



Landgate AVS

Product Description – v2.0

October 2017

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Further, Landgate does not make any representation as to the accuracy or correctness of any 3rd party services used by Landgate to deliver address verification services.

Revision History

Date	Version	Change	Author
November 2016	1.0	Initial Version	Todd Harris
February 2017	1.1	<ol style="list-style-type: none">1. PSMA Cloud Product Description hyperlink update2. Minor grammatical amendments.	Todd Harris
October 2017	1.2	<ol style="list-style-type: none">1. PSMA Cloud Product Description hyperlink update2. Minor grammatical amendments.	Todd Harris
October 2017	2.0	<ol style="list-style-type: none">3. Removal of “commercial” offering references - offered to WA public sector agencies only	Todd Harris

References

Reference	Source
Address Management Policy (AMP)	https://www0.landgate.wa.gov.au/docvault.nsf/web-new/AU_POLICIES/\$FILE/WAAddressManagementPolicy.pdf
National Address Management Framework	http://www.anzlic.gov.au/sites/default/files/files/NAMF_fact_sheet_May_2013.pdf
Public Sector Commissioner’s Circular	https://publicsector.wa.gov.au/sites/default/files/documents/2013-03_policy_framework_and_standards_for_address_management_in_public_sector_entities.pdf
PSMA Cloud Product Description v2.3	https://www.pdma.com.au/sites/default/files/psma_cloud_product_description_v2.3.pdf

Customer contact

Landgate Customer Service: +61(8) 9273 7373 between the hours of 8:30am to 5:00pm WST Monday to Friday (excluding public holidays) and ask to speak to an Account Manager

Or email: customerservice@landgate.wa.gov.au

Table of Contents

Introduction	1
Document Purpose	1
What is an Address Verification Service (AVS)	1
Address Management Policy (AMP)	1
Street Address Improvement Programme (SAIP)	2
National Address Management Framework (NAMF)	2
Overview	3
Landgate AVS	3
Batch Bureau Verification Service	3
Point of Entry (PoE) Verification Service	3
Polygon identification number (PIN)	4
Services	5
1 Batch Bureau AVS	5
1.1 What is Batch Bureau AVS	5
1.2 Scope	5
1.2.1 Consultation	5
1.2.2 Prerequisites	5
1.2.3 Outcomes	5
1.2.4 Service and support	6
1.3 Out of Scope	6
1.4 Understanding the validation methods	6
1.4.1 Address Verification Datasets	6
1.4.2 Address Validation Methods (workflows)	6
1.4.3 Recommended WorkFlows	7
1.5 Input Data Formats	7
2 Point of Entry AVS	8
2.1 What is a Point of Entry (PoE) Address Verification Service	8
2.2 Scope of PoE Address Verification Service	8
2.2.1 Consultation	8
2.2.2 Prerequisites	8
2.2.3 Set-up	8
2.2.4 Service and support	9
2.3 Change management	9
2.4 Out of Scope	9
2.5 Understanding the validation methods	10
2.5.1 Address Verification Datasets	10
2.5.2 Address Validation Methods (workflows)	10

2.5.3	Recommended WorkFlows	10
3	Annexures	12
3.1	Annexure: Interpreting Results – Match Percentage	12
3.2	Annexure: Interpreting Results – Match Code	14
3.3	Annexure: Point of Entry sample SOAP XML files – Request/Response	15
3.4	Annexure: Checks on parsed address input file	20

Introduction

Document Purpose

This document describes the Address Verification Services offered by Landgate and is a guide and reference for analysts and decision makers to make an assessment on the suitability of the service offerings for their business.

What is an Address Verification Service (AVS)

For the purposes of this document, an Address Verification Service is a service designed to enable state government agencies to verify address information against authoritative street address data.

The service provides the ability to verify an entire address database along with ability to maintain a verified address database via a web service.

Address Management Policy (AMP)

In March 2009, the Western Australian Public Sector Commission (PSC) and Landgate invited 28 State Government entities to participate in an address data quality survey. The survey identified the critical nature of address information to public sector entities and also recognised that the allocation of resources to improve address management in end user agencies is generally of low priority.

Improving the quality of street address data will have measurable benefits to agencies and a focussed whole of government approach needs to be adopted to improve street address quality.

Subsequently the Address Management Policy (AMP)¹ was developed. Custodianship of the policy was transferred from the Public Sector Commission to Landgate in 2013. A Public Sector Circular² subsequently recommended that all public sector agencies adopt the AMP.

The AMP focuses on a number of key areas:

- Data Standards
 - Three data sets were recognised as the authoritative source of address information:
 - Street Address (Western Australia) – Landgate Address Data Set (ADR)
 - Street Address (other States & Territories) – Geocoded National Address File (G-NAF)
 - Postal Address (all jurisdictions) – Australia Post Postal Address File (PAF)
- Exchange of Data
 - Australian Standard 4590:2006 (Section 5) – provides a standardised format for the storage and exchange of address data
- Data Cleansing
 - Agencies are encouraged to utilise a batch AVS to check and cleanse their address data against the authoritative data sets at least annually for data that is less than five years old.
- Data Verification
 - New or amended addresses provided to agencies should be verified against the authoritative address data set on their receipt.

