

# **Data Dictionary for Address Lookup Service**

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# 1 API Specification

## 1.1 Hypertext Transfer Protocol (HTTP) Request's Input Parameters

### 1.1.1 Address Lookup Service

The Address Lookup Service allows data consumers to look up address records using simple address element information [for example (a) building name, (b) street name and number or (c) estate name and block number]. The service will also search for addresses with spelling or pronunciation similar to the user input information for reference use. The following input parameters are supported:

- “q” – input address element information (mandatory; URL-encoded(percent-encoded));
- “n” – maximum number of records to be returned (optional; range: 1-200; default: 200);
- “t” – tolerance on returned record scores (optional; range: 0-80; default: 20);
- “b” – enable/disable basic searching mode, default disabled (optional; range: 0 or 1; default: 0);
- “3d” – enable/disable showing of floor and unit information in the records to be returned, default disabled (optional; range: 0 or 1; default: 0);
- “floor” – input address floor information for filtering the returned floors of the result addresses, effective when “3d” is enabled (optional; URL-encoded(percent-encoded)); and
- “unit” – input address unit information for filtering the returned units of the result addresses, effective when “3d” is enabled (optional; URL-encoded(percent-encoded)).

The score tolerance “t” is for controlling the number of returned address records to a range with similar scores to the highest score. For example, if the highest score of the address records is 75 and the “t” parameter is set to 10, only results with scores 65-75 will be returned.

When parameter “t” and parameter “n” are applied together, the addresses fulfilling both parameter “t” and parameter “n” would be returned.

When parameter “b” is set to “enabled” (b=1), the service will not search for addresses with similar spelling or pronunciation.

### 1.1.2 GeoAddress Lookup Service

The GeoAddress Lookup Service allows data consumers to look up address records using GeoAddress. GeoAddress is a 19-character standardized identifier for a corresponding building or address. It serves as a common reference for the same address location which may be stored in different ways, e.g. the unique GeoAddress of Hankow Centre in Tsim Sha Tsui is “3565117476T20050430” with different textual addresses (“1C MIDDLE ROAD”; “4A ASHLEY ROAD”; “47 PEKING ROAD” or

“5-15 HANKOW ROAD”) can be found. With GeoAddress, different systems can communicate referring to the same address location while maintaining the textual addresses under their own information systems.

The structure of the GeoAddress (e.g. “3565117476T20050430”) is as follows:

1st - 10th character (e.g. “3565117476”)

Formed by combining the Easting (e.g. “835651”) and Northing (e.g. “817476”) from HK1980 Grid Coordinates, with the first leading digits “8” removed from the Easting and Northing values.

11th character (e.g. “T”)

“P” stands for Podium or “T” stands for Tower.

12th - 19th character (e.g. “20050430”)

Address record creation date, in the format of YYYYMMDD.

The following input parameters are supported by the GeoAddress Lookup Service:

- “ga” – input GeoAddress (mandatory; 19 characters string);
- “n” – maximum number of records to be returned (optional; range: 1-200; default : 200);
- “3d” – enable/disable showing of floor and unit information in the records to be returned, default disabled (optional; range: 0 or 1; default: 0);
- “floor” – input address floor information for filtering the returned floors of the result addresses, effective when “3d” is enabled (optional; URL-encoded(percent-encoded)); and
- “unit” – input address unit information for filtering the returned units of the result addresses, effective when “3d” is enabled (optional; URL-encoded(percent-encoded)).

## 1.2 Optional Parameters in HTTP Headers

Apart from the input parameters listed in Section 1.1, Address Lookup Service and GeoAddress Lookup Service also support the following optional parameters in the HTTP headers. Based on the input values of the optional parameters in the HTTP Headers, Address Lookup Service and GeoAddress Lookup Service allow the English and/or Chinese structured address in XML or JSON format to be returned.

