



### NGDB proposed MetaData

#### Stations Table

- ◆ The *stations* table contains information about individual geodetic survey marks.
- ◆ There is only one record for each mark. There may be several different marks in the same vicinity (e.g. a new mark replaces a destroyed one) but each would have a different sequence number.

Record	Description
Sequence number	Unique station identifier, used to link tables.
Name1	24 character station name
Name2	Alternative 24 character station name
Name3	Another alternative 24 character station name
Custodian *	The agency responsible for the maintenance of the station and information pertaining to it.

#### Coordinate Table

- ◆ The *coordinate* table contains the geodetic positions of a station mark, and other related information. There may be a number of positions for each site (sequence #), but:
  - ◆ For conventional geodetic survey marks, there will be only one position on a given datum for each site in the stations table, but there may be several positions on different datums for the same site.
  - ◆ For geodynamic, or other scientific type sites, there may be a number of positions on the same datum (or different datums), but at different epochs.
- ◆ The positions entered must be as observed or derived from an adjustment or computation. They must not be derived from a similar position on a different datum or at a different epoch.
- ◆ Derived values must not be entered (e.g. ellipsoidal height resulting from AHD plus N value). Where necessary these can be computed when a report is produced.
- ◆ The position may be entered as geodetic (lat, long, ellip. Ht.) or Earth-centred Cartesian, the type not entered will be from the other and stored.

Sequence number	Unique station identifier, used to link tables.
Position Identifier	A sequential number for each position given for a sequence number, to enable it to be uniquely identified (by reference to sequence # AND position ID).
Latitude Longitude Ellipsoidal height	Position resulting from a direct observation, or the adjustment of redundant observations. Either these fields or XYZ should be entered, but <u>not</u> both. Should <u>not</u> be a derived position (e.g. transformed from another datum or ellipsoidal height from MSL + N value).
X,Y,Z	Earth-centred Cartesian coordinates, resulting from a direct observation, or the adjustment of redundant observations. Either these fields or the latitude, longitude & ellipsoidal height should be entered, but <u>not</u> both.
Horizontal Class & Order*	Horizontal position Class determined from ICSM Special Publication 1
Vertical Class & Order *	Horizontal position Order determined from ICSM Special Publication 1
100,000 map area	The number of the standard 1:100,000 map area in which the position lies.
Horizontal absolute accuracy *	Field for future simple, numeric description of the horizontal accuracy. In time, this could optionally replace the horizontal Class & order.
Vertical absolute accuracy *	Field for future simple, numeric description of the vertical accuracy. In time, this could optionally replace the vertical Class & Order
Datum *	Datum to which the position refers (e.g. AGD or GDA). For the

	purposes of this database, datum will be interpreted to also mean reference frame or coordinate set (e.g. ITRF96 or AGD84).
Ellipsoid *	The ellipsoid used to produce the geodetic coordinates (lat/long/ellip ht). If only XYZ coordinates entered, the ellipsoid to be used to express them as lat, long & ellip ht.
Epoch	The instant in time to which the position applies. For old coordinates this will be the date of production (e.g. AGD66=1966.0, AGD84=1984.0), for GDA94 it will be 1994.0 and for other more precise positions it will be the actual epoch of observation (e.g. ITRF96 at 1998.82).
Supersedes	A pointer to the position which this position supersedes. If this is a position for a new station, it will be blank, otherwise it will contain the record number of the old position.
Superseded by	A pointer to the position which supersedes this one. If blank then this is the current value, otherwise it contains the record number of the position which supersedes it.
Availability	A field to indicate any restriction on the public release of the position. (e.g. Free indicates open distribution, otherwise the authority to whom queries should be referred).
Release date	The date at which the position was produced or made available (useful to trace the history of positions)
Comments	Explanations not covered by the other fields

**Coordinate Source Table**

- ◆ The *Coordinate Source* table records the source and subsequent use of each position shown in the coordinate table.
- ◆ The source may be an authority, an adjustment output reference or a SINEX file.
- ◆ There may be multiple sources for a position, but only one will be flagged as the origin (i.e. the origin of the position) – all others will be where the position was used in an adjustment as a fixed or constrained position.