¹ [https://www0.landgate.wa.gov.au/docvault.nsf/web-new/AU_POLICIES/\\$FILE/WAAddressManagementPolicy.pdf](https://www0.landgate.wa.gov.au/docvault.nsf/web-new/AU_POLICIES/$FILE/WAAddressManagementPolicy.pdf)

² https://publicsector.wa.gov.au/sites/default/files/documents/2013-03_policy_framework_and_standards_for_address_management_in_public_sector_entities.pdf

- Agencies are encouraged to utilise a Point of Entry (PoE) AVS that verifies against the authoritative datasets. This approach is of particular importance once a bulk validation has been performed as it helps maintain a consistent data quality within a verified data set.

Improved quality and accuracy of agency address data enables agencies to benefit from a range of outcomes. For example:

- More efficient interchange of address information, notification and verification
- Reduced data duplication and returned correspondence
- Better informed government planning and decision-making
- Improved service delivery by emergency response agencies
- Simplified government processes for agencies and citizens.

Street Address Improvement Programme (SAIP)

In recognition of the cost and resource effort required for agencies to adopt the AMP, public sector agencies were advised to establish implementation plans by August 2015 and aim to comply with the AMP by August 2018. Landgate, recognising the value of address management, initiated the Street Address Improvement Program (SAIP) in 2013. The purpose of the SAIP was to enable Landgate to formally encourage, coordinate and assist with adoption and implementation of the AMP across State Government.

National Address Management Framework (NAMF)

[The National Address Management Framework \(NAMF\)](#) is a national, consistent, standards-based framework which guides the process for verifying addresses and provides a standard for exchange of address data. PSMA Cloud uses NAMF Interface standard version "1.0". As new versions of the NAMF Interface standard are developed, PSMA Cloud will maintain compatibility for legacy functions.

Overview

Landgate AVS

This is a WA public sector service offering only and is not offered to commercial entities.

Improved address information has the potential to provide significant savings across Government. Customer contact by address is critical to WA Government agencies and the potential impact of incorrect address information can be very costly.

Landgate has leveraged the PSMA Cloud service to deliver an authoritative Address Verification Service for Western Australia (Landgate AVS). The State's authoritative Street Address dataset (ADR) is maintained by Landgate daily and delivered each night to PSMA's GNAF-Live to ensure street addressing for WA delivered via the service is the most up-to-date available.

Landgate AVS comprises two distinct but complimentary offerings;

- Landgate AVS – Batch Bureau
- Landgate AVS - Point of Entry (PoE)

These services validate candidate addresses against the authoritative address datasets. In Australia there are three authoritative address datasets:

- the jurisdictional (State/Territory) dataset
- Geocoded National Address File (G-NAF)
- Postal Address File (PAF)

PSMA has taken the jurisdictional datasets and created a single dataset call "G-NAF Live" and included it in their PSMA Cloud service. Note that the currency of the jurisdictional data varies within G-NAF Live:

- | | | | | | |
|-------|---------|-------|-------------|------|-------------|
| • WA | - daily | • VIC | - weekly | • SA | - quarterly |
| • NSW | - daily | • TAS | - weekly | • NT | - quarterly |
| • ACT | - daily | • QLD | - quarterly | | |

Both G-NAF and PAF are updated quarterly.

Batch Bureau Verification Service

Agencies can engage with Landgate and supply their address file which is then verified using the Batch Bureau service. The verified address output file will be returned to the customer along with documentation on how to interpret the results. Landgate provides expert advice and consultancy to assist with correct formatting and understanding the results.

Point of Entry (PoE) Verification Service

To enable consistent data quality within a verified dataset, Landgate have again leveraged the PSMA Cloud service to deliver a PoE (Point of Entry) Address Verification service available under annual access subscription terms. This service enables simple address verification at the point of entry where a single address is entered, validated and the correct or closest addresses returned. Customers will need to do some development work in their environment to integrate and call the PoE web service from their application(s) and business systems. As with the Batch Bureau service, Landgate provides expert advice and consultancy to assist with setting custom PoE workflow requirements for your business system.

Polygon identification number (PIN)

To enable agencies to leverage the Landgate Address Verification Service offerings further, Landgate has activated the ability for calls to the service to return the cadastral land parcel polygon identification number (PIN) that is associated with the returned address. This allows for customers to link address information to WA's cadastral polygon dataset if so desired.

Services

1 Batch Bureau AVS

This section describes Landgate's Bureau Batch Address Verification Service. It explains what customers need to do to access the service and what they are getting from the service.

It should be read in conjunction with the following:

- Batch Address Verification Service – Request Form (**Ask your Landgate Account Manager**)
- [Interpreting the Results \(See Annexure\)](#)
- [Checks on Parsed Address input file \(See Annexure\)](#)
- Batch Address Verification Service – Input and Output File Formats and Samples (**Excel Spreadsheet – upon request**).

