



# **Scottish Address Directory (SAD)**

**Technical specification**

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## 1. Background

NRS Geography create a new quarterly Scottish Address Directory (SAD) containing address information, classification of type and three unique identifiers, the Royal Mail Unique Delivery Point Reference Number (UDPRN), the One Scotland Gazetteer (OSG) Unique Property Reference Number (UPRN) and the OSG Unique Street Reference Number (USRN).

By comparing the contents of the previous version of the Ordnance Survey (OS) AddressBase product against the latest version, an updated address list is created. Additional information is then added from a suite of Geography addressing products to create the newest version of the SAD. This is done using the unique reference numbers which also allow the SAD to be linked to a number of other datasets which hold these identifiers.

## 2. Contents of the Scottish Address Directory

The directory is in the format of a database held in SQL Server and holds 4 tables, which will be converted to text or SAS files as per user requirements:-

1. Address
2. AlternativeAddress
3. HistoricalAddress
4. MIS

### 1. Address

This is the main Scottish Address Directory table which contains current and provisional addresses.

Field Name	Index	Data Type	Size	Nullable	Accepted Format	Data Source	Description
PostcodePostal		VarChar	8	N	G4 9QT or G78 1WD or AB12 7FY	AddressBase Table 21 Postcode_Locator field	A valid postcode in the format prescribed by the Royal Mail. Comprised of, for example Area EH District 10 Sector 4 Unit SU  If UDPRN present this field should be populated from Royal Mail PAF Postcode field
Postcode		VarChar	9	N	G4 9QTA or AB12 7FY	AddressBase Table 21 Postcode_Locator field / Scottish Postcode Directory	A valid postcode in the format prescribed by the Royal Mail and if the address falls within a postcode split across council areas, island to island, island to mainland or Scotland/England border, this gives the split postcode it lies in.
SUPostcode		VarChar	9	Y	G4 9QT or G78 1WD or AB12 7FY	Scottish Postcode Directory	If postcode is a large user this is its linked small user postcode
PostcodeTypeAB		Char	1	N	D, N, C or L	AddressBase Table 21 Postal_Address field	Indicates if it is a matched record which receives post (D), a child record (C), a local authority assigned postcode (L) or a postcode which may not receive post (N).
PostcodeTypePAF		Char	1	Y	L or S	Royal Mail PAF Postcode Type field	Indicates if it is a small user or large user postcode

Field Name	Index	Data Type	Size	Nullable	Accepted Format	Data Source	Description
POBoxIndicator		Char	1	Y	Y or null	AddressBase Table 32 Classification_Code field	Indicates if the address is a PO Box
SplitPostcodeIndicator		Char	1	N	Y or N	Geography SplitPostcode database	Indicates if the postcode is split across council areas, Scotland/England border or by water (island to island, island to mainland).
Organisation		VarChar	100	Y		AddressBase Table 31 Organisation field	Name of occupying organisation. If UDPRN present this field should be populated from Royal Mail PAF OrganisationName field
Department		VarChar	60	Y		Royal Mail PAF Department field	Name of the subdivision of an organisation for delivery purposes
Property		VarChar	192	Y		AddressBase Table 24 all SAO fields + PAO_Text field	Name of the sub-building (e.g. flat) If UDPRN present this field should be populated from Royal Mail PAF Sub Building and Building fields
BuildingNumber		VarChar	12	Y		AddressBase Table 24 PAO numbers + suffix fields	Number of building. If UDPRN present this field should be populated from Royal Mail Number field
Street		VarChar	160	Y		AddressBase Table 15 Street_Description field	Name of street the address is in. If UDPRN present this field should be populated from Royal Mail PAF DependentThoroughfare and Thoroughfare fields
Locality		VarChar	70	Y		AddressBase Table 15 Locality_Name field	Name of locality the address is in. If UDPRN present this field should be populated from Royal Mail PAF DoubleDependentLocality and DependentLocality fields
Town		VarChar	30	N		AddressBase Table 15 Town_Name field	Name of town the address is in. If UDPRN present this field should be populated from Royal Mail PAF Town field
MultiOccupancyCount		Integer	4	N	0 to 1000	AddressBase Table 21 Multi_OCC_COUNT field	Count of all child UPRN's for the record
UPRN	P	VarChar	12	N	Uses only numbers 0 to 9	AddressBase Table 24 UPRN field	Unique Property Reference Number.

