend. Th'fare	Depend. Th'fare Descr.
CH7 1AZ	16334377	0	S	37342	180670	0	0	0
LL55 4AH	22016190	0	S	11947	112538	0	0	0
CH7 6BS	19885162	0	S	39389	54	1	0	0

Descriptor

2	Street
1	Road

This example defines 3 addresses:

1. **High Street, Mold, Clwyd* CH7 1AZ** (where an alternative locality of 'Yr Wyddgrug' has been defined and for this 'High Street' an Alternative thoroughfare of 'Maes Ty Gwyn' has been defined. This is reflected in the changed keys between the two address files).

2. **Nant Y Glyn, Llanrug, Caernarfon, *Gwynedd LL55 4AH** (has no Welsh Alternative address details defined, because the address is already held in Welsh, so the standard values are present in both files)

3. **Church Road, Northop, Mold, *Clwyd, CH7 6BS** (where an alternative locality of 'Llaneurgain, Yr Wyddgrug' is defined, but no alternative thoroughfare).

* Please note that this information is not postally required

Welsh File Address examples

Note that not every Welsh address has alternative data.

In this example there is a Welsh alternative for both the Thoroughfare & Locality. This is reflected in the changed keys for the two address files.

Table 37: Welsh alternatives for both Thoroughfare and Locality

Field on PAF®	Fictional example
Thoroughfare	1 Castle Street
Post Town	CARDIFF
Postcode	CF10 1BT

```
1 Heol y Castell
CAERDYDD
CF10 1BT
```
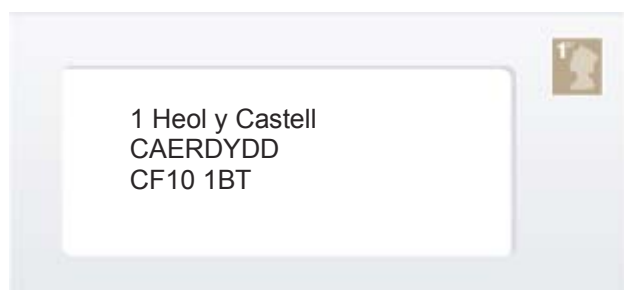
In this example there is an alternative Thoroughfare and Locality, both with Welsh alternatives:

Table 38: Welsh alternative Thoroughfare but no Welsh Locality

Field on PAF®	Fictional example
Thoroughfare	Church Street
Post Town	PORTHMADOG
Postcode	LL49 9HW

```
Stryd y Llan
PORTHMADOG
LL49 9HW
```

In this example there is a Welsh alternative Locality but no Welsh alternative Thoroughfare.

Table 39: Welsh alternative Locality but no Welsh Thoroughfare

Field on PAF®	Fictional example
Thoroughfare	Church Road
Locality	Northop
Post Town	MOLD
Postcode	LL49 9HW

Church Road
Llaneurgain
YR WYDDGRUG
LL49 9HW

Record definitions

Mainfile – Localities File

RECORD NAME   :   Header Record
RECORD LENGTH   :   151

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	**(a)**
File Identifier	1	Alphanumeric	8	1	**(b)**
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	129	1	

NOTES
(a) – Record Identifier = zeroes,   **(b) –** File Identifier = LOCALITY

RECORD NAME   :   Data Record
RECORD LENGTH   :   151

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Locality Key	1	Numeric	6	1
Filler	1	Alphanumeric	30	1
Filler	1	Alphanumeric	15	1
Post Town	1	Alphanumeric	30	1
Dependent Locality	1	Alphanumeric	35	1
Double Dependent Locality	1	Alphanumeric	35	1

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   151

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	**(a)**
Record Count	1	Numeric	8	1	**(b)**
Filler	1	Alphanumeric	135	1	

NOTES
(a) – Record Identifier = 99999999
(b) – Record count contains the number of records on file including header and trailer.

Mainfile – Thoroughfare File

RECORD NAME   :   Header Record
RECORD LENGTH   :   68

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	(a)
File Identifier	1	Alphanumeric	8	1	(b)
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	46	1	

NOTES

(a) – Record Identifier = zeroes
(b) – File Identifier = THOROUGH

RECORD NAME   :   Data Record
RECORD LENGTH   :   68

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Thoroughfare Key	1	Numeric	8	1
Thoroughfare Name	1	Alphanumeric	60	1

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   68

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	(a)
Record Count	1	Numeric	8	1	(b)
Filler	1	Alphanumeric	52	1	

NOTES

(a) – Record Identifier = 99999999
(b) – Record count contains the number of records on file including header and trailer.

Mainfile – Thoroughfare Descriptors File

RECORD NAME   :   Header Record
RECORD LENGTH   :   30

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	(a)
File Identifier	1	Alphanumeric	8	1	(b)
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	8	1	

NOTES
(a) – Record Identifier = zeroes
(b) – File Identifier = THDESCRI

RECORD NAME   :   Data Record
RECORD LENGTH   :   30

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Thoroughfare Descriptor Key	1	Numeric	4	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Approved Abbreviation	1	Alphanumeric	6	1	(a)

NOTES
(a) – Approved abbreviation is space filled.

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   30

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	(a)
Record Count	1	Numeric	8	1	(b)
Filler	1	Alphanumeric	14	1	

NOTES
(a) – Record Identifier = 99999999
(b) – Record count contains the number of records on file including header and trailer.

Mainfile – Building Names File

RECORD NAME   :   Header Record
RECORD LENGTH   :   58

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	(a)
File Identifier	1	Alphanumeric	8	1	(b)
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	36	1	

NOTES

(a) – Record Identifier = zeroes
(b) – File Identifier = BUILDING

RECORD NAME   :   Data Record
RECORD LENGTH   :   58

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Building Name Key	1	Numeric	8	1
Building Name	1	Alphanumeric	50	1

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   58

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	(a)
Record Count	1	Numeric	8	1	(b)
Filler	1	Alphanumeric	42	1	

NOTES

(a) – Record Identifier = 99999999
(b) – Record count contains the number of records on file including header and trailer.

Mainfile – Sub Building Names File

RECORD NAME   :   Header Record
RECORD LENGTH   :   38

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	**(a)**
File Identifier	1	Alphanumeric	8	1	**(b)**
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	16	1	

NOTES

(a) – Record Identifier = zeroes
(b) – File Identifier = SUBBUILD

RECORD NAME   :   Data Record
RECORD LENGTH   :   38

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Sub Building Name Key	1	Numeric	8	1
Sub Building Name	1	Alphanumeric	30	1

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   38

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	**(a)**
Record Count	1	Numeric	8	1	**(b)**
Filler	1	Alphanumeric	22	1	

NOTES

(a) – Record Identifier = 99999999
(b) – Record count contains the number of records on file including header and trailer.

Mainfile – Organisations File

RECORD NAME　　　　　:　　　Header Record
RECORD LENGTH　　　　:　　　153

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Numeric	8	1	**(a)**
File Identifier	1	Alphanumeric	8	1	**(b)**
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	131	1	

NOTES

(a) – Record Identifier = zeroes
(b) – File Identifier = ORGANISA

RECORD NAME　　　　　:　　　Data Record
RECORD LENGTH　　　　:　　　153

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Organisation Key	1	Numeric	8	1
Postcode Type	1	Alphanumeric	1	1
Organisation Name	1	Alphanumeric	60	1
Department Name	1	Alphanumeric	60	1
Filler	1	Alphanumeric	24	1

RECORD NAME　　　　　:　　　Trailer Record
RECORD LENGTH　　　　:　　　153

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	8	1	**(a)**
Record Count	1	Numeric	8	1	
Filler	1	Alphanumeric	137	1	

NOTES

(a) – Record Identifier = 99999999

Mainfile – Address File

RECORD NAME   :   Header Record
RECORD LENGTH   :   88

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	59	1	

NOTES

(a) – Postcode = Low values (except for CD-Rom where Postcode = Spaces)
(b) – Address Key = zeroes
(c) – File Identifier = ADDRESS

Mainfile – Address File

RECORD NAME   :   Data Record
RECORD LENGTH   :   88

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1				
Outward Code	2	Alphanumeric	4	1	
Inward Code	2	Alphanumeric	3	1	
Address Key	1	Numeric	8	1	
Locality Key	1	Numeric	6	1	**(a)**
Thoroughfare Key	1	Numeric	8	1	**(b)**
Thoroughfare Descriptor Key	1	Numeric	4	1	**(c)**
Dependent Thoroughfare Key	1	Numeric	8	1	
Dependent Thoroughfare Descriptor Key	1	Numeric	4	1	
Building Number	1	Numeric	4	1	**(d)**
Building Name Key	1	Numeric	8	1	**(e)**
Sub Building Name Key	1	Numeric	8	1	**(f)**
Number of Households	1	Numeric	4	1	**(g)**
Organisation Key	1	Numeric	8	1	**(h)**
Postcode Type	1	Alphanumeric	1	1	**(i)**
Concatenation Indicator	1	Alphanumeric	1	1	**(j)**
Delivery Point Suffix	1	Alphanumeric	2	1	**(k)**
Small User Organisation Indicator	1	Alphanumeric	1	1	**(l)**
PO Box Number	1	Alphanumeric	6	1	**(m)**

NOTES

(a) – Locality Key refers to a record in the Localities File.
(b) – Thoroughfare Key and Dependent Thoroughfare Key both point to records in the Thoroughfares File. If equal to zero there is no Thoroughfare/Dependent Thoroughfare present.

NOTES TO MAINFILE DATA RECORD cont.

(c) – Thoroughfare Descriptor Key and Dependent Thoroughfare Descriptor Key both point to records in the Thoroughfare Descriptors File. If equal to zero there is no Descriptor present.

(d) – Building number – when equal to zero this indicates that a Building Number is not required for this address.

(e) – Building Name Key points to a record in the Building Names File. If equal to zero there is no Building Name.

(f) – Sub Building Name Key points to a record in the Sub Building Names File. If equal to zero there is no Sub Building Name.

(g) – Number of Households field contains multi-occupancy information. When equal to one it indicates that there is one household at the address, when greater than one the field contains the number of households present.

(h) – Organisation Key for a Small User refers to a record in the Organisations File. If equal to zero there is no Organisation present. For a Large User the Address Key points to a record in the Organisation file. Since Small and Large User records are on different key sequences the Postcode Type (S or L) must also be used when accessing the Organisation file to ensure that the correct record is retrieved.
A Delivery Point which has a PO Box and is a Large User Organisation will always have a corresponding entry in the Organisation reference file, even if the Organisation and Department Names are blank.

(i) – Postcode Type is 'S' for Small Users and 'L' for Large Users.

(j) – Concatenation indicator is either 'Y' or space. When equal to 'Y' this indicates that the Building Number and the Sub Building Name should appear concatenated on the same address line.

Here's an example where the address line should read 12A SMITH STREET

Thoroughfare Name	=	SMITH
Thoroughfare Descriptor	=	STREET
Building Number	=	12
Sub Building Name	=	A
Concatenation Indicator	=	Y

(k) – The Delivery Point Suffix (DPS) is a unique Royal Mail 2-character code (the first numeric & the second alphabetical – e.g. 2B), which, when added to the Postcode, enables each live Delivery Point to be uniquely identified. Once the Delivery Point is deleted from PAF the DPS may be reused (although they aren't reused until all remaining Delivery Points in the range have been allocated). The DPS for a Large User is always '1A' as each Large User has its own Postcode. The chapter on the Compressed Standard file, Note (d) of the Record definition table for 'Type 3 – Delivery Point details' has an explanation of the DPS format and its use

(l) – Small User Organisation Indicator can have the values 'Y' or space. A value of 'Y' indicates that a Small User Organisation is present at this address

(m) – When the PO Box Number field is populated it will contain PO BOX nnnnnn where n represents the PO Box number. Please note that the PO Box details can occasionally consist of a combination of numbers and letters e.g. HK860. PO Box Numbers are only allocated to Large Users.

WELSH MAINFILE

If no Welsh Alternative address exists for the Delivery Point the Locality Key, Thoroughfare Key, Thoroughfare Descriptor Key, Dependent Thoroughfare Key and Dependent Thoroughfare Descriptor Key will be identical to the standard Mainfile keys. If an Alternative address exists the keys will be replaced by keys pointing to elements of the Alternative Address. However the reference information for all fields is in the standard Mainfile reference files.

Mainfile – Address File

RECORD NAME   Trailer Record
RECORD LENGTH   :   88

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1			1	
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record Count	1	Numeric	8	1	
Filler	1	Alphanumeric	65	1	

NOTES

(a) – Postcode = High values (except for CD-Rom where Postcode = Spaces)
(b) – Address Key = 99999999

Mainfile – Business Mail® File

RECORD NAME   Header Record
RECORD LENGTH   :   10

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	4	1	**(a)**
Edition	1	Alphanumeric	6	1	

NOTES

(a) – Record Identifier = Low values (except for CD-Rom where record Identifier = Spaces)

RECORD NAME   Data Record
RECORD LENGTH   :   10

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Postcode Sector	1			
Outward Code	2	Alphanumeric	4	1
Sector	2	Numeric	1	1
Standard Selection Code	1			
Residue Identifier	2	Numeric	3	1
Direct Within Residue Indicator	2	Numeric	2	1

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   10

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	4	1	**(a)**
Record Count	1	Numeric	6	1	**(b)**

NOTES

(a) – Record Identifier = High values (except for CD-Rom where record Identifier = Spaces)
(b) – Record Count contains the number of records on file including header and trailer

Related products/links

PAF data in different structures

Compressed Standard™
Ranges™

If you take Mainfile, you might be interested in these additional products:

Alias®
Changes and Single Changes
Keychain
Just Built™
Multiple Residence™
Not Yet Built™
UDPRN™
BFPO Postcode data

Pricing/licensing

For pricing, licensing & ordering details for this product, please visit www.poweredbypaf.com

Alias®

In simple terms

Alias™ data is information the public choose to use when addressing mail, but which isn't actually required for delivery purposes. Here are some examples:

- house names on numbered properties (e.g. 'Rose Cottage' at '2 High Street')
- county names (e.g. 'Surrey' or 'Lincs')
- businesses operating from home ('Jones Plumbing' at '2 The Avenue').

Alias data makes a great add-on to a PAF®-based system, helping locate correct postal addresses from 'postally-not-required' data. It is only available with a PAF product, not as a stand-alone product.

- **relational database format (ideal for use with the Mainfile™)**
- **full editions only (there are no Changes files)**
- **postally not required address data**
- **useful for advanced address searching**

Alias is supplied as a single file, this being:

Table 40: Alias file size

Product file names	Sample record size (April '09 data)	Sample file size (April '09 data)
Alias file	2,891,757	32.1Mb

Product description

The Alias file contains the following:

Locality records	old short forms, local names and Postally Not Required (PNR) Localities
Thoroughfare records	replacement Thoroughfare names for a given Locality, Thoroughfare, Dependent Thoroughfare combination
Delivery Point Alias information	additional Delivery Point Information e.g. Trading Names, Building Name details where a Building Number is the official building identifier
County records	Traditional, Administrative and Former Postal County information. Note (b) to the Record Definition Table 'Record Type 4 – County Name' later in this chapter contains more information on the different types of counties

Alias is not, however, a comprehensive listing and the nature of the data is such that Royal Mail cannot guarantee its accuracy. Alias information may be used by the public when addressing mail but is not required as part of PAF address.

Selectability/media

CD-Rom
FTP

Please note that it is only available as a full UK file only (no selections) and alongside a PAF product.

File details

The file is approximately 175Mb in size and contains around 2.5 million records of the following types:

Type   1 – Locality Alias
        2 – Thoroughfare Alias
        3 – Delivery Point Alias
        4 – County Name
        5 – County Alias

The sequence of the Delivery Point Alias information is in ascending organisation key, ascending address key.
The sequence of the County Alias File is ascending Postcode.

Further information

For pricing, licensing & ordering please visit www.poweredbypaf.com.

Record definitions

Alias File

RECORD NAME   :   Header Record
RECORD LENGTH   :   75

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
File Header	1	Alphanumeric	8	1	
File Name	1	Alphanumeric	8	1	**(a)**
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	53	1	

NOTES

(a) – File Name = ALIASFLE

RECORD NAME   :   Record Type 1 – Locality Alias
RECORD LENGTH   :   75

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Type	1	Numeric	1	1	**(a)**
Locality Key	1	Numeric	9	1	
Postcode Sector	1				
Outward Code	2	Alphanumeric	4	1	
Inward Code	2	Alphanumeric	1	1	
Alias Name	1	Alphanumeric	35	1	
Alias Type	1	Alphanumeric	3	1	**(b)**
Filler	1	Alphanumeric	22	1	

NOTES

(a) – Record Type = 1
(b) – Alias type can be 'SYS', 'LOC', 'PNR' or 'REQ'. 'SYS' and 'LOC' are short and local names. 'PNR' are Postally Not Required Localities. PNRs have sectors allocated to them in addition to a Locality Key. REQs are Postally Required applied to those Localities that are held on the Mainfile, with the exception of Post Towns. For other types the Sector field is blank.

Alias File

RECORD NAME   :   Record Type 2 – Thoroughfare Alias
RECORD LENGTH   :   75

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Type	1	Numeric	1	1	**(a)**
Alias Name	1	Alphanumeric	35	1	
Alias Descriptor	1	Numeric	4	1	
Thoroughfare Key	1	Numeric	9	1	
Thoroughfare Descriptor Key	1	Numeric	4	1	**(b)**
Dependent Thoroughfare Key	1	Numeric	9	1	
Dependent Thoroughfare Descriptor Key	1	Numeric	4	1	
Locality Key	1	Numeric	9	1	

NOTES

(a) – Record Type = 2

(b) – Alias Name = The Alias Text (with Alias Descriptor expanded from the Mainfile Thoroughfare Descriptor file if appropriate) is a local alias for a specific Location. (The location is defined as Locality, Thoroughfare, Thoroughfare Descriptor, Dependent Thoroughfare, Dependent Thoroughfare Descriptor as defined on the Mainfile layout.)

Alias File

RECORD NAME   :   Record Type 3 – Delivery Point Alias
RECORD LENGTH   :   75

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Type	1	Numeric	1	1	**(a)**
Address Key	1	Numeric	8	1	
Organisation Key	1	Numeric	8	1	
Postcode Type	1	Alphanumeric	1	1	**(b)**
Category	1	Alphanumeric	2	1	**(c)**
Currency	1	Alphanumeric	1	1	**(d)**
Alias Text	1	Alphanumeric	50	1	
Filler	1	Alphanumeric	4	1	

NOTES

(a) – Record Type = 3
(b) – Postcode Type = The Postcode type for Small Users is 'S' and for Large Users is 'L'.
(c) – Category = Each Delivery Point alias may be assigned a category; the current allowable categories are in the table below:

Table 41: Allowable Alias Delivery Point categories

CATEGORY	DESCRIPTION
AK	Also Known As
BN	Building Name
DT	Department
OD	Organisation Description
OR	Organisation at a Residential
TN	Trading Name
UK	Unknown / Miscellaneous
WA	Welsh Alternative

(d) – Currency = Each Delivery Point alias can also be given a currency indicator. These are

C = current
P = past
Z = default.

Alias File

| RECORD NAME | : | Record Type 4 – County Name |
| RECORD LENGTH | : | 75 |

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Type	1	Numeric	1	1	**(a)**
County Key	1	Numeric	4	1	
County Name	1	Alphanumeric	30	1	
County Type	1	Alphanumeric	1	1	**(b)**
Filler	1	Alphanumeric	39	1	

NOTES

(a) – Record Type = 4

(b) – County Type will be T (Traditional County), P (Former Postal County) or A (Administrative County). Here's some more information on County Types:

Former Postal	was used for the distribution of mail before the Postcode system was introduced in the 1970s. It helped differentiate between similar and same-sounding place names (e.g. 'Caistor' in Lincolnshire and 'Caistor St Edmund' in Norfolk, or 'Newport' in Shropshire and 'Newport' on the Isle of Wight). The Former Postal County was the Administrative County at the time. This data rarely changes.
Traditional	provided by the Association of British Counties. It's historical data, and can date from the 1800s.
Administrative	A Unitary Authority name, where one is present. If there is no Unitary Authority, the County name is used. This data is provided by the Office for National Statistics. This information is not static, because County boundaries may change due to administrative changes. In some circumstances, it would be nonsensical to use the Administrative County in an address. For example in Portsmouth, the Administrative County is also 'Portsmouth'

Here's one of a few examples where the Formal Postal County, the Traditional County and the Administrative County are all different:

Organisation and premises	47 FIELD REGIMENT ROYAL ARTILLERY/BAKER BARRACKS
Dependent Locality	THORNEY ISLAND
Post Town	EMSWORTH
County – Former Postal	HAMPSHIRE
County – Traditional	SUSSEX
County – Administrative	WEST SUSSEX
Postcode	PO10 8DH

Alias File

RECORD NAME   :   Record Type 5 – County Alias
RECORD LENGTH   :   75

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Type	1	Numeric	1	1	(a)
Postcode	1	Alphanumeric	7	1	
Former Postal County	1	Numeric	4	1	
Traditional County	1	Numeric	4	1	
Administrative County	1	Numeric	4	1	
Filler	1	Alphanumeric	55	1	

NOTES

(a) – Record Type = 5

Some county names are abbreviated on PAF. Here's a list of those abbreviations.

Table 42: County abbreviations on Alias

County name	Abbreviation	County name	Abbreviation
Bedfordshire	Beds	North Humberside	N Humberside
Berkshire	Berks	North Yorkshire	N Yorkshire
Buckinghamshire	Bucks	Northamptonshire	Northants
Cambridgeshire	Cambs	Northumberland	Northd
County Antrim	Co Antrim	Nottinghamshire	Notts
County Armagh	Co Armagh	Oxfordshire	Oxon
County Down	Co Down	South Glamorgan	S Glam
County Durham	Co Durham	South Humberside	S Humberside
County Fermanagh	Co Fermanagh	South Yorkshire	S Yorkshire
County Tyrone	Co Tyrone	Staffordshire	Staffs
East Sussex	E Sussex	Tyne and Wear	Tyne & Wear
Gloucestershire	Glos	Warwickshire	Warks
Hampshire	Hants	West Glamorgan	W Glam
Hertfordshire	Herts	West Midlands	W Midlands
Lancashire	Lancs	West Sussex	W Sussex
Leicestershire	Leics	West Yorkshire	W Yorkshire
Lincolnshire	Lincs	Wiltshire	Wilts
Mid Glamorgan	M Glam	Worcestershire	Worcs
Middlesex	Middx		

Alias File

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   75

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
File Trailer	1	Alphanumeric	9	1	(a)
Record Count	1	Numeric	10	1	
Filler	1	Alphanumeric	56	1	

NOTES

(a) – File trailer = 999999999

Related products/links

If you take Alias, you might be interested in these additional products:

Mainfile

Pricing/licensing

There is a charge for the supply of the Alias data and customers will also need a valid PAF Licence. See www.poweredbypaf.com for details.

Keychain™

In simple terms

The Keychain™ file is a raw data file that is supplied with PAF® Changes. It allows you to keep track of Address & Organisation Keys.

- **Supplied as part of PAF Changes**
- **Address and Organisation Key information**
- **New edition available every month**
- **Covers all 124 Postcode Areas**

Keychain consists of a single file, this being:

Table 43: Keychain file size

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)
Keychain File	12,718	256Kb

Product description

The Keychain file records the link between old and new address or organisation keys.

There are many reasons for a Delivery Point acquiring different keys and the Keychain product records the changes.

These changes can fall into two types: where a Delivery Point is deleted and re-input, and where a Delivery Point is amended.

1. Where a Delivery Point is **deleted and re-input**, PAF doesn't differentiate whether it's a completely new Delivery Point or whether it's an old deleted Delivery Point being re-input. So new address keys are allocated.
2. Where a Delivery Point is **amended,** PAF keeps the address keys unless forced to change keys under one of PAF database address rules – see PAF Address key rules in the Appendices section.

Selectability/media

Keychain is supplied with PAF Changes via:

CD-Rom
FTP

File details

Here are the situations where key changes are NOT captured on the Keychain product:

a) Deletion of a Delivery Point followed by the insertion of a Delivery Point which doesn't match the deleted Delivery Point.

b) Deletion of a Delivery Point followed by the insertion of an identical Delivery Point, when the logically deleted Delivery Point is no longer held (i.e. it has been tidied up at month end after more than three months).

The Keychain product will contain time-sequenced data for all identified re-keys.

Record definitions

Keychain

RECORD NAME : Header Record
RECORD LENGTH : 56

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
File Header	1	Alphanumeric	9	1	**(a)**
File Name	1	Alphanumeric	8	1	**(b)**
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	33	1	

NOTES

(a) – File Header = Spaces
(b) – File Name = KEYCHAIN

RECORD NAME : Data Record
RECORD LENGTH : 56

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Time	1	Alphanumeric	14	1	**(a)**
Old Postcode	1	Alphanumeric	7	1	
Old Address Key	1	Numeric	8	1	
Old Organisation Key	1	Numeric	8	1	
Old Postcode Type	1	Alphanumeric	1	1	**(b)**
New Address Key	1	Numeric	8	1	
New Organisation Key	1	Numeric	8	1	
New Postcode Type	1	Alphanumeric	1	1	**(b)**
Reason	1	Alphanumeric	1	1	**(c)**

NOTES

(a) – Time = For this file the time is held as CCYYMMDDHHMMSS
(b) – Postcode Type = The Postcode Type for Small Users is 'S' and for Large Users is 'L'.
(c) – Reason = The Reason for Keychain is 'D' = Duplicate with logically deleted Delivery Point and 'G' for general rekeys, generated by PAF system.