Header parameters	Supported Values	Remarks
Accept	application/json application/xml	Optional (default: application/xml)
Accept-Encoding	gzip	Optional (default: no compression)
Accept-Language	* en zh-Hant en, zh-Hant	Optional (default: *) en: English zh-Hant: Traditional Chinese

## 1.3 HTTP Response Status Code

The following table summarises the HTTP Response Status Codes that the calling application may receive:

Response Status Code	Description	Explanation
200	OK	The request has succeeded and lookup result is returned
400	Bad Request	The request parameters cannot be interpreted by the server
406	Not Acceptable	The specified media type in the Accept header is not supported.
413	Payload Too Large	The input address is longer than 255 characters.
429	Too Many Requests	Too many requests has been sent in a given amount of time.
500	Internal Server Error	The server is unable to process the request.

More details on the Response Status Codes can be found in Chapter 6 of the Internet Engineering Task Force (IETF)'s RFC7231 specification:

<https://tools.ietf.org/rfc/rfc7231.txt>

## 2 Data Dictionary

### 2.1 Elements of the Returned Address Results

The below table summarises the elements of the returned results. More detail description can be found from the common schemas on structured address and free format address published on the Office of the Government Chief Information Officer (OGCIO) websites.

Element	Description	Remarks
AddressLookupResult	Address lookup result contains the request address, and a list of suggested addresses in decreasing order of similarity.	
RequestAddress	An address to be looked up.	
AddressLine	A string of free-text address captured from input parameter of this web service.	
SuggestedAddress	A suggested address from the address database.	A maximum number of 200 suggested addresses will be returned.
Address	A Premises address or other type of address (if applicable).	
PremisesAddress	Reference to an address which can be occupied by persons or organisations.	Details of the element are provided in “2.1.1 Child Elements of PremisesAddress” of this document.
ValidationInformation	Validation Information of the suggested address.	
Score	For results ordering and reference only.	Provided in the address lookup results effective from 31 December 2019.

*2.1.1 Child Elements of PremisesAddress*

Element	Description	Remarks
EngPremisesAddress	A structured address in English referring to a location that can be occupied by persons or organisations within Hong Kong.	Details of the element are provided in “2.1.1.1 Child Elements of EngPremisesAddress” of this document.
ChiPremisesAddress	A structured address in Chinese of the premises occupied by persons or organisations within Hong Kong.	Details of the element are provided in “2.1.1.3 Child Elements of ChiPremisesAddress” of this document.
GeoAddress	<p>GeoAddress of an address in the format CHAR(19) where the leading ten-digit of the GeoAddress can be used to locate the vicinity of the address.</p> <p>The leading ten-digit of the GeoAddress is a Geo Reference Number formed by combining the Easting (x) and Northing (y) coordinates (HK1980 Datum). Because all coordinates within HKSAR begin with “8”, this digit was truncated as well.</p> <p>For example, the Geo Reference Number 3212345123 is formed by the x,y-coordinates 832123.E, 845123.N.</p>	Provided in the address lookup results effective from 31 December 2019.
GeospatialInformation	Geospatial information of an address.	<p>Provided in the address lookup results effective from 30 March 2017.</p> <p>Details of the element are provided in “2.1.1.5 Child Elements of GeospatialInformation” of this document.</p>

**2.1.1.1 Child Elements of EngPremisesAddress**

Element	Description	Remarks
Eng3dAddress	Floor and unit information of the address concerned in English.	<p>Provided in the address lookup results effective from 31 July 2022.</p> <p>The element is only applicable to the buildings of this public housing of the Hong Kong Housing Authority and is shown when the parameter “3d” is set to “1” (i.e. enabled).</p> <p>Details of the element are provided in “2.1.1.2 Child Elements of Eng3dAddress” of this document.</p>
EngBlock	Block information of the address concerned in English.	
BlockDescriptor	Block descriptor in English (e.g. “Building”, “House”, “Block”, “BLK”).	
BlockNo	Block number in English or numeric values (e.g. “1”, “A”, “EAST”).	
BlockDescriptorPrecedenceIndicator	An indicator showing the ordering of block descriptor and block number in full English address when both are not Null, where Y = block description precedes block number (e.g. in the cases of “BLOCK A” and “BLOCK 1”), N = block number precedes block description (e.g. in the cases of “NORTH BLOCK” and “WEST TOWER”).	
BuildingName	Building name in English.	
EngEstate	Estate name and related information of the address concerned in English.	