Field Name	Index	Data Type	Size	Nullable	Accepted Format	Data Source	Description
ParentUPRN		VarChar	12	Y	Uses only numbers 0 to 9	AddressBase Table 21 PARENT_UPRN field	Unique reference number of the parent record for the address (i.e. the building shell for flats)
UDPRN		Char	8	Y	Contains leading 0's. Uses only numbers 0 to 9	AddressBase Table 28 RM_UDPRN field	Unique Delivery Point Reference.
USRN		VarChar	8	N	Uses only numbers 0 to 9	AddressBase Table 24 USRN field	Unique Street Reference Number.
CouncilAreaCode		VarChar	9	N	S12000005 to S12000050	Scottish Postcode Directory CouncilArea2019Code	The 9 digit council area code the address falls into
LocalCustodianCode		VarChar	4	N	9000 to 9079	AddressBase Table 21 Local_Custodian_Code field	The code used by local authorities to indicate who has ownership for the address
CountOfEntrances		Integer	3	N	1 to 999	AddressBase Table 24 UPRN to USRN count	Number of possible entrances, by street, for an address
CountOfAlternativeAddress		Integer	3	Y	2 to 999	AddressBase Table 24 UPRN count	Number of possible variations for the address record (e.g. Flat 1 or Flat A) where greater than 1
ClassificationAB		VarChar	6	Y		AddressBase Table 32 CLASSIFICATION_CODE	The classification of the address as sourced from the Local Land and Property Gazetteers and from OS (for full list of classifications see, <a href="https://www.ordnancesurvey.co.uk/business-and-government/help-and-support/products/addressbase-premium.html">https://www.ordnancesurvey.co.uk/business-and-government/help-and-support/products/addressbase-premium.html</a> )
CEIndicator		Char	1	N	Y or N	NRS communal establishment register	Indicates if the address is deemed to be a CE by Geography.
GridRefEasting		VarChar	6	Y		AddressBase Table 21 X_Coordinate field	Grid Reference Easting Position.
GridRefNorthing		VarChar	7	Y		AddressBase Table 21 Y_Coordinate field	Grid Reference Northing Position.

Field Name	Index	Data Type	Size	Nullable	Accepted Format	Data Source	Description
RPC		Integer	1	N	1, 2, 3, 4, 5, 9	AddressBase Table 21 RPC field	Indicates the accuracy value of the coordinates allocated to the address (according to OS)
Latitude		Double		N		AddressBase Table 21 Latitude field	Address co-ordinates in degrees latitude
Longitude		Double		N		AddressBase Table 21 Longitude field	Address co-ordinates in degrees longitude
DateOfIntroduction		Date		Y		Geography	Date the record was added to the directory
CrossReference		Char		Y		AddressBase Table 23 Cross_Reference Field	Primary key of corresponding record in an external dataset (e.g. MasterMap AL2 TOID)
DateLastChanged		Date		Y		AddressBase UPRN to UPRN comparison	Date Address Changed

## 2. AlternativeAddress

This is a table listing the different variations of an address (e.g. Flat 1, 10 High Street or Flat 10/1 High Street)

Field Name	Index	Data Type	Size	Nullable	Accepted Format	Data Source	Description
ObjectID	P	Automated		N	Uses only 0-9	System	Unique reference number assigned to a record
UPRN	P	VarChar	12	N	Uses only numbers 0 to 9	AddressBase Table 24 UPRN field	Unique Property Reference Number.
PostcodePostal		VarChar	8	N	G4 9QT or G78 1WD or AB12 7FY	AddressBase Table 21 Postcode_Locator field	A valid postcode in the format prescribed by the Royal Mail. Comprised of, for example Area EH District 10 Sector 4 Unit SU  If UDPRN present this field should be populated from Royal Mail PAF Postcode field
Property		VarChar	192	Y		AddressBase Table 24 all SAO fields + PAO_Text field	Name of the sub-building (e.g. flat).
BuildingNumber		VarChar	12	Y		AddressBase Table 24 PAO numbers + suffix fields	Number of building.
Street		VarChar	160	Y		AddressBase Table 15 Street_Description field	Name of street the address is in.
Locality		VarChar	70	Y		AddressBase Table 15 Locality_Name field	Name of locality the address is in.
Town		VarChar	30	N		AddressBase Table 15 Town_Name field	Name of town the address is in.