Keychain

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   43

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
File Trailer	1	Alphanumeric	9	1	**(a)**
Record Count	1	Alphanumeric	10	1	**(b)**
Filler	1	Alphanumeric	37	1	

NOTES

(a) – File Trailer = 99999999
(b) – Record count contains the number of records on file including header and trailer.

Related products/links

If you take Keychain, you might be interested in these additional products:

Mainfile™
Compressed Standard File™
Combined Changes File™

Applications that include Keychain data

None

Pricing/licensing

There is no additional charge for the Keychain data, customers simply need to request it when ordering the Combined Changes File.

Customers will however need a valid PAF Licence, see www.poweredbypaf.com for costs.

Changes & Single Changes

In simple terms

The Changes & Single Changes Product contains files that will update PAF® Mainfile™, Keychain™ & the Welsh Mainfile (If you use our Ranges™ or Compressed Standard™ products, you'll need the Expanded Changes or Expanded Single Changes file). The two Changes files summarise all insertions, deletions & amendments made to the full dataset since your last update.

The quickest & simplest way to update PAF is not to use Changes files at all, but to take regular refreshes of the full dataset (e.g. a monthly or quarterly full Mainfile). This means you simply delete the previous files & replace them with the newer, but identically named refreshes – very simple. This is the 'low maintenance' option.

Applying Changes files regularly is 'high maintenance', because applying thousands of changes is a very long & involved process compared to buying full refreshes. It's important to apply Changes products regularly and in the right order. For example: if a new Delivery Point was included in January's Changes product, and an amend was made to it which appeared on February's Changes product, if the January Changes product had not been applied, then the information contained in the February file would not be logical.

- **High maintenance update option**
- **Sent monthly, quarterly or daily (daily is only an option via internet download)**
- **Compatible with Mainfile, keychain file & Welsh Mainfile**

Product description

This file contains PAF update information. It contains details of additions, deletions, amendments and Postcode recoding of Delivery Points. The update data is only available at individual Delivery Point level; there are no group level records to give information at Postcode level. If a Postcode is deleted then the file contains a deletion record for each Delivery Point within the Postcode.

The product contains addresses in relational format, similar to the Mainfile product. The addresses are held not as text but as a series of keys, or pointers, which relate to files of address element text. The product is supplied as two files named Changes1 and Changes2. The size of these files varies depending on the volume of PAF updates over the issue period.

The Single Changes file is identical in format and layout to the Changes2 file. However, only one pair of records will appear for each Delivery Point, representing the first and last view of the Delivery Point over the change period (there will be no record of changes made in between).

Here's an example:

Table 44: Changes files Delivery Point views

Product	First view of Delivery Point	Changes in between	Last view of Delivery Point
Changes2	Rose Cottage	Rose Lodge	Number 10
Single Changes	Rose Cottage		Number 10

The Welsh Changes File will have exactly the same format as the Changes2 File. Welsh Changes must be used in conjunction with the regular Changes2 File.

Please note that

- All record types on the Welsh Changes File are record type 1, i.e. Address details
- For record types 2 & 3 refer to the Changes2 file, i.e. changes such as Organisation Name changes are only available on the Changes2 file.

Selectability/media

Usually supplied via the Combined PAF Changes product. However customers who take subsets of the data (e.g. PO, SO and GU) will be supplied with the files separately. Available via:

CD-Rom
FTP

PAF Changes details

PAF Changes consists of 7 files which are:

Table 45: Changes file sizes

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)	Notes
Changes1 (semi-static data)	45,147	606Kb	**(a)**
Changes2 (day-today-changes)	145,434	3.46Mb	**(b)**
Single Changes (no change history)	136,722	3.31Mb	**(c)**
Welsh Changes	5,246	125Kb	**(d)**
Expanded Changes (text, not keys)	145,434	4.7Mb	**(e)**
Expanded Single Changes (text and no change history)	136,722	4.48Mb	**(e)**
Total File = 627,423 / 16.9Mb (approx.)			

Keychain™ is also supplied, please see separate chapter.

NOTES TO TABLE 45: Changes File sizes

(a) – Changes1

The file contains the following record types:

Record Type 1   – Localities
Record Type 2   – Thoroughfares
Record Type 3   – Thoroughfare Descriptors
Record Type 4   – Building Names
Record Type 5   – Sub Building Names

Records are held in ascending sequence by Record Type and Record Key.

On Changes1, the localities file Record Key is 8 characters, whereas the Mainfile localities file is 6 characters. The reason Changes1 differs from Mainfile is to provide continuity between the record types. It does not imply that the field sizes on the Mainfile are incorrect.

Record keys within record types 1 to 5 will not be consecutive. These records provide a subset of the Mainfile reference files. The address elements present are those elements that are required to expand the address Changes2 records e.g. if Locality Key 121 is not present on any of the Changes2 records then that Locality will not be present in the Changes1 file.

During the course of address maintenance, changes made to the reference file are shown as amendment types:

A = amendment
D = deletion
I = insertion

There are rarely amendments or deletions to the Mainfile reference tables (i.e. Localities, Thoroughfares, Thoroughfare Descriptors, Building Names, Sub Building Names). These additions are represented on the Changes1 File. The addition of a reference file record is shown by a Changes1 record for the new address element.

Here's an example:

A Building Name ' The Manse' is added on 030290 at 10:15:01 and is assigned record key 694027. This is what it looks like on the Changes1 file:

Rec Type	Rec Key	Date	Time	Amendment Type	Building Name
4	00694027	19900203	101501	I	THE MANSE

When an address element is present on Changes1 for reference purposes only, the Date and Time fields are zero filled and the Amendment Type field is space filled.

(b) – Changes2

The file contains the following record types:

Record Type 1   Address details
Record Type 2   Small User Organisation details (Type 2 records will only be present for Small User Organisations)
Record Type 3   Large User details (Type 3 records will only be present for Large Users)

Records are held in ascending sequence by:

  Date
  Time
  Postcode
  Delivery Point Suffix
  Postcode Type
  Address Key
  Organisation Key
  Amendment Type
  Record Type

Amendment types are:

  B – before view   }   Amendment
  C – after view

  D – deletion
  I – insertion

For further information about the Derivation of Amendment Types see end of this section.

Insertions and deletions are represented by a single Type 1 record. If the address is for a Small User Organisation the Type 1 record will be followed by a Type 2 record. If the address is for a Large User the type 1 record will be followed by a Type 3 record.

Amendments are represented by a pair of Type 1 records, these being a before and an after view. Each Type 1 record may be followed by a Type 2 or 3 record.

(c) – Single Changes

The Single Changes product is identical in format and layout to the Changes2 File. However, only one pair of records will appear for each Delivery Point, representing the first and last view of the Delivery Point over the change period.

Here's the example again:

Product	First view of Delivery Point	Changes in between	Last view of Delivery Point
Changes2	Rose Cottage	Rose Lodge	Number 10
Single Changes	Rose Cottage		Number 10

Changes information is available for Small and Large User addresses.

(d) – Welsh Changes

The Welsh Changes File will have exactly the same format as the regular Changes2 File. This product must be used in conjunction with the regular Changes2 file.

Please note that all record types on the Welsh Changes File are Record Type 1, i.e. Address details. For Record Types 2 and 3 refer to the regular Changes2 file, e.g. changes such as 'Organisation Name' changes are only available on the regular Changes2 file.

(e) – Expanded Changes and Expanded Single Changes

These Changes files update the text based products. See separate Chapter in the 'text based products' section.

General data information

Date format is YYYYMMDD

Time format is HHMMSS

Derivation of amendment types for PAF Changes products

This section refers to the Amendment Type indicator in the Changes Products.

Amendment types are:

> **B – before view**
> **C – after view**   **} amendment**
>
> **D – deletion**
> **I – insertion**

The majority of amendments to PAF are taken using data sourced from actions carried out by Royal Mail operational staff. The amendments are either added as an 'I', or an existing Delivery Point is deleted as a 'D'. However, some actions are generated as a result of the processing carried out to maintain PAF keying structure. This section explains the reasons for choosing certain amendment types and gives examples of the common occurrences.

The keys used in PAF are described in the chapter on PAF database structure. To support this keying structure a restriction of the use of keys was defined. This definition states that each unique occurrence of Address Details has a unique Address Key. The 'Address' details are the Locality, Thoroughfare, Thoroughfare Descriptor, Dependent Thoroughfare, Dependent Thoroughfare Descriptor, Building Number, Building Name and Sub Building Name. Organisations are uniquely identified by the Address Key and the Organisation Key. Several Organisations at the same 'Address' have the same Address Key but different Organisation Keys.

If a residential Delivery Point is added it will be allocated a new Address Key. If a new Organisation is added it will be allocated a new Organisation Key. Checking is then done to see if another Organisation exists on the same 'Address'. If it does, this Address Key is used for the newly inserted Organisation. If it doesn't, a new Address Key is allocated. In all cases the Amendment type is an 'I'.

Only when data is amended on-screen in such a way as to compromise the Key integrity, is an unexpected amendment type generated. If a simple amendment is done to a residential Delivery Point (e.g. correcting a spelling mistake on a Building Name), although the 'Address' is changed it is still unique so the Address Key does not need to change. In such a case the Amendment Type is a 'B and C'.

However, if an Organisation exists in a shared office (i.e. multiple organisations in the same Building) and one of the organisations has the Delivery Point details changed; this would create a new Delivery Point which then requires a new key. The old Delivery Point would therefore be deleted (Amendment Type 'D').   The new Delivery Point would be inserted (Amendment Type I). The Address Key would have a new value if the new 'Address' is unique, or an existing value if the new Delivery Point exists with organisations already on the system. In this case what appears to be an amendment must be represented as a delete/insert because of the Key changes.

Here's an example:

Organisation	Address details	Thoroughfare	Post Town	Address Key	Organisation Key
Bloggs Solicitors	George House	High Street	ANYTOWN	154002	10003
Jones Accountants	George House	High Street	ANYTOWN	154002	10004
Davies Printers	George House First Floor	High Street	ANYTOWN	154003	10005

If 'Jones Accountants' is amended to include 'First Floor' in the address, the entry will be deleted for keys 154002 10004 and inserted for 154003 10004.

Or, if the address is amended to have 'Ground Floor' in the details, the inserted entry would be Full 154004 10004, as the address does not yet exist. The Organisation Key will remain the same, and not be re-assigned.

Record definitions

Changes & Single ChangesFile – Changes1

RECORD NAME   :   Header Record
RECORD LENGTH   :   169

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	9	1	**(a)**
File Identifier	1	Alphanumeric	8	1	**(b)**
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	146	1	

NOTES

(a) – Record Identifier = Low values (except for CD-Rom where record Identifier = Spaces)
(b) – File Identifier = CHANGES1

RECORD NAME   :   Locality Record
RECORD LENGTH   :   169

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Type	1	Numeric	1	1	**(a)**
Locality Key	1	Numeric	8	1	
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	
Amendment Type	1	Alphanumeric	1	1	
Filler	1	Alphanumeric	30	1	
Filler	1	Alphanumeric	15	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	

NOTES

(a) – Record Type = 1

Changes & Single ChangesFile – Changes1

RECORD NAME   :   Thoroughfare Record
RECORD LENGTH   :   169

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Type	1	Numeric	1	1	**(a)**
Thoroughfare Key	1	Numeric	8	1	
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	
Amendment Type	1	Alphanumeric	1	1	
Thoroughfare Name	1	Alphanumeric	60	1	
Filler	1	Alphanumeric	85	1	

NOTES

(a) – Record Type = 2

RECORD NAME   :   Thoroughfare Descriptor Record
RECORD LENGTH   :   169

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Type	1	Numeric	1	1	**(a)**
Thoroughfare Descriptor Key	1	Numeric	8	1	
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	
Amendment Type	1	Alphanumeric	1	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Approved Abbreviation	1	Alphanumeric	6	1	**(b)**
Filler	1	Alphanumeric	119	1	

NOTES

(a) – Record Type = 3
(b) – Approved abbreviation is space filled.

Changes & Single Changes™ File – Changes1

RECORD NAME   :   Building Name Record
RECORD LENGTH   :   169

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Type	1	Numeric	1	1	(a)
Building Name Key	1	Numeric	8	1	
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	
Amendment Type	1	Alphanumeric	1	1	
Building Name	1	Alphanumeric	50	1	
Filler	1	Alphanumeric	95	1	

NOTES

(a) – Record Type = 4

Changes & Single Change File – Changes1

RECORD NAME   :   Sub Building Name Record
RECORD LENGTH   :   169

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Type	1	Numeric	1	1	(a)
Sub Building Name Key	1	Numeric	8	1	
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	
Amendment Type	1	Alphanumeric	1	1	
Sub Building Name	1	Alphanumeric	30	1	
Filler	1	Alphanumeric	115	1	

NOTES

(a) – Record Type = 5

Changes & Single Change File – Changes1

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   169

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	9	1	(a)
Record Count	1	Numeric	8	1	
Filler	1	Alphanumeric	152	1	

NOTES

(a) – Record Identifier = High values (except for CD-Rom where record Identifier = Spaces)

Changes & Single Change File – Changes2

RECORD NAME   :   Header Record
RECORD LENGTH   :   168

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	14	1	**(a)**
File Identifier	1	Alphanumeric	8	1	**(b)**
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	146	1	

NOTES

(a) – Record Identifier = Low values (except for CD-Rom where record Identifier = Spaces)
(b) – File Identifier = CHANGES2

Changes & Single Change File – Changes2

RECORD NAME   :   Address Record
RECORD LENGTH   :   168

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Date	1	Numeric	8	1	(a)
Time	1	Numeric	6	1	
Postcode	1			1	
Outward Code	2	Alphanumeric	4		
Inward Code	2		3		
Delivery Point Suffix (DPS)	1	Alphanumeric	2	1	
Postcode Type	1	Alphanumeric	1	1	(b)
Address Key	1	Numeric	8	1	
Organisation Key	1	Numeric	8	1	(c)
Amendment Type	1	Alphanumeric	1	1	
Record Type	1	Numeric	1	1	(d)
Locality Key	1	Numeric	8	1	(e)
Thoroughfare Key	1	Numeric	8	1	(f)
Thoroughfare Descriptor Key	1	Numeric	8	1	(g)
Dependent Thoroughfare Key	1	Numeric	8	1	
Dependent Thoroughfare Descriptor Key	1	Numeric	8	1	
Building Number	1	Numeric	4	1	(h)
Building Name Key	1	Numeric	8	1	(i)
Sub Building Name Key	1	Numeric	8	1	(j)
Number of Households	1	Numeric	4	1	(k)
Concatenation Indicator	1	Alphanumeric	1	1	(l)
PO Box Number	1	Alphanumeric	6	1	(m)

cont. overleaf

Changes & Single Change File – Changes2

RECORD NAME   :   Address Record (cont.)
RECORD LENGTH   :   168

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Small User Organisation Indicator	1	Alphanumeric	1	1	**(n)**
Reason for Amendment	1	Numeric	2	1	**(o)**
New Postcode	1	Alphanumeric			
Outward Code	2		4	1	**(p)**
Inward Code	2		3	1	
Filler	1	Alphanumeric	45	1	

NOTES

(a) – Delivery Point Suffix (DPS). The DPS is a unique Royal Mail 2-character code (the first numeric & the second alphabetical – e.g. 2B), which, when added to the Postcode, enables each live Delivery Point to be uniquely identified. Once the Delivery Point is deleted from PAF the DPS may be reused (although they aren't reused until all remaining Delivery Points in the range have been allocated). The DPS for a Large User is always '1A' as each Large User has its own Postcode. .

(b) – Postcode Type – Postcode Type is always 'S' for Small Users and 'L' for Large Users. When the Postcode Type is 'S' and the Small User Organisation Indicator is set, there will be a following Type 2 record containing Small User Organisation details. When the Postcode Type is 'L', there will be a following Type 3 record containing Large User details.

(c) – Organisation Key. When Organisation Key > zero there will be a following Type 2 record containing Organisation details.

(d) – Record Type = 1

(e) – Locality Key points to a Type 1 record in the Changes1 File.

(f) – Thoroughfare Key and Dependent Thoroughfare Key both point to Type 2 records in the Changes1 file. If equal to zero there is no Thoroughfare/Dependent Thoroughfare present.

(g) – Thoroughfare Descriptor Key and Dependent Thoroughfare Descriptor Key both point to Type 3 records in the Changes1 file. If equal to zero there is no Descriptor present.

(h) – Building Number. If Building Number is equal to zero a Building Number is not required for this address.

(i) – Building Name Key points to a Type 4 record in the Changes1 file. If equal to zero there is no Building Name.

(j) – Sub Building Name Key points to a Type 5 record in the Changes1 file. If equal to zero there is no Sub Building Name.

(k) – Number of households contains multi-occupancy information. When equal to one this indicates that there is one household at the address, when greater than one it contains the number of households present.

(l) – Concatenation indicator is either 'Y' or space. When equal to 'Y' this indicates that Building Number and Sub Building Name should appear concatenated on the same address line.

Here's an example:

Thoroughfare Name	=	SMITH
Thoroughfare Descriptor	=	STREET
Building Number	=	12
Sub Building Name	=	A
Concatenation Indicator	=	Y

The address line will read 12A SMITH STREET.

(m) – PO Box is space filled. The system only allows PO Box numbers against Large User records. All current PO Box number changes therefore will only appear in a Type 3 (Large User) record. When this field is populated it will contain PO BOX nnnnnn where n represents the PO Box number. Note that the PO Box details can occasionally consist of a combination of numbers and letters e.g. HK860.

(n) – Small User Organisation indicator has the values 'Y' or space. A value of 'Y' indicates that a Small User Organisation is present at this address.

(o) – Reason for amendment – Table 46 below gives the reasons.

(p) – New Postcode will be space filled except for an address amendment due to Postcode revision. In this case it will be space filled on the before image and will contain the new Postcode on the after image. The Address Key will not be affected by this.

Changes & Single Change File – Changes2

RECORD NAME   :   Address Record (cont.)
RECORD LENGTH   :   168

NOTES cont.

Table 46: Amendment types – codes and reasons

Amend Type	Reason For Amendment	Description of Amendment
01	New Postcode and/or Delivery Point added to PAF	• Postcode added • Larger user added • Small user added
02	Error Correction	• Major address change and/or recode • Single amendments • Locality change • Thoroughfare change • Large user amendment • Small user amendment • Small user deletion • Building Name amendment (e.g. spelling correction) • Selective Reallocation *
03	New Postcode and/or Delivery Point deleted to PAF	• Postcode deleted • Larger user deleted • Small user deleted
04	Coding Revision	• Locality amendment • Thoroughfare amendment • Selective Reallocation * (building name, recoding)
05	Change of Organisation or Business Name	• Large user amendment • Small user amendment • Change of Organisation Name • Selective Reallocation * (building number)
06	Change of Status	• Not currently in use
07	Large User Moving or Ceasing Trading	• Large user deleted
08	Change of Building Name, Number or Sub Building Name	• Small user amendment • Selective Reallocation * (building name)
09	Change of Address of a Large User	• Not currently in use

* – Selective Reallocation is a PAF® maintenance process. Delivery Points can be moved to a different Postcode, retaining the same address keys where possible. If the Delivery Point is re-keyed the change is tracked on the Keychain File. Other Selective Reallocation functions involve making changes to the Delivery Points, such as Building Number change.

Changes & Single Change File – Changes2

RECORD NAME : Small User Organisation Details
RECORD LENGTH : 168

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	
Postcode Outward Code Inward Code	1 2 2	 Alphanumeric Alphanumeric	 4 3	 1 1	
Delivery Point Suffix (DPS)	1	Alphanumeric	2	1	
Postcode Type	1	Alphanumeric	1	1	**(a)**
Address Key	1	Numeric	8	1	
Organisation Key	1	Numeric	8	1	
Amendment Type	1	Alphanumeric	1	1	
Record Type	1	Numeric	1	1	**(b)**
Organisation Name	1	Alphanumeric	60	1	
Department Name	1	Alphanumeric	60	1	
PO Box Number	1	Alphanumeric	6	1	**(c)**

NOTES

(a) – Postcode type will always be 'S'.

(b) – Record Type = 2

(c) – PO Box is space filled. The system only allows PO Box numbers against Large User records. All current PO Box number changes therefore will only appear in a Type 3 (Large User) record. When this field is populated it will contain PO BOX nnnnnn (where n represents the PO Box number). Note that the PO Box details can occasionally consist of a combination of numbers and letters e.g. HK860.

Changes & Single Change File – Changes2

RECORD NAME   :   Large User Details
RECORD LENGTH   :   168

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	

Postcode
   Outward Code
   Inward Code
	1
	2
	2
		
		Alphanumeric
		Alphanumeric
			
			4
			3
				
				1
				1	

Delivery Point Suffix (DPS)	1	Alphanumeric	2	1	
Postcode Type	1	Alphanumeric	1	1	**(a)**
Address Key	1	Numeric	8	1	
Organisation Key	1	Numeric	8	1	**(b)**
Amendment Type	1	Alphanumeric	1	1	
Record Type	1	Numeric	1	1	**(c)**
Organisation Name	1	Alphanumeric	60	1	
Department Name	1	Alphanumeric	60	1	
PO Box Number	1	Alphanumeric	6	1	**(d)**

NOTES

(a) – Postcode Type will always be 'L'.
(b) – Organisation Key for a Large User is always zero. This is because a Large User has a unique address key and will be the only organisation present at that address.
(c) – Record Type = 3
(d) – The words 'PO Box' are not held in this field, only the value of the PO Box Number e.g. this file will not show 'PO Box 70' but '70'. PO Box Number. When this field is populated it will contain PO BOX nnnnnn where n represents the PO Box number. Note that the PO Box details can occasionally consist of a combination of numbers and letters e.g. HK860.

Changes & Single Change File – Changes2

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   168

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	14	1	(a)
Record Count	1	Numeric	8	1	
Filler	1	Alphanumeric	146	1	

NOTES

(a) – Record Identifier = High values (except for CD-Rom where record Identifier = spaces)

Related products/links

PAF Changes data in different structures

Expanded & Expanded Single Changes (for updating the Compressed Standard™ file or if adapted, the Ranges™ file).

Pricing/licensing

For pricing, licensing & ordering details for this product, please visit www.poweredbypaf.com
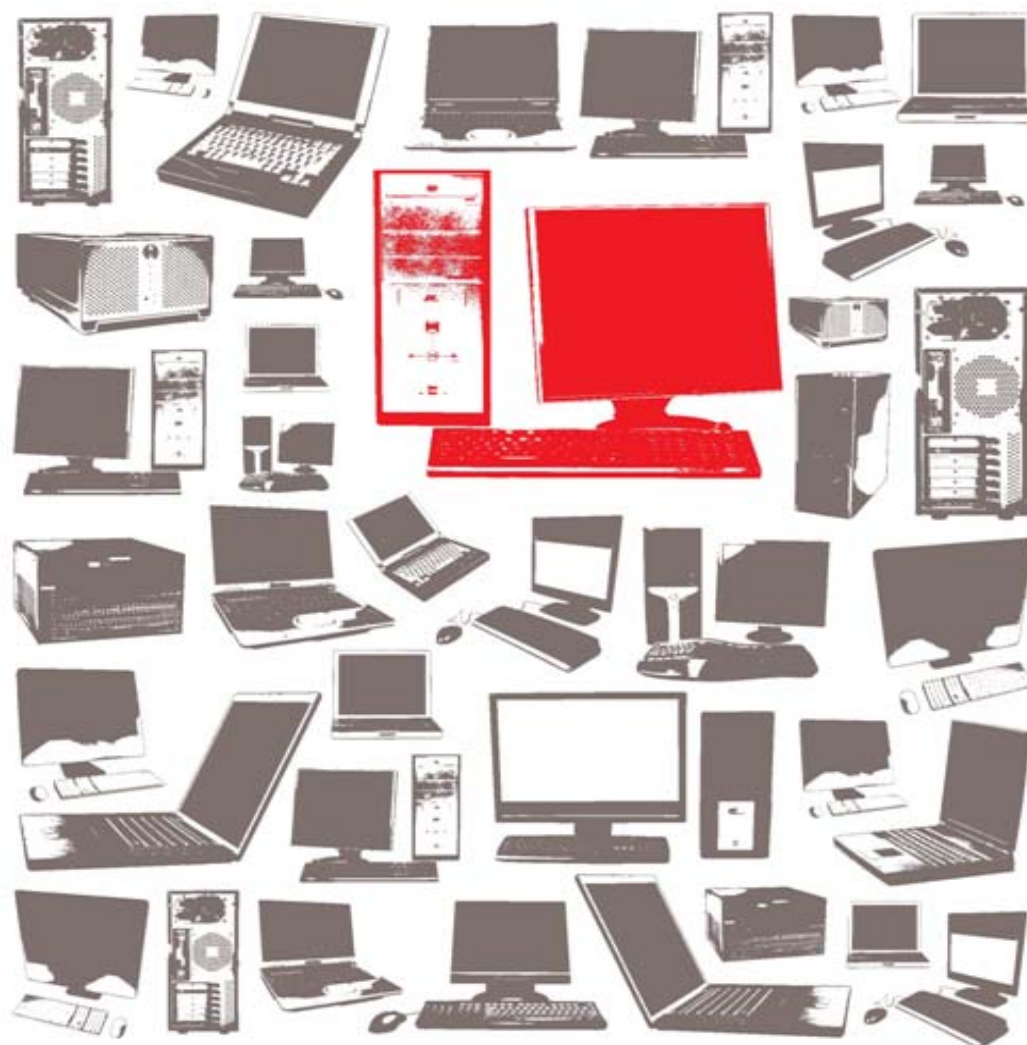
Section 3
PAF products in a TEXT format

Chapter 9   Compressed Standard™
Chapter 10 Ranges™
Chapter 11 Expanded & Expanded Single Changes

Compressed Standard^{TM} File

In simple terms

The PAF® Compressed Standard™ file is similar to the Mainfile™ raw data, but the numeric keys on Mainfile are replaced by text in the Compressed Standard file. This format is known as 'Expanded'. It makes the file easier to use than the Mainfile, but is much larger in size.