Element	Description	Remarks
EstateName	Estate name of the address in English.	
EngPhase	Phase information of the address concerned in English.	
PhaseName	Phase name of the address concerned in English.	
PhaseNo	Phase number of the address concerned.	
EngVillage	Village name and building number information of the address concerned in English.	
LocationName	Place name of the address in English.	Provided in the address lookup results effective from 31 December 2019.
VillageName	Village name of the address in English.	
BuildingNoFrom	Starting building number of the English village address, or the building number when a single building number value is concerned, non-numeric part is included (e.g. “12A” in “12A-14B”, and “3B” in “3B/3C”).	
BuildingNoTo	Ending building number of the English village address, non-numeric part is included (e.g. “14B” in “12A-14B”, and “3C” in “3B/3C”).	
EngStreet	Street name and building number information of the address concerned in English.	
LocationName	Place name of the address in English.	Provided in the address lookup results effective from 31 December 2019.
StreetName	Street name of the address in English.	
BuildingNoFrom	Starting building number of the English street address, or the building number when a single building number value is	

Element	Description	Remarks
	concerned, non-numeric part is included (e.g. “12A” in “12A-14B”, and “3B” in “3B/3C”).	
BuildingNoTo	Ending building number of the English street address, non-numeric part is included (e.g. “14B” in “12A-14B”, and “3C” in “3B/3C”).	
EngDistrict	District information of the address concerned in English.	
DcDistrict	District Council where the address concerned locates.	Central & Western District Eastern District Islands District Kowloon City District Kwai Tsing District Kwun Tong District North District Sai Kung District Sha Tin District Sham Shui Po District Southern District Tai Po District Tsuen Wan District Tuen Mun District Wan Chai District Wong Tai Sin District Yau Tsim Mong District Yuen Long District

Element	Description	Remarks
Region	Region that the address reference to.	HK      Hong Kong KLN      Kowloon NT      New Territories

**2.1.1.2 Child Elements of Eng3dAddress (Provided in the lookup results effective from 31 July 2022)**

Element	Description	Remarks
EngFloor	Floor number and related information of the address concerned in English.	
FloorNum	Floor number.	
FloorDescription	Floor description in English (e.g. “CONCOURSE”, “UPPER G/F”, “ROOF”, “PODIUM”).	
EngUnit	Unit number and related information of the address concerned in English.	
UnitDescriptor	Unit descriptor in English (e.g. “FLAT”, “SHOP”).	
UnitNo	Unit number, including any non-numeric parts (e.g. “A1”, “3C”).	
UnitPortion	Unit portion in English.	CE      Central CL      Attic E      East FR      Front LF      Left MD      Middle N      North

Element	Description	Remarks
		NE North-East NW North-West PH Rooftop House PN (Portion) PT (Part) RF Roof RG Right RR Rear S South SE South-East SR Terrace SW South-West TR Roof W West

### 2.1.1.3 Child Elements of ChiPremisesAddress

Element	Description	Remarks
Region	Region that the address belongs to (e.g. “香港”, “九龍”, “新界”).	
ChiDistrict	District information of the address concerned in Chinese.	
DcDistrict	District of the District Council where the address concerned locates.	中西區 東區 離島區

Element	Description	Remarks
		九龍城區 葵青區 觀塘區 北區 西貢區 沙田區 深水埗區 南區 大埔區 荃灣區 屯門區 灣仔區 黃大仙區 油尖旺區 元朗區
ChiStreet	Street name and building number information of the address concerned in Chinese.	
LocationName	Place name in Chinese.	Provided in the address lookup results effective from 31 December 2019.
StreetName	Street name in Chinese.	
BuildingNoFrom	Starting building number of the Chinese street address, or the building number when a single building number value is concerned, with non-numeric part included (e.g. “12A” in “12A-14B”, and “3B” in “3B/3C”).	

