

## Data statement

### Geocoding Australian cases

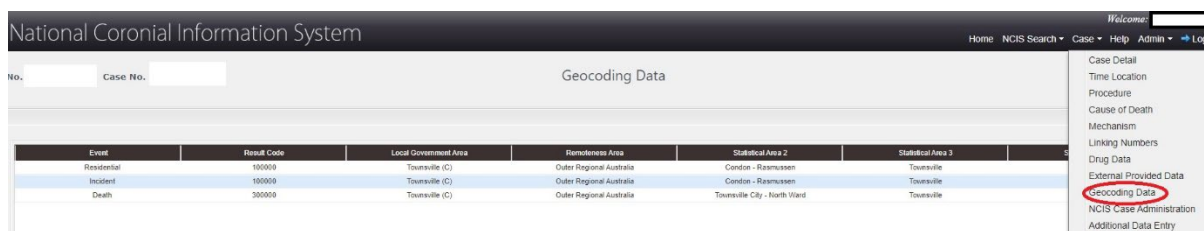
Geocoding is the process of converting a street address to latitude and longitude coordinates. It also refers to the process of assigning geographic boundaries to those coordinates.

Geocoding address information contained in the NCIS enables users to conduct searches and analyse fatality data by geographic regions.

Geocoding data is considered a supplementary data set within the NCIS collection as it is not provided by the coronial courts. The NCIS Unit uses third party geocoding products to produce the boundary areas associated with an address.

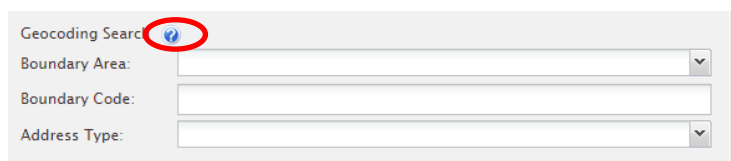
### Location of geocoding data


Geocoding data for an individual case can be viewed on the *Geocoding Data* page under the *Case* menu.



Event	Result Code	Local Government Area	Remoteness Area	Statistical Area 2	Statistical Area 3
Residential	100000	Townsville (C)	Outer Regional Australia	Centon - Reamussen	Townsville
Incident	100000	Townsville (C)	Outer Regional Australia	Centon - Reamussen	Townsville
Death	200000	Townsville (C)	Outer Regional Australia	Townsville City - North Ward	Townsville

The *Query Design* screen should be used to search across the NCIS dataset for deaths that involve particular geographic areas. Guidance on how to conduct a search is available by clicking on the information icon adjacent to the *Geocoding Search* heading on the *Query Design – Case details* screen.



Geocoding Search 

Boundary Area:

Boundary Code:

Address Type:

Access to geocoding data is dependent on user access permissions

### Scope and coverage

Up to five addresses can be recorded for an individual case in the NCIS. Three of these addresses are geocoded for Australian cases. Table 1 outlines which addresses have geocoding applied, which case years have all cases geocoded and which have limited geocoding applied.

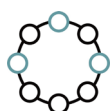


Table 1. Address types and scope geocoded for Australian cases

Address type	Geocoding status	All cases geocoded <sup>1</sup>	Limited geocoded <sup>2</sup> cases
Residential	Geocoded	2000–2018	2019 onwards
Incident	Geocoded	2000–2018	2019 onwards
Death	Geocoded	2000–2018	2019 onwards
Last known alive	Not geocoded	Not applicable	Not applicable
Body found	Not geocoded	Not applicable	Not applicable

## Geocoding frequency

Geocoding is performed using a batch model.

A batch of the latest applicable addresses is extracted from the NCIS periodically each year, cleaned and run through the geocoding product. The resulting output for address matches which are deemed acceptable are uploaded to the NCIS and the data made available to users. User notifications are sent out each time a new batch of geocoded data is uploaded to the system.

## Boundary areas in geocoding data set

Australian addresses that are geocoded have the following boundary areas applied:

- Local government area (LGA)
- Statistical area 2 (SA2)
- Statistical area 3 (SA3)
- Statistical area 4 (SA4)
- Remoteness area (RA)

Boundary areas are sourced from the Australian Statistical Geography Standard (ASGS) which is maintained by the Australian Bureau of Statistics (ABS). The ASGS is the one of the primary classification structures used to reflect geographic boundaries across Australia.