- **Expanded database in text format**
- **Large size PAF raw data file**
- **Uses the Expanded Changes Files to update (daily, monthly or quarterly)**

The Compressed Standard File is supplied as a series of files, these being:

Table 47: Compressed Standard file sizes

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)
Compressed Standard file	33,652,915	625Kb
Welsh Compressed Standard file	32,035,450	2.19Mb
Total Compressed Standard File = 33,652,915 / 469Mb (approx.)		

Product description

Compressed Standard data is supplied to customers as a combined file, containing both the English & the Welsh address data. Each record is held at Delivery Point level and is held in an 'Expanded Format' (i.e. text rather than keys). There are around 30 million records on the Compressed Standard File (not including the Welsh records). This makes it the largest of the three PAF formats. The other two formats are PAF Mainfile (with its efficient key system) at 28m records and the Ranges™ File (which summarises building numbers) at 7.5million records. The Combined Compressed Standard File is aimed at companies who prefer to hold their data in a text format rather than the relational format offered by the Mainfile.

Selectability/media

Available via:

CD-Rom
FTP

File details

Postcode sequence numbers

The file is held in ascending Postcode sequence. The address data for a Postcode is held in a hierarchical manner, with the following record types being present for each Postcode:

Record Type 1 – Locality details
Record Type 2 – Thoroughfare details
Record Type 3 – Delivery point details

The sequence of records within a Postcode is:

Record Type 1
Record Type 2(s) – if multiple Thoroughfares exist on a Postcode
Record Type 3(s) – one record for each Delivery Point

There can be only one Locality per Postcode, so there is one Type 1 record per Postcode. The Type 1 record is followed by Type 2 and Type 3 records.

Thoroughfare sequence numbers

All new Postcodes added to the system will only have one Thoroughfare, although a number of Postcodes still exist with more than one Thoroughfare. If there is more than one Thoroughfare then the Type 2/Type 3 sequence is repeated for each Thoroughfare. The Type 2 records contain a sequence number, which starts at 1 for the first Thoroughfare within a Postcode and is incremented by 1 for each successive Thoroughfare. The sequence number is repeated on each of the Type 3 Delivery Point records following that Type 2 record.

Record Type 1
Record Type 2
Record Type 3
Record Type 3
Record Type 2
Record Type 3
Record Type 3
Record Type 3

A small number of Postcodes may contain up to nine Thoroughfares. Where there are more than nine Thoroughfares for Postcode then the letters A, B and C are used for sequence numbers 10, 11 and 12.

There is one Type 3 record for each Delivery Point held on PAF, which contains PAF address keys and multi-occupancy information. Within a Postcode/Thoroughfare the sequence of the Type 3 records is:

> **Numbered Delivery Points**
> **Named Delivery Points**
> **Small/Large User Organisations**

Miscellaneous

- CD-Roms have spaces and not high values
- All records end with CR LF
- Where the file is split across several files, the files do not contain trailing HEX 1As.

Welsh alternative file

The addresses on the Welsh address file are only those in sectors defined as being part of Wales. See the Appendices section for Cross-border postcode areas.

For those addresses in Wales for which no Welsh Alternative address exists, this file contains identical data to the English address file

For the addresses on the Welsh address file there is a one-to-one relationship between the English and the Welsh files and PAF Key (Address Key, Organisation key, Postcode type) to allow a one-to-one match to be made between the two files.

The Welsh address files do not contain any Alternative Organisation, Department, Building Name and Sub Building Name information.

In the case of Welsh Thoroughfares, the Descriptor element is at the start of the string, so in general the Thoroughfare Descriptor on the Welsh address will not exist. The Thoroughfare Descriptor field will therefore be space filled. We have no plans to add any Descriptors.

Record definitions

Compressed Standard File™

RECORD NAME   :   Header Record
RECORD LENGTH   :   251

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	7	1	(a)
File Identifier	1	Alphanumeric	8	1	(b)
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	230	1	

NOTES

(a) – Record Identifier = Low values. For CD-Rom, Record Identifier = Spaces.
(b) – File Identifier = CSTANDRD. File Identifier for the Welsh Alternative File = WFCOMPST

Compressed Standard File^{TM}

RECORD NAME   :   Type 1 – Locality Details
RECORD LENGTH   :   251

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode Sector	1				
Outward Code	2	Alphanumeric	4	1	**(a)**
Inward Code	2	Alphanumeric	3	1	
Record Type	1	Alphanumeric	1	1	**(b)**
Postcode Type	1	Alphanumeric	1	1	**(c)**
Filler	1	Alphanumeric	30	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Filler	1	Alphanumeric	112	1	

NOTES

(a) – Postcode. Each Postcode consists of two parts. The first part is the Outward Postcode, or Outward code. This is separated by a single space from the second part which is the Inward Postcode, or Inward Code.

(b) – Record Type = 1

(c) – Postcode type = 'S' or Small Users and 'L' for Large Users.

Welsh Alternative File – If no Alternative address exists for the Delivery Point, the Post Town, Dependent Locality and Double Dependent Locality will be identical to the normal Compressed Standard file. If an Alternative address exists the fields will be replaced by text from elements of the Alternative address.

Compressed Standard File^{TM}

RECORD NAME   :   Type 2 – Thoroughfare Details
RECORD LENGTH   :   251

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1				
Outward Code	2	Alphanumeric	4	1	
Inward Code	2	Alphanumeric	3	1	
Record Type	1	Alphanumeric	1	1	**(a)**
Postcode Type	1	Alphanumeric	1	1	**(b)**
Thoroughfare Sequence Number	1	Alphanumeric	1	1	**(c)**
Thoroughfare Name	1	Alphanumeric	60	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Dependent Thoroughfare Name	1	Alphanumeric	60	1	
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1	
Filler	1	Alphanumeric	81	1	

NOTES

(a) – Record Type = 2
(b) – Postcode Type is 'S' for Small User and 'L' for Large Users.
(c) – Thoroughfare Sequence Number (See 'File Details Section' for explanation)

Welsh Alternative File – If no Alternative address exists for the Delivery Point, the Thoroughfare Name, Thoroughfare Descriptor, Dependent Thoroughfare Name and Dependent Thoroughfare Descriptor fields will be identical to the normal Compressed Standard file. If an Alternative address exists the fields will be replaced by text from elements of the Alternative address.

Compressed Standard File^{TM}

RECORD NAME   :   Type 3 – Delivery Point details
RECORD LENGTH   :   251

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1				
Outward Code	2	Alphanumeric	4	1	
Inward Code	2	Alphanumeric	3	1	
Record Type	1	Alphanumeric	1	1	(a)
Postcode Type	1	Alphanumeric	1	1	(b)
Thoroughfare Sequence Number	1	Alphanumeric	1	1	(c)
Delivery Point Suffix (DPS)	1	Alphanumeric	2	1	(d)
Building Number	1	Numeric	4	1	
Building Name	1	Alphanumeric	50	1	
Sub Building Name	1	Alphanumeric	30	1	
Organisation Name	1	Alphanumeric	60	1	
Department Name	1	Alphanumeric	60	1	
PO Box Number	1	Alphanumeric	14	1	
Number of Households	1	Numeric	4	1	(e)
Small User Organisation indicator	1	Alphanumeric	1	1	(f)
Address Key	1	Numeric	8	1	
Organisation Key	1	Numeric	8	1	

NOTES

(a) – Record Type = 3
(b) – The Postcode type is 'S' for Small User and 'L' for Large Users.
(c) – Thoroughfare Sequence Number (See 'File Details Section' for explanation)
(d) – Delivery Point Suffix (DPS). The DPS is a unique Royal Mail 2-character code (the first numeric & the second alphabetical – e.g. 2B), which, when added to the Postcode, enables each live Delivery Point to be uniquely identified. Once the Delivery Point is deleted from PAF the DPS may be reused (although they aren't reused until all remaining Delivery Points in the range have been allocated). The DPS for a Large User is always '1A' as each Large User has its own Postcode. Only numbers 1-9 appear in the numeric position, and letters C, I, K, M, O V are not used. The maximum DPS can be 9T. So, in total, there are 175 possible DPS allocations per Postcode, from 1A to 9T.

NOTES to Record Definition Table: Type 3 – Delivery Point details cont.

(e) –   Number of households. Indicates whether there is multi-occupancy at an address. When equal to one it indicates that there is one household at this address; when greater than one it contains the number of households present.

(f) –   Small User Organisation Indicator. Can have the values 'Y' or space. A value of 'Y' indicates that there is a Small User Organisation present at this address.

Welsh Alternative File – None of the fields in the Type 3 record are affected by the Alternative Address details.

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   251

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	7	1	**(a)**
Record Count	1	Numeric	8	1	
Filler	1	Alphanumeric	236	1	

NOTES

(a) – Record Identifier = High values For CD-Rom: Record Identifier = Spaces

Related products/links

Related datasets

Mainfile^{TM}
Ranges File^{TM}
Expanded Changes File^{TM}
Expanded Single Changes File^{TM}

Pricing/licensing

For pricing, licensing & ordering details for Compressed Standard product, please visit www.poweredbypaf.com

Ranges^{TM}

In simple terms

The Ranges file is a simple-to-use PAF® raw data product. 'Ranges' means all building numbers are summarised as Number Ranges, e.g. 1-99. Building Names are unaffected. The file contains readable text held at a Postcode level. Ranges^{TM} only holds address information. PAF address keys, Multi-occupancy information and Delivery Point Suffixes are not supplied.

- **Expanded database format**
- **Medium sized PAF raw data**
- **House numbers are ranged to help save space**
- **Uses one of the Expanded Changes files to update (daily, monthly or quarterly)**

The Ranges File is supplied as a series of files, these being:

Table 48: Ranges file sizes

Product file names	Approximate number of records	Approximate file size in Mb
Ranges file	8,255,819	152Mb
Welsh Alternative file	432,062	8.43
Total Ranges File = 8,687,881 / 160Mb (approx.)		

Product description

Supplied as a Combined Ranges file. 'Combined' means it has both English & Welsh Postcode and address information.

Ranges data is stored to Postcode level (our other two product options - Mainfile & Compressed Standard File - both hold data at Delivery Point level). Ranges data is also held as text, rather than as address keys (as on Mainfile). Ranges file is much bigger than Mainfile because text takes up more space than keys. Because it's a bigger file, it's known as being in an 'Expanded Format'. Although a larger file, it is easier to use because all of the data elements are readable & the structure is simpler.

Selectability/media

Available via

CD-Rom
FTP

File details

The file contains the following record types:

Record Type 1 – Building Number Ranges
Record Type 2 – Named Delivery Points
Record Type 3 – Small User Organisations/Large User Organisations

The file is held in ascending sequence by Postcode/Thoroughfare. Within a Postcode, Thoroughfare and Dependent Thoroughfare the sequence is Type 1 records, followed by Type 2 records, followed by Type 3 records.

Type 1 records contain ranges of Building Numbers. These represent Delivery Points that are identified by a Building Number only, i.e. they have no Building Name, Sub Building Name or Organisation Name. The Building Numbers are held as odd and even Number Ranges. Individual Building Numbers are held with the Building Number in the start of range, the end of range being zero. For example, a Thoroughfare with Building Numbers 1 to 12, 14 to 24 and 27 would be represented by the following Number Ranges:–

start	end
1	11
2	24
15	23
27	0

Type 2 and Type 3 records contain information on the basis of one record per Delivery Point.
The Type 1 records contain ranges of Building Numbers and so may contain details of many Delivery Points.
Type 2 and Type 3 records contain data on the basis of one record per Delivery Point.

Each record type may occur many times or never at all. For example, a Postcode contains 10 private addresses, all of which have a Building Name. The Postcode is represented by:

  0 Type 1 records
10 Type 2 records
  0 Type 3 records

Locality and Thoroughfare information is present for each record type.

Welsh Alternative file

This file contains identical data to the Standard file for those addresses within the Welsh Principality for which no Alternative address exists. The addresses on the Welsh address file are only those in Sectors defined as being part of the principality.   See the Appendices section for Cross–border Postcodes in Wales. The Welsh address files do not contain any Alternative Organisation, Department, Building Name and Sub Building Name information. Generally it is anticipated that the Thoroughfare Descriptor on the Alternative address will not exist and this field will therefore be space filled. This is because there is no proposal to add any Descriptors and, in the case of Welsh Thoroughfares, the Descriptor element is at the start of the string.

Record definitions

Ranges File

RECORD NAME   :   Header Record
RECORD LENGTH   :   517

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	7	1	(a)
File Identifier	1	Alphanumeric	8	1	(b)
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	496	1	

NOTES

(a) – Record Identifier = Low values. (except for CD-Rom where record identifier = Spaces)

(b) – File Identifier = RANGES. File Identifier for the Welsh Alternative File = WFRANGES

Ranges File

RECORD NAME   :   Type 1 Record – Number Ranges
RECORD LENGTH   :   517

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1				
Outward Code	2	Alphanumeric	4	1	
Inward Code	2	Alphanumeric	3	1	
Filler	1	Alphanumeric	30	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality		Alphanumeric	35	1	
Thoroughfare Name	1	Alphanumeric	60	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Dependent Thoroughfare Name	1	Alphanumeric	60	1	
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1	
Record Type	1	Numeric	1	1	**(a)**
Postcode Type	1	Alphanumeric	1	1	**(b)**
Number Ranges	1			18	
Start of range	2	Numeric	4	1	**(c)**
End of range	2	Numeric	4	1	
Filler	1	Alphanumeric	74	1	

NOTES

(a) – Record Type = 1. There may be more than one Type 1 record for a Postcode/Thoroughfare.
(b) – The Postcode Type for Small Users is 'S' and for Large Users is 'L'.
(c) – Number Ranges – Numbered properties are represented by ranges of numbers and/or individual Building Numbers. Ranges of numbers will be held as odd and even Number Ranges. Individual Building Numbers will be held with the Building Number in the start of range field, the end of range field will be zero. Unused ranges occurrences will be zero filled.

Welsh Alternative File – If no Alternative address exists for the Delivery Point, the Post Town, Dependent Locality, Double Dependent Locality, Thoroughfare Name, Thoroughfare Descriptor, Dependent Thoroughfare Name and Dependent Thoroughfare Descriptor will be identical to the normal Ranges file. If an Alternative address exists the fields will be replaced by text from elements of the Alternative address.

Ranges File

RECORD NAME   :   Type 2 Record – Named Delivery Points
RECORD LENGTH   :   517

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1				
Outward Code	2	Alphanumeric	4	1	
Inward Code	2	Alphanumeric	3	1	
Filler	1	Alphanumeric	30	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare Name	1	Alphanumeric	60	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Dependent Thoroughfare Name	1	Alphanumeric	60	1	
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1	
Record Type	1	Numeric	1	1	**(a)**
Postcode Type	1	Alphanumeric	1	1	**(b)**
Building Number	1	Alphanumeric	4	1	
Building Name	1	Alphanumeric	50	1	
Sub Building Name	1	Alphanumeric	30	1	
PO Box Number	1	Alphanumeric	14	1	**(c)**
Filler	1	Alphanumeric	120	1	

NOTES
(a) – Record Type = 2.
(b) – The Postcode type for Small Users is 'S' and for Large Users is 'L'.
(c) – PO Box Number is not used and is space filled.

Welsh Ranges file – If no Alternative address exists for the Delivery Point, the fields shaded above will be identical to the normal Ranges file. If an Alternative address exists the fields will be replaced by text from elements of the Alternative address.

Ranges File

RECORD NAME   :   Type 3 Record – Small / Large User Organisations
RECORD LENGTH   :   517

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1				
Outward Code	2	Alphanumeric	4	1	
Inward Code	2	Alphanumeric	3	1	
Filler	1	Alphanumeric	30	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare Name	1	Alphanumeric	60	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Dependent Thoroughfare Name	1	Alphanumeric	60	1	
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1	
Record Type	1	Numeric	1	1	**(a)**
Postcode Type	1	Alphanumeric	1	1	**(b)**
Building Number	1	Numeric	4	1	
Building Name	1	Alphanumeric	50	1	
Sub Building Name	1	Alphanumeric	30	1	
Organisation Name	1	Alphanumeric	60	1	
Department Name	1	Alphanumeric	60	1	
PO Box Number	1	Alphanumeric	14	1	**(c)**

NOTES are overleaf

NOTES to Ranges Type 3 Record – Small / Large User Organisations

(a) – Record Type = 3.

(b) – The Postcode Type for Small Users is 'S' and for Large Users is 'L'.

(c) – The words 'PO Box' are not held in this field, only the value of the PO Box Number e.g. this file will not show 'PO Box 70' but '70'. PO Box Number. When this field is populated it will contain PO BOX nnnnnn, where n represents the PO Box number. Please note that the PO Box details can occasionally consist of a combination of numbers and letters e.g. HK860.

Welsh Alternative File – If no Alternative address exists for the Delivery Point, the Post Town, Dependent Locality, Double Dependent Locality, Thoroughfare Name, Thoroughfare Descriptor, Dependent Thoroughfare Name, and Dependent Thoroughfare Descriptor fields will be identical to the normal Ranges file. If an Alternative address exists the fields will be replaced by text from elements of the Alternative address.

Ranges File

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   517

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	7	1	(a)
Record Count	1	Numeric	8	1	
Filler	1	Alphanumeric	502	1	

NOTES

(a) – Record Identifier = High values. For CD-Rom: Record Identifier = Spaces.

Related products/links

Related datasets

Mainfile^{TM}
Compressed Standard^{TM}
Expanded Changes
Expanded Single Changes

Pricing/licensing

For pricing, licensing & ordering details for the Ranges product, please visit www.poweredbypaf.com

Expanded Changes & Expanded Single Changes

In simple terms

This product details the additions, deletions and amendments required to update the Compressed Standard™ file. Users who require a low maintenance option should subscribe to the full Compressed Standard files.

- **Changes held in 'Expanded Format' i.e. text based data**
- **Provides updates for the Compressed Standard file**
- **Available at individual Delivery Point level only**
- **High maintenance update option**
- **Available daily, monthly or quarterly**

Product description

This product contains PAF® Changes information. It contains details of the addition, deletion, amendment and Postcode recoding of Delivery Points.

Single Changes is identical in format and layout to the Expanded Changes file. However, only one pair of records will appear for each Delivery Point, representing the first and last view of the Delivery Point over the change period.

Changes data is only available at individual Delivery Point level; there are no group level records to give information at a Postcode level. For example, if a Postcode is deleted then the file will contain a deletion record for each Delivery Point within the Postcode. Changes information is available for Small and Large User addresses.

PAF Changes consists of 7 files which are:

Table 49: Expanded Changes & Expanded Single Changes file sizes

Product file names	Sample record ze (April 09 data)	(April 09 data)
Changes1 File	45,147	606Kb
Changes2 File	145,434	3.46Mb
Single Changes File	136,722	3.31Mb
Expanded Changes File	145,434	4.7Mb
Expanded Single Changes File	136.l722	4.48Mb
Welsh Changes	5,246	125Kb
Total File = 627,423 / 16.9Mb (approx.)		

Please note that Keychain™ is also supplied, please see separate chapter.

Selectability/media

Usually supplied via the Combined PAF Changes, however customers who take subsets of the data (e.g. PO, SO and GU) will be supplied with the files separately. Available via:

CD-Rom
FTP

File details

Date is held in YYYYMMDD format.
Time is held in HHMMSS format.

Records are held in ascending sequence by:

Date
Time
Postcode
Delivery Point Suffix
Postcode Type
Address Key
Organisation Key
Amendment Type
Record Type

Amendment types are:

B	**–**	**before view**	**}**	
C	**–**	**after view**	**}**	**amendment**
D	**–**	**deletion**		
I	**–**	**insertion**		

For further information about the derivation of Amendment Types see previous chapter 'Changes & Single Changes'

Record types are:

Record Type 1 – Address details
Record Type 2 – Small User Organisation Name
Record Type 3 – Large User Name

Type 2 records will only be present for Small User organisations.

Type 3 records will only be present for Large Users.

Insertions and deletions are represented by a single Type 1 record. If the address is for a Small User Organisation the Type 1 record will be followed by a Type 2 record. If the address is for a Large User, the Type 1 record will be followed by a Type 3 record.

Amendments are represented by a pair of Type 1 records, these being a before and an after view. Each Type 1 record may be followed by Type 2 or 3 record.

The Single Changes product is identical in format and layout to the Expanded Changes2 file. However, only one pair of records will appear for each Delivery Point, representing the first and last view of the Delivery Point over the change period.

Record definitions

Expanded Changes & Expanded Single Changes^{TM}

RECORD NAME   :   Header Record
RECORD LENGTH   :   444

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	14	1	(a)
File Identifier	1	Alphanumeric	8	1	(b)
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	416	1	

NOTES

(a) – Record Identifier = Low values (except for CD-Rom where Record Identifier = Spaces)
(b) – File Identifier = XCHANGES

Expanded Changes & Expanded Single Changes™

RECORD NAME   :   Address Record
RECORD LENGTH   :   444

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	

Postcode
  Outward Code
  Inward Code
	1
	2
	2
		
		Alphanumeric
		Alphanumeric
			
			4
			3
				
				1
				1	

Delivery Point Suffix (DPS)	1	Alphanumeric	2	1	**(a)**
Postcode Type	1	Alphanumeric	1	1	**(b)**
Address Key	1	Numeric	8	1	
Organisation Key	1	Numeric	8	1	
Amendment Type	1	Alphanumeric	1	1	
Record Type	1	Numeric	1	1	**(c)**
Filler	1	Alphanumeric	30	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare	1	Alphanumeric	60	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Dependent Thoroughfare	1	Alphanumeric	60	1	
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1	
Building Number	1	Numeric	4	1	
Building Name	1	Alphanumeric	50	1	
Sub Building Name	1	Alphanumeric	30	1	
Number of Households	1	Numeric	4	1	**(d)**
PO Box Number	1	Alphanumeric	14	1	**(e)**
Small User Organisation Indicator	1	Alphanumeric	1	1	**(f)**
Reason for Amendment	1	Numeric	2	1	**(g)**

New Postcode
  Outward Code
  Inward Code
	1
	2
	2
		
		Alphanumeric
		Alphanumeric
			
			4
			3
				
				1
				1
					(h)

NOTES OVERLEAF

NOTES to Expanded Changes & Expanded Single Changes Address Record

(a) – Delivery Point Suffix (DPS) – The DPS is a unique Royal Mail 2-character code (the first numeric & the second alphabetical – e.g. 2B), which, when added to the Postcode, enables each live Delivery Point to be uniquely identified. Once the Delivery Point is deleted from PAF the DPS may be reused (although they aren't reused until all remaining Delivery Points in the range have been allocated). The DPS for a Large User is always '1A' as each Large User has its own Postcode. DPS may be re-used.

(b) – Postcode Type is 'S' for Small Users and 'L' for Large Users. When the Postcode Type is 'S' and the Small User Organisation Indicator is set, there will be a following Type 2 record containing Small User Organisation details.

(c) – Record Type = 1

(d) – Number of Households contains multi-occupancy information. When equal to one this indicates that there is one household at the address, when greater than one the field contains the number of households present.

(e) – PO Box Number is space filled. The current system only allows PO Box numbers against Large User records. All current PO Box number changes therefore will only appear in a Type 3 (Large User) record. The facility is available to hold PO Box number details against Type 2 (Small User Organisation) records and residential Type 1 (Address Records). This facility may be utilised in the future. Any changes to Large User PO Box details will appear in the Large User Type 3 records. Subsequently any changes to Small User Organisation PO Box details will appear in the Small User Organisation Type 2 records and any changes to Large User PO Box details will appear in the Large User Type 3 records.

(f) – Small User Organisation Indicator can have the values 'Y' or space. A value 'Y' indicates that a Small User Organisation is present, i.e. There will be a Type 2 record following.

(g) – Reasons for Amendment table is overleaf

(h) – New Postcode will be space filled except for an address amendment due to Postcode revision. In this case the Postcode field in the before and after image will hold the old Postcode and the New Postcode field will be space filled on the before image and will contain the new Postcode on the after image.