1.1 What is Batch Bureau AVS

This is a transactional service whereby agencies can engage with Landgate and supply their address file (following the provision of a quote) which can then be verified against multiple authoritative address datasets (see [Section 1.4.1](#)). The verified address output file will be returned to the customer along with documentation on how to interpret the results. Landgate provides expert advice and consultancy to assist with correct formatting and understanding the results.

1.2 Scope

1.2.1 Consultation

- Landgate will provide subject matter expert (SME) consultation to assist with identifying relevant workflow parameters to suit requirements and to populate the Batch AVS request form.
- The Landgate SME will also assist with interpretation of responses from the service.

1.2.2 Prerequisites

- The customer has engaged with Landgate via their Landgate Account/Service Manager and a quotation for the Batch verification has been provided and accepted with an agreed delivery timeframe.
- Customers have successfully completed the Batch Address Verification Service – Request Form.
- Customers have supplied the address input file(s), in .csv format (or excel - size permitting), to be processed as per the Request Form. Data must be formatted as described in the Batch Address Verification Service – Input and Output File Formats and Samples spreadsheet.

1.2.3 Outcomes

- Landgate will process the supplied input file(s) according to customer prescribed specifications (see section 2.4 for a list of authoritative address datasets, their description and the validation methods).
- Landgate will deliver the output files to the Customer (to the email address specified as the *Business Contact* on the Request Form), in .csv format (or excel - size permitting), as per the field format specified in the Batch Address Verification Service – Input and Output File Formats and Samples spreadsheet.

1.2.4 Service and support

Landgate will deliver the output files within agreed timeframes notwithstanding:

- Any delays associated with inappropriately formatted files received from the customer.
- Any workflow changes required following receipt of the signed Batch Request form.
- PSMA Cloud service outages.
- Any other circumstance beyond Landgate's control.

1.3 Out of Scope

Formatting the input files into the formats specified in the Batch Address Verification Service – Input and Output File Formats and Samples spreadsheet is out of scope for Landgate. This is the responsibility of the customer. Note that incorrect formatting of the input data can affect the quality of the verification results.

1.4 Understanding the validation methods

This section describes the validation methods available in the Batch AVS.

The validation method consists of:

- the authoritative address datasets to be used (user defined; recommended options are available)
- their order of access (user defined; recommended options are available)
- the level to which an address match is made. Landgate has investigated, tested and adopted a value that returns the closest address match.

This section should be read in conjunction with the following:

- Batch Address Verification Service - [Interpreting the Results \(See Annexure\)](#)
- [PSMA Cloud Product Description v2.3](#) (reference only).

1.4.1 Address Verification Datasets

Landgate's Bureau Batch Address Verification Service (AVS) can operate on one or several of PSMA's authoritative address datasets.

PSMA provides 3 different address datasets for address verification purposes.

G-NAF: Maintained by PSMA, the Geocoded National Address File is an index of physical Australian addresses, each with a geographic coordinate. This is a [National Address Management Framework \(NAMF\)](#) compliant National dataset; it is updated quarterly.

G-NAF Live: G-NAF Live is a near-live database of the most recent authoritative addresses provided to PSMA Australia by the state and territory address custodians and is NAMF compliant.

PAF: The Postal Address File is a database of Australian postal addresses created and maintained by Australia Post to assist in the delivery of mail. It includes a Delivery Point Identifier (DPID). Updates to the PAF are released quarterly.

1.4.2 Address Validation Methods (workflows)

A **validation method** (known in PSMA Cloud as a 'workflow') is a predetermined succession of validation steps against one or more address datasets (G-NAF, G-NAF Live, PAF) to return the closest match to the address supplied.

1.4.3 Recommended WorkFlows

- G-NAF Live then G-NAF
- G-NAF Live then G-NAF and PAF
- PAF Only

In most instances “G-NAF Live and G-NAF” will provide the best Australia wide authoritative physical data. Users should be aware that searching the Postal Address File (PAF) attracts an additional cost. For this reason it is recommend PO Box addresses are separated into a separate file for processing with specifically the “PAF Only” workflow rather than using the “G-NAF Live then G-NAF and PAF” option.

The workflow also contains a parameter that specifies a minimum match quality percentage value for addresses in the results. Landgate has investigated, tested and adopted a value that returns the closest address match.

The actual match quality percentage value is returned with the address found ([see Annexure 3.1](#)). As a general rule:

Source: [PSMA Cloud Product Description v2.3](#)

100%	indicates an exact matched address
≥ 96	indicates a highly likely address match; an address that may only require a simple change such as a locality / postcode change or minor spelling correction.
90-95	indicates a likely match (a good or possible address candidate) but may need to be confirmed.
< 90	typically require intervention to decide which address candidate is correct
71%-90%	a nearby address
<70%	a speculative address

Similarly, a match code ([see Annexure 3.2](#)) is returned to be used with the match percentage to assist with diagnosing G-NAF and G-NAF Live attribute mismatches.

