

PRODUCT GUIDE

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AddressBase



Ordnance Survey

AddressBase Products

Product Guide

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Preface

This user guide (hereafter referred to as the guide) is designed to provide an overview of AddressBase Products (hereafter referred to as the products) and it gives guidelines and advice on how a customer might derive the maximum benefit from the products. It assumes a general knowledge of geographic information.

If you find an error or omission in this guide, or otherwise wish to make a comment or suggestion as to how we can improve the guide, please contact us at the address shown below under contact details or complete the product and service performance report form at [Annexe B](#) and return it to us.

Contact details

Our Customer Service Centre will be pleased to deal with your enquiries:

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Using this guide

The documentation is supplied in portable document format (PDF) only. Free Adobe® Reader® software, which displays the guide, incorporates search and zoom facilities and allows you to navigate within. Hyperlinks are used to navigate between associated parts of the guide and to relevant Internet resources by clicking on the blue hyperlinks and the table of contents.

Chapter 1 Introduction

Overview

The AddressBase product family is made up of three products:

- AddressBase,
- AddressBase Plus,
- AddressBase Premium

AddressBase products are created by bringing together different address sources:

- Local Authority Gazetteers for England, Wales and Scotland,
- Royal Mail® PAF® data,
- References to Valuation Office Agency (VOA) data,
- Additional addresses and coordinates from Ordnance Survey.

This information is managed by GeoPlace under a joint venture partnership between Local Government Agency and Ordnance Survey. Scottish Local Authority address information is supplied to GeoPlace under licence between Ordnance Survey and the Improvement Service supported by the Scottish Government.

Ordnance Survey is responsible for customer management, sales, marketing and distribution of the AddressBase products.

Key Features

Explanation of AddressBase products

Product name	AddressBase Premium	AddressBase Plus	AddressBase
Features	<ul style="list-style-type: none"> • UPRN • Current / Live addresses • Alternative addresses • Provisional addresses • Historical addresses • Royal Mail Postcode Address File • National Grid coordinates • Latitude and Longitude coordinates • Four levels of classification • Valuation Office Agency classification scheme • Feature life cycle dates • Local authority addresses • OWPA records • Multiple occupancy addresses • Local authority street information • USRN (Unique Street Reference Number) 	<ul style="list-style-type: none"> • UPRN • Current / Live addresses • Royal Mail Postcode Address File • National Grid coordinates • Latitude and Longitude coordinates • Four levels of classification • Feature life cycle dates • Local authority addresses • OWPA records • Multiple occupancy addresses • Local authority street information • USRN (Unique Street Reference Number) • References to OS MasterMap Topography Layer TOIDs 	<ul style="list-style-type: none"> • UPRN • Royal Mail Postcode Address File • National Grid coordinates • Latitude and Longitude coordinates • Primary level of classification

	<ul style="list-style-type: none"> • Street start and end coordinates • References to OS MasterMap Topography Layer TOIDs • References to OS MasterMap Integrated Transport Network Layer TOIDs • Parent/child relationships • Valuation Office Agency cross references 	<ul style="list-style-type: none"> • References to OS MasterMap Integrated Transport Network Layer TOIDs • Parent/child relationships • Valuation Office Agency cross references 	
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Coordinate Reference Systems

AddressBase products use two Coordinate Reference Systems (CRS).

- British National Grid (BNG),
- European Terrestrial Reference System 89 (ETRS89).

BNG uses the OSGB36® geodetic datum and a single Transverse Mercator projection for the whole of Great Britain. Positions on this projection are described using Easting and Northing coordinates in units of metres. The BNG is a horizontal spatial reference system only; it does not specify a vertical (height) reference system.

ETRS89 is the EU recommended frame of reference for European data, and is represented in AddressBase products as Latitude and Longitude values. ETRS89 is a horizontal spatial reference system only; it does not specify a vertical (height) reference system.

A guide to coordinate systems in Great Britain is available at:

<http://www.os.uk/docs/support/guide-coordinate-systems-great-britain.pdf>

High-level product view

AddressBase

AddressBase Plus

AddressBase Premium



Figure 1: Overview of product content

Applications

Product Name	AddressBase Premium	AddressBase Plus	AddressBase
Suggested application	Planning, mailing, postal delivery, analysis, statistics, strategic decision-making, address matching and verification, customer relationship management (CRM), web mapping, live 'front line' operational use.	Planning, mailing, postal delivery, analysis, statistics, strategic decision-making, address-matching and verification, CRM, web mapping.	Precise location of an address, addition of the UPRN to postal addresses, web mapping postal delivery.
Benefits	<ul style="list-style-type: none"> - Reduces the effort of maintaining address information across multiple departments. - Facilitates data-sharing between multiple organisations and departmental systems. - Connectivity – with the UPRN as the key identifier for a property/address systems can share information without the need for multiple matching processes needing to be in place. - Created from a central hub managed by GeoPlace to bring all the address information together to ensure data management and update consistency. 		