For further information about the ASGS, refer to the [ABS website](#).

<sup>1</sup> *All cases geocoded* indicates that any open or closed case with an applicable address had a geocoding attempt made

<sup>2</sup> *Limited cases geocoded* indicates that closed cases involving a non-natural fatality will have been prioritised for geocoding. There may be some crossover across case years 2019-2021 before the new practice for prioritising cases to be geocoded was applied in 2023

## Reliability indicators

Not every address can be matched exactly to a corresponding reference address. In some instances, addresses may only be able to be matched to a street or suburb level. A user can determine the closeness of an address match by referencing the result code made available as part of the geocoding data set. The structure and meaning of result codes depend upon the product that was used to geocode the address. As two different geocoding products have been used to assign geocodes to Australian cases during the lifespan of the NCIS, different result code formats will appear in the system.

Table 2 indicates the various result codes that are associated with geocoding output for Australian addresses and to which reference period they are most likely to apply.

*Table 2. Common result codes for different geocoding products*

Variable	QuickLocate (Map Data Sciences)	IQ Office (Intech Solutions)
Reference period <sup>3</sup>	2000–2021	2019 onwards
Result code structure	6 digits	1 digit
Exact match to street number level	100000	2
Match to nearest street number	100001	3
Match to street level (midpoint of street)	200000	4
Match to suburb/locality level	300000	5

## Quality considerations

Several considerations relating to the quality of geocoding data in the NCIS should be noted:

- All third-party geocoding products used by the NCIS Unit have been developed for the Australasian market and are regularly updated with applicable address files and boundary classifications.
- The quality of a geocoding result is considered by the NCIS Unit before data is uploaded to the NCIS. Any instances where the level of match is deemed to be outside acceptable parameters (and may therefore have a higher likelihood of being misleading or inaccurate) are excluded from NCIS upload.

---

<sup>3</sup> Reference periods refers to the case years within the NCIS that are likely to have been geocoded using a particular product. As the final batch using the QuickLocate product was processed in December 2021, there will likely be a cross-over period where some addresses were geocoded for a case year using the QuickLocate product and others were geocoded using the IQ Office product (most likely to occur for case years 2019–2021)

- The closeness of an identified location to the input address can be determined on a case by case basis through review of the applicable *Result code*.

### Limitations

#### Quality assurance

Geocoded data is considered a supplementary dataset in the NCIS. Supplementary data is not included in quality assurance reviews conducted by the NCIS Unit which examine the quality of data coding supplied by the coronial courts.

#### Indicator that geocoding data is not available

Outputs within the geocoding data set will show a value of *not available* if the address was not suitable to be geocoded, or if there was an inability to match an address at the level required to allocate a boundary area.

#### Addresses that are not suitable to be geocoded

On occasion it may not be possible to assign a valid geographic boundary to a location, resulting in the geocoding for the case being marked in the NCIS record as *not available*. These include circumstances where:

- the deceased had no fixed address or their residential address was not known
- the address is outside Australia
- the geocoding software is unable to provide a sufficiently accurate geocode.

Where the incident or death address is a location without a standard street address, a geocode may be produced for the nearest street or suburb to the location. This includes, but is not limited to:

- beaches
- areas of water
- particular locations on railway lines or railway stations
- national parks or bushland
- landmarked points on a stretch of road
- mines
- bridges
- cliffs or lookouts.

#### Inability to locate exact match to an address

If an address can only be identified to a general area (such as a street or suburb), a specific boundary area value may not be able to be applied if multiple boundary areas are found within that general area.

For example, an address may be matched to a lengthy street or suburb which spans across several different SA1, SA2 or LGA boundaries. If the geocoding product is unable to determine which boundary areas are applicable to a general centre-point location, it will not allocate one.

Conversely, a general area could neatly fit within an LGA boundary (so the LGA boundary is available), but cross multiple SA3 boundaries (so an SA3 boundary is not available).

### Disclaimer

While every effort is made to ensure geocoded data contained in the NCIS is accurate, the NCIS Unit does not provide any warranty regarding the accuracy, currency and completeness of the geographic data assigned to addresses in the data collection. The NCIS Unit and the Victorian Department of Justice and Community Safety accept no responsibility for any loss or damage that may arise from any use of or reliance on the geocoding data in the NCIS.