1.5 Input Data Formats

There is a choice of input data formats (.csv); the options are:

- Parsed - an address that is presented as a set of discreet fields
- Unparsed - an address that is presented as a single text string

It should be noted that a parsed format should return better results if the customer has formatted the data correctly. However, incorrect information in a parsed field can degrade the level of address match.

2 Point of Entry AVS

This section describes Landgate's Point of Entry (PoE) Address Verification Service. It explains what the customers need to do to access the service and what they are getting from the service.

It should be read in conjunction with the following:

- PoE Address Verification Service – Request Form (Ask your Landgate Account Manager)
- PoE Address Verification Service - [Interpreting the Results \(See Annexure\)](#)
- PoE Address Verification Service - Point of Entry sample SOAP XML files – [Request/Response \(See Annexure\)](#)
- [PSMA Cloud Product Description v2.3](#) (reference material only).

2.1 What is a Point of Entry (PoE) Address Verification Service

The PoE AVS allows for the maintaining of consistent data quality within a verified dataset. This secured web service enables simple address verification at the point of entry where a single address is entered, validated and the correct or closest addresses returned. Software development work will be required to integrate and call the PoE web service from application(s) and business systems. As with the Batch Bureau service, Landgate provides expert advice and consultancy to assist with setting custom PoE workflow requirements.

2.2 Scope of PoE Address Verification Service

2.2.1 Consultation

- Landgate recognises that customers will likely require forward planning to develop and implement an application program or solution. Therefore, Landgate will negotiate with the customer, agreed timeframes for set-up of the service.
- Landgate will provide subject matter expert (SME) consultation to assist with identifying relevant workflow parameters to suit requirements and to populate the PoE AVS request form.
- The Landgate SME will also assist with interpretation of responses from the service.

2.2.2 Prerequisites

Prior to progressing with PoE AVS setup, the following needs to occur:

- Agreed timeframes for service provision.
- A Landgate AVS Subscription License agreement is in place for the PoE Service. Refer to your Landgate Account Manager for more information.
- Customers have successfully completed and signed the PoE Verification Service Request Form (see [Section 2.5](#) for a list of authoritative address datasets, their description and the validation methods). Landgate will provide assistance to the customer in selecting the parameters that match closest to the customer's requirements. Adjustments to the PoE workflow, within reason, may be made following customer testing to ensure the desired outcomes are met.

2.2.3 Set-up

- In accordance with the prescribed customer's workflow parameters set out in the PoE AVS request form, Landgate will set up the workflow process in a pre-production service to enable the customer to test any application programs that may have been developed.

- Landgate will provide to the customer, user credentials (username and password) that will enable access to invoke the abovementioned workflow.
- Following successful testing, and within agreed timeframes, Landgate will implement the relevant workflow in the production environment.

2.2.4 Service and support

The following service and support is provided:

- Landgate will deliver to the agreed timeframes negotiated with the customer notwithstanding;
 - Any delays associated with changes to the PoE workflow subsequent to Landgate receiving the signed PoE Request Form.
 - PSMA Cloud service outages.
 - Any other circumstance out of Landgate's control.
- PSMA Cloud services are available 24/7 except for scheduled maintenance outages. Any scheduled maintenance outages will be communicated by Landgate to the customer via contact details specified by the customer.
- Landgate will provide customer support with relation to the availability of the service and will engage with PSMA for issues related to outages or unexpected responses from the service.
- Customer support will be available during the hours of 8:30am to 5:00pm WST Monday to Friday (excluding public holidays)
 - Landgate Customer Service: +61(8) 9273 7373
 - Or email: customerservice@landgate.wa.gov.au

2.3 Change management

Any changes required following migration of the customer workflow to the production environment will need to follow the below process:

- Changes are to be documented, signed and provided to the Landgate Account Manager responsible for the account.
- Once received, Landgate will then provide a quote to carry out the required changes.
- Once agreed upon, Landgate will then implement the relevant changes within an agreed timeframe, in the pre-production environment to allow for testing.
- Following successful testing, and within an agreed timeframe, the new workflow parameters will be implemented in the production service.

2.4 Out of Scope

The following is deemed out of scope of the PoE AVS:

- Customer's systems application development and advice is out of scope for Landgate. The customer will need to develop coding within their application program to submit an address query in SOAP XML format which the PoE service will act on and return an equivalently formatted SOAP XML file containing the validation information. The customer's application program then has to unpack and action the information. Landgate is not responsible for any coding in the external agencies environment.
- Data analysis where no address match is returned following a call to the PoE service is out of scope of support other than help with interpreting the responses resulting from the PoE workflow parameters. The PoE AVS responds with "valid address" information only, if the end user does not see an address they might be expecting, this means it is not contained within the authoritative street address datasets that the service interrogates and is therefore deemed not a "valid address". Further investigation utilising [MyLandgate](#) is suggested where address information is limited.

- Pre-production; no commitment or representations are made with relation to availability or performance of the PSMA Cloud pre-production environment.