### 3. HistoricalAddress

This is a table listing any deleted or changed addresses since the previous data extract.

Field Name	Index	Data Type	Size	Nullable	Accepted Format	Data Source	Description
ObjectID	P	Automated		N	Uses only 0-9	System	Unique reference number assigned to a record
UPRN	P	VarChar	12	N	Uses only numbers 0 to 9	AddressBase Table 24 UPRN field	Unique Property Reference Number.
Postcode		VarChar	9	N	G4 9QTA or AB12 7FY	AddressBase Table 21 Postcode_Locator field / Scottish Postcode Directory	A valid postcode in the format prescribed by the Royal Mail and if the address falls within a postcode split across council areas, island to island, island to mainland or Scotland/England border, this gives the split postcode it lies in.
PostcodePostal		VarChar	9	N	G4 9QT or G78 1WD or AB12 7FY	AddressBase Table 21 Postcode_Locator field	A valid postcode in the format prescribed by the Royal Mail. Comprised of, for example Area EH District 10 Sector 4 Unit SU
Property		VarChar	192	Y		AddressBase Table 24 all SAO fields + PAO_Text field	Name of the sub-building (e.g. flat).
BuildingNumber		VarChar	12	Y		AddressBase Table 24 PAO numbers + suffix fields	Number of building.
Street		VarChar	160	Y		AddressBase Table 15 Street_Description field	Name of street the address is in.
Locality		VarChar	70	Y		AddressBase Table 15 Locality_Name field	Name of locality the address is in.
Town		VarChar	30	N		AddressBase Table 15 Town_Name field	Name of town the address is in.
DateLastChanged		Date		Y		AddressBase UPRN to UPRN comparison	Date Address Changed
DateOfDeletion		Date		Y		Geography	Date the record was marked as a deleted address

#### 4. MIS (management information statistics)

This table contains details of the number of new, deleted and changed postcodes and addresses on SAD.

Field Name	Data Type	Description
VersionOfTheData	VarChar	The version or Epoch of the data used (e.g. 2019Q3).
TotalNoOfAddressRecords	Integer	Count of the total number of records in the Addresses table
TotalNoOfNewAddressRecords	Integer	Count of new records since previous version
TotalNoOfNewAddressRecordsResidential	Integer	Count of new records since previous version, where AddressBase classification = R*
TotalNoOfNewAddressRecordsNonResidential	Integer	Count of new records since previous version, where AddressBase classification = not R*
TotalNoOfDeletedAddressRecords	Integer	Count of deleted records since previous version
TotalNoOfChangedAddressRecords	Integer	Count of records with a change since previous version
TotalNoOfChangedAddressRecordsResidential	Integer	Count of records with a change since previous version, where AddressBase classification = R*
TotalNoOfChangedAddressRecordsNonResidential	Integer	Count of records with a change since previous version, where AddressBase classification = not R*
TotalNoOfNewPostcodes	Integer	Count of new postcodes since previous version
TotalNoOfExistingPostcodesWithNewAddresses	Integer	Count of existing postcodes which have had records added since previous version
TotalNoOfExistingPostcodesWithNewAddressesResidential	Integer	Count of existing postcodes which have had records added since previous version, where AddressBase classification = R*
TotalNoOfExistingPostcodesWithNewAddressesNonResidential	Integer	Count of existing postcodes which have had records added since previous version, where AddressBase classification = not R*
TotalNoOfDeletedPostcodes	Integer	Count of deleted postcodes since previous version
TotalNoOfExistingPostcodesWithDeletedAddresses	Integer	Count of existing postcodes which have had records removed since previous version
TotalNoOfAddressWithADifferantPostcode	Integer	Count of records which have changed postcode since previous version
TotalNoOfAddressWithADifferantPostcodeResidential	Integer	Count of records which have changed postcode since previous version, where AddressBase classification = R*
TotalNoOfAddressWithADifferantPostcodeNonResidential	Integer	Count of records which have changed postcode since previous version, where AddressBase classification = not R*
TotalNoOfAddressesMatchedToPAF	Integer	Count of records with both a UPRN and UDPRN
TotalNoOfAddressesNotMatchedToPAF	Integer	Count of records without a UDPRN
TotalNoOfMultiOccupancyAddresses	Integer	Count of records with a multi occupancy count >1
CountOfMultiOccupancyAddresses	Integer	Total number of records classed as multi-occupancy by the local authority
TotalNoOfNonPostalAddresses	Integer	Count of records classed as not receiving post
TotalNoOfClassificationCommercial	Integer	Count of records with classification beginning 'C' on AddressBase
TotalNoOfClassificationLand	Integer	Count of records with classification beginning 'L' on AddressBase
TotalNoOfClassificationMilitary	Integer	Count of records with classification beginning 'M' on AddressBase
TotalNoOfClassificationOther	Integer	Count of records with classification beginning 'O' on AddressBase
TotalNoOfClassificationParentShell	Integer	Count of records with classification beginning 'P' on AddressBase