Chapter 2 The joint venture

Initiative

Through collaborative working between Ordnance Survey, GeoPlace and the Local Government Agency a single definitive spatial address database for Great Britain has been created and maintained since September 2011 for England and Wales, and April 2012 for Scotland.

This initiative supports the *UK Location Strategy* concept of a 'core reference geography', including the key principles of the European Union INSPIRE directive, that data should only be collected once and kept where it can be maintained most effectively.

What this means

The creation of AddressBase products brings together the best parts of:

- Local Government's National Land and Property Gazetteer (NLPG),
 - The One Scotland Address Gazetteer (OSG),
 - Ordnance Survey owned large scale data and coordinates,
 - Royal Mail® Postcode Address File (PAF®)
- **NLPG** provides the most up-to-date addresses including street names and numbers for England and Wales. This data also provides a Unique Property Reference Number (UPRN) for each address encompassing residential, commercial and public infrastructure such as fire stations.
 - **One Scotland Address Gazetteer** provides the most up-to-date addresses including street names and numbers for Scotland. This data also provides a Unique Property Reference Number (UPRN) for each address encompassing residential, commercial and public infrastructure such as fire stations.
 - **Ordnance Survey** provides a wide range of additional addresses including Objects Without a Postal Address (OWPAs) such as Telephone Exchanges, a wider spatial context by including TOIDs for both the OS Mastermap Topography Layer® and OS Mastermap Integrated Transport Networks Layer® which the address feature is related to and additional classification information.
 - **PAF®** brings approximately 28 million Royal Mail addresses that are identified as receiving post.

Chapter 3 Roles and responsibilities

GeoPlace

GeoPlace is a limited liability partnership jointly owned by the Local Government Agency and Ordnance Survey and is the centre of excellence for spatial address and street information in Great Britain. GeoPlace brings together local government's address and streets gazetteers with information from Ordnance Survey and Royal Mail's PAF® dataset into a central spatial address data hub. The database hub is updated by GeoPlace based upon the receipt of data from all of the contributing data sources.

GeoPlace manage this hub and provide address and street information to be utilised in the AddressBase products.



England and Wales

There are 348 local authorities in England and Wales, inputting updates to their Local Land and Property Gazetteers (LLPG). These changes are submitted to the GeoPlace Hub daily, weekly or monthly as part of their update schedule.

On receipt of these updates they are checked to ensure that they have been produced in accordance with the NLPG Data Entry Conventions (DEC-NLPG) and they are in compliance with the national standard for the representation of address information – BS 7666 Parts 1 and 2.

Scotland

There are 32 local authorities in Scotland which update their local Central Address Gazetteers (CAG) on a weekly basis. The Improvement Service check each update to ensure compliance with the national standard for addressing (BS7666.2006) and the Scottish Gazetteer Conventions 1-3.

Local Authority Custodians

One of the key strengths of AddressBase products is the collection and verification of data at the local level. A real benefit is the capture of addresses at the earliest point in their lifecycle, and then this address being maintained by the local authority.

To do this the Local Custodians will utilise the wealth of information at their disposal until the address is demolished (when it becomes a historical record).

Local Custodians will use information such as:

- Building and Development control,
- Planning and Land Charges,
- Waste Collection,
- Electoral Roll

LLPG custodians (England and Wales) are allocated sequential batches of UPRNs by GeoPlace, which are assigned by the LLPG custodian at the creation of a new address.

The CAG (Scotland) custodians are allocated sequential batches of UPRNs by the Improvement Service, which are assigned by the CAG custodian at the creation of a new address.

Street Name and Numbering

A critical step in the creation of an address is undertaken within each Local Authority by the dedicated street naming and numbering (SNN) custodian and the Scottish Local Street Gazetteer (LSG) custodians, who allocates the official street name and building information.

The SNN/LSG custodian has a statutory obligation to provide SNN/LSG information for all addresses within their administrative area. Once the SNN/LSG custodian has fulfilled their statutory obligation for initial capture, the LLPG/CAG custodian will maintain the address for the life of the address record.

Unique Property Reference Number (UPRN)

The UPRN is the persistent identifier providing consistency across the AddressBase products range.

Each address record has a UPRN, which provides a reference key to join related address records across different datasets.