2.5 Understanding the validation methods

This section describes the validation methods available in Landgate's PoE Address Verification Service (AVS). The validation method consists of:

- the authoritative address datasets to be used (user defined; recommended options are available)
- their order of access (user defined; recommended options are available)
- the level to which an address match is made. Landgate has investigated, tested and adopted a value that returns the closest address match.

This section should be read in conjunction with the following:

- PoE Address Verification Service - [Interpreting the Results \(See Annexures\)](#)
- [PSMA Cloud Product Description v2.3](#) (reference material only).

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Landgate's PoE Address Verification Service (AVS) can operate on one or multiple PSMA authoritative address datasets.

PSMA provides 3 different address datasets for address verification purposes.

1. **G-NAF:** Maintained by PSMA, the Geocoded National Address File is an index of physical Australian addresses, each with a geographic coordinate. This is a [National Address Management Framework \(NAMF\)](#) compliant National dataset; it is updated quarterly.
2. **G-NAF Live:** G-NAF Live is a near-live database of the most recent authoritative addresses provided to PSMA Australia by the state and territory address custodians; it is also NAMF compliant.
3. **PAF:** The Postal Address File is a database of Australian postal addresses created and maintained by Australia Post to assist in the delivery of mail. It includes a Delivery Point Identifier (DPID). Updates to the PAF are released quarterly.

2.5.2 Address Validation Methods (workflows)

A **validation method** (known in PSMA Cloud as a 'workflow') is a predetermined succession of validation steps against one or more address datasets (G-NAF, G-NAF Live, PAF) to return the closest match to the address supplied.

2.5.3 Recommended WorkFlows

- G-NAF Live then G-NAF
- G-NAF Live then G-NAF and PAF
- PAF Only

The workflow also contains a parameter that specifies a minimum match quality percentage value for addresses in the results. Landgate has investigated, tested and adopted a value that returns the closest address match.

The actual match quality percentage value is returned with the address found ([see Annexure 3.1](#)). As a general rule:

Source: [PSMA Cloud Product Description v2.3](#)

100%	indicates an exact matched address
≥ 96	indicates a highly likely address match; an address that may only require a simple change such as a locality / postcode change or minor spelling correction.
90-95	indicates a likely match (a good or possible address candidate) but may need to be confirmed.
< 90	typically require intervention to decide which address candidate is correct
71%-90%	a nearby address
<70%	a speculative address

Similarly, a match code ([see Annexure 3.2](#)) is returned to be used with the match percentage to assist with diagnosing G-NAF and G-NAF Live attribute mismatches.

3 Annexures

3.1 Annexure: Interpreting Results – Match Percentage

Source: [PSMA Cloud Product Description v2.3](#)

100% - Exact Matched Address	
Note, if an exact match is found then only one result is returned.	
100	<p>The returned address matches the input address with the following conditions:</p> <ul style="list-style-type: none"> • Any of the following fields were not provided in the input address but were returned in the result: <ul style="list-style-type: none"> ○ <i>complexUnitType</i> ○ <i>complexLevelType</i> ○ <i>site_name</i> ○ <i>countryNameCode</i> ○ <i>locationDescriptor</i> ○ <i>deliveryPointIdentifier</i> ○ <i>state</i> • <i>localityName</i> is an alias but <i>postcode</i> is matched • <i>streetNumber1</i> is matched • <i>streetNumber2</i> is matched (or NULL in both the Request and result) • All other fields match (or NULL in both the Request and result)
96-99% - Highly Likely Match	
99	<ul style="list-style-type: none"> • Any condition covered by an Exact Match above • <i>postcode</i> was not provided in the input • <i>complexLevelNumber</i> was not provided but <i>complexUnitIdentifier</i> matches
98	<ul style="list-style-type: none"> • Any condition covered by a 99% match • <i>complexUnitType</i> is not matched • <i>complexLevelType</i> is not matched • Input address contains an alias street or locality
97	<ul style="list-style-type: none"> • Any condition covered by 98% • <i>localityName</i> is an adjacent neighbour and result is best matched address. • <i>streetName</i> is an alias and result is best matched address. • <i>streetType</i> does not match, however, <i>streetName</i> and <i>localityName</i> is matched • A <i>streetSuffix</i> is additionally returned. No alternative <i>streetSuffix</i> for the address exist and <i>streetName</i> and <i>localityName</i> match. • Input address is an alias address.
96	<ul style="list-style-type: none"> • Any condition covered by 97% • <i>siteName</i> does not match. • <i>postcode</i> does not match, however, <i>state</i> and <i>localityName</i> match and result is best matched address. • <i>streetName</i> is a phonetic or alias match and return is best matched address. • <i>localityName</i> is a phonetic, alias or adjacent neighbour and result is best matched address. • <i>complexLevelNumber</i> is returned but not provided in input. • <i>complexLevelNumber</i> is not matched but <i>complexUnitType</i> is matched.
94-95% - Good Candidates	
95	<ul style="list-style-type: none"> • Any condition covered by 96% • <i>localityName</i> is a phonetic, alias or adjacent neighbour • <i>streetName</i> is a phonetic or alias match • Input address is an alias address.
94	<ul style="list-style-type: none"> • Any condition covered by 95% • Complex information is provided in the input but not returned in the result
91-93% - Possible Candidates	
93	<ul style="list-style-type: none"> • Any condition covered by 94% • A <i>streetSuffix</i> is additionally returned. Alternative <i>streetSuffix</i> for the address exist, however, <i>streetName</i> and <i>localityName</i> match. • <i>localityName</i> is an adjacent neighbour and result is not the best matching address. • <i>streetNumber2</i> does not match.
91	<ul style="list-style-type: none"> • Any condition covered by 92% • <i>streetSuffix</i> does not match. • <i>complexLevelNumber</i> does not match.
71%-90% - Nearby Addresses	