NOTES to Expanded Changes & Expanded Single Changes Address Record

(g) – Table 50: Reasons for amendment

Amendment type	Reasons for amendment	Description of amendment
01	Postcode/Delivery Point Added to PAF	• This also includes any Delivery Point that may have been previously omitted from PAF when the Postcode went live. • Large User Added
02	Error Correction	• Bulk Recoding • Single Amendments • Locality Change • Thoroughfare Change • Large User Amendment • Small User Amendment • Small User Deletion • Building Name Amendment • Selective Reallocation*
03	Postcode/Delivery Point Deleted	• Postcode Deleted • Large User Deleted • Small User Deleted
04	Coding Revision	• Locality Amendment • Bulk Recode • Thoroughfare Amendment • Selective Reallocation (building name, recoding)
05	Change of Organisation or Business Name	• Large User Amendment • Small User Amendment • Change of Organisation Name • Selective Reallocation (building number)
06	Change of Status	• Not Currently In Use
07	Large User Moving or Ceasing Trading	• Large User Deleted
08	Change of Building Name, or Number	• Small User Amendment • Selective Reallocation • (building name)
09	Change of Address of a Large User	Not Currently In Use

* Delivery Points can be moved to a different Postcode, retaining the same address keys where possible. If the Delivery Point is re-keyed the change is tracked on the Keychain File. Other Selective Reallocation functions involve making changes to the Delivery Points, such as Building Number.

Expanded Changes & Expanded Single Changes™

RECORD NAME   :   Small User Organisation Record
RECORD LENGTH   :   444

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	

Postcode
  Outward Code
  Inward Code
	1
	2
	2
		
		Alphanumeric
		Alphanumeric
			
			4
			3
				1	

Delivery Point Suffix	1	Alphanumeric	2	1	
Postcode Type	1	Alphanumeric	1	1	**(a)**
Address Key	1	Numeric	8	1	
Organisation Key	1	Numeric	8	1	
Amendment Type	1	Alphanumeric	1	1	
Record Type	1	Numeric	1	1	**(b)**
Organisation Name	1	Alphanumeric	60	1	
Department Name	1	Alphanumeric	60	1	
PO Box	1	Alphanumeric	14	1	**(c)**
Filler	1	Alphanumeric	268	1	

NOTES

(a) – Postcode Type will always be 'S'.

(b) – Record Type = 2

(c) – PO Box is space filled. The current system only allows PO Box numbers against Large User records. All current PO Box number changes therefore will only appear in a Type 3 (Large User) record. The facility is available to hold PO Box number details against Type 2 (Small User Organisation) records and residential Type 1 (Address Records). This facility may be utilised in the future.

Subsequently any changes to Small User Organisation PO Box details will appear in the Small User Organisation Type 2 records and any changes to Large User PO Box details will appear in the Large User Type 3 records.

Expanded Changes & Expanded Single Changes™

RECORD NAME   :   Large User Record
RECORD LENGTH   :   444

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	

Postcode
  Outward Code
  Inward Code
	1
	2
	2
		
		Alphanumeric
		Alphanumeric
			
			4
			3
				1	

Delivery Point Suffix	1	Alphanumeric	2	1	
Postcode Type	1	Alphanumeric	1	1	**(a)**
Address Key	1	Numeric	8	1	
Organisation Key	1	Numeric	8	1	
Amendment Type	1	Alphanumeric	1	1	
Record Type	1	Numeric	1	1	**(b)**
Organisation Name	1	Alphanumeric	60	1	
Department Name	1	Alphanumeric	60	1	
PO Box	1	Alphanumeric	14	1	**(c)**
Filler	1	Alphanumeric	268	1	

NOTES

(a) – Postcode Type will always be 'L'

(b) – Record Type = 3

(c) – PO Box. The words 'PO Box' are not held in this field, only the value of the PO Box Number e.g. this file will not show 'PO Box 70' but '70'. When this field is populated it will contain PO BOX nnnnnn where n represents the PO Box number. Note that the PO Box details can occasionally consist of a combination of numbers and letters e.g. HK860.

Expanded Changes & Expanded Single Changes^{TM}

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   444

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	14	1	(a)
Record Count	1	Numeric	8	1	
Filler	1	Alphanumeric	422	1	

NOTES

(a) – Record Identifier = High values (except for CD-Rom where Record Identifier = Spaces)

Related products/links

Compatible PAF datasets

Compressed Standard File™

Please note that Expanded Changes & Expanded Single Changes™ can be adapted to update the Ranges File™. The Ranges File was originally designed to be taken as a full file only.

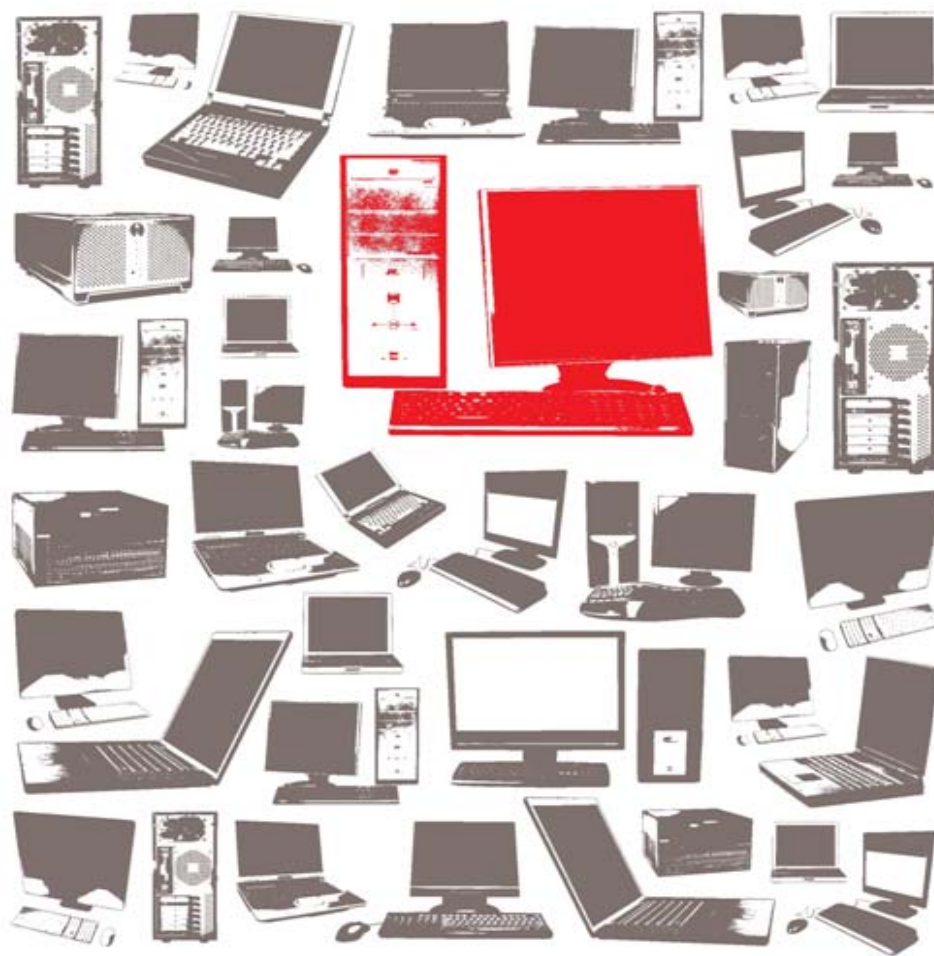### PAF Changes data in different structures

Changes & Single Changes File™ (for updating the Mainfile™)

Applications that include PAF data

Find a third party who can supply this data through our supplier directory www.poweredbypaf.com

Pricing/licensing

For pricing, licensing & ordering details for this product, please visit www.poweredbypaf.com

Section 4
Other products

Postcode Information File (PIF™)

In simple terms

The PIF™ file is used to help the barcoding of mail. Delivery point suffix (DPS) & checksum information is required to create barcodes on mail and PIF™ supplies these; useful if your database or PAF® product does not include it.

- **Supplies Postcode, DPS information & the checksum digit for delivery points**
- **Used to barcode mail**
- **Full or Changes product available**

The PIF™ File is supplied as a series of files, these being:

Table 51: PIF file sizes

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)
Postcode Information File	28,524,452	215Mb
PIF™ Changes	101,693	1.65Mb
Total PIF File = 28,626,145 / 216Mb (approx.)		

Product description

PIF™ contains information that is unique to a delivery point. It contains the Postcode and Delivery Point Suffix (DPS), two elements that are sufficient to define a live delivery point.

Delivery point details are provided either just as a Building Number or as a string containing the most significant 50 characters of the Delivery Point description (as held as display text within PAF®).

Delivery Point Suffix (DPS)

The DPS is a unique Royal Mail 2-character code (the first numeric & the second alphabetical – e.g. 2B), which, when added to the Postcode, enables each live Delivery Point to be uniquely identified. Once the Delivery Point is deleted from PAF® the DPS may be reused (although they aren't reused until all remaining Delivery Points in the range have been allocated).

DPS format: two characters in a numeric alpha format. Only digits 1-9 appear in the numeric position. To allow the 9U-9Z range to be used as defaults for customer barcoding, DPS allocation is restricted from 1A to 9T (175 occurrences) the alpha characters C, I, K, M, O and V are not used in the DPS. Delivery Point Suffixes on a Postcode may wrap around when all 175 DPSs have historically been allocated.

If a property currently on PAF® is demolished, its DPS will be erased. If subsequently a new property is constructed in its place the next available DPS will be allocated.

A Large User Postcode will contain details of one Organisation and its associated Delivery Point details. It will therefore always have a DPS value of 1A.

PIF allows address data to be linked to the correct DPS and checksum digit. Further information relating to the use of barcodes and the calculation of the checksum digit can be found in the Business Mail User guide, which can be downloaded from www.royalmailtechnical.com or by calling 08457 950 950.

Examples showing the contents of PIF are shown below:

Table 52a: contents of PIF

Delivery Point Data	Postcode	DPS	Checksum Digit
1	SO31 6XY	1A	S
2	SO31 6XY	1B	T
3	SO31 6XY	1D	V
4	SO31 6XY	1E	W
5	SO31 6XY	1F	X
6	SO31 6XY	1G	Y
9	SO31 6XY	1L	3
10	SO31 6XY	1N	5
11	SO31 6XY	1P	7

Using the above example, if Delivery Point number 3 is demolished then Postcode SO31 6XY 1D will cease to exist. If, at a later date, a new property is constructed on the same site (e.g. two house or flats 3A and 3B) the next available DPS will be allocated to each new Delivery Point and the file would change in the following ways:

Table 52b: contents of PIF

Delivery Point Data	Postcode	DPS	Checksum Digit
1	SO31 6XY	1A	K
2	SO31 6XY	1B	L
4	SO31 6XY	1E	O
11	SO31 6XY	1P	7

To:

Delivery Point Data	Postcode	DPS	Checksum Digit
1	SO31 6XY	1A	K
2	SO31 6XY	1B	L
3A	SO31 6XY	1W	E
3B	SO31 6XY	1X	F
4	SO31 6XY	1E	O

At its most simple level the information in the Display Text Field will contain only the house number information. However, for those properties that do not have a house number then the house Name will appear. Where flats occur, the relevant flat information from the Postcode Address File will appear. For Organisations which appear on PAF the Organisation will appear on the PIF.

Selectability/media

CD-Rom
(FTP – PIF itself is not available, only the PIF Changes file)

Record definitions

Postcode Information File™ (PIF)

RECORD NAME   :   Header Record
RECORD LENGTH   :   60

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	7	1	**(a)**
File Identifier	1	Alphanumeric	8	1	**(b)**
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	39	1	

NOTES

(a) – Record Identifier = Low values (except for CD-Rom where Record Identifier = Spaces)
(b) – File Identifier = POSTINFO

RECORD NAME   :   Data Record
RECORD LENGTH   :   60

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	7	1	
Delivery Point Suffix (DPS)	1	Alphanumeric	2	1	
Check Digit	1	Alphanumeric	1	1	
Display Text BNR (Redefines display text)	1				
Building Number (BNR)	2	Numeric	4	1	**(a)**
Filler	2	Alphanumeric	46		

NOTES

(a) – At its most simple level, the information in the Display Text Field will contain only the house number information (known as 'BNR', which stands for 'Building Number Range'). However for those properties without a house number then the house name will appear. Where flats occur, the relevant flat information from PAF will appear. For Organisations on PAF, the Organisation will appear on PIF.

Here are 5 examples of PIF, showing the most significant 50 characters

Table 53: PIF example 1 – showing an address with an Organisation Name

Field on PAF®	Example
Organisation	P L C Partnership
Building Name	Lansdown House 25-26
Thoroughfare	Hampshire Terrace
Post Town	PORTSMOUTH
Postcode	PO1 2QF

```
    |    |    |    |    |    |    |
123456789012345678901234567890123456789012345678901234567890
PO1 2QF2WEP L C PARTNERSHIP, LANSDOWN HOUSE, 25-26
```

Table 54: PIF example 2 – showing an address with a Building Number

Field on PAF®	Example
Building Number	92
Thoroughfare	St. Georges Square
Post Town	PORTSMOUTH
Postcode	PO1 3AR

```
    |    |    |    |    |    |    |
123456789012345678901234567890123456789012345678901234567890
PO1 3AR1JX0092
```

Table 55: PIF example 3 – showing an address with a Building Name

Field on PAF®	Example
Building Namer	4A
Thoroughfare	Dean Street
Post Town	PORTSMOUTH
Postcode	PO1 3BH

```
    |    |    |    |    |    |    |
123456789012345678901234567890123456789012345678901234567890
PO1 3BH1JI4A
```

Table 56: PIF example 4 – showing an address with a PO Box Number

Field on PAF®	Example
Organisation	Zurich Insurance Co
PO Box Number	PO Box 20
Building Name	Zurich House
Thoroughfare	Stanhope Road
Post Town	PORTSMOUTH
Postcode	PO1 1DU

```
     |    |    |    |    |    |
 12345678901234567890123456789012345678901234567890
 PO1 1DU1AYZURICH INSURANCE CO, PO BOX 20, ZURICH HOUSE
```

Table 57: PIF example 5 – showing an address with a PO Box Number

Field on PAF®	Example
Sub Building Name	Flat 2
Building Number	18
Thoroughfare	Queen Street
Post Town	PORTSMOUTH
Postcode	PO1 3HL

```
     |    |    |    |    |    |
 12345678901234567890123456789012345678901234567890
 PO1 3HL1HQFLAT 2, 18
```

Postcode Information File (PIF)

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   60

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	7	1	(a)
Record Count	1	Numeric	8	1	
Filler	1	Alphanumeric	45	1	

NOTES:

(a) – Record Identifier = High values (except for CD-Rom where Record Identifier = Spaces)

Related products/links

Related products

PIF Changes
Mainfile™
Ranges™
Compressed Standard™

Pricing/licensing

For pricing, licensing & ordering details for this product, please visit www.poweredbypaf.com

Postcode Information File (PIF) Changes™

In simple terms

The PIF Changes product simply details the changes to Delivery Point details for Postcode / Delivery Point Suffix combinations as supplied on the PIF product (see previous chapter).

The PIF Files are supplied as a series of files, these being:

Table 58: PIF Changes file size

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)
Postcode Information File	28,524,452	215Mb
PIF Changes	101,693	1.65Mb
Total PIF File = 28,626,145 / 216Mb (approx.)		

Product description

PIF Changes are supplied in the same sequence and use the same amendment types as the Changes2 product (see PAF® Changes chapter) but only contain one record type.

Selectability/media

Available via:

CD-Rom
FTP

File details

The file is produced in ascending sequence by:

Date
Time
Postcode
Delivery Point Suffix
Amendment Type
Date = YYYYMMDD
Time = HHMMSS

Valid amendments types =

B   **–**   **before view**   **}**
C   **–**   **after view**   **}**   **amendment**

D   **–**   **deletion**
I   **–**   **insertion**

Amendments are represented by a pair of records, these being a before and after view.
Insertions and deletions are represented by a single record.

When an amendment has been made due to a Postcode revision there will be a pair of amendment records.
The 'before' image will contain the old Postcode, and the 'after' image will contain the new Postcode.

Record definitions

Postcode Information File (PIF) Changes File

RECORD NAME : Header Record
RECORD LENGTH : 75

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	8	1	**(a)**
File Identifier	1	Alphanumeric	8	1	**(b)**
Edition	1	Alphanumeric	6	1	
Filler	1	Alphanumeric	53	1	

NOTES

(a) – Record Identifier = zeros
(b) – File Identifier = PIFCHNGS

RECORD NAME : Data Record
RECORD LENGTH : 75

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Date		Numeric	8	1	
Time		Numeric	6	1	
Postcode	1	Alphanumeric	7	1	
Delivery Point Suffix (DPS)	1	Alphanumeric	2	1	
Amendment Type	1	Alphanumeric	1	1	
Check Digit	1	Alphanumeric	1	1	
Display Text BNR (redefines display text)	1			1	**(a)**
Building Number (BNR)	2	Numeric	4	1	
Filler	2	Alphanumeric	46	1	

NOTES

(a) – Display Text. The information in the Display Text Field will at its most simple level contain only the house number information (BNR). However for those properties that do not have a house number then the house Name will appear. Where flats occur the relevant flat information from PAF will appear. For Organisations which appear on PAF the Organisation will appear on the PIF.

Postcode Information File (PIF) Changes File

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   75

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	8	1	(a)
Record Count	1	Numeric	8	1	
Filler	1	Alphanumeric	59	1	

NOTES

(a) – Record Identifier = 99999999

Related products/links

Related products

Postcode Information File™
Mainfile™
Ranges™
Compressed Standard™

Pricing/licensing

For pricing, licensing & ordering details for this product, please visit www.poweredbypaf.com

Unique Delivery Point Reference Number (UDPRN)

In simple terms

UDPRN stands for 'Unique Delivery Point Reference Number'. Each UDPRN is an 8-character code that can be used instead of the current address keys on PAF®.

UDPRN will only be supplied with PAF Mainfile or Compressed Standard File because it concerns Delivery Points. There is no UDPRN Ranges file because Ranges is a Postcode level product.

UDPRN has two available formats – Full and Expanded. PAF Mainfile users will need the UDPRN Full format; Compressed Standard File users will need the UDPRN Expanded Format.

In summary:

- **Simple, unique reference number for each Delivery Point**
- **Far less likely to be reused than the existing PAF Keys**
- **8-character numeric code**
- **A new UDPRN is automatically assigned to each new Delivery Point added to PAF**

The UDPRN files are supplied as a set, these being:

Table 59: Unique Delivery Point Reference Number (UDPRN) file sizes

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)
UDPRN Full	28,524,452	258Mb
UDPRN Expanded	28,524,452	604Mb
UDPRN Changes	84,853	1.46Mb
UDPRN Single Changes	82,453	1.44Mb

Product description

The existing PAF address keys change with the normal maintenance of PAF. The combination of the Address Key, Organisation key and Postcode indicator uniquely identifies an address.

In the main, address keys change when
- An organisational address becomes a residential address
- A residential address becomes an organisation
- A Delivery Point (DP) is deleted in error and later re-input to PAF.

In all of the above instances a new Address Key is assigned to the address even though the details may be identical to the one that had been deleted.

We recognise that some users of PAF develop their own software applications, not only around PAF, but also using the address keys as a unique reference link to their own information. However, when a PAF record is deleted, this in turn may remove a record in PAF user's application, and their local information is consequently lost. For that reason PAF user would ideally prefer the Address Key only to change when the DP has genuinely and permanently gone, for example demolished.

Selectability/media

The UDPRN product must be used with the appropriate PAF product. This means that UDPRN Full is used with the Mainfile, and UDPRN Expanded with the Compressed Standard File. There is no UDPRN Ranges file.

The data is automatically provided with the normal product, similar to the Welsh File. UDPRN data is available as a monthly refresh of data, or as a monthly Changes product on the following media:

CD-Rom
FTP

A Welsh version of the product is not required because address keys refer to the Welsh address keys on the Welsh File, which is already supplied on the Mainfile Products.

Record definitions

UDPRN Full

RECORD NAME   :   Header Record
RECORD LENGTH   :   35

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				**(a)**
Postcode	2	Alphanumeric	7	1	
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	6	1	

NOTES

(a) – Record Identifier = Low Values or Spaces
(b) – Address Key = zeroes
(c) – File Identifier = UDPRNFUL
(d) – Edition = Y99M99

_____

RECORD NAME   :   Data Record
RECORD LENGTH   :   35

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Postcode	1	Alphanumeric	7	1
Address Key	1	Numeric	8	1
UDPRN Key	1	Numeric	8	1
Organisation Key	1	Numeric	8	1
Postcode Type	1	Alphanumeric	1	1
Delivery Point Suffix	1	Alphanumeric	2	1
SU Organisation Indicator	1	Alphanumeric	1	1

UDPRN Full

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   35

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record count	1	Alphanumeric	8	1	**(c)**
Filler	1	Alphanumeric	6	1	

NOTES

(a) – Postcode = High Values or Spaces

(b) – Address Key = 99999999

(c) – Record Count contains the number of records on file including header and trailer

Please note that these products will be sorted by Postcode

UDPRN Expanded

RECORD NAME   :   Header Record
RECORD LENGTH   :   518

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				**(a)**
Postcode	2	Alphanumeric	7	1	
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	489	1	

NOTES

(a) – Record Identifier = Low Values or Spaces
(b) – Address Key = zeroes
(c) – File Identifier = UDPRNEXP
(d) – Edition = Y99M99

UDPRN Expanded

RECORD NAME   :   Data Record
RECORD LENGTH   :   518

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Postcode	1	Alphanumeric	7	1
Address Key	1	Numeric	8	1
UDPRN Key	1	Numeric	8	1
Post Town	1	Alphanumeric	30	1
Dependent Locality	1	Alphanumeric	35	1
Double Dependent Locality	1	Alphanumeric	35	1
Thoroughfare	1	Alphanumeric	60	1
Thoroughfare Descriptor	1	Alphanumeric	20	1
Dependent Thoroughfare	1	Alphanumeric	60	1
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1
Building Number	1	Numeric	4	1
Building Name	1	Alphanumeric	50	1
Sub Building Name	1	Alphanumeric	30	1
Organisation Name	1	Alphanumeric	60	1
Department Name	1	Alphanumeric	60	1
PO Box	1	Alphanumeric	14	1
Number of Households	1	Numeric	4	1
Organisation Key	1	Numeric	8	1
Postcode Type	1	Alphanumeric	1	1
SU Organisation Indicator	1	Alphanumeric	1	1
Concatenation Indicator	1	Alphanumeric	1	1

UDPRN Expanded

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   518

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	(a)
Address Key	2	Numeric	8	1	(b)
Record count	1	Alphanumeric	8	1	(c)
Filler	1	Alphanumeric	495	1	

NOTES

(a) – Postcode = High Values or Spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Please note that these products will be sorted by Postcode

UDPRN Changes

RECORD NAME   :   Header Record
RECORD LENGTH   :   50

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				**(a)**
Postcode	2	Alphanumeric	7	1	
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	21	1	

NOTES

(a) – Record Identifier = Low Values or Spaces
(b) – Address Key = zeroes
(c) – File Identifier = UDPRNCHG
(d) – Edition = Y99M99

_____

RECORD NAME   :   Data Record
RECORD LENGTH   :   50

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Date	1	Numeric	8	1
Time	1	Numeric	6	1
Postcode	1	Alphanumeric	7	1
Address Key	1	Numeric	8	1
UDPRN Key	1	Numeric	8	1
Organisation Key	1	Numeric	8	1
Postcode Type	1	Alphanumeric	1	1
Delivery Point Suffix	1	Alphanumeric	2	1
SU Organisation Indicator	1	Alphanumeric	1	1
Amendment Type	1	Alphanumeric	1	1

UDPRN Changes

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   50

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record count	1	Numeric	8	1	**(c)**
Filler	1	Alphanumeric	27	1	

NOTES

(a) – Postcode = High Values or Spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Please note that these products will be sorted by Postcode

UDPRN Single Changes

RECORD NAME   :   Header Record
RECORD LENGTH   :   50

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				**(a)**
Postcode	2	Alphanumeric	7	1	
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	21	1	

NOTES

(a) – Record Identifier = Low Values or Spaces
(b) – Address Key = zeroes
(c) – File Identifier = UDPRNSCG
(d) – Edition = Y99M99

_____

RECORD NAME   :   Data Record
RECORD LENGTH   :   50

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Date	1	Numeric	8	1
Time	1	Numeric	6	1
Postcode	1	Alphanumeric	7	1
Address Key	1	Numeric	8	1
UDPRN Key	1	Numeric	8	1
Organisation Key	1	Numeric	8	1
Postcode Type	1	Alphanumeric	1	1
Delivery Point Suffix	1	Alphanumeric	2	1
SU Organisation Indicator	1	Alphanumeric	1	1
Amendment Type	1	Alphanumeric	1	1

UDPRN Single Changes

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   50

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record count	1	Numeric	8	1	**(c)**
Filler	1	Alphanumeric	27	1	

NOTES

(a) – Postcode = High Values or Spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Please note that these products will be sorted by Postcode

Related products/links

Related products

- Mainfile™
- Ranges File™
- Compressed Standard File™

BFPO (British Forces Post Office) Postcode Data

In simple terms

Over 100,000 British Forces service personnel and their dependents serve overseas. In many cases, those stationed abroad don't have a permanent address in the UK. This creates difficulties for service personnel accessing services online and with shopping online.