Throughout its life cycle, information on the address of a property can change. This may be due to a change of name, change of use, or the eventual demolition of the property. All of these changes are reflected against the same UPRN meaning users are aware that it is the same physical property.

Chapter 4 Overview of the AddressBase products

Three products have been designed to meet distinct customer requirements. The source data is collated, verified and quality assured by GeoPlace.

AddressBase Premium

AddressBase Premium provides the most detailed view of an address and its life cycle for England, Wales and Scotland. It has over 40 million addresses and 100 million cross references as well as providing all the information relating to an address or property from creation to retirement.

The product contains Local Authority, Ordnance Survey and Royal Mail addresses. This includes alternative addresses for current records where available, indicating variations on the official addresses; and provisional addresses (proposed planning developments), and historic information (demolished properties) where available.

OWPA (Objects Without a Postal Address) and Cross References to VOA data and products such as OS Mastermap Topography Layer and OS Integrated Transport Networks Layer are also included.

AddressBase Plus

AddressBase Plus contains current properties using addresses sourced from Local Authorities, Ordnance Survey and Royal Mail for England, Wales and Scotland. The product currently contains approximately 35 million records.

All address records are provided with an UPRN (Unique Property Reference Number), and the product contains all current addresses validated from Local Custodians and additional Royal Mail attribution where matched.

The product enables the end-user to locate an address or property on a map using either X, Y coordinates supplied on a British National Grid or Latitude and Longitude coordinates provided on an ETRS89 projection.

The product also includes cross references to OS MasterMap Topography Layer and OS MasterMap Integrated Transport Network Layer TOID references.

AddressBase

AddressBase provides a current view of addresses matched between the LLPGs (England and Wales), CAGs (Scotland) and Royal Mail PAF[®] data. The product provides Royal Mail attribution as well as enhancing PAF[®] with X and Y coordinates on the British National Grid and ETRS89 coordinate reference system, and also providing a primary level classification.

This product will provide you with a single view of an address and allow you to carry out primary analysis. You could also locate this address on a map to give you a geographic view.

Classifications

Classification schemes are used in all three AddressBase products, with AddressBase provided a single character ('R' denoting residential for example), and AddressBase Plus and AddressBase Premium providing a more granular scheme ('RD06' denoting flat for example).

Example of a detailed classification

C	Commercial	H	Hotel/Motel/ Boarding/ Guest House	01	Boarding/Guest House/ Bed And Breakfast/Youth Hostel	Object defined by local government contributing authority, includes: Commercial Lodging.	CH01YH	Youth Hostel
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Chapter 5 Product supply

Supply Format

AddressBase products are available in two formats:

- Comma-Separated Values (CSV) ,
- Geography Markup Language (GML) version 3.2

Both of these formats can either be supplied as a Full Supply, or Change Only Update (COU).

Supply Media

AddressBase products incorporate a web based ordering system that allows customers to order initial data supply and updates, obtain price estimates and view details of their data holdings on demand.

<http://www.os.uk/business-and-government/help-and-support/products/how-to-buy.html>

Coverage

AddressBase products provide address data for England, Wales and Scotland.

Chunking

To make the management of large areas easier, the AddressBase data is split into chunks of smaller data. The primary supply mechanism is referred to as non-geographic chunks. This is the main mechanism for the delivery of data.

Public Sector Mapping Agreement (PSMA) customers are able to order geographic chunks (5km tiles) as well as non-geographic chunks although geographic chunks are not considered the main supply mechanism.

Non-geographic chunking

Non-geographic chunking is a way of dividing up data into chunks that are supplied in separate volumes that have a fixed maximum number of records, as opposed to a given geographic National Grid area. For this reason, it is possible for features from various geographic locations to appear in one volume and for adjacent features to appear in different volumes.

Non-geographic chunk volumes are designed to be loaded into spatial databases, but can be used in a file format as long as all chunks are translated or imported into the system at the same time.

For the csv supplies a maximum of one million complete address records will be contained within one volume, when the limit is reached, a new volume will be started.

For the GML supply a maximum of 200,000 features will be provided in one volume before the next one is started.

Geographic chunking

For data that is supplied in 5km by 5km chunks, the file name will reference the 1km tile in the south-west corner of the 5km tile.

Based on your area of interest (AOI), for example the boundary of your local authority, a 5km by 5km grid covering the area of interest is generated.

Any features intersecting with squares in that grid are added to a geographic chunk file representing the square. Geographic chunking is performed using the standard Ordnance Survey National Grid.

Area selection

National sets (Managed GB Sets)

The Managed GB Sets (MGBS) service is a way of processing identical orders faster, which improves delivery times.