90	<ul style="list-style-type: none"> • Any condition covered by 91% • <i>complexLevelType</i> does not match.
89	<ul style="list-style-type: none"> • Any condition covered by 90% • <i>streetNumber1</i> falls within street number range. • <i>streetNumber2</i> falls within street number range.
87	<ul style="list-style-type: none"> • All address where one of: <ul style="list-style-type: none"> ○ <i>streetName</i> ○ <i>localityName</i> and <i>stateTerritory</i> ○ <i>postcode</i> <p>match without using near neighbour, alias or phonetic matching.</p>
75	<ul style="list-style-type: none"> • <i>stateTerritory</i> does not match
<70% - Speculative	
<70	<ul style="list-style-type: none"> • Addresses results lower than 70% are considered a best guess only

3.2 Annexure: Interpreting Results – Match Code

Source: [PSMA Cloud Product Description v2.3](#)

matchCode	<p>This field is intended for diagnostic use only. This is a NAMF extension attribute only available in PSMA functions that contains information on the quality of the address match returned by the address search process. It is only relevant to GNAF or GNAF Live. The string in the <i>matchCode</i> field contains match results for each NAMF Field in the format of Field Code followed by Match Type. eg. SE:Y;UT:Y;UI:Y;LT:Y;CL:Y;LI:Y;NR:Y;SN:Y; etc.</p>																																																
	<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2">Field Codes</th> </tr> </thead> <tbody> <tr> <td>SE</td> <td>SiteName</td> </tr> <tr> <td>UT</td> <td>complexUnitType</td> </tr> <tr> <td>UI</td> <td>complexUnitIdentifier</td> </tr> <tr> <td>LT</td> <td>complexLevelType</td> </tr> <tr> <td>CL</td> <td>complexLevelNumber</td> </tr> <tr> <td>LI</td> <td>lotIdentifier</td> </tr> <tr> <td>NR</td> <td>streetNumber1, streetNumber2</td> </tr> <tr> <td>SN</td> <td>streetName</td> </tr> <tr> <td>ST</td> <td>Streettype</td> </tr> <tr> <td>SS</td> <td>streetSuffix</td> </tr> <tr> <td>LN</td> <td>localityName</td> </tr> <tr> <td>PC</td> <td>Postcode</td> </tr> <tr> <td>SA</td> <td>stateTerritory</td> </tr> </tbody> </table> <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th colspan="2">Field Codes</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>Yes, NAMF field was matched in the returned address</td> </tr> <tr> <td>N</td> <td>No, NAMF field was not matched in the returned address</td> </tr> <tr> <td>F</td> <td>Only streetnumber1 field was identified</td> </tr> <tr> <td>L</td> <td>Only streetNumber2 was matched</td> </tr> <tr> <td>A</td> <td>An alias match for the field was matched</td> </tr> <tr> <td>P</td> <td>A phonetic match for the field was identified</td> </tr> <tr> <td>S</td> <td>A phonetic match for an alias was identified</td> </tr> <tr> <td>G</td> <td>A neighbouring locality was matched</td> </tr> <tr> <td>B</td> <td>A phonetic match for a neighbouring locality was matched</td> </tr> </tbody> </table>	Field Codes		SE	SiteName	UT	complexUnitType	UI	complexUnitIdentifier	LT	complexLevelType	CL	complexLevelNumber	LI	lotIdentifier	NR	streetNumber1, streetNumber2	SN	streetName	ST	Streettype	SS	streetSuffix	LN	localityName	PC	Postcode	SA	stateTerritory	Field Codes		Y	Yes, NAMF field was matched in the returned address	N	No, NAMF field was not matched in the returned address	F	Only streetnumber1 field was identified	L	Only streetNumber2 was matched	A	An alias match for the field was matched	P	A phonetic match for the field was identified	S	A phonetic match for an alias was identified	G	A neighbouring locality was matched	B	A phonetic match for a neighbouring locality was matched
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3.3 Annexure: Point of Entry sample SOAP XML files – Request/Response

Example 1

Call to the PSMA AVS to validate an address against the Australia Post Postal Address File (PAF). Address to be validated: 1 / 85-89 EDWARD ST, PERTH WA

XML Web Service Request:

