PAF & Grids Data Specification

Introduction

All text on PAF products is held in upper case.

A delivery point is composed of a combination of the following elements. 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 and therefore is not supplied.

Field Description

Field Name	Type	Width
UDPRN	Number	Integer
Organisation Name	Text	60
Department Name	Text	60
PO Box	Text	255
Building Name	Text	50
Sub_Building Name	Text	30
Building Number	Number	Integer
Thoroughfare	Text	255
Street	Text	255
Double Dependent Locality	Text	35
Dependent Locality	Text	35
Post Town	Text	30
Postcode	Text	8
Postcode Type	Text	1
DPS	Text	2
SU Organisation Flag	Text	1
X Co-ordinate OSGB Grid Ref	Text	6
Y Co-ordinate OSGB Grid Ref	Text	6
Longitude WGS84 projection	Text	8
Latitude WGS84 projection	Text	9

Notes

UDPRN

The Unique Delivery Point Reference Number (UDPRN) is an 8-character code that can be used instead of the current address keys on PAF®.

In summary:

1. Simple, unique reference number for each Delivery Point
2. Far less likely to be reused than the existing PAF Keys
3. 8-character numeric code
4. A new UDPRN is automatically assigned to each new Delivery Point added to PAF

Address Details

An address is composed of the following address elements.

Premise Elements

- Sub Building Name
- Building Name
- Building Number

Thoroughfare Elements

- Thoroughfare (name and descriptor)
- Street (name and descriptor)

Locality Elements

- Double Dependent Locality
- Dependent locality
- Post Town
- Postcode

Premise Elements

A combination of these elements may be present. A Sub Building Name cannot be present on its own. There will always be Building Name or Building Number data present when a Sub Building is present.

If the address relates to an Organisation Name then it is possible that none of the premise elements will be present.

If the address relates to a PO Box then it is possible that none of the premise elements will be present.

Building Number

When blank this indicates that a building number is not required for this address.

Thoroughfare Elements

There may be no Thoroughfare information present for an address. This usually occurs in rural areas when the Locality information identifies the location of an address.

Thoroughfare cannot be present on it's own, there will always be Street data present when a Thoroughfare is present.

Locality Elements

A Locality is a geographic area. Currently PAF holds details of approximately 30,000 Localities in the UK.

A Locality consists of a Post Town, with Dependent Locality and Double Dependent Locality further defining the geographic area where required. The Post Town will always be present – all Localities

have a Post Town. For some Localities this will be the only element present. A Double Dependent Locality can only be present where a Dependent Locality is present.

Postcode

Formerly a Postcode could contain between 1 and over 300 addresses. This is now restricted to a maximum of 100 although the average number of addresses per Postcode is 15.

There can be only one Locality per Postcode – all addresses in a Postcode have the same Locality.

Formerly a Postcode could cover addresses on up to 12 Thoroughfares (streets). This is now restricted to 1 although some existing Postcodes may contain more.

Postcode Type

Postcode Type is 'S' for small users and 'L' for large users.

PO Box Number

PO Box numbers are only allocated to Large Users.

DPS

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.

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.

SU 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.

Grid References

The majority of grid references are derived from the Ordnance Survey product OS MasterMap, that contains grid references for each address. Newly introduced postcodes initially have a grid reference that has been imputed by ONS Geography. In due course these are replaced by improved OS MasterMap grid references which use data supplied by Ordnance Survey's field surveyors.

The grid references provided for Northern Ireland postcodes are derived from the LPS 'Pointer ' product and use the Irish National Grid system that covers all of Ireland and is independent of the British National Grid. These are then converted to the British National Grid system to ensure consistency across all Postcode records in the file.

Latitude/ Longitude

The degrees latitude and longitude are calculated from the 1 metre grid reference by converting the easting and northing to numeric and then one point shapefile is created for GB using the 'BritishNatGrid' coordinate system and another for Northern Ireland using 'Ireland 1965.ING'.

These files are then projected to GCS_WGS_1984, using an OSGB_1936_to_WGS_1984_Petroleum transformation for GB and a TM75_to_WGS_1984_2 transformation for NI. Latitude and longitude are then calculated from the resulting x and y co-ordinates.

No geographic coordinates are provided for postcodes in the Channel Islands and the Isle of Man.