Royal Mail and the BFPO have developed a practical solution to this problem. By creating an address and postcode structure that is consistent with PAF®, service personnel will no longer experience these difficulties and will enjoy a number of benefits.

Product description

BFPO Postcode Data has been structured so that it can be used in conjunction with other PAF® based solutions. The address and postcode structure is entirely consistent with PAF®. We have created a pseudo BF 'postcode' which looks like any other postcode but doesn't correspond with a geographic location as obviously other postcodes do.

Data is updated monthly and the latest set will be included alongside all updates regardless of frequency. This includes both PAF® Changes and full refresh products. Data will be available to Daily Changes customers on a monthly basis. This will appear in the daily folder along with the regular daily update.

BFPO Postcode Data is not part of the core Royal Mail Postcode Address File (PAF®). It is an option available at the point of data extraction to all recipients of raw PAF®.

How is the data formatted when extracted with the PAF® files?

The data is held in the same fields as normal PAF® addresses. The BFPO Postcode Data will be included as the point of extract with any PAF® product – unless the option to exclude it is selected. An example BFPO address returned from a postcode lookup would be:

Thoroughfare / Street: BFPO13
Post Town: BFPO
Postcode: BF1 0AA

The following additional information needs to be captured:

Number, Rank, Name
Sub Unit
Unit

A fully captured correct BFPO address in the preferred BFPO format should look like this

987456321 Cpl. John Brown
1ˢᵗBn, The Kings Fusiliers
BFPO
BF1 0AA
BFPO 13

The data from BFPO 13 onwards can be extracted with the PAF® files. The data above BFPO 13 needs to be captured from the end-user in the same way as non-address elements for other addresses. Those items are as follows:

Number   e.g. **98745632**
Rank   e.g. **Cpl**
Name   e.g. **John Brown**
Sub Unit   e.g. **1ˢᵗBn**
Unit   e.g. **The Kings Fusiliers**

Non-address data is best stored in non-address fields. If there is no other option, the additional data required by BFPO can be placed into any fields above Street. This is the same as accommodating non-address elements in other situations where field availability is limited.

For example a BFPO address could be inserted as follows into the following fields:

Name: **987456321 Cpl. John Brown**
Property: **1ˢᵗBn, The Kings Fusiliers**
Street: **BFPO 13**
Locality:
Town: **BFPO**
Postcode: **BF1 0AA**

If an application has an Organisation, Sub Building and Building field in the same way as PAF®, those fields could be used for the BFPO Postcode Data items as follows:

Existing Field	Use For
Organisation	Number, Rank, Name
SubBuilding	Sub Unit
Building	Unit

UDPRN & Address Keys

All BFPO addresses have a set of keys just like other PAF® records. This includes UDPRN and Address Key, Locality Key etc. Key ranges are assigned to avoid future conflicts with PAF®. For example the UDPRN and Address Key start at 99000001. It is important to check that no conflicting arbitrary limit is in place and that these ranges do not cause difficulty.

Address keys and UDPRN's are provided for consistency and to make use of the BFPO Postcode Data within existing processes as easy as possible. It is not a requirement to accommodate them.

Are there any special cases for BFPO numbers that I should be aware of?

BFPO 105 relates to Isolated Detachments. These require a Box number in addition to the BFPO number. However the Box number should be specified as the Unit so there is no need to treat this situation any differently. For example:

12345678 Sgt Smith
NTMA, Box 123
BFPO 105
BFPO
BF1 0AX

The Unit here is "Box 123" with the Sub Unit being "NTMA". If creating or updating fields dynamically it might be worthwhile considering explicitly asking for the box number when BFPO 105 is entered rather than the unit.

How should I store this data in my database?

The ideal is to accommodate Number, Rank, Name, Sub Unit and Unit elements as either additional fields in the database or in fields designed for non-address data.

Where this is not possible the data has to be accommodated in the best way possible within the constraints of the existing system. It is worth checking that field lengths and validation rules are able to accommodate the data correctly.

Where Street, Town and Postcode fields are allocated it makes sense to use them consistently for both BFPO and other postal addresses. The Property, Organisation and/or Name fields can be used to appropriately store the Unit, Sub Unit, Number, Rank and Name.

If addresses are stored in the same format as PAF®, then the Sub Unit would be equivalent to Sub Building, Unit to Building and Number, Rank and Name to Organisation. For consistency and ease of cleaning we would recommend storing these in the same fields as might be available for normal addresses, for example:

BFPO Field	Same as Normal Address Field
Number	(Field for BFPO use only)
Rank	Title
Name	Name or constituent first name, surname fields
Sub Unit	Sub Building or Flat
Unit	Building or House Name
BFPO Number	Street
BFPO Town	Town
BFPO Postcode	Postcode

Rather than the Number and Rank fields being additional fields, validation on the Name field could be relaxed to allow this data to be accommodated.

Not Yet Built™

In simple terms

The Not Yet Built™ file (NYB) is a raw data product, created to identify properties that are at the development stage.

- **Accurate and up-to-date information on the address data of tomorrow**
- **Supplied as a completely new data set each month**
- **Valuable planning tool for many industries e.g. utility companies, credit referencing agencies, retail outlets, education authorities and estate agents**
- **Great for advanced leaflet drop planning e.g. carpet retailers, conservatory supplies, Satellite TV Companies, etc.**
- **UK coverage (excluding Jersey, Guernsey and the Isle of Man).**

The Not Yet Built™ files are supplied as a set, these being:

Table 60: Not Yet Built file sizes

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)
Not Yet Built™	342,003	6.53Mb
Not Yet Built™ Expanded	342,003	7.13Mb
Not Yet Built™ Ranges	149,724	2.13Mb

Product description

Information relating to new developments is received daily from a number of sources including Local Authorities, Building developers and Royal Mail staff. Our Address Development Centre in Sunderland reviews this information and allocates a Postcode accordingly. The address is then added to the Not Yet Built database – a separate file of Not Yet Built Delivery Points.

Once a property is built and capable of receiving mail, it appears on the Just Built™ database and on PAF.

Selectability/media

Available via:

CD-Rom
FTP

File details

There are three versions to choose from:

- **NYB Full** – a relational style database to be used in conjunction with PAF Mainfile.
- **NYB Expanded** – a text file product that gives one record for each Delivery Point listed, e.g. '1-20 High Street' will be shown as 20 separate records. This can be used as a stand-alone product.
- **NYB Ranges** – a text file product that gives one record for each range of Delivery Points e.g. '1-20 High Street', '1-5 Acacia Avenue' or '2-6 Acacia Avenue'.

Record definitions

Not Yet Built™ Full

RECORD NAME	:	Header Record
RECORD LENGTH	:	226

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	197	1	

NOTES

(a) – Postcode = High Values or spaces
(b) – Address Key = zeroes
(c) – File Identifier = NYBUILTK
(d) – Edition = Y99M99

Not Yet Built™ Full

RECORD NAME   :   Data Record
RECORD LENGTH   :   226

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Postcode	1	Alphanumeric	7	1
Address Key	1	Numeric	8	1
UDPRN Key	1	Numeric	8	1
Locality Key	1	Numeric	8	1
Thoroughfare Key	1	Numeric	8	1
Thoroughfare Descriptor Key	1	Numeric	4	1
Dependent Thoroughfare Key	1	Numeric	8	1
Dependent Thoroughfare Descriptor Key	1	Numeric	4	1
Building Number	1	Numeric	4	1
Building Name Key	1	Numeric	8	1
Sub Building Name Key	1	Numeric	8	1
Organisation Name	1	Alphanumeric	60	1
Department Name	1	Alphanumeric	60	1
PO Box	1	Alphanumeric	14	1
Number of Households	1	Numeric	4	1
Organisation Key	1	Numeric	8	1
Postcode Type	1	Alphanumeric	1	1
SU Organisation Indicator	1	Alphanumeric	1	1
Concatenation Indicator	1	Alphanumeric	1	1
Delivery Point Suffix	1	Alphanumeric	2	1

Not Yet Built™ Full

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   776

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record Count	1	Numeric	8	1	**(c)**
Filler	1	Alphanumeric	753	1	

NOTES

(a) – Postcode = High Values or spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Not Yet Built™ Expanded

RECORD NAME   :   Header Record
RECORD LENGTH   :   518

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	489	1	

NOTES

(a) – Postcode = High Values or spaces
(b) – Address Key = zeroes
(c) – File Identifier = NYBUILTE
(d) – Edition = Y99M99

Not Yet Built™ Expanded

RECORD NAME   :   Data Record
RECORD LENGTH   :   518

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Postcode	1	Alphanumeric	7	1
Address Key	1	Numeric	8	1
UDPRN Key	1	Numeric	8	1
Post Town	1	Alphanumeric	30	1
Dependent Locality	1	Alphanumeric	35	1
Double Dependent Locality	1	Alphanumeric	35	1
Thoroughfare	1	Alphanumeric	60	1
Thoroughfare Descriptor	1	Alphanumeric	20	1
Dependent Thoroughfare	1	Alphanumeric	60	1
Dependent Thoroughfare Descrip	1	Alphanumeric	20	1
Building Number	1	Numeric	4	1
Building Name	1	Alphanumeric	50	1
Sub Building Name	1	Alphanumeric	30	1
Organisation Name	1	Alphanumeric	60	1
Department Name	1	Alphanumeric	60	1
PO Box	1	Alphanumeric	14	1
Number of Households	1	Numeric	4	1
Organisation Key	1	Numeric	8	1
Postcode Type	1	Alphanumeric	1	1
SU Organisation Indicator	1	Alphanumeric	1	1
Concatenation Indicator	1	Alphanumeric	1	1
Delivery Point Suffix	1	Alphanumeric	2	1

Not Yet Built™ Expanded

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   518

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record Count	1	Numeric	8	1	**(c)**
Filler	1	Alphanumeric	495	1	

NOTES

(a) – Postcode = High Values or spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Not Yet Built™ Ranges

RECORD NAME   :   Header Record
RECORD LENGTH   :   487

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	458	1	

NOTES

(a) – Postcode = High Values or spaces
(b) – Address Key = zeroes
(c) – File Identifier = NYBRANGE
(d) – Edition = Y99M99

Not Yet Built™ Ranges

RECORD NAME   :   Data Record
RECORD LENGTH   :   518

Record type 1 – Number Range

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Postcode	1	Alphanumeric	7	1
Post Town	1	Alphanumeric	30	1
Dependent Locality	1	Alphanumeric	35	1
Double Dependent Locality	1	Alphanumeric	35	1
Thoroughfare	1	Alphanumeric	60	1
Thoroughfare Descriptor	1	Alphanumeric	20	1
Dependent Thoroughfare	1	Alphanumeric	60	1
Dependent Thoroughfare Descrip	1	Alphanumeric	20	1
Record Type	1	Numeric	1	1
Postcode Type	1	Alphanumeric	1	1
Number Ranges	1			18
Start of Range	2	Numeric	4	1
End of Range	2	Numeric	4	1
Filler	1	Alphanumeric	74	1

Not Yet Built™ Ranges – Data Record cont.

Record type 2 – Named Delivery Points

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Postcode	1	Alphanumeric	7	1
Post Town	1	Alphanumeric	30	1
Dependent Locality	1	Alphanumeric	35	1
Double Dependent Locality	1	Alphanumeric	35	1
Thoroughfare	1	Alphanumeric	60	1
Thoroughfare Descriptor	1	Alphanumeric	20	1
Dependent Thoroughfare	1	Alphanumeric	60	1
Dependent Thoroughfare Descrip	1	Alphanumeric	20	1
Record Type	1	Numeric	1	1
Postcode Type	1	Alphanumeric	1	1
Building Number	1	Numeric	4	1
Building Name	1	Alphanumeric	50	1
Sub Building Name	1	Alphanumeric	30	1
Filler	1	Alphanumeric	134	1

Not Yet Built™ Ranges – Data Record cont.

Record type 3 – Small / Large user organisations

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Postcode	1	Alphanumeric	7	1
Post Town	1	Alphanumeric	30	1
Dependent Locality	1	Alphanumeric	35	1
Double Dependent Locality	1	Alphanumeric	35	1
Thoroughfare	1	Alphanumeric	60	1
Thoroughfare Descriptor	1	Alphanumeric	20	1
Dependent Thoroughfare	1	Alphanumeric	60	1
Dependent Thoroughfare Descrip	1	Alphanumeric	20	1
Record Type	1	Numeric	1	1
Postcode Type	1	Alphanumeric	1	1
Building Number	1	Numeric	4	1
Building Name	1	Alphanumeric	50	1
Sub Building Name	1	Alphanumeric	30	1
Organisation Name	1	Alphanumeric	60	1
Department Name	1	Alphanumeric	60	1
PO Box Number	1	Alphanumeric	14	1

Not Yet Built™ Ranges

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   487

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record Count	1	Numeric	8	1	**(c)**
Filler	1	Alphanumeric	464	1	

NOTES

(a) – Postcode = High Values or spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Related products/links

Related products

Multiple Residence™
Just Built™
Mainfile™
Ranges File™
Compressed Standard File™

Pricing/licensing

For pricing, licensing & ordering details for this product, please visit www.poweredbypaf.com

Just Built™

In simple terms

Just Built™ is a raw data product that provides the addresses and Postcodes of all newly built properties capable of receiving mail.

- **Target new addresses straightaway**
- **Ideal if you're looking to acquire new customers**
- **New edition available every month of all properties that have just become active**
- **Create leaflet drops e.g. carpet retailers, conservatory supplies, satellite TV companies, etc.**
- **Sample data file available**

The Just Built Files are supplied as a set:

Table 61: Just Built file sizes

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)
Just Built	21,542	265Kb
Just Built Expanded	21,542	606Kb
Just Built Ranges	12,308	270Kb

Product description

Just Built™ is data of newly built properties. It is generally bought as a mailing list, for use in a single mailing, although additional payments can be made to re-use the same data. 'Newly built' means a property has a letterbox and can receive mail, but the address is not necessarily occupied.

Records are collected quarterly from our postmen and women, so the number of records varies from month to month, depending on the number of properties reported built. Records are available from July 2010.

Chronologically, Not Yet Built™ is created before the Just Built™ data. The data is then added onto PAF® file.

Selectability/media

Available via:

CD-Rom
FTP

File details

- Available as fixed field ASCII data
- 121 Postcode areas available – does not include Guernesy (GY), Jersey (JE) or Isle of Man (IM)
- Option to select individual Postcode areas
- The various file types available are:
  - **Full file** – to be used in conjunction with PAF® Mainfile product because it is a relational style database
  - **Expanded file** – a text file, with one record entry for each 'just built' address. Can be used alone or in conjunction with Compressed Standard product.
  - **Ranges file** – if a consecutive range of building numbers are present then they will appear as one record. Can be used alone, or in conjunction with Ranges. For Just Built Ranges, the 'Date Made Live' is set to zero for the ranges, and is populated for un-ranged Delivery Points. This is because there is only one date to apply to the whole range.
- The header is the same layout as Mainfile™
- Record Count on the trailer includes the header and the trailer (count of records in the body plus 2)
- Concatenation Indicator is 'Y' (concatenated) or space (not concatenated)

Record definitions

Just Built™

RECORD NAME   :   Data Record
RECORD LENGTH   :   43

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	14	1	

NOTES

(a) – Postcode = Spaces
(b) – Address Key = zeroes
(c) – File Identifier = JUSBUILT
(d) – Edition = Y99M99

RECORD NAME   :   Data Record
RECORD LENGTH   :   43

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	7	1	
UDPRN Key	1	Numeric	8	1	
Address Key	1	Numeric	8	1	
Organisation Key	1	Numeric	8	1	
Postcode Type	1	Alphanumeric	1	1	
Delivery Point Suffix (DPS)	1	Alphanumeric	2	1	
SU Organisation Indicator	1	Alphanumeric	1	1	
Date Made Live on PAF	1	Numeric	8	1	**(a)**

NOTES

(a) – Date made live on PAF = YYYYMMDD

Just Built™

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   43

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record Count	1	Numeric	8	1	**(c)**
Filler	1	Alphanumeric	20	1	

NOTES

(a) – Postcode = Spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Just Built™ Expanded

RECORD NAME   :   Header Record
RECORD LENGTH   :   526

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	497	1	

NOTES

(a) – Postcode = Spaces
(b) – Address Key = zeroes
(c) – File Identifier = JBUILTEX
(d) – Edition = Y99M99

Just Built™ Expanded

RECORD NAME : Data Record
RECORD LENGTH : 526

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	7	1	(c)
Address Key	1	Numeric	8	1	(d)
UDPRN Key	1	Numeric	8	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare	1	Alphanumeric	60	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Dependent Thoroughfare	1	Alphanumeric	60	1	
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1	
Building Number	1	Numeric	4	1	
Building Name	1	Alphanumeric	50	1	
Sub Building Name	1	Alphanumeric	30	1	
Organisation Name	1	Alphanumeric	60	1	
Department Name	1	Alphanumeric	60	1	
PO Box	1	Alphanumeric	14	1	
Number of Households	1	Numeric	4	1	
Organisation Key	1	Numeric	8	1	
Postcode Type	1	Alphanumeric	1	1	
SU Organisation Indicator	1	Alphanumeric	1	1	
Concatenation Indicator	1	Alphanumeric	1	1	
Delivery Point Suffix	1	Alphanumeric	2	1	
Date Made Live	1	Numeric	8	1	

Just Built™ Expanded

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   526

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record Count	1	Numeric	8	1	**(c)**
Filler	1	Alphanumeric	503	1	

NOTES

(a) – Postcode = Spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Just Built™ Ranges

RECORD NAME   :   Header Record
RECORD LENGTH   :   495

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	466	1	

NOTES

(a) – Postcode = Spaces
(b) – Address Key = zeroes
(c) – File Identifier = JBRANGES
(d) – Edition = Y99M99

Just Built™ Ranges

RECORD NAME   :   Data Record
RECORD LENGTH   :   495

This will follow the same rules as the Ranges product, where the record type = 1 is Number Ranges, 2 = named properties (building name present) and 3 = LU organisation. Note that there are no keys, DPS, MOCC etc. as these are ranged.

Record type 1 – Number range

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	7	1	**(c)**
Post Town	1	Alphanumeric	30	1	**(d)**
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare	1	Alphanumeric	60	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Dependent Thoroughfare	1	Alphanumeric	60	1	
Dependent Thoroughfare Descriptor	1	Numeric	20	1	
Record Type	1	Numeric	1	1	
Postcode type	1	Alphanumeric	1	1	
Number Ranges	1			18	
Start of range	2	Numeric	4	1	
End of Range	2	Numeric	4	1	
Date Made Live (zero)	1	Numeric	8	1	
Filler	1	Alphanumeric	74	1	

Just Built™ Ranges

Record type 2 – Named Delivery Points

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	7	1	**(a)**
Post Town	1	Alphanumeric	30	1	**(b)**
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare	1	Alphanumeric	60	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Dependent Thoroughfare	1	Alphanumeric	60	1	
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1	
Record Type	1	Numeric	1	1	
Postcode Type	1	Alphanumeric	1	1	
Building Number	1	Numeric	4	1	
Building Name	1	Alphanumeric	50	1	
Sub Building Name	1	Alphanumeric	30	1	
Date Made Live	1	Numeric	8	1	
Filler	1	Alphanumeric	134	1	

Just Built™ Ranges

Record type 3 – Small/Large User organisations

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Postcode	1	Alphanumeric	7	1
Post Town	1	Alphanumeric	30	1
Dependent Locality	1	Alphanumeric	35	1
Double Dependent Locality	1	Alphanumeric	35	1
Thoroughfare	1	Alphanumeric	60	1
Thoroughfare Descriptor	1	Alphanumeric	20	1
Dependent Thoroughfare	1	Alphanumeric	60	1
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1
Record Type	1	Numeric	1	1
Postcode Type	1	Alphanumeric	1	1
Building Number	1	Numeric	4	1
Building Name	1	Alphanumeric	50	1
Sub Building Name	1	Alphanumeric	30	1
Organisation Name	1	Alphanumeric	60	1
Department Name	1	Alphanumeric	60	1

Just Built Ranges

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   495

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record Count	1	Numeric	8	1	**(c)**
Filler	1	Alphanumeric	472	1	

NOTES

(a) – Postcode = Spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Related products/links

Related products

Not Yet Built™
Multiple Residence™
Mainfile™
Ranges File™
Compressed Standard File™

Pricing/licensing

For pricing, licensing & ordering details for this product, please visit www.poweredbypaf.com

Multiple Residence™ (MR)

In simple terms

The Multiple Residence product (also known as MR) is a raw data product developed to identify addresses that are delivered to a shared Delivery Point. This means premises with one front door (Delivery Point), behind which the building has been sub-divided into flats, units, etc. Multiple Residence data provides a detailed address structure for these properties.

- **'Households behind the doors' – detailed address structure for Multiple Residence properties**
- **Data is updated every month**
- **Covers 121 Postcode areas (not Jersey, Guernsey nor Isle of Man)**
- **Full product only, no Postcode selections available**
- **Use as a standalone dataset or integrate with PAF®.**

The Multiple Residence Files are supplied as a set

Table 62: Multiple Residence file sizes

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)
Multiple Residence Full	479263	16.8Mb
Multiple Residence Single Changes	21187	806Kb

Product description

The Multiple Residence data identifies those addresses delivered to a shared Delivery Point (DP). This shared Delivery Point is known as the 'owning DP'. We are only able to capture Multiple Residence data where there is an address structure (e.g. 'Flat A' and 'Flat B', 'Upper Flat' and 'Lower Flat', or 'Unit 1' and 'Unit 2' etc.). We also hold household counts for such premises.

Multiple Residence data does not include:

- **bedsits**
- **marinas**
- **caravan sites**
- **hostels**
- **hotels**
- **prisons.**

Uses for MR data

Multiple Residence data is useful to identify the number of households at a given address or addresses, and may be of interest to utilities and cable communications companies wishing to establish the numbers of potential customers. Equally, the data can be used for verifying multiple claimants in a property or for targeting services such as insurance or other related financial services.

This data can help you decide whether or not to use a secure mail service to deliver goods to a property consisting of many households or flats.

Selectability/media

Available via:

CD-Rom
FTP

Multiple Residence data is a raw data product. Rather than having separate Full and expanded products, Multiple Residence contains both Full and expanded data. This means you can either use the data as a stand-alone product using the expanded fields or via PAF® Mainfile using the Full data.

We produce a new data set each month which includes any newly identified multiple occupied properties or changes to the data. The data is supplied on CD-Rom and is available for the whole of the UK (excluding Jersey, Guernsey and the Isle of Man).

You can either order a 'Changes' Multiple Residence product, showing only those changes which occurred since the data was last produced, or a complete refresh of data which contains all Multiple Residence data, including both changed and unchanged addresses.

Multiple Residences (MRs) are, by their very nature, not Delivery Points. Therefore, to identify each uniquely, we introduced a new numeric code – the Unique Multiple Residence Reference Number (UMRRN). Every Multiple Residence record has been allocated a UMRRN. This can be linked to the Unique Delivery Point Reference Number (UDPRN). This in turn links in with PAF records as all 29 million addresses have a UDPRN.

The first Unique Multiple Residence Reference Number added to PAF will be assigned the next sequential Unique Delivery Point Reference Number.

The UMRRN will work exactly like the UDPRN in that it will only change in limited circumstances as detailed in the following pages.

Below are some frequently asked questions about UMRRNs.

FAQs on Unique Multiple Residence Reference Numbers (UMRRNs)

1. When will a deleted Delivery Point and its associated Multiple Residences be resurrected?

If a deletion is found to be an error and the DP is added back on to PAF, the DP will retain its MRs and the UMRRNs will remain the same. The DP/MR address details may be exactly the same or may vary from the original DP/MR that was deleted. Here are three examples:

- '5 High Street' has three MRs – 'Flat 1', 'Flat 2' and 'Flat 3'. The DP is deleted from PAF in error and we now have information that it has changed to 'Walker House, High Street'. We would resurrect the '5 High Street' DP and then amend it to read 'Walker House, High Street'. The three MRs would then be resurrected, retaining their original UMRRNs.

- 'Flat A' is a Multiple Residence at '25 Church Lane'. The MR is amended to 'Flat 1', but this does not affect the UMRRN.

- 'Flat 15' is a Multiple Residence at '121 Ling Road'. The MR is deleted in error and we now have information that it has changed to 'Flat 0'. 'Flat 15' would be resurrected as an MR and amended to 'Flat 0'.

Sometimes residential premises are refurbished under an estate action scheme, where properties are rebuilt/redecorated, etc. If these properties have been deleted from PAF$^®$ and there is a subsequent need to re-add them once the scheme has been completed and the DP details match exactly (house number and street name), then we will resurrect the original DP and any MR addresses.

If there's any change from the original naming and numbering scheme (e.g. a change of road name), then each property would be added as a new Delivery Point, and any MRs would be given new UMRRNs.

2. When will the owning DP change but the MR retains the UMRRN?

A number of circumstances arise where the MR moves from its original DP to another, e.g. due to flat conversions, demolition or rebuilding changes. Here's an example:

If a MR is given a letterbox and receives a daily mail delivery, effectively becoming a DP, the MR will be converted to a DP and the UMRRN will become the DP's UDPRN.