Element	Description	Remarks
BuildingNoTo	Ending building number of the Chinese street address, with non-numeric part included (e.g. “14B” in “12A-14B”, and “3C” in “3B/3C”).	
ChiVillage	Village name and building number information of the address concerned in Chinese.	
LocationName	Place name in Chinese.	Provided in the address lookup results effective from 31 December 2019.
VillageName	Village name in Chinese.	
BuildingNoFrom	Starting building number of the Chinese village address, or the building number when a single building number value is concerned, with non-numeric part included (e.g. “12A” in “12A-14B”, and “3B” in “3B/3C”).	
BuildingNoTo	Ending building number of the Chinese village address, with non-numeric part included (e.g. “14B” in “12A-14B”, and “3C” in “3B/3C”).	
ChiEstate	Estate name and related information of the address concerned in Chinese.	
EstateName	Estate name of the address in Chinese.	
ChiPhase	Phase name and phase number information of the address concerned in Chinese.	
PhaseName	Phase name of the address concerned in Chinese.	
PhaseNo	Phase number of the address concerned.	
ChiBlock	Block information of the address concerned in Chinese.	

Element	Description	Remarks
BlockDescriptor	Block descriptor in Chinese (e.g. “座”, “洋房”).	
BlockNo	Block number in Chinese or numeric values (e.g. “1”, “一”, “東”).	
BuildingName	Building name in Chinese.	
Chi3dAddress	Floor and unit information of the address concerned in Chinese.	<p>Provided in the address lookup results effective from 31 July 2022.</p> <p>The element is only applicable to the buildings of the public rental housing of the Hong Kong Housing Authority and is shown when the parameter “3d” is set to “1” (i.e. enabled).</p> <p>Details of the element are provided in “2.1.1.4 Child Elements of Chi3dAddress” of this document.</p>

#### *2.1.1.4 Child Elements of Chi3dAddress (Provided in the lookup results effective from 31 July 2022)*

Element	Description	Remarks
ChiFloor	Floor number and related information of the address concerned in Chinese.	
FloorNum	Floor number.	
FloorDescription	Floor description in Chinese (e.g. “大堂層”, “地下上層”, “天台”, “平台”).	
ChiUnit	Unit number and related information of the address concerned in Chinese.	
UnitDescriptor	Unit descriptor in Chinese (e.g. “室”, “舖”)	

Element	Description	Remarks
UnitNo	Unit number, including any non-numeric parts (e.g. “A1”, “3C”)	
UnitPortion	Unit portion in Chinese.	東部 東南部 南部 西南部 西部 西北部 北部 東北部 左面部分 右面部分 前面部分 中間部分 後面部分 及天台 及平台 及閣樓 及天台屋 (部分)

**2.1.1.5 Child Elements of Geospatial Information (Provided in the lookup results effective from 30 March 2017)**

Element	Description	Remarks
Northing	Northing value of HK1980 Grid Coordinates (e.g. “830238”)	



Easting	Easting value of HK1980 Grid Coordinates (e.g. “808452”)	
Latitude	Latitude degree value of WGS84 Geographical Coordinates (e.g. “22.4112”)	
Longitude	Longitude degree value of WGS84 Geographical Coordinates (e.g. “113.9067”)	

More details on the common schemas of structured address and free format address are available on the website of the Office of the Government Chief Information Officer.

*Common schema of structured address:*

[https://www.ogcio.gov.hk/en/our\\_work/infrastructure/e\\_government/if/common\\_schemas/structured\\_address/index.html](https://www.ogcio.gov.hk/en/our_work/infrastructure/e_government/if/common_schemas/structured_address/index.html)

*Common schema of free format address:*

[https://www.ogcio.gov.hk/en/our\\_work/infrastructure/e\\_government/if/common\\_schemas/free\\_format\\_address/index.html](https://www.ogcio.gov.hk/en/our_work/infrastructure/e_government/if/common_schemas/free_format_address/index.html)

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