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ns1="http://namf09.anzlic.org.au" xmlns:ns2="http://ws.namf09.anzlic.org.au">
  <SOAP-ENV:Body>
    <ns2:execute>
      <ns1:requests id="200" version="1.0">
        <ns1:authentication>
          <ns1:username>*****</ns1:username>
          <ns1:password>*****</ns1:password>
        </ns1:authentication>
        <ns1:features/>
        <ns1:request id="200.1" name="executeWorkflow">
          <ns1:features>
            <ns1:feature name="function">
              <ns1:feature name="name">
                <ns1:featureValue>SLMT:MailPoint_verifyUnparsedAddress</ns1:featureValue>
              </ns1:feature>
              <ns1:feature name="id">
                <ns1:featureValue>SLMT:MailPoint_verifyUnparsedAddress_1</ns1:featureValue>
              </ns1:feature>
              <ns1:feature name="parameters">
                <ns1:feature name="getPostalAddress">
                  <ns1:featureValue>TRUE</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="minMatchingAccuracy">
                  <ns1:featureValue>partial</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="minMatchQualityPercentage">
                  <ns1:featureValue>0</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="omitAddress">
                  <ns1:featureValue>FALSE</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="geoType">
                  <ns1:featureValue>ADDRESS</ns1:featureValue>
                </ns1:feature>
              </ns1:features>
            </ns1:feature>
          </ns1:features>
          <ns1:address>
            <ns1:unstructuredAddressLine1>1 / 85-89 EDWARD ST, PERTH WA</ns1:unstructuredAddressLine1>
          </ns1:address>
        </ns1:request>
      </ns1:requests>
    </ns2:execute>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

XML Web Service Response:

```
<?xml version='1.0' encoding='utf-8'?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Body>
    <ns2:executeResponse xmlns:ns2="http://ws.namf09.anzlic.org.au">
      <responses xmlns="http://namf09.anzlic.org.au" id="200">
        <result status="OK" completed="true" hasErrorsInResponseElements="false" />
        <response id="200.1">
          <responseResult>
            <address>
              <addressIdentifier>86356328</addressIdentifier>
              <complexUnitType>U</complexUnitType>
              <complexUnitIdentifier>1</complexUnitIdentifier>
              <streetNumber1>85</streetNumber1>
              <streetNumber2>89</streetNumber2>
              <streetName>EDWARD</streetName>
              <streetType>ST</streetType>
              <localityName>PERTH</localityName>
              <stateTerritory>WA</stateTerritory>
              <postcode>6000</postcode>
              <deliveryPointIdentifier>86356328</deliveryPointIdentifier>
            </address>
            <attributes>
              <attribute name="dataset">
                <attributeValue>PAF</attributeValue>
              </attribute>
              <attribute name="matchQualityPercentage">
                <attributeValue>98</attributeValue>
              </attribute>
              <attribute name="matchQualityPercentageDescription">
                <attributeValue>PAF match - Post Code Missing</attributeValue>
              </attribute>
              <attribute name="matchCertainty">
                <attributeValue>partial</attributeValue>
              </attribute>
              <attribute name="pafVersion">
                <attributeValue>15.3</attributeValue>
              </attribute>
              <attribute name="pafExpiryDate">
                <attributeValue>2015-10-01 00:00:00</attributeValue>
              </attribute>
              <attribute name="diagnostics">
                <attributeValue>000102080002023110</attributeValue>
              </attribute>
              <attribute name="formattedAddressString">
                <attributeValue>U 1 85-89 EDWARD ST, PERTH WA 6000</attributeValue>
              </attribute>
              <attribute name="geoType">
                <attributeValue>ADDRESS</attributeValue>
              </attribute>
            </attributes>
          </responseResult>
          <status>OK</status>
        </response>
      </responses>
    </ns2:executeResponse>
  </soapenv:Body>
</soapenv:Envelope>
```

Example 2

Call to the PSMA AVS to validate an address against PSMA G-NAF Live.

Address to be validated: [1 / 85-89 EDWARD ST, PERTH WA](#)

XML Web Service Request:

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:ns1="http://namf09.anzlic.org.au" xmlns:ns2="http://ws.namf09.anzlic.org.au">
  <SOAP-ENV:Body>
    <ns2:execute>
      <ns1:requests id="200" version="1.0">
        <ns1:authentication>
          <ns1:username>*****</ns1:username>
          <ns1:password>*****</ns1:password>
        </ns1:authentication>
        <ns1:features/>
        <ns1:request id="200.1" name="executeWorkflow">
          <ns1:features>
            <ns1:feature name="function">
              <ns1:feature name="name">
                <ns1:featureValue>PSMA:GNAF_Live_verifyUnparsedAddress</ns1:featureValue>
              </ns1:feature>
              <ns1:feature name="id">
                <ns1:featureValue>PSMA:GNAF Live_verifyUnparsedAddress_1</ns1:featureValue>
              </ns1:feature>
              <ns1:feature name="parameters">
                <ns1:feature name="geocode">
                  <ns1:featureValue>TRUE</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="maxResults">
                  <ns1:featureValue>50</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="minMatchingAccuracy">
                  <ns1:featureValue>partial</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="minMatchQualityPercentage">
                  <ns1:featureValue>0</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="omitAddress">
                  <ns1:featureValue>FALSE</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="geoType">
                  <ns1:featureValue>ADDRESS</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="geocodeLevel">
                  <ns1:featureValue>LOCALITY CENTROID</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="abbreviateComplexLevelType">
                  <ns1:featureValue>FALSE</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="abbreviateComplexUnitType">
                  <ns1:featureValue>FALSE</ns1:featureValue>
                </ns1:feature>
                <ns1:feature name="abbreviateStreetSuffix">
                  <ns1:featureValue>FALSE</ns1:featureValue>
                </ns1:feature>
          </ns1:features>
        </ns1:request>
      </ns1:requests>
    </ns2:execute>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

```

    <ns1:feature name="abbreviateStreetType">
      <ns1:featureValue>TRUE</ns1:featureValue>
    </ns1:feature>
    <ns1:feature name="primaryFlag">
      <ns1:featureValue>TRUE</ns1:featureValue>
    </ns1:feature>
    <ns1:feature name="secondaryFlag">
      <ns1:featureValue>TRUE</ns1:featureValue>
    </ns1:feature>
  </ns1:feature>
</ns1:features>
<ns1:address>
  <ns1:unstructuredAddressLine1>1 / 85-89 EDWARD ST, PERTH WA</ns1:unstructuredAddressLine1>
</ns1:address>
</ns1:request>
</ns1:requests>
</ns2:execute>
</SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```

XML Web Service Response:

```

<?xml version='1.0' encoding='utf-8'?>
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Body>
    <ns2:executeResponse xmlns:ns2="http://ws.namf09.anzlic.org.au">
      <responses xmlns="http://namf09.anzlic.org.au" id="200">
        <result status="OK" completed="true" hasErrorsInResponseElements="false" />
        <response id="200.1">
          <responseResult>
            <address>
              <addressIdentifier>GLWA_010744524</addressIdentifier>
              <complexUnitIdentifier>1</complexUnitIdentifier>
              <streetNumber1>85</streetNumber1>
              <streetNumber2>89</streetNumber2>
              <streetName>EDWARD</streetName>
              <streetType>ST</streetType>
              <localityName>PERTH</localityName>
              <stateTerritory>WA</stateTerritory>
              <postcode>6000</postcode>
              <geoFeature>PROPERTY/PARCEL GEOCODE</geoFeature>
              <geoDatumCode>GDA94</geoDatumCode>
              <geoNorthSouthCoordinate>-31.94791514</geoNorthSouthCoordinate>
              <geoEastWestCoordinate>115.86930831</geoEastWestCoordinate>
            </address>
            <attributes>
              <attribute name="matchQualityPercentage">
                <attributeValue>99</attributeValue>
              </attribute>
              <attribute name="matchCode">
                <attributeValue>SE:Y;UT:Y;UI:Y;LT:Y;CL:Y;LI:Y;NR:Y;SN:Y;ST:Y;SS:Y;LN:Y;PC:N;SA:Y;</attributeValue>
              </attribute>
              <attribute name="primarySecondary">
                <attributeValue>Secondary</attributeValue>
              </attribute>
              <attribute name="dataset">

```

```
<attributeValue>GNAF Live</attributeValue>
</attribute>
<attribute name="formattedAddressString">
  <attributeValue>1/85-89 EDWARD ST, PERTH WA 6000</attributeValue>
</attribute>
<attribute name="geoType">
  <attributeValue>ADDRESS</attributeValue>
</attribute>
<attribute name="matchCertainty">
  <attributeValue>full</attributeValue>
</attribute>
<attribute name="mesh_block">
  <attributeValue>50319583000</attributeValue>
</attribute>
<attribute name="jurisdictionId">
  <attributeValue>10744524</attributeValue>
</attribute>
</attributes>
</responseResult>
<status>OK</status>
</response>
</responses>
</ns2:executeResponse>
</soapenv:Body>
</soapenv:Envelope>
```

3.4 Annexure: Checks on parsed address input file

The following checks should be performed on Batch input files containing parsed addresses to identify anomalies that may cause issues with the Batch Address Verification Service.

CHECKS

1. “stateTerritory” field

Sort the column and identify all non-Australian country records.

The service does not validate non-Australian addresses; remove these if applicable.

2. “postcode” field

Sort the column and ensure all records have a valid post code; if not the post code should be left blank or ‘null’.

3. “postalDeliveryIdentifier”

Sort the column to identify Australia Post addresses.

Postal address should be extracted into a separate file for processing under a PAF Only workflow.

4. “streetName”

Sort the column to identify errors in street name.

This can reveal a number of data entry issues:

- Potential Australia Post addresses.
- “Lot” number not street number data present in the field.
- Miscellaneous errors.

5. “streetNumber1”

Sort the column to identify errors in street numbers.

- Similar issues as identified in item 4.

6. “streetNumber2”

Sort the column to identify errors in street numbers.

7. “streetType”

Sort the column to identify errors in street type.

8. “streetSuffix”

Sort the column to identify errors in street suffix.