<b>Field Name</b>	<b>Data Type</b>	<b>Description</b>
TotalNoOfClassificationResidential	Integer	Count of records with classification beginning 'R' on AddressBase
TotalNoOfClassificationUnclassified	Integer	Count of records with classification beginning 'U' on AddressBase
TotalNoOfClassificationXDualUse	Integer	Count of records with classification beginning 'X' on AddressBase
TotalNoOfClassificationZObjectOfInterest	Integer	Count of records with classification beginning 'Z' on AddressBase

There will also be 3 supplementary lookup files which will be held as csv files;

1. PostcodeTypeAB\_lookup
2. RPC\_lookup
3. CouncilAreaCode\_lookup

### 1. PostcodeTypeAB\_lookup

This gives further details of the postcode type codes used on AddressBase.

Field Name	Data Type	Size	Data Source	Description
PostcodeType	VarChar	1	AddressBase Premium	Code used to describe the record as postal or not as defined by AddressBase logic
PostcodeTypeDescription	VarChar	75	AddressBase Premium	Extended description of the postal types defined in AddressBase

### 2. RPC\_lookup

This gives an indication of the accuracy of the coordinates assigned to the address, as determined by Ordnance Survey.

Field Name	Data Type	Size	Data Source	Description
RPC	Integer	1	AddressBase Premium	Code used to identify the accuracy of the coordinates allocated to the address
RPCDescription	VarChar	350	AddressBase Premium	Extended description of the accuracy of the coordinates allocated to the address

### 3. CouncilAreaCode\_lookup

This table gives details of the council area the address record falls within.

Field Name	Data Type	Size	Data Source	Description
CouncilAreaCode	VarChar	9	Scottish Postcode Directory	A code that identifies a Council Area
LocalCustodianCode	Integer	4	AddressBase Premium	A code that identifies the custodian of the data
CouncilAreaName	VarChar	250	Scottish Postcode Directory	Official name that identifies a Council Area

### 3. Glossary

#### **AddressBase (AB)**

An Ordnance Survey product which combines the One Scotland Gazetteer (OSG) with matched address information from the Royal Mail Postcode Address File (PAF).

Three versions of the product are available;

1. AddressBase – list of the PAF matched addresses
2. AddressBase Plus – OSG and matched PAF address information for live records only
3. AddressBase Premium – full OSG data with matched PAF addresses *[this is the version Geography use]*

#### **Communal Establishment Register (CER)**

A dataset of Scottish addresses identified as being a communal Establishment, and associated information about each address

#### **Geoplace**

Partnership between local government, in England and Wales, and Ordnance Survey. They are the custodians of the National Address Gazetteer and the National Street Gazetteer for England and Wales.

#### **Matched Address**

A property record for which an entry has been found on the Royal Mail Postcode Address File and the One Scotland Gazetteer. A link has been created using the unique identifiers from both datasets.

#### **One Scotland Gazetteer (OSG)**

Scottish address list combining the 32 council address gazetteers. It contains address and property lifecycle information. *Also see Council Address Gazetteer (CAG).*

#### **Royal Mail Postcode Address File (PAF)**

The Postcode Address File is a database of all UK addresses and postcodes. It is produced by Royal Mail and is continuously updated. NRS, receives this file on a quarterly basis through a third party provider. This file provides the information for the digitising of new postcodes and the removal of deleted postcodes

#### **Unique Delivery Point Reference Number (UDPRN)**

Unique identifier allocated to each delivery point on the Royal Mail Postcode Address File.

**Unique Property Reference Number (UPRN)**

Unique identifier allocated to each property record on the One Scotland Gazetteer.

**Unique Street Reference Number (USRN)**

Unique identifier allocated to each street entry on the One Scotland Gazetteer.