3. When will a MR change and not retain the UMRRN?

There will be occasions when we don't want the MR to be moved or associated with new, 'converted' or 'replacement' Delivery Points.

In these circumstances, where the 'original' DP is demolished, any 'uniqueness' associated with it and its UMRRN will have passed. Anything subsequently built on all or part of the 'original' site, whether business or residential, will have no relationship with the 'original' DP or any of its potential functions. Here's an example:

A house with four MRs is demolished, the original DP is deleted and two new houses with three MRs each are built in its place. The two new houses that now stand on all, or part of, the site will be added to PAF® as 'new' DPs. Neither of the new DPs will have any association with the former property on the same site, and new UDPRNs and UMRRNs will be allocated.

Record definitions

Multiple Residence™ Full

RECORD NAME   :   Header Record
RECORD LENGTH   :   782

NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	753	1	

NOTES

(a) – Postcode = Low Values or spaces
(b) – Address Key = zeroes
(c) – File Identifier = MURESFUL
(d) – Edition = Y99M99

Multiple Residence™ Full – data record

RECORD NAME   :   Data Record
RECORD LENGTH   :   782

- This table contains both the keys and the text versions.
- Where there is a Delivery Point (DP) on PAF that has a multi-occupancy greater than one but no Multi Residence (MR) details, there will be a record on the product for the owning DP but without the MR.

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	7	1	
Multi-occupancy count of owning DP	1	Numeric	4	1	
Address Key (of the owning DP)	1	Numeric	8	1	
Organisation key (of the owning DP)	1	Numeric	8	1	**(a)**
Postcode type (of the owning DP)	1	Alphanumeric	1	1	
Delivery Point Suffix (of the owning DP)	1	Alphanumeric	2	1	
UDPRN Key (of the owning DP)	1	Numeric	8	1	**(b)**
UMRRN (of MR)	1	Numeric	8	1	**(c)**
Locality Key	1	Numeric	6	1	**(d)**
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare key	1	Numeric	8	1	
Thoroughfare	1	Alphanumeric	60	1	
Thoroughfare Descriptor key	1	Numeric	4	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Dependent Thoroughfare key	1	Numeric	8	1	
Dependent Thoroughfare	1	Alphanumeric	60	1	

... Table continued overleaf

NOTES
(a) – The Organisation Key can be read using the Mainfile to produce the Organisation and Department Name of the owning DP. The Organisation Name and Department for the MR will exist as text only.
(b) – UDPRN = Unique Delivery Point Reference Number
(c) – UMRRN = Unique Multiple Residence Reference Number
(d) – The Locality Key can be read using the Mainfile to produce the Post Town, Dependent Locality and Double Dependent Locality.

Multiple Residence™ Full – data record cont.

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Dependent Thoroughfare Descriptor key	1	Numeric	4	1	
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1	
Building Number (of the owning DP)	1	Numeric	4	1	
Building Name key (of the owning DP)	1	Numeric	8	1	
Building Name (of the owning DP)	1	Alphanumeric	50	1	
Sub Building Name key (of the owning DP)	1	Numeric	9	1	
Sub Building Name (of the owning DP)	1	Alphanumeric	30	1	
Organisation name (of the owning DP)	1	Alphanumeric	60	1	
Department name (of the owning DP)	1	Alphanumeric	60	1	
Small User Organisation Indicator (of the owning DP)	1	Alphanumeric	1	1	
Concatenation Indicator (of the owning DP)	1	Alphanumeric	1	1	(e)
Building Number (of the MR)	1	Numeric	4	1	
Building Name key (of the MR)	1	Numeric	8	1	
Building Name (of the MR)	1	Alphanumeric	50	1	
Sub Building Name key (of the MR)	1	Numeric	9	1	
Sub Building Name (of the MR)	1	Alphanumeric	30	1	
Organisation name (of the MR)	1	Alphanumeric	60	1	
Department name (of the MR)	1	Alphanumeric	60	1	
SU Organisation Indicator (of the MR)	1	Alphanumeric	1	1	
Concatenation Indicator (of the MR)	1	Alphanumeric	1	1	

NOTES

(e) – Concatenation indicator is either 'Y' or space. When equal to 'Y' this indicates that Building Number and Sub Building Name should appear concatenated on the same address line

Multiple Residence™ Full

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   776

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record Count	1	Numeric	8	1	**(c)**
Filler	1	Alphanumeric	753	1	

NOTES

(a) – Postcode = High Values or spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Multiple Residence™ Changes

RECORD NAME   :   Header Record
RECORD LENGTH   :   797

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
File Identifier	1	Alphanumeric	8	1	**(c)**
Edition	1	Alphanumeric	6	1	**(d)**
Filler	1	Alphanumeric	768	1	

NOTES

(a) – Postcode = Low Values or spaces
(b) – Address Key = zeroes
(c) – File Identifier = MURESCHG
(d) – Edition = Y99M99

Multiple Residence™ Changes

RECORD NAME　　　　:　　　Data Record
RECORD LENGTH　　　:　　　797

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Date	1	Numeric	8	1	
Time	1	Numeric	6	1	
Amendment Type	1	Alphanumeric	1	1	
Postcode	1	Alphanumeric	7	1	
Multi-occupancy count of the owning DP	1	Numeric	4	1	
Address Key (of the owning DP)	1	Numeric	8	1	
Organisation key (of the owning DP)	1	Numeric	8	1	
Postcode type (of the owning DP)	1	Alphanumeric	1	1	
Delivery Point Suffix (of the owning DP)	1	Alphanumeric	2	1	
UDPRN Key (of the owning DP)	1	Numeric	8	1	**(a)**
UMRRN (of the MR)	1	Numeric	8	1	**(b)**
Locality Key	1	Numeric	6	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare key	1	Numeric	8	1	
Thoroughfare	1	Alphanumeric	60	1	
Thoroughfare Descriptor key	1	Numeric	4	1	
Thoroughfare Descriptor	1	Alphanumeric	20	1	
Dependent Thoroughfare key	1	Numeric	8	1	
Dependent Thoroughfare	1	Alphanumeric	60	1	
Dependent Thoroughfare Descriptor key	1	Numeric	4	1	
Dependent Thoroughfare Descriptor	1	Alphanumeric	20	1	

...Table continues overleaf

NOTES
(a) – UDPRN = Unique Delivery Point Reference Number
(b) - UMRRN = Unique Multiple Residence Reference Number

Multiple Residence™ Changes – data record cont.

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS
Building Number (of the owning DP)	1	Numeric	4	1
Building Name key (of the owning DP)	1	Numeric	8	1
Building Name (of the owning DP)	1	Alphanumeric	50	1
Sub Building Name key (of the owning DP)	1	Numeric	9	1
Sub Building Name (of the owning DP)	1	Alphanumeric	30	1
Organisation name (of the owning DP)	1	Alphanumeric	60	1
Department name (of the owning DP)	1	Alphanumeric	60	1
Small User Organisation Indicator (of the owning DP)	1	Alphanumeric	1	1
Concatenation Indicator (of the owning DP)	1	Alphanumeric	1	1
Building Number (of the MR)	1	Numeric	4	1
Building Name key (of the MR)	1	Numeric	8	1
Building Name (of the MR)	1	Alphanumeric	50	1
Sub Building Name key (of the MR)	1	Numeric	9	1
Sub Building Name (of the MR)	1	Alphanumeric	30	1
Organisation name (of the MR)	1	Alphanumeric	60	1
Department name (of the MR)	1	Alphanumeric	60	1
Small User Organisation Indicator (of the MR)	1	Alphanumeric	1	1
Concatenation Indicator (of the MR)	1	Alphanumeric	1	1

General

The amendment type will be:

      I = Insert
      D = Delete
      B = Change Before
      C = Change After

The Changes will be single changes only. Changes will include adding, amending, deleting MR, changes to owning DP on MR and changes to DPs with a multi-occupancy greater than one that do not have MR details.

Multiple Residence™ Changes

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   797

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1				
Postcode	2	Alphanumeric	7	1	**(a)**
Address Key	2	Numeric	8	1	**(b)**
Record Count	1	Numeric	8	1	**(c)**
Filler	1	Alphanumeric	774	1	

NOTES

(a) – Postcode = High Values or spaces
(b) – Address Key = 99999999
(c) – Record Count contains the number of records on file including header and trailer

Related products/links

Related products

Not Yet Built™
Just Built™
Mainfile™
Ranges File™
Compressed Standard File™

Pricing/licensing

For pricing, licensing & ordering details for this product, please visit www.poweredbypaf.com

Postzon™

In simple terms

Postzon data contains the grid references, local authority Ward Codes and National Health Service (NHS) Area Codes for most UK Postcodes (Isle of Man, Guernsey and Jersey addresses are not recognised by Ordnance Survey).

- **Links postal characteristics to UK geography**
- **Provides Ward Codes, grid references (100m) and NHS Area Codes**
- **Grid references supplied at 100m accuracy**
- **Supplied as full files only (no Changes Files)**

Postzon is supplied as a single file, this being:

Table 63: Postzon file size

Product file names	Sample record size (April 09 data)	Sample file size (April 09 data)
Postzon file	1,754,959	13.3Mb

Product description

Five organisations – the Office for National Statistics (ONS), Ordnance Survey (OS), Land & Property Services (Ordnance Survey of Northern Ireland), the General Register Office for Scotland (GROS) and Royal Mail – have developed a co-ordinated production process to provide a core set of Postcode location data. This is called the Gridlink® core dataset. Postzon is the Royal Mail product derived from Gridlink®, which links postal characteristics to UK geography.

Postzon file holds grid reference data for 100m.

Selectability/media

Available via:

CD-Rom
FTP

File details

The file is held in ascending Postcode sequence. There is one record per Postcode. All fields are fixed length. Numeric fields are held right justified, zero filled. Non numeric fields are held left justified, space filled.

Postzon™

RECORD NAME   :   Header Record
RECORD LENGTH   :   79

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	7	1	**(a)**
File Identifier	1	Alphanumeric	8	1	**(b)**
Edition	1	Alphanumeric	6	1	**(c)**
Filler	1	Alphanumeric	58	1	

NOTES

(a) – Record Identifier = low values (except for CD-Rom where Record Identifier = Spaces)
(b) – File Identifier = PZONE100
(c) – Edition = Date (e.g. Y00M11)

Postzon™ 100m

```
RECORD NAME        :        Data Record
RECORD LENGTH      :        79
```

FIELD NAME	DATA ORIGIN *	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES (overleaf)
Postcode		1				
Outward Code	RM	2	Alphanumeric	4	1	
Inward Code		2	Alphanumeric	3	1	
Introduction Date	RM	1	Numeric	6	1	(a)
Grid reference East	OS/LPS	1	Numeric	5	1	(b)
Grid reference North	OS/LPS	1	Numeric	5	1	(b)
Country Code	ONS/GROS	1	Alphanumeric	9	1	(c)
Area Code		1				
County	ONS/GROS	2	Alphanumeric	9	1	(c)
District		2	Alphanumeric	9	1	
Ward Code	ONS/GROS	1	Alphanumeric	9	1	(c)
NHS Region	ONS/GROS	1	Alphanumeric	9	1	(c)
NHS Code	ONS/GROS	1	Alphanumeric	9	1	(c)
User Type	RM	1	Numeric	1	1	(d)
Grid Status	ALL	1	Numeric	1	1	(e)

* The list below is the key to the initials in 'DATA ORIGIN' column

Gridlink® data partners

GROS   General Register for Scotland (www.gro-scotland.gov.uk)

LPS   Land & Property Services, formerly Ordnance Survey of Northern Ireland (www.lpsni.gov.uk)

ONS   Office for National Statistics (www.statistics.gov.uk)

OS   Ordnance Survey (www.ordnancesurvey.co.uk)

RM   Royal Mail (www.royalmail.com)

Postzon Data Record – NOTES (Page 1 of 3)

(a) – Introduction date. Format = YYYYMM (date of the most recent introduction onto PAF®).

(b) – Grid references East and North

Grid references are 10-digit East and North relating the location of the Postcode to the National Grid, or to the Irish Grid for Postcode Area 'BT' for a resolution of 100m.

How Postzon relates to the National Grid

For the majority of northern grid references where 6 characters would be required to hold the Northing numeric value, a conversion of the first two numerics into a single letter takes place, to allow the Northing to be held in a 5-character field.

The letters used are: **P, U, Z, O, T, Y** and are used as follows:

Table 64: How Postzon relates to the National Grid

Northing letter on PAF	If Easting value begins with	then Northing value begins with
P	4	12
U	4	11
Z	4	10
O	3	12
T	3	11
Y	3	10

Grid references and Northern Ireland

The grid references for Northern Ireland (BT) Postcode area reflect the Irish Grid system.

The Irish Grid does not conform to the National Grid used for England, Scotland and Wales, both are planar co-ordinate systems but differ in their origin. Consequently the values that are present on Postzon overlap with the other areas of the UK. Belfast, for example, has the same co-ordinates as parts of Cheshire and Merseyside.

To convert Irish to National the grid references must be converted to longitude and latitude, and then a complex algorithm is applied to calculate the National grid reference. An approximate conversion of Northern Irish grid references to the same origin as the rest of the UK may be obtained by adding 13000 to the Northing and subtracting 17000 from the Easting of the NI references. This should not be regarded as an exact conversion.

For further information visit Land and Property Services website: www.lpsni.gov.uk

Postzon Data Record – NOTES (Page 2 of 3)

(c) – Country, County, District, NHS Region and NHS Code

This data is provided to Royal Mail as part of the Gridlink® data interchange process. The make-up, composition and accuracy of this data are the responsibility of the appropriate Gridlink® data partner(s) listed page 178. Any queries arising from this data should therefore be routed accordingly.

(d) – User Type

User Type indicates whether the Postcode relates to a large or Small User.

0 =   Small User
1 =   Large User

(e) – Grid Status

A positional quality indicator to show the status of the grid reference and the method that was used to allocate the reference.

Table 65: Grid status

Grid	
0	Status not supplied by OS
1	Within the building of the matched address closest to the Postcode mean.
2	Co-ordinates allocated by GROS during Postcode boundary creation to the building nearest the centre of the populated part of the Postcode (Scotland only)
3	Approximate to within 50m of true position
4	Postcode unit mean (direct copy from ADDRESS-POINT (GB) and COMPAS (NI) - mean of matched addresses with the same Postcode)
5	Postcode imputed by ONS to 1 metre resolution
6	Postcode sector mean - mainly PO Boxes
9	No co-ordinates available

Postzon™

RECORD NAME   :   Trailer Record
RECORD LENGTH   :   79

FIELD NAME	LEVEL	DATA TYPE	SIZE	OCCURS	NOTES
Record Identifier	1	Alphanumeric	7	1	(a)
Record Count	1	Numeric	8	1	
Filler	1	Alphanumeric	64	1	

NOTES

(a) – Record Identifier = High values. (except for CD-Rom where record identifier = Spaces)

Related products/links

Related datasets

Mainfile
Compressed Standard File
Ranges File
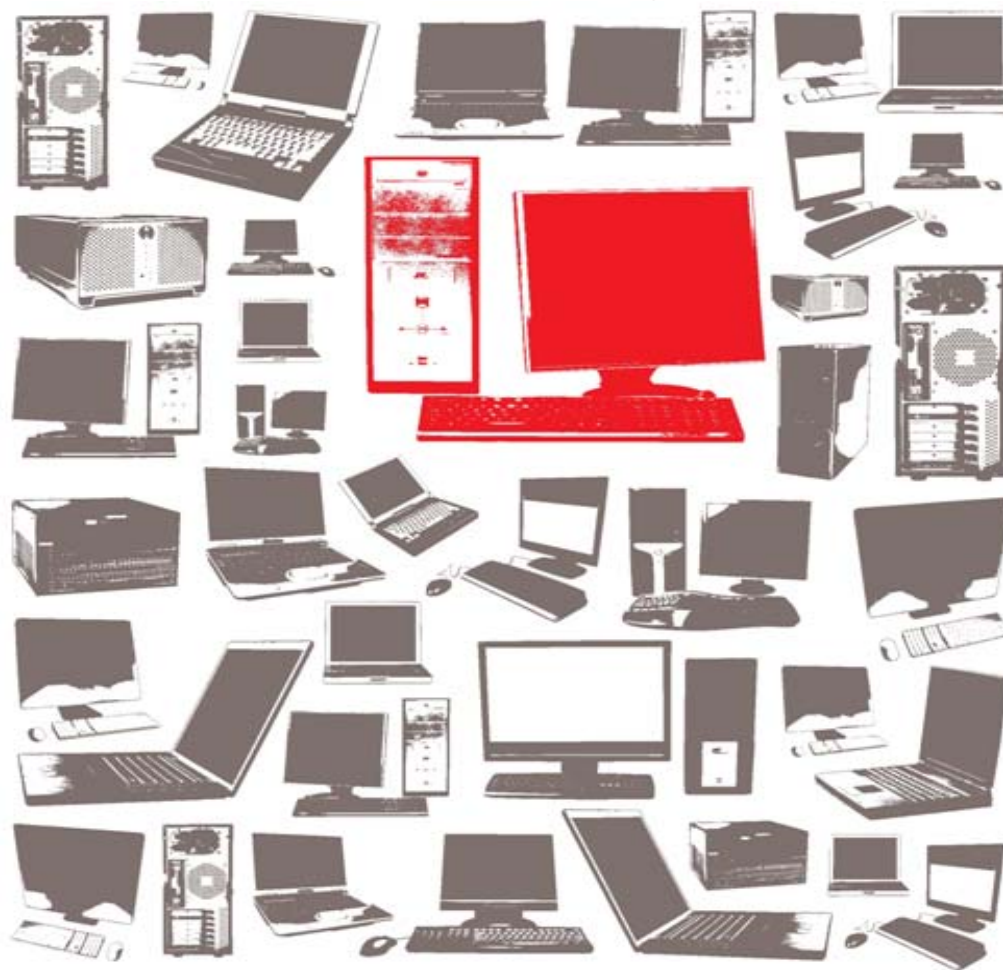
Section 5: Products in CSV Format

Chapter 20 CSV PAF

Chapter 21 CSV PAF Changes

Chapter 22 CSV Alias

Chapter 23 CSV Multiple Residence

Chapter 24 CSV Multiple Residence Changes

Chapter 25 CSV Just Built

Chapter 26 CSV Not Yet Built

Chapter 27 CSV PIF

Chapter 28 CSV BFPO

Chapter 29 CSV Postzon

CSV PAF®

In Simple Terms

CSV PAF® is similar to the Mainfile™ raw data, but the numeric keys on Mainfile are replaced by text and fields are of variable width delimited by commas. It makes the file easier to use than the Mainfile, but does not use keys.

- Expanded database in CSV format
- Large size PAF raw data file
- Contains UDPRN in-place of the address key so no separate UDPRN file is required
- Use CSV PAF Changes to update (daily, monthly or quarterly)

CSV PAF is supplied as a single file, this being:

Table 66: CSV PAF file size

Product file names	Sample record size (January 13 data)	Sample file size (January 13 data)
CSV PAF.csv	29,144,258	1,934,405,668

Product description

CSV PAF data is supplied to customers as a combined file, containing address data and UDPRNs. Each record is held at Delivery Point level and is held as text rather than keys. The CSV PAF file is smaller than the PAF Mainfile (as it is of a variable rather than fixed width record size) but is less efficiently stored as records are not keyed. The CSV PAF File is aimed at companies who find it easier to import a standard format CSV file rather than the relational format offered by the Mainfile.

Selectability / media

Available via:

CD-Rom
FTP

File details

The file is held in ascending Postcode sequence. There will be multiple records for postcodes that contain multiple delivery points as one record exists for each delivery point in PAF.

Miscellaneous

- All records end with CR LF
- All fields are of variable length and delimited with comma's
- Text is ASCII, no extended or Unicode characters are used

- No fields are quoted and no characters are escaped
- No header record is present

Further information

For pricing, licensing & ordering please visit www.poweredbypaf.com

Record definitions

CSV PAF

RECORD NAME   :   Address Record
RECORD LENGTH   :   490 characters maximum (not fixed)

FIELD NAME	LEVEL	DATA TYPE	MAX SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	8	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Dependent Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Building Number	1	Numeric	4	1	
Building Name	1	Alphanumeric	50	1	
Sub Building Name	1	Alphanumeric	30	1	
PO Box	1	Alphanumeric	6	1	
Department Name	1	Alphanumeric	60	1	
Organisation Name	1	Alphanumeric	60	1	
UDPRN	1	Numeric	8	1	
Postcode Type	1	Alphanumeric	1	1	(a)
SU Organisation Indicator	1	Alphanumeric	1	1	(b)
Delivery Point Suffix	1	Alphanumeric	2	1	(c)

NOTES

(a) – The Postcode type is 'S' for Small User and 'L' for Large Users

(b) – Small User Organisation Indicator. Can have the values 'Y' or space. A value of 'Y' indicates that there is a Small User Organisation present at this address.

(c) – Delivery Point Suffix (DPS). The DPS is a unique Royal Mail 2-character code (the first numeric & the second alphabetical – e.g. 2B), which, when added to the Postcode enables each live Delivery Point to be uniquely identified. Once the Delivery Point is deleted from PAF the DPS may be reused (although they aren't reused until all remaining Delivery Points in the range have been allocated). The DPS for a Large User is always '1A' as each Large User has its own Postcode. Only numbers 1-9 appear in the numeric position, and letters C, I, K, M, O V are not used. The maximum DPS can be 9T. So, in total, there are 175 possible DPS allocations per Postcode, from 1A to 9T.

CSV PAF® Changes

In Simple Terms

This product details the additions, deletions and amendments required to update the CSV PAF® file. Users who require a low maintenance option should subscribe to the full CSV PAF® file.

- Changes held in expanded CSV format
- Available at individual delivery point level only
- High maintenance update option
- Available daily, monthly or quarterly
- Compatible with CSV PAF®

The CSV PAF Changes file is supplied as two files:

Table 67: CSV PAF Changes file sizes

Product file names	Sample record size (January 13 data)	Sample file size (January 13 data)
CSV PAF Changes.csv	66,546	6,599,441
CSV PAF Changes Single.csv	59,742	5,913,127
Total CSV Alias = 12,512,568 Mb		

Product description

This file contains PAF update information. It contains details of additions, deletions, amendments and Postcode recoding of Delivery Points.

The CSV PAF Changes Single file is identical in format and layout to the CSV PAF Changes file. However, only one pair of records will appear for each Delivery Point, representing the first and last view of the Delivery Point over the change period.

Changes data is only available at individual Delivery Point level; there are no group level records to give information at a Postcode level. For example, if a Postcode is deleted then the file will contain a deletion record for each Delivery Point within the Postcode. Changes information is available for Small and Large User addresses.

Selectability/media

Available via:

CD-Rom
FTP

File details

Date is held in YYYYMMDD format.
Time is held in HHMMSS format.

Records are held in ascending date and time sequence.

Amendment types are:

B   –   before view   }
C   –   after view   } amendment

D   –   deletion
I   –   insertion

Miscellaneous

- All records end with CR LF
- All fields are of variable length and delimited with comma's
- Text is ASCII, no extended or Unicode characters are used
- No fields are quoted and no characters are escaped
- No header record is present

Further information

For pricing, licensing & ordering please visit www.poweredbypaf.com

Record definitions

CSV PAF

RECORD NAME   :   Changes Record
RECORD LENGTH   :   513 characters maximum (not fixed)

FIELD NAME	LEVEL	DATA TYPE	MAX SIZE	OCCURS	NOTES
Date	1	Numeric *	10	1	
Time	1	Numeric *	8	1	
Amendment Type	1	Alphanumeric	1	1	
Reason for Amendment	1	Numeric	4	1	(a)
Postcode	1	Alphanumeric	8	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Numeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Dependent Thoroughfare & Descriptor	1	Alphanumeric	80	1	

Building Number	1	Numeric	4	1	
Building Name	1	Alphanumeric	50	1	
Sub Building Name	1	Alphanumeric	30	1	
PO Box Number	1	Alphanumeric	6	1	
Department Name	1	Alphanumeric	60	1	
Organisation Name	1	Alphanumeric	60	1	
UDPRN Key	1	Numeric	8	1	
Postcode Type	1	Alphanumeric	1	1	(b)
SU Organisation Indicator	1	Alphanumeric	1	1	(c)
Delivery Point Suffix	1	Alphanumeric	2	1	(d)

* While the date and time fields are primarily numeric fields, they are formatted in the CSV files with forward slash and colon separators in the date format DD/MM/YYYY and time format HH:MM:SS

NOTES

(a) –Reasons for Amendment table is below

(b) – The Postcode type is 'S' for Small User and 'L' for Large Users

(c) – Small User Organisation Indicator. Can have the values 'Y' or space. A value of 'Y' indicates that there is a Small User Organisation present at this address.

(d) – Delivery Point Suffix (DPS). The DPS is a unique Royal Mail 2-character code (the first numeric & the second alphabetical – e.g. 2B), which, when added to the Postcode enables each live Delivery Point to be uniquely identified. Once the Delivery Point is deleted from PAF the DPS may be reused (although they aren't reused until all remaining Delivery Points in the range have been allocated). The DPS for a Large User is always '1A' as each Large User has its own Postcode.