<b>Record</b>	<b>Description</b>
Sequence #	Unique station identifier, used to link tables.
Position Identifier	A sequential number for each position given for a sequence number, to enable it to be uniquely identified (by reference to sequence # AND position ID). This ID must be identical to the one in the coordinate table.
Source *	A reference to the uses of the position. There may be a number of these and they may be: (i) The source of the position (e.g. an adjustment section name or an authority) (ii) Subsequent uses of the position in an adjustment, as a constrained or fixed point
Serial	This is a historical item, only applicable to positions entered prior to about 1987. It uniquely identifies the site within a given adjustment section.
Origin	‘ORIGIN’ – the source given is the original determination of this position value. There may be only one ORIGIN per unique position. ‘blank’ – the source given used the position as a fixed or constrained point.
Archive	A reference to where the source document is archived (e.g. authority or a Government Archives reference.

**Orthometric Height Table**

<b>Record</b>	<b>Description</b>
Sequence #	Unique station identifier, used to link tables.
Height Identifier	A sequential number for each orthometric height given for a sequence number, to enable it to be uniquely identified (by reference to sequence # AND position ID).
Orthometric height	Orthometric height above the Australian height datum, or, for isolated areas or offshore territories, above a local Mean Sea Level datum. Generally this field <u>should not contain derived orthometric heights</u> (e.g. GPS ellipsoidal height minus N value), the ellipsoidal height should be stored in the coordinate table and an orthometric height derived on request, using the latest available N value.
Datum *	The height datum to which the orthometric height refers. Generally it will be AHD, but in some cases, particularly offshore areas, it may be a local mean sea level determination (e.g. Mawson 1994, or RAN Hydro 1986)
Vertical Class *	Height Class determined from ICSM Special Publication 1
Vertical Order *	Height Order determined from ICSM Special Publication 1
Method *	Method used to determine the height (e.g. spirit levelling, trigonometric levelling, barometric levelling, or perhaps in some cases, GPS).
Supersedes	A pointer to the height which this height supersedes. If it is a height for a new site it will be blank, otherwise it will contain the record number of the old height.
Superseded by	A pointer to the height which supersedes this one. If blank then this is the current value, otherwise it contains the record number of the height which supersedes it.
Vertical absolute accuracy *	Field for future simple, numeric description of the vertical accuracy. In time, this could optionally replace the Vertical Class & Order
Comments	Explanations not covered by the other fields (max 80 characters)

**Orthometric Height Source table**

Sequence #	Unique station identifier, used to link tables.
Height Identifier	A sequential number for each orthometric height given for a sequence number, to enable it to be uniquely identified (by reference to sequence # AND position ID). Must be identical to the Id used in the height table.
Source *	A reference to the origin of the orthometric height (e.g. Linadj section or authority).
Archive	A reference to where the source document is archived (e.g authority or Government Archives reference)
Comments	Explanations not covered by the other fields (max 80 characters)

**Comments table**

Sequence #	Unique station identifier, used to link tables.
Comments	General comments about the site not covered elsewhere

**Fieldbooks table**

Sequence #	Unique station identifier, used to link tables.
Fieldbook number	Official number of a NatMap/AUSLIG field book used for this site. May be more than one per site.
Archive reference	A reference to where fieldbook is archived (e.g authority or Government Archives reference)

**StationMark table**

◆ The *Station mark* table describes the mark to which all information refers

Sequence #	Unique station identifier, used to link tables.
Beacon	Description of the beacon over the survey mark (if any) (e.g. rock cairn, steel quad)
Mark	Description of the survey (ground) mark (e.g. brass plaque in concrete)

**Station Diagram table**

Sequence #	Unique station identifier, used to link tables.
Diagram	Diagram or image of the station or its environment. May be many per station.

**Station Access table**

The *Station Access* table describes how to get to the station.