If you are signed up to a MGBS service you will benefit from:

- Data arriving faster and in a more predictable manner.
- Seeing the same version of features as other organisations.
- Easier data management – no need to manage your order beyond signing up.

For PSMA customers, MGBS will be supplied as geographic or non-geographic chunks.

For non-PSMA users, MGBS will be supplied as non-geographic chunks.

Customer Defined Areas of Interest

Customers may provide their own area of interest (AOI) in any standard GIS format.

You can supply us with a polygon or you can digitise a polygon within our online ordering service.

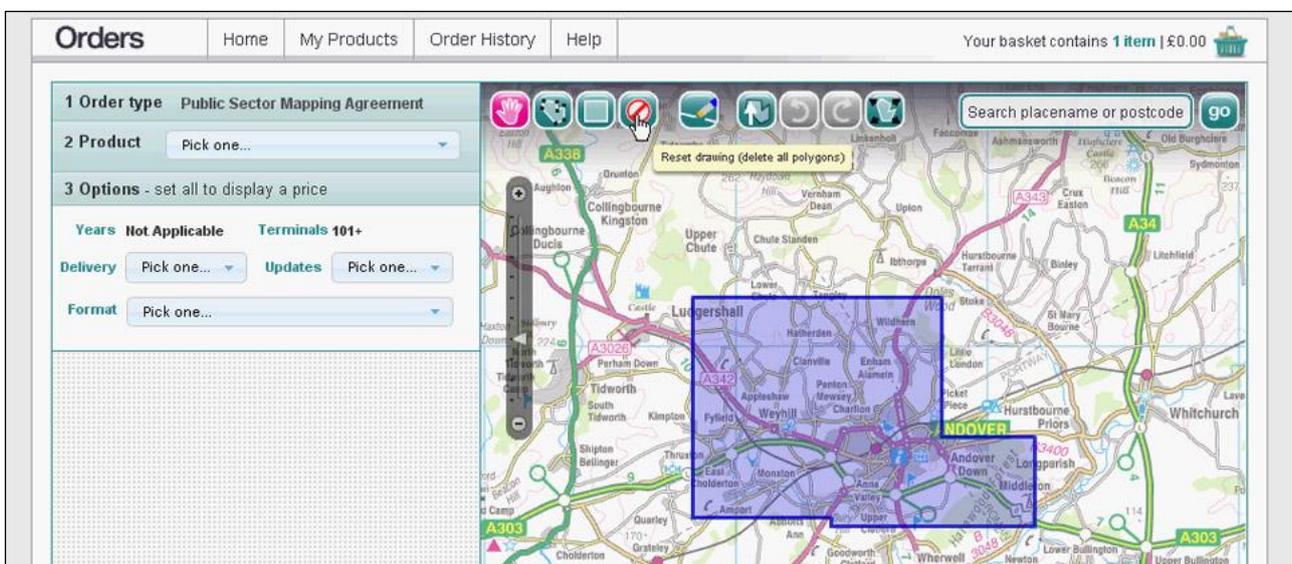


Figure 2: Ordnance Survey online ordering service

DVD contents

When a customer receives an order via hard media, the following files will be supplied.

Within the DATA directory, data files will be found in their compressed format.

Within the DOC directory the *Medialist.txt* is provided – outlining the contents of the media.

Within the RESOURCES directory lookup tables for the AddressBase Classification Scheme and Local Custodian Codes are provided as well as the Header Files.

With a File Transfer Protocol (FTP) order, the same information is supplied but the filenames will be slightly different, reflecting the FTP order number.

Change-only update

Change-only update (COU) is a supply of features which have been created, changed or deleted in a customer's area of interest since their last supply.

Any feature which has not undergone one of the above changes since a customer's last supply will not be supplied as part of a COU.

COU will be supplied on a six-weekly basis.

Geographic Chunked COU

A Geographic chunked COU is not supplied as per the Non Geographic chunked COU outlined above. If a single record has changed within a specified 5 km tile, the entire 5 km tile containing all features will be supplied. This means the user will need to remove all features that previously existed in the provided tile (s) and insert the entire new tile (s) in its place.

Chapter 6 Further Information

Further information about the AddressBase products can be found on the Ordnance Survey Website:

<https://www.ordnancesurvey.co.uk/business-and-government/products/addressbase-products.html>

Technical Specifications:

[AddressBase](#)

[AddressBase Plus](#)

[AddressBase Premium](#)

Getting Started Guide:

[AddressBase Products](#)

Ordnance Survey:

<http://os.uk>

Annexe A Product and service performance report form

Ordnance Survey welcomes feedback from its customers about AddressBase.