Table 68: Reasons for amendment

Amendment Type	Reasons for amendment	Description of amendment
01	Postcode/Delivery Point Added to PAF	• This also includes any Delivery Point that may have been previously omitted from PAF when the Postcode went live. • Large User Added
02	Error Correction	• Bulk Recoding • Single Amendments • Locality Change • Thoroughfare Change • Large User Amendment • Small User Amendment • Small User Deletion • Building Name Amendment • Selective Reallocation*
03	Postcode/Delivery Point Deleted	• Postcode Deleted • Large User Deleted • Small User Deleted

04	Coding Revision	• Locality Amendment • Bulk Recode • Thoroughfare Amendment • Selective Reallocation (building name, recoding)
05	Change of Organisation or Business Name	• Large User Amendment • Small User Amendment • Change of Organisation Name • Selective Reallocation (building number)
06	Change of Status	• Not Currently In Use
07	Large User Moving or Ceasing Trading	• Large User Deleted
08	Change of Building Name, or Number	• Small User Amendment • Selective Reallocation (building name)
09	Change of Address of a Large User	• Not Currently In Use

* Delivery Points can be moved to a different Postcode, retaining the same address keys where possible. If the Delivery Point is re-keyed the change is tracked on the Keychain File. Other Selective Reallocation functions involve making changes to the Delivery Points, such as Building Number.

CSV Alias^{TM}

In Simple Terms

Alias™ data is information the public choose to use when addressing mail, but which isn't actually required for delivery purposes. While the keyed Alias file also contains alias delivery point, thoroughfare and locality records, CSV Alias® solely provides the most commonly used County alias data.

CSV Alias makes a great add-on to a PAF ®-based system, helping locate correct postal addresses from 'postally not-required' county data. It is only available with a PAF product, not as a stand-alone product.

- expanded database in CSV format (ideal for use with CSV PAF®)
- full editions only (there are no Changes files)
- postally not required county data
- useful for advanced address searching

The CSV Alias file is supplied as two files:

Table 69: CSV Alias file sizes

Product file names	Sample record size (January 13 data)	Sample file size (January 13 data)
CSV Alias Org.csv	1,422,970	199,594,183
CSV Alias Res.csv	27,721,288	3,366,592,929
Total CSV Alias = 3,566,187,112		

Product description

The CSV Alias file contains the following:

Traditional, Administrative and Former Postal County information. This is provided along with the full address so data can be correlated with other PAF data. The notes to the Record Definition Table later in this chapter contain more information on the different county types.

Alias is not, however, a comprehensive listing and the nature of the data is such that Royal Mail cannot guarantee its accuracy. Alias information may be used by the public when addressing mail but is not required as part of the PAF address.

Selectability/media

Available via:

CD-Rom
FTP

Please note that it is only available alongside a PAF product.

File details

The file is held in ascending Postcode sequence. There will be multiple records for postcodes that contain multiple delivery points as one record exists for each delivery point in PAF.

Miscellaneous

- All records end with CR LF
- All fields are of variable length and delimited with comma's
- Text is ASCII, no extended or Unicode characters are used
- All fields are contained within double quotes (")
- No characters are escaped
- No header record is present

Further information

For pricing, licensing & ordering please visit www.poweredbypaf.com

Record definitions

CSV Alias

RECORD NAME   :   County Alias Record
RECORD LENGTH   :   572 characters maximum (not fixed)

FIELD NAME	LEVEL	DATA TYPE	MAX SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	8	1	
PostTown	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Dependent Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Building Number	1	Numeric	4	1	
Building Name	1	Alphanumeric	50	1	
SubBuilding Name	1	Alphanumeric	30	1	
PO Box	1	Alphanumeric	6	1	
Department Name	1	Alphanumeric	60	1	
Organisation Name	1	Alphanumeric	60	1	

Former Postal County	1	Alphanumeric	30	1	(a)
Traditional County	1	Alphanumeric	30	1	(a)
Administrative County	1	Alphanumeric	30	1	(b)
Postcode Type	1	Alphanumeric	1	1	(c)
SU Organisation Indicator	1	Alphanumeric	1	1	
Delivery Point Suffix	1	Alphanumeric	2	1	

NOTES

(a) – The Former Postal County was used for the distribution of mail before the Postcode system was introduced in the 1970s. It helped differentiate between similar and same sounding place names (e.g. 'Caistor' in Lincolnshire and 'Caistor St Edmund' in Norfolk, or 'Newport' in Shropshire and 'Newport' on the Isle of Wight). The Former Postal County was the Administrative County at the time. This data rarely changes.

(b) – The Traditional County is provided by the Association of British Counties. It's historical data, and can date from the 1800s.

(c) – The Administrative County is a Unitary Authority name, where one is present. If there is no Unitary Authority, the County name is used. This data is provided by the Office of National Statistics. This information is not static, because County boundaries may change due to administrative changes. In some circumstances, it would be nonsensical to use the Administrative County in an address. For example in Portsmouth, the Administrative County is also 'Portsmouth'

CSV Multiple Residence™

In Simple Terms

CSV Multiple Residence is a CSV product that identifies addresses that are delivered to a shared Delivery Point. This means premises with one front door (Delivery Point), behind which the building has been sub-divided into flats, units, etc. Multiple Residence data provides a detailed address structure for these properties.

- 'Households behind the doors' – detailed address structure for Multiple Residence properties
- Data is updated every month
- Covers 121 Postcode areas (not Jersey, Guernsey nor Isle of Man)
- Use as a standalone dataset or integrate with PAF®.

CSV Multiple Residence is supplied as a single file, this being:

Table 70: CSV Multiple Residence file size

Product file names	Sample record size (January 13 data)	Sample file size (January 13 data)
CSV Multiple Residence.csv	665,400	63,176,539

Product description

The Multiple Residence data identifies those addresses delivered to a shared Delivery Point (DP). This shared Delivery Point is known as the 'owning DP'. We are only able to capture Multiple Residence data where there is an address structure (e.g. 'Flat A' and 'Flat B', 'Upper Flat' and 'Lower Flat', or 'Unit 1' and 'Unit 2' etc.). We also hold household counts for such premises.

More details on the uses of Multiple Residency data and how it is assigned can be found in the Multiple Residence section of the PAF Programmer's Guide.

Selectability/media

Available via:

CD-Rom
FTP

File details

The file is held in ascending Postcode sequence.

Miscellaneous

- All records end with CR LF

- All fields are of variable length and delimited with comma's
- Text is ASCII, no extended or Unicode characters are used
- No fields are quoted and no characters are escaped
- No header record is present

Further information

For pricing, licensing & ordering please visit www.poweredbypaf.com

Record definitions

CSV Multiple Residence

RECORD NAME   :   Multiple Residence Record
RECORD LENGTH   :   697 characters maximum (not fixed)

FIELD NAME	LEVEL	DATA TYPE	MAX SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	8	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Dependent Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Building Number (owning DP)	1	Numeric	4	1	
Building Name (owning DP)	1	Alphanumeric	50	1	
Sub Building Name (owning DP)	1	Alphanumeric	30	1	
Department Name (owning DP)	1	Alphanumeric	60	1	
Organisation Name (owning DP)	1	Alphanumeric	60	1	
UDPRN Key (owning DP)	1	Alphanumeric	8	1	(a)
Postcode Type (owning DP)	1	Alphanumeric	1	1	
SU Organisation Indicator (owning DP)	1	Alphanumeric	1	1	
Delivery Point Suffix (owning DP)	1	Alphanumeric	2	1	
Building Number (MR)	1	Alphanumeric	4	1	
Building Name (MR)	1	Alphanumeric	50	1	
Sub Building Name (MR)	1	Alphanumeric	30	1	
Department Name (MR)	1	Alphanumeric	60	1	
Organisation Name (MR)	1	Alphanumeric	60	1	
UMPRN (MR)	1	Numeric	8	1	(b)
SU Organisation Indicator (MR)	1	Alphanumeric	1	1	

NOTES

(a) – UDPRN = Unique Delivery Point Reference Number
(b) – UMPRN = Unique Multiple Residence Reference Number

CSV Multiple Residence™ Changes

In Simple Terms

This product details the additions, deletions and amendments required to update the CSV Multiple Residence® file. Users who require a low maintenance option should subscribe to the full CSV Multiple Residence® file.

- Changes held in expanded CSV format
- High maintenance update option
- Available monthly
- Compatible with CSV Multiple Residence®

CSV Multiple Residence Changes is supplied as a single file, this being:

Table 71: CSV Multiple Residence Changes file size

Product file names	Sample record size (January 13 data)	Sample file size (January 13 data)
CSV Multiple Residence Changes.csv	18,822	2,314,021

Product description

This file contains Multiple Residence update information. It contains details of additions, deletions, and amendments to Multiple Residence recordssince the data was last produced.

The Changes will be single changes only. Changes will include adding, amending, deleting MR, changes to owning DP on MR and changes to DPs with a multi-occupancy greater than one that do not have MR details.

More details on the uses of Multiple Residency data and how it is assigned can be found in the Multiple Residence section of the PAF Programmer's Guide.

Selectability/media

Available via:

CD-Rom
FTP

File details

The file is held in ascending date and time sequence.

Amendment types are:

B   –   before view   }
C   –   after view   } amendment

D   –   deletion
I   –   insertion

Miscellaneous

- All records end with CR LF
- All fields are of variable length and delimited with comma's
- Text is ASCII, no extended or Unicode characters are used
- No fields are quoted and no characters are escaped
- No header record is present

Further information

For pricing, licensing & ordering please visit www.poweredbypaf.com

Record definitions

CSV Multiple Residence Changes

RECORD NAME   :   Multiple Residence Changes Record
RECORD LENGTH   :   716 characters maximum (not fixed)

FIELD NAME	LEVEL	DATA TYPE	MAX SIZE	OCCURS	NOTES
Date	1	Numeric *	10	1	
Time	1	Numeric *	8	1	
Amendment Type	1	Alphanumeric	1	1	
Postcode	1	Alphanumeric	8	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Dependent Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Building Number (owning DP)	1	Numeric	4	1	
Building Name (owning DP)	1	Alphanumeric	50	1	
Sub Building Name (owning DP)	1	Alphanumeric	30	1	

Department Name (owning DP)	1	Alphanumeric	60	1	
Organisation Name (owning DP)	1	Alphanumeric	60	1	
UDPRN Key (owning DP)	1	Alphanumeric	8	1	(a)
Postcode Type (owning DP)	1	Alphanumeric	1	1	
SU Organisation Indicator (owning DP)	1	Alphanumeric	1	1	
Delivery Point Suffix (owning DP)	1	Alphanumeric	2	1	
Building Number (MR)	1	Alphanumeric	4	1	
Building Name (MR)	1	Alphanumeric	50	1	
Sub Building Name (MR)	1	Alphanumeric	30	1	
Department Name (MR)	1	Alphanumeric	60	1	
Organisation Name (MR)	1	Alphanumeric	60	1	
UMPRN (MR)	1	Numeric	8	1	(b)
SU Organisation Indicator (MR)	1	Alphanumeric	1	1	

* While the date and time fields are primarily numeric fields, they are formatted in the CSV files with forward slash and colon separators in the date format DD/MM/YYYY and time format HH:MM:SS

NOTES

(a) – UDPRN = Unique Delivery Point Reference Number
(b) – UMRRN = Unique Multiple Residence Reference Number

CSV Just Built™

In Simple Terms

CSV Just Built is a CSV product that provides the addresses and Postcodes of all newly built properties capable of receiving mail.

- Target new addresses straightaway
- Ideal if you're looking to acquire new customers
- New edition available every month of all properties that have just become active
- Create leaflet drops e.g. carpet retailers, conservatory supplies, satellite TV companies, etc.

CSV Just Built is supplied as a single file, this being:

Table 72: CSV Just Built file size

Product file names	Sample record size (January 13 data)	Sample file size (January 13 data)
CSV Just Built.csv	13,474	1,055,067

Product description

Records are collected quarterly from our postmen and women, so the number of records varies from month to month, depending on the number of properties reported built. The June 2009 file contained just under 30,000 records. Records are available from January 2009.

Chronologically, Not Yet Built™ is created before the Just Built™ data. The data is then added onto PAF® file.

Selectability/media

Available via:

CD-Rom
FTP

File details

The file is held in ascending Postcode sequence.

Miscellaneous

- All records end with CR LF
- All fields are of variable length and delimited with comma's
- Text is ASCII, no extended or Unicode characters are used
- No fields are quoted and no characters are escaped

- No header record is present

Further information

For pricing, licensing & ordering please visit www.poweredbypaf.com

Record definitions

CSV Just Built

RECORD NAME   :   Just Built Record
RECORD LENGTH   :   498 characters maximum (not fixed)

FIELD NAME	LEVEL	DATA TYPE	MAX SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	8	1	
Post Town	1	Alphanumeric	30	1	
Dependent Locality	1	Alphanumeric	35	1	
Double Dependent Locality	1	Alphanumeric	35	1	
Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Dependent Thoroughfare & Descriptor	1	Alphanumeric	80	1	
Building Number	1	Numeric	4	1	
Building Name	1	Alphanumeric	50	1	
SubBuilding Name	1	Alphanumeric	30	1	
PO Box	1	Alphanumeric	6	1	
Department Name	1	Alphanumeric	60	1	
Organisation Name	1	Alphanumeric	60	1	
UDPRN Key	1	Alphanumeric	8	1	
Postcode Type	1	Alphanumeric	1	1	
SU Organisation Indicator	1	Alphanumeric	1	1	
Delivery Point Suffix	1	Alphanumeric	2	1	
Date Made Live on PAF	1	Alphanumeric	8	1	(a)

NOTES

(a) – Date made live on PAF = YYYYMMDD

CSV Not Yet Built™

In Simple Terms

CSV Not Yet Built (NYB) is a CSV product, created to identify properties that are at the development stage.

- Accurate and up-to-date information on the address data of tomorrow
- Supplied as a completely new data set each month
- Valuable planning tool for many industries e.g. utility companies, credit referencing agencies, retail outlets, education authorities and estate agents
- Great for advanced leaflet drop planning e.g. carpet retailers, conservatory supplies, Satellite TV Companies, etc.
- UK coverage (excluding Jersey, Guernsey and the Isle of Man).

CSV Not Yet Built is supplied as a single file, this being:

Table 73: CSV Not Yet Built file size

Product file names	Sample record size (January 13 data)	Sample file size (January 13 data)
CSV Not Yet Built.csv	311,155	21,553,841

Product description

Information relating to new developments is received daily from a number of sources including Local Authorities, Building developers and Royal Mail staff. Our Address Development Centre in Sunderland reviews this information and allocates a Postcode accordingly. The address is then added to the Not Yet Built database – a separate file of Not Yet Built Delivery Points.

Once a property is built and capable of receiving mail, it appears on the Just Built™ database and on PAF.

Selectability/media

Available via:

CD-Rom
FTP

File details

The file is held in ascending Postcode sequence.

Miscellaneous

- All records end with CR LF
- All fields are of variable length and delimited with comma's
- Text is ASCII, no extended or Unicode characters are used
- No fields are quoted and no characters are escaped
- No header record is present

Further information

For pricing, licensing & ordering please visit www.poweredbypaf.com

Record definitions

CSV Not Yet Built

RECORD NAME   :   Not Yet Built Record
RECORD LENGTH   :   490 characters maximum (not fixed)

FIELD NAME	LEVEL	DATA TYPE	MAX SIZE	OCCURS
Postcode	1	Alphanumeric	8	1
Post Town	1	Alphanumeric	30	1
Dependent Locality	1	Alphanumeric	35	1
Double Dependent Locality	1	Alphanumeric	35	1
Thoroughfare & Descriptor	1	Alphanumeric	80	1
Dependent Thoroughfare & Descriptor	1	Alphanumeric	80	1
Building Number	1	Numeric	4	1
Building Name	1	Alphanumeric	50	1
SubBuilding Name	1	Alphanumeric	30	1
PO Box	1	Alphanumeric	6	1
Department Name	1	Alphanumeric	60	1
Organisation Name	1	Alphanumeric	60	1
UDPRN Key	1	Alphanumeric	8	1
Postcode Type	1	Alphanumeric	1	1
SU Organisation Indicator	1	Alphanumeric	1	1
Delivery Point Suffix	1	Alphanumeric	2	1

CSV PIF™

In Simple Terms

The CSV PIF™ file is used to help the barcoding of mail. Delivery point suffix (DPS) & checksum information is required to create barcodes on mail and PIF™ supplies these; useful if your database or PAF® product does not include it.

• Supplies Postcode, DPS information & the checksum digit for delivery points
• Used to barcode mail
• Full or Changes product available

CSV PIF is supplied as a series of files, these being:

Table 74: CSV PIF file sizes

Product file names	Sample record size (January 13 data)	Sample file size (January 13 data)
CSV PIF.csv	29,144,256	606,932,032
CSV PIF Changes.csv	56,254	2,922,473
Total CSV Alias = 609,854,505 Mb		

Product description

PIF™ contains information that is unique to a delivery point. It contains the Postcode and Delivery Point Suffix (DPS), two elements that are sufficient to define a live delivery point.

Delivery point details are provided either just as a Building Number or as a string containing the most significant 50 characters of the Delivery Point description (as held as display text within PAF®).

CSV PIF Changes are supplied in the same sequence and use the same amendment types as the CSV PAF Changes product (see CSV PAF® Changes chapter) but only contain one record type.

Further information and examples of PIF data can be found in the section on the Postcode Information File in the Programmers Guide.

Selectability/media

Available via:

CD-Rom
FTP

File details

In the CSV PIF file records are held in ascending Postcode sequence.

In CSV PIF Changes records are held in date/time order.

CSV PIF Changes valid amendment types are:

B   -   before view   }
C   -   after view   } amendment

D   -   deletion
I   -   insertion

Amendments are represented by a pair of records, these being a before and after view.
Insertions and deletions are represented by a single record.

When an amendment has been made due to a Postcode revision there will be a pair of amendment records. The 'before' image will contain the old Postcode, and the 'after' image will contain the new Postcode.

Miscellaneous

- All records end with CR LF
- All fields are of variable length and delimited with comma's
- Text is ASCII, no extended or Unicode characters are used
- No fields are quoted and no characters are escaped
- No header record is present

Further information

For pricing, licensing & ordering please visit www.poweredbypaf.com

Record definitions

CSV PIF

RECORD NAME   :   CSV PIF Record
RECORD LENGTH   :   61 characters maximum (not fixed)

FIELD NAME	LEVEL	DATA TYPE	MAX SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	8	1	
Delivery Point Suffix	1	Alphanumeric	2	1	
Check Digit	1	Alphanumeric	1	1	
Display Text / Building Number	1	Alphanumeric	50	1	(a)

CSV PIF Changes

RECORD NAME   :   CSV PIF Changes Record
RECORD LENGTH   :   80 characters maximum (not fixed)

FIELD NAME	LEVEL	DATA TYPE	MAX SIZE	OCCURS	NOTES
Date	1	Numeric *	10	1	
Time	1	Numeric *	8	1	
Amendment Type	1	Alphanumeric	1	1	
Postcode	1	Alphanumeric	8	1	
Delivery Point Suffix	1	Alphanumeric	2	1	
Check Digit	1	Alphanumeric	1	1	
Display Text / Building Number	1	Alphanumeric	50	1	(a)

* While the date and time fields are primarily numeric fields, they are formatted in the CSV files with forward slash and colon separators in the date format DD/MM/YYYY and time format HH:MM:SS

NOTES

(a) – At its most simple level, the information in the Display Text Field will contain only the house number information. However for those properties without a house number then the house name will appear. Where flats occur, the relevant flat information from PAF will appear. For Organisations on PAF, the Organisation will appear on PIF.

CSV BFPO

In Simple Terms

CSV BFPO is a CSV product which contains postcodes assigned by the British Forces Post Office to BFPO addresses. An option is given to extract any relevant product with BFPO data, however this file is provided for those who would rather process it separately in a similar format to CSV PAF®.

- Provide ease of integration of BFPO data into existing PAF® based solutions
- For use when separate processing of BFPO data is desirable.

CSV BFPO is supplied as a single file, this being:

Table 75: CSV BFPO size

Product file names	Sample record size (January 13 data)	Sample file size (January 13 data)
CSV BFPO.csv	664	31,856

Product description

British Forces Post Office (BFPO) specific postcodes use a "BF" postcode area to enable the same access to goods and services on the Internet to service personnel based overseas as they enjoy at home. This file contains a full list of active BFPO postcodes along with the BFPO number they are assigned too, in the same structure as the Postcode Address File, for incorporation into PAF based solutions.

When capturing BFPO addresses the following data will need to be entered by the user, after capturing the address from the postcode:

Number e.g. 987456321
Rank   e.g. Col
Name   e.g. John Brown
Sub Unit e.g. Unit 6
Unit   e.g. Welsh Guards

An example BFPO address would look as follows:

987456321 Col. John Brown
Unit 6, Welsh Guards
BFPO 15
BFPO
BF1 0AA

The data from BFPO 15 downwards is contained in the CSV BFPO file. Note that BFPO prefer the BFPO number to appear on the last line of the address if possible, but accept that restrictions of PAF based systems mean that the Postcode will often have to come last.

Selectability/media

Available via:

CD-Rom
FTP

File details

The file is held in ascending Postcode sequence.

Miscellaneous

- All records end with CR LF
- All fields are of variable length and delimited with comma's
- Text is ASCII, no extended or Unicode characters are used
- No fields are quoted and no characters are escaped
- A header record is provided for ease of use

Record definitions

CSV BFPO

RECORD NAME   :   Address Record
RECORD LENGTH   :   490 characters maximum (not fixed)

FIELD NAME	LEVEL	DATA TYPE	MAX SIZE	OCCURS	NOTES
Postcode	1	Alphanumeric	8	1	
Post Town	1	Alphanumeric	30	1	(a)
Dependent Locality	1	Alphanumeric	35	1	(b)
Double Dependent Locality	1	Alphanumeric	35	1	(b)
Thoroughfare & Descriptor	1	Alphanumeric	80	1	(c)
Dependent Thoroughfare & Descriptor	1	Alphanumeric	80	1	(b)
Building Number	1	Numeric	4	1	(b)
Building Name	1	Alphanumeric	50	1	(b)
Sub Building Name	1	Alphanumeric	30	1	(b)
PO Box	1	Alphanumeric	6	1	(b)
Department Name	1	Alphanumeric	60	1	(b)
Organisation Name	1	Alphanumeric	60	1	(b)
UDPRN	1	Numeric	8	1	(d)
Postcode Type	1	Alphanumeric	1	1	(e)

| SU Organisation Indicator | 1 | Alphanumeric | 1 | 1 | (b) |
| Delivery Point Suffix | 1 | Alphanumeric | 2 | 1 | (f) |

NOTES

(a) – The Post Town will always be "BFPO" for BFPO records.

(b) –These fields are not used for BFPO records so will always be blank. They are included for consistency with PAF records.

(c) –The thoroughfare field will hold the BFPO number prefixed by BFPO, e.g. "BFPO 15"

(d) – The UDPRN is a pseudo (but non-overlapping) value assigned to each BFPO record for those systems that require it.

(e) – The Postcode Type field will always be set to 'L' for Large User for BFPO records

(f) – The Delivery Point Suffix will always be '1A'. This value is provided for compatibility with PAF systems requiring it, it should not be used in barcode production etc. which is not applicable for BFPO addresses.

CSV Postzon™

In Simple Terms

Postzon data contains the grid references, local authority Ward Codes and National Health Service (NHS) Area codes for most UK Postcodes (Isle of Man, Guernsey and Jersey addresses are not recognised by Ordnance Survey). CSV Postzon provides this data in comma delimited text format.

- Links postal characteristics to UK geography
- Provides Ward codes, grid references (100m) and NHS Area Codes
- Grid references supplied at 100m accuracy
- Supplied as full files only (no changes files)

CSV Postzon is supplied as a single file, this being:

Table 76: CSV Postzon file size

Product file names	Sample record size (January 13 data)	Sample file size (January 13 data)
CSV Postzon.csv	1,745,680	183,928,852

Product description

Five organisations – the Office for National Statistics (ONS), Ordnance Survey (OS), Land & Property Services (Ordnance Survey of Northern Ireland), the General Register Office for Scotland (GROS) and Royal Mail – have developed a co-ordinated production process to provide a core set of Postcode location data. This is called the Gridlink® core dataset. Postzon is the Royal Mail product derived from Gridlink®, which links postal characteristics to UK geography.

CSV Postzon file holds grid reference data to 100m.

Selectability/media

Available via:

CD-Rom
FTP

File details

The file is held in ascending Postcode sequence. There is one record per postcode.