Sequence #	Unique station identifier, used to link tables.
Description	General description of how to find your way to the station (landmarks, mileages etc).
Method *	The type of transport required (e.g. helicopter, 4WD or 2WD vehicle, boat etc)
Authority *	The agency who compiled the access information given
Time	The time (usually in minutes) required to access the station. This refers to the penultimate access on foot

**Reference marks table**

The Reference Mark table describes each reference mark and its relative position to the main station mark. The Reference Object used for the orientation of the angular measurements is included in this

Sequence #	Unique station identifier, used to link tables.
Reference mark order	A record counter which gives the order of the reference marks at each site.
Description	A description of the reference mark (e.g. Ramset nail in rock) Repeated for each reference mark (including the Reference Object)
Name	The official name of the reference mark (e.g. RM1, or perhaps SSM1224, etc) Traditionally, as viewed from the station mark, they are numbered clockwise, with RM1 being the first one from due north. Repeated for each reference mark (including the Reference Object)
Distance	The horizontal distance from the station mark to the reference mark, in metres. Repeated for each reference mark (including the Reference Object)
Direction	The direction from the reference object to the mark (degrees, minutes and seconds) Repeated for each reference mark including the Reference Object)
Diff height	The difference in height from the station mark to the reference mark, in metres. Repeated for each reference mark (including the Reference Object)
Orientation	The orientation used on the RO for the directions (e.g. magnetic, true, local)
Reference mark source	The origin of the reference mark information (e.g. station summary, fieldbook, or an agency).

**Facility table**

- ◆ The *Facility* table links a group of sites which share a common attribute or theme (e.g. the Australian Fiducial Network or marks at Stromlo SLR observatory). This allows reports for these themes to be easily extracted easily.

Sequence #	Unique station identifier, used to link tables. Repeated for as many facilities as required.
Facility name	The unique name of the facility.

**Station Summary**

The Station Summary table gives, in digital format, the miscellaneous information traditionally found on the hardcopy station summary. For new stations, this could be the authority who provided the information in this table.

Sequence #	Unique station identifier, used to link tables.
Authority ID *	The agency who produced the hardcopy station summary from which the information was extracted.
Date established	Date the station was established
Established by *	The authority who established the station
Date last visited	The date the station was last visited
Last visited by *	The authority who last visited the site
Last Update	The date the station summary was last updated.
Environment *	Environmental restrictions on the site (e.g. national park, Antarctic)
State overlap 1 *	Where the site is within about 50 km of a State/Territory boundary, this field indicates the adjoining state
State overlap 2 *	Where the site is within about 50 km of two State/Territory boundaries, this field indicates the second adjoining state
Date original mark established	Where the mark has been reinstated in the identical position as an earlier (original) mark, this field gives the date of the establishment of this original mark.
Original mark established by *	Where the mark has been reinstated in the identical position as an earlier (original) mark, this field gives the agency who established this original mark.
Original observations	The type of observations used to first establish the position of this station (e.g. traverse, triangulation or GPS)
Other observations 1 *	Subsequent geodetic observations at the station (e.g. traverse, triangulation or GPS)
Other observations 2 *	Subsequent geodetic observations at the station (e.g. traverse, triangulation or GPS)
Other observations 3 *	Subsequent geodetic observations at the station (e.g. traverse, triangulation or GPS)
Other observations 4 *	Subsequent geodetic observations at the station (e.g. traverse, triangulation or GPS)
Other observations 5 *	Subsequent geodetic observations at the station (e.g. traverse, triangulation or GPS)
Station summary authority *	The agency who produced the hardcopy station summary for the site.
Station summary year	The date the hardcopy station summary was produced.
Photo category *	The type of photo identification of the mark (e.g. area ident, abs imagery)
Photo held by *	The agency who holds the photography of the site
Photo scale	The scale of the site photography
Photo year	The vintage of the site photography

Archive	A reference to where the site photography is archived (agency of Govt archives number).
---------	---

\* Indicates that the contents of this field are to be selected from a table of possibilities (data dictionary)