If you would like to share your thoughts with us, please print a copy of this form and when completed post or fax it to the address below.

Your name:

Organisation:

Address:

.....

.....

Postcode:

Phone:

Fax:

Email:

Quotation or order reference:

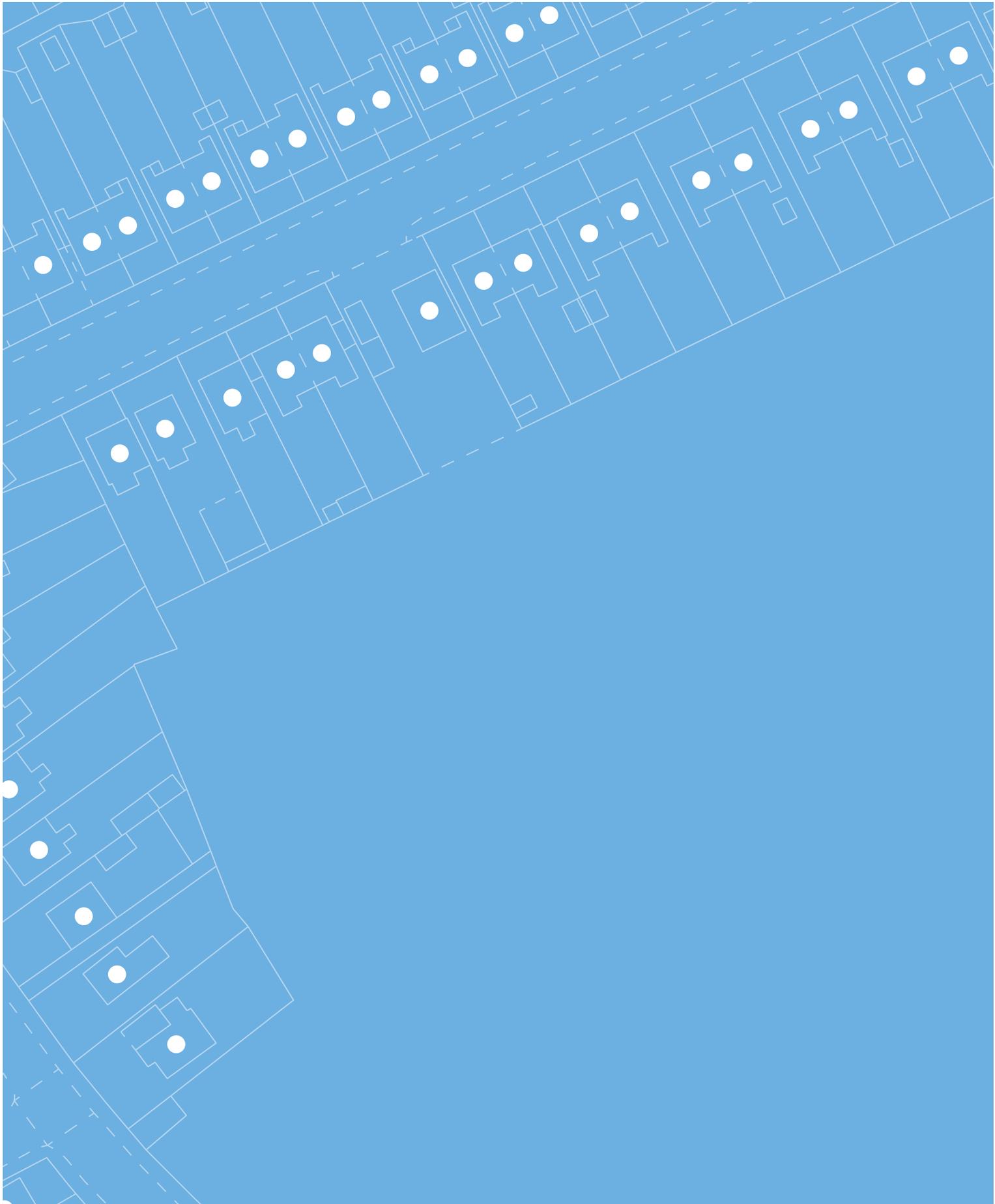
Please record your comments or feedback in the space below. We will acknowledge receipt of your form within three (3) working days and provide you with a full reply or a status report within 21 working days.

If you are posting this form, please send it to:

AddressBase Product Manager, Ordnance Survey, Adanac Drive, SOUTHAMPTON, SO16 0AS.

If you wish to return it by fax, please dial 02380 056 159.

Any personal information that you supply with this report form will be used by Ordnance Survey only in the improvement of its products and services. It will not be made available to third parties.



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