Miscellaneous

- All records end with CR LF
- All fields are of variable length and delimited with comma's
- Text is ASCII, no extended or Unicode characters are used
- All fields are contained within double quotes (")

- No characters are escaped
- No header record is present

Further information

For pricing, licensing & ordering please visit www.poweredbypaf.com

Record definitions

CSV Postzon

RECORD NAME   :   Postzon Record
RECORD LENGTH   :   81 characters maximum (not fixed)

FIELD NAME	DATA ORIGIN *	LEVEL	DATA TYPE	MAX SIZE	OCCURS	NOTES
Postcode	RM	1	Alphanumeric	8	1	
Introduction Date	RM	1	Numeric	6	1	(a)
Grid Reference East	OS/LPS	1	Numeric	5	1	(b)
Grid Reference North	OS/LPS	1	Numeric	5	1	(b)
AreacodeCounty	ONS/GROS	1	Alphanumeric	9	1	(c)
Areacode District	ONS/GROS	1	Alphanumeric	9	1	(c)
Ward Code	ONS/GROS	1	Alphanumeric	9	1	(c)
User Type	RM	1	Alphanumeric	1	1	(d)
Grid Status	ALL	1	Numeric	1	1	(e)
Country	ONS/GROS	1	Alphanumeric	9	1	(c)
Ward Status	ONS/GROS	1	Numeric	1	1	(f)
NHS Code	ONS/GROS	1	Alphanumeric	9	1	(c)
NHS Region	ONS/GROS	1	Alphanumeric	9	1	(c)

* The list below is the key to the initials in 'DATA ORIGIN' column

Gridlink® data partners

GROS   General Register for Scotland (www.gro-scotland.gov.uk)
LPS   Land & Property Services, formerly Ordnance Survey of Northern Ireland
www.lpsni.gov.uk
ONS   Office for National Statistics (www.statistics.gov.uk)
OS   Ordnance Survey (www.ordnancesurvey.co.uk)
RM   Royal Mail (www.royalmail.com)

NOTES

(a) – Introduction date. Format = YYYYMM (date of the most recent introduction onto PAF®).
(b) – Grid references are a 10-digit East and North relating to the location of the Postcode to the National Grid, or the Irish Grid for Postcode Area 'BT' for a resolution of 100m.

How Postzon relates to the National Grid

For the majority of northern grid references where 6 characters would be required to hold the Northing numeric value, a conversion of the first two numerics into a single letter takes place, to allow the Northing to be held in a 5-character field.

The letters used are: **P, U, Z, O, T, Y** and are used as follows:

Table 77: How Postzon relates to the National Grid

Northing letter on PAF	If Easting value begins with	then Northing value begins with
P	4	12
U	4	11
Z	4	10
O	3	12
T	3	11
Y	3	10

Grid references and Northern Ireland

The grid references for Northern Ireland (BT) Postcode area reflect the Irish Grid system.

The Irish Grid does not conform to the National Grid used for England, Scotland and Wales, both are planar co-ordinate systems but differ in their origin. Consequently the values that are present on Postzon overlap with the other areas of the UK. Belfast, for example, has the same co-ordinates as parts of Cheshire and Merseyside.

To convert Irish to National the grid references must be converted to longitude and latitude, and then a complex algorithm is applied to calculate the National grid reference. An approximate conversion of Northern Irish grid references to the same origin as the rest of the UK may be obtained by adding 13000 to the Northing and subtracting 17000 from the Easting of the NI references. This should not be regarded as an exact conversion.

For further information visit Land and Property Services website: www.lpsni.gov.uk

 (c) – Country, County, District, Ward, NHS Region and NHS Code . This data is provided to Royal Mail as part of the Gridlink® data interchange process. The make-up, composition and accuracy of this data are the responsibility of the appropriate Gridlink® data partner(s) listed page 178. Any queries arising from this data should therefore be routed accordingly.

(d) – User Type. User Type indicates whether the Postcode relates to a large or Small User.

0 =   Small User
1 =   Large User

(e) – Grid Status A positional quality indicator to show the status of the grid reference and the method that was used to allocate the reference.

Table 78: Grid status

Grid Status	Reference allocation
0	Status not supplied by OS
1	Within the building of the matched address closest to the Postcode mean.
2	Co-ordinates allocated by GROS during Postcode boundary creation to the building nearest the centre of the populated part of the Postcode (Scotland only)
3	Approximate to within 50m of true position
4	Postcode unit mean (direct copy from ADDRESS-POINT (GB) and COMPAS (NI) – mean of matched addresses with the same Postcode)
5	Postcode imputed by ONS to 1 metre resolution
6	Postcode sector mean – mainly PO Boxes
9	No co-ordinates available

(f)   – Ward Status – Prior to the introduction of Gridlink® CSV Postzon was supplied with an indicator to show the status of the Area Code and the method that was used to allocate the code. However the Gridlink® data set has just the one positional quality indicator (see Grid Status above). To avoid changing the structure of the CSV Postzon file this field remains. The data content however will be a replica of that in the Grid Status field.
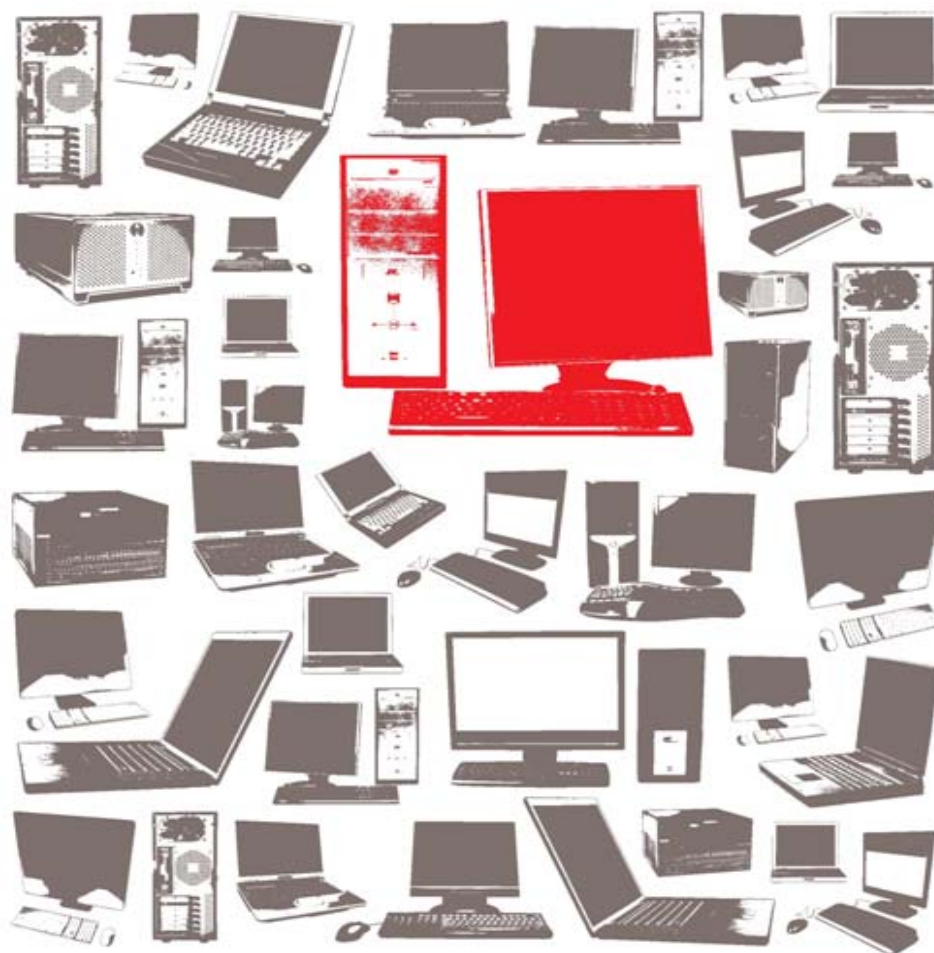
Section 6
Appendices

a) ASCII character tables & punctuation in PAF

b) PAF Address Key rules

c) Cross-border Postcodes

d) Media options

e) List of tables

Contact us

Appendix a)
ASCII character tables & punctuation in PAF

Table 79: ASCII character set conversion

The data provided is in ASCII format. The format of ASCII used is Standard (US) ASCII. The table below shows the ASCII Character to Decimal Value Conversion

Character	Decimal Value	Character	Decimal Value	Character	Decimal Value	Character	Decimal Value
NUL	0	)	41	R	82	{	123
SOH	1	*	42	S	83	¦	124
STX	2	+	43	T	84	}	125
ETX	3	,	44	U	85	~	126
EOT	4	–	45	V	86	DEL	127
ENQ	5	.	46	W	87		128
ACK	6	/	47	X	88		129
BEL	7	0	48	Y	89		130
BS	8	1	49	Z	90		131
HT	9	2	50	[	91		132
LF	10	3	51	\	92		133
VT	11	4	52	]	93		134
FF	12	5	53	^	94		135
CR	13	6	54	_	95		136
SO	14	7	55	`	96		137
SI	15	8	56	a	97		138
DLE	16	9	57	b	98		139
DC1	17	:	58	c	99		140
DC2	18	;	59	d	100		141
DC3	19	<	60	e	101		142
DC4	20	=	61	f	102		143
NAK	21	>	62	g	103		144
SYN	22	?	63	h	104		145
ETB	23	@	64	i	105		146
CAN	24	A	65	j	106		147
EM	25	B	66	k	107		148
SUB	26	C	67	l	108		149
ESC	27	D	68	m	109		150
FS	28	E	69	n	110		151
GS	29	F	70	o	111		152
RS	30	G	71	p	112		153
US	31	H	72	q	113		154
SP	32	I	73	r	114		155
!	33	J	74	s	115		156
'	34	K	75	t	116		157
#	35	L	76	u	117		158
$	36	M	77	v	118		159
%	37	N	78	w	119		160
&	38	O	79	x	120		161
'	39	P	80	y	121	¢	162
(	40	Q	81	z	122	£	163

Table 80: PAF allowable characters

Here's a list of standard ASCII characters found in PAF data. Some characters aren't allowed in some PAF fields for operational, data extract or manipulation reasons.

Char	Decimal value	Description	Allowed in these PAF fields
A-Z		Alpha characters – Upper & Lower Case	ALL – Allowed as part of a text string or as single characters.
&	38	Ampersand	ALL – Allowed in any position in the Organisation, Department and DP Alias Fields. But restricted to certain positions in Sub Building & Building Name fields to replace the word 'AND'.
'	39	Apostrophe	ALL – Can only be used between alpha characters to define names such as O'Neill or plurals such as James's.
*	42	Asterisk	ORGANISATION, DEPARTMENT, DP ALIAS FIELDS ONLY – not allowed at the end of entries as this may cause problems with wildcard searches of data.
( )	40, 41	Brackets	ALL – Must always be a pair and must be preceded / followed by a space.
,	44	Comma	NONE – can be misread in data extract and CSV files and so is not allowed.
.	46	Full Stop	ALL – The use of the full stop is restricted in Sub Building, Building Name and DP Alias fields. Can only be used to abbreviate Saint to St. and should always by followed by a space. It can also have limited use in the Organisation field.
#	35	Hash	ORGANISATION FIELD ONLY.
-	45	Hyphen	ALL – The use of the hyphen is restricted in Sub Building & Building Name fields. Also must be part of a building number range or a double barrelled name and must not be preceded / followed by spaces.
0-9		Numerics	ALL – Allowed as part of a text string or as single characters. Although a single zero is allowed in either the Building Name OR Sub Building Name fields, it is not allowed in both simultaneously.
' '	34, 39	Quotation marks – single	NONE – can be misread in data extract and CSV files and so is not allowed (except for apostrophe entries)
" "	34, 39	Quotation marks – double	NONE – can be misread in data extract and CSV files and so is not allowed.
		All Other standard ASCII Characters	ORGANISATION, DP ALIAS FIELDS ONLY – All other characters are allowed to form a company name in the Organisation Name field or the DP Alias field only.

Appendix b)
PAF® Address Key rules

The PAF Address Key consists of three elements called the Address key, the Organisation key and the Postcode Type.

These rules are referred to in the Keychain chapter.

Rule 1
A Small User Delivery Point without an Organisation is known as a Small User Residential Delivery Point and has an Address key with a non-zero value and an Organisation key with a zero value.

Rule 2
A Small User Delivery Point with an Organisation is known as a Small User Organisational Delivery Point and has both an Address key and an Organisation key with a non-zero value.

Rule 3
A Large User Delivery Point has an Address key with a non-zero value and an Organisation key with a zero value.

Since a Large User Delivery Point is the only Delivery Point on the Postcode, the Address key is in fact populated with the Postcode key. For this reason, it is possible to have a Small User Residential Delivery Point and a Large User Delivery Point with the same Address key and an Organisation key, and so the Postcode Type has to be used to differentiate, giving the full PAF Address Key of an Address key, an Organisation key and the Postcode Type.

For Small User Delivery Points the Address key uniquely describes the Premises, that is to say, the combination of Locality, Thoroughfares, Sub-Building Name, Building Name and Building Number.

Small User Residential Delivery Points have no Organisation (or Department) and thus consist only of the Premises, which is why they only need an Address key.

Small User Organisational Delivery Points have an Organisation in addition to the Premises, and there can be more than one Organisation at the same Premises. So an Address key alone is insufficient to uniquely describe the Delivery Point and must be supplemented by an Organisation key.

Rule 4
For a given Small User Postcode all Small User Organisational Delivery Points at the same Premises must have the same Address key. Obviously, they will have different Organisation keys.

Appendix c) Cross-border Postcodes

Introduction

These tables show the cross-border Postcodes in Wales and Scotland.

Table 81: Postcode sectors in Wales

English	Cross border	Welsh
CH1 1,2,3,4,5,9	CHESTER – CH1 6	CH5 1,2,3,4,9
CH2 – CH3	CHESTER – CH4 8 & 9	CH6 5,6,9
CH4 0,7	CHESTER – CH7 9	CH7 2,3,4,5,6
CH7 1		CH8 7,8,9
CH25 – CH49		
CH60 – CH66		
CH88		
CH99		
	WREXHAM – LL12 0	LL11
	WREXHAM – LL13 9	LL12 7,8,9
	WREXHAM – LL14 5	LL13 0,7,8
		LL14 1,2,3,4,6
		LL15 – LL49
		LL51 – LL78
SY1 – SY4	SHREWSBURY – SY5 0 & 9	SY10 0,8
SY5 6,7,8	BUCKNELL – SY7 8	SY16 3,4
SY6	BISHOPS CASTLE – SY9 5	SY17 5
SY7 0,9	OSWESTRY – SY10 7 & 9	SY18 6
SY8	WHITCHURCH – SY13 2 & 3	SY19 7
SY11 – SY12	MALPAS – SY14 7	SY20 8,9
SY13 1,4	MONTGOMERY – SY15 6	SY21 0,7,9
SY14 8	WELSHPOOL – SY21 8	SY22 5
SY16 1,2	LLANSANTFFRAID – SY22 6	SY23 3,4,5

cont.

Postode sectors in Wales cont.		
English	**Cross border**	**Welsh**
SY23 1,2		SY24 5
		SY25 6
	KNIGHTON – LD7 1 & 9	LD1 – LD6
	PRESTEIGNE – LD8 2	
GL1 – GL15	COLEFORD – GL16 8 & 9	
GL16 7		
GL17 – GL20		
GL50 – GL56		
	ABERGAVENNY – NP7 8	NP4
	CHEPSTOW – NP16 7 & 9	NP7 0,5,6,7,9
	MONMOUTH – NP25 3, 4, 5 & 9	NP8
		NP10 – NP15
		NP16 5 & 6
		NP18 – NP20
		NP22 – NP26
		NP44
HR1 – HR2	HEREFORD – HR3 5 & 6	
HR4	KINGTON – HR5 3	
HR6 – HR9		

Table 82: English/Scottish border Postcodes

Postode sectors		
English	**Cross border**	**Scottish**
	HAWICK TD9 0	TD1 – TD8
TD15 2	COLDSTREAM TD12 4	TD10 – TD11
	BERWICK-UPON-TWEED TD15 1	TD13 – TD14

Appendix d) Media options

Introduction

This chapter lists the file contents of our combined products.

Raw data products are currently available on CD-Rom or downloadable via FTP.

CD-Rom data – technical descriptions

- **ASCII only**
- **Capacity 560Mb**
- **Recorded using the ISO 9660 JOLIET file system format**

For CD-Rom all data files (like Mainfile Address and Changes files) are provided as a number of 560Mb logical files, one on each CD-Rom. Reference files are provided as one continuous file.

CD-Rom data – product portfolio

The products supplied on CD-Rom are as follows:

- **Alias**
- **Compressed Standard File**
- **Expanded Single Changes File**
- **Justbuilt**
- **Mainfile**
- **Not Yet Built**
- **Ranges File**
- **PAF Changes1 & 2**
- **PAF Single Changes**
- **PAF Expanded Changes**
- **PIF**
- **Postzon**
- **UDPRN**
- **UDPRN Changes**

A PAF **raw data product** can consist of one or multiple files. Viewing the contents of each CD-Rom will display the directory name (e.g. CPRANGES.CO1) in which you will find the relevant files

The **directory name** suffix is the sequence number of the CD-Rom in the set (e.g. CPMAINFL.CO2 is the second CD-Rom of the complete set).

The **file names** (e.g. fpchngs2.CO1) are the individual files which make up a combined product. The suffix is the same as the directory name. Each file on the CD-Rom is continuous.

The **format** of the CD-Rom files is ASCII text. This means that all ASCII O (NULL) characters and ASCII 255 (High Values) have been changed to ASCII 32 (Spaces). This will only affect you if you sort the data after it has been loaded, as the header and footer records don't start with null and high values and therefore won't be sorted to the start and the end. The ASCII Character Tables are listed in Appendix 1.

The **file extension** of '.CO1', 'CO2' etc is the packing software tool used to reduce the size of the files. You may find you need an 'unpacking' program to access the data. There are many available, e.g. WinZip, gzip, WinAce etc.

Here are the contents of the product files individually in table form:

Table 83: Mainfile product files

CD-Rom No	Directory name	File name	Contents
1	CPMAINFL.CO1	bname.CO1	Building reference file
		fpmainfl.CO2	Address file
		fpmainfl.CO3	Address file
		fpmainfl.CO4	Address file
		fpmainfl.CO5	Address file
		fpmainfl.CO6	Address file
		Local.CO1	Locality reference file
		Mailsort.CO1	Business Mail reference file
		org.CO1	Organisation name reference file
		subbname.CO1	Sub Building Name reference file
		thdesc.CO1	Thoroughfare Descriptor reference file
		Thfare.CO1	Thoroughfare reference file
		wfmainfl.CO6	Welsh address file

Table 84: Alias product file

CD-Rom No	Directory name	File name	Contents
1	ALIASFLE.CO1	Aliasfle.CO1	Alias file

Table 85: PAF Changes product files

CD-Rom No	Directory name	File name	Contents
1	CPCHANGE.C01	changes1.C01	Changes and single changes reference file (Changes1)
		Fpchngs2.C01	Changes2 files
		fpchgsng.C01	Single Changes File
		fpxchnge.C01	Expanded Changes File
		fpxchsng.C01	Single expanded Changes File
		keychain.C01	Keychain
		wchanges.C01	Welsh Changes File

Table 86: Compressed Standard product files – CD-Rom1

CD-Rom No	Directory name	File name	Contents
1	CPCOMPST.C01	fpcompst.C01	Compressed standard file
		fpcompst.C02	Compressed standard file
		fpcompst.C03	Compressed standard file
		fpcompst.C04	Compressed standard file
		fpcompst.C05	Compressed standard file
		fpcompst.C06	Compressed standard file
		fpcompst.C07	Compressed standard file
		fpcompst.C08	Compressed standard file
		fpcompst.C09	Compressed standard file

Table 87: Compressed Standard product files – CD-Rom2

CD-Rom No	Directory name	File name	Contents
2	CPCOMPST.C02	fpcompst.C10	Compressed standard file
		fpcompst.C11	Compressed standard file
		fpcompst.C12	Compressed standard file
		fpcompst.C13	Compressed standard file
		fpcompst.C14	Compressed standard file
		wfcompst.C15	Welsh Compressed Standard File
		wfcompst.C15	Welsh Compressed Standard File

Table 88: Ranges product files

CD-Rom No	Directory name	File name	Contents
1	CPRANGES.C01	fpranges.C01	Ranges file
		fpranges.C02	Ranges file
		fpranges.C03	Ranges file
		fpranges.C04	Ranges file
		fpranges.C05	Ranges file
		fpranges.C06	Ranges file
		fpranges.C07	Ranges file
		fpranges.C08	Ranges file
		wfranges.C08	Welsh ranges file

Table 89: PIF product files

CD-Rom No	Directory name	File name	Contents
1	CPPIF.C01	postinfo.C01	PIF file
		postinfo.C02	PIF file
		postinfo.C03	PIF file
		Pifchngs.C03	PIF Changes File

Table 90: Unique Delivery Point Reference Number (UDPRN) FULL product files

CD-Rom No	Directory name	File name	Contents
1	UDPRNFUL.C01	udprnful.C01	Full UDPRN
		udprnful.C02	Full UDPRN
		udprnful.C03	Full UDPRN

Table 91: Unique Delivery Point Reference Number (UDPRN) SINGLE CHANGES product file

CD-Rom No	Directory name	File name	Contents
1	UDPRNSCG.C01	udprnscg.C01	UDPRN Single Changes

Table 92: Unique Delivery Point Reference Number (UDPRN) CHANGES product files

CD-Rom	Directory name	File name	Contents
1	UDPRNCGE.C01	udprncge.C01	UDPRN Changes

Table 93: Unique Delivery Point Reference Number (UDPRN) EXPANDED product files

CD-Rom No	Directory name	File name	Contents
1	FPUDPRNE.C01	fpudprne.C01	FP UDPRN
		fpudprne.C02	FP UDPRN
		fpudprne.C03	FP UDPRN
		fpudprne.C04	FP UDPRN
		fpudprne.C05	FP UDPRN
		fpudprne.C06	FP UDPRN
		fpudprne.C07	FP UDPRN
		fpudprne.C08	FP UDPRN
		fpudprne.C09	FP UDPRN
2	FPUDPRNE.C02	fpudprne.C10	FP UDPRN
		fpudprne.C11	FP UDPRN
		fpudprne.C12	FP UDPRN
		fpudprne.C13	FP UDPRN
		fpudprne.C14	FP UDPRN
		fpudprne.C15	FP UDPRN
		fpudprne.C16	FP UDPRN
		fpudprne.C17	FP UDPRN
		fpudprne.C18	FP UDPRN
3	FPUDPRNE.C03	fpudprne.C19	FP UDPRN
		fpudprne.C20	FP UDPRN
		fpudprne.C21	FP UDPRN
		fpudprne.C22	FP UDPRN
		fpudprne.C23	FP UDPRN
		fpudprne.C24	FP UDPRN
		fpudprne.C25	FP UDPRN
		fpudprne.C26	FP UDPRN
		fpudprne.C27	FP UDPRN

Table 94: Not Yet Built product files

CD-Rom No	Directory name	File name	Contents
1	FPNYBILT.C01	fpnybilt.C01	Not Yet Built File
1	NYBRANGE.C01	nybrange.C01	Not Yet Built ranges
1	FPNYBEXP.C01	Fpnybexp.C01	Not Yet Built Expanded

Table 95: Just Built product files

CD-Rom No	Directory name	File name	Contents
1	JSTBUILT.C01	jstbuilt.C01	Just Built File
1	FPJBILTE.C01	fpjbilte.C01	Just Built Expanded File
1	JBRANGES.C01	Jbranges.C01	Just built ranges

Table 96: Multiple Residence product files

CD-Rom No	Directory name	File name	Contents
1	FPMULRES.C01	fpmulres.C01	Multiple Residence
1	MRSCHGES.C01	mrschges.C01	Multiple Residence Changes

Table 97: Postzon product file

CD-Rom No	Directory name	File name	Contents
1	PZONE100.C01	pzone100.C01	Postzon 100m File

Full or selectable

A product can be ordered either as a 'Full 'or 'Selectable' product. Not all products are selectable.

Full = all Postcodes areas
Selectable = one or more Postcode areas

Full products are only supplied in the 'combined' format and selectable products are supplied as 'individual' products. Selectable products are only available monthly.

These products are not selectable and must be bought with a full PAF product
- Alias
- Keychain
- All the Welsh products, i.e. Welsh Mainfile, Welsh Compressed Standard, Welsh Ranges, and Welsh Changes

PAF products via internet download

The sizes of some of our PAF products are too large to offer an efficient and secure method of delivery via the Internet. We are currently looking at offering electronic delivery methods as an alternative to the current platform.

The products available via the internet at the time of going to press are, in alphabetical order:

- **Alias File**
- **Changes**
- **Single Changes**
- **Welsh Changes**
- **Keychain**
- **Expanded Changes**
- **Expanded Single Changes**
- **PIF Changes**
- **Postzon**

If you are interested in switching from CD-Rom to internet download please contact us on 0845 606 6854 (option 3) or email address.management@royalmail.com.

Appendix e)
Index of tables

Contact us for information

Contact the Address Management Unit (AMU) if you want more information about any of the Postcode products in this guide.

Phone	08456 066 854 (option 3), 8.30am – 5pm Monday to Friday
Fax	02392 835 247
Email	address.management@royalmail.com
Address	Customer Support Team, Address Management Unit, Royal Mail, Fourth Floor, Slindon Street, PORTSMOUTH, PO1 1AF

Your comments on this guide

If you have any comments on the Programmers' Guide Edition 7 we'd be pleased to hear from you. Email feedback to address.management@royalmail.com and type 'Programmers' Guide comment' in the subject line.

Data Protection Act 1998

The Royal Mail Postcode Address File (PAF) per se does constitute processed personal data as defined in the Data Protection Act 1998, and is appropriately 'Notified' with the Office of the Data Protection Commissioner. If a company or other organisation purchases a copy of PAF and uses, alters or enhances it so that the details of an individual can be located, it is the responsibility of the company or organisation to register appropriately with the Office of the Data Protection Commissioner.

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