

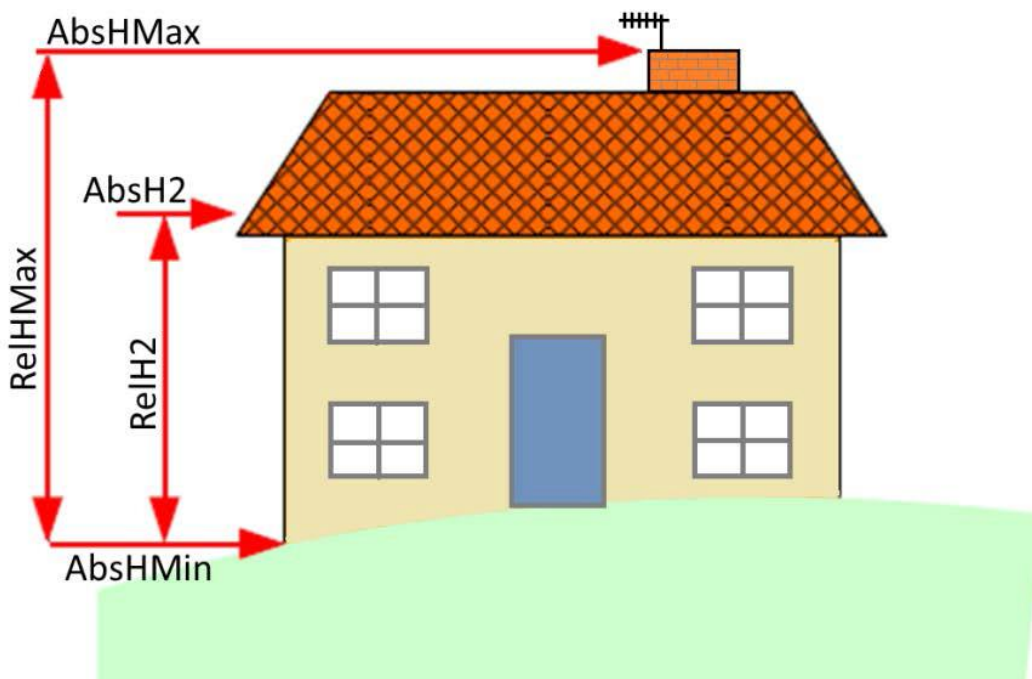
OS Building Height Attribute – Detailed Product Information

OS MasterMap Topography Layer – Building Height Attribute consists of three absolute height values and two relative height values for each building polygon. All heights have been calculated in metres to one decimal place.

The OS Building Height Attribute dataset comprises the following fields:

Attributes	Data_Type	Description
OS_TOPO_TOID	String	Unique feature identifier of the topographicArea building polygon taken from OS MasterMap Topography Layer.
OS_TOPO_VERSION	Integer	The version number of the TOID for which the height values were calculated, taken from OS MasterMap Topography Layer.
BHA_PROCESSDATE	Date	The date that the Building Height Attribute values were calculated for the given OS_TOPO_TOID.
TILEREF	String	The 5km National Grid tile reference that the topographicArea building polygon falls within. Tile references follow the structure, for example, SX99SW.
ABSHMIN	Real	See description below
ABSH2	Real	See description below
ABSHMAX	Real	See description below
RELH2	Real	See description below
RELHMAX	Real	See description below
BHA_CONF	Integer	A qualitative assessment of the confidence of the height statistics for each topographicArea building polygon – see table below.

Attribute Description:



Absolute heights

The absolute building heights describe the height of the building at three distinct points. They are measured against Ordnance Datum Newlyn (ODN) and require the use of other height products (for example, OS Terrain 5) to give meaningful heights to the building features. If we have been unable to calculate a valid value for any of these attributes the field will be populated as NULL.

AbsHMin

AbsHMin is the absolute minimum height of the intersection of the external building walls and the underlying ground surface.

AbsH2

AbsH2 is the absolute height of the base of the roof, that is, where the roof intersects the principal part of the building. The principal part of the building is defined as the main original structure, excluding elements at higher or lower elevation, whether original or added subsequently. This is likely to be similar to, but is not the same as, the roof eave height.

AbsHMax

AbsHMax is the absolute height of the highest point on the building, including any structures, but excluding features where the horizontal cross-section of the roof section or structure is less than 0.3m². The term structure refers to features such as chimneys, plant housings and machinery.

Relative heights

Relative building heights have been generated from the above absolute height values. These provide height values that can be utilised without the use of other height products. If we have been unable to calculate a valid value for any of these attributes the field will be populated as NULL.

The equations used to compute these relative heights from the absolute heights are shown below with a description of the heights.

RelH2

$$\text{RelH2} = \text{AbsH2} - \text{AbsHMin}$$

RelH2 is the relative building height from the base of the building (AbsHMin) to the height of the base of the roof (AbsH2). If we have been unable to calculate a valid value for either of these attributes the field will be populated as NULL.

RelHMax

$$\text{RelHMax} = \text{AbsHMax} - \text{AbsHMin}$$

RelHMax is the relative building height from the base of the building (AbsHMin) to the height of the highest point on the building (AbsHMax).

BHA_CONF Values:

Value	Confidence	Description
10	High	Buildings that can be represented well by the Building Height Attribute values and for which we do have a high confidence in the geometric accuracy of the values.
20	Moderate	Buildings that can be represented well by the Building Height Attribute values but where we do not have a high confidence in the geometric accuracy of the height values.
30	Low	Buildings that have a complex geometry which cannot be accurately represented using the Building Height Attribute values.
90	Incomplete	Buildings for which we have not been able to calculate some or all of the Building Height Attribute values.
99	None	Buildings for which the confidence level of the Building Height Attribute values has not been assessed.

Source Data and Methodology:

The absolute heights are denoted with the prefix 'Abs' while the relative heights are denoted with the prefix 'Rel'.

The absolute heights require the use of additional terrain height information to provide context to these heights, such as by using them in conjunction with the OS Terrain 5 DTM product. The relative heights can be used in isolation to provide a third dimension to buildings while all other features will be flat, as they refer only to the height of the building, rather than height above Ordnance Datum Newlyn (ODN).

Please be aware that the building heights are calculated within existing OS MasterMap Topography Layer building polygons, which are captured for use in a 2D environment. Where a building has several different roof levels the existing Topography Layer building polygon is not split to reflect the multiple roof heights associated with the building. Therefore buildings with multiple roof heights are difficult to accurately represent within this dataset.

Issues with Data:

OS MasterMap Building Height Attribute contains the TOID attribute from OS MasterMap Topography Layer to enable it to be joined to the Topographic Areas feature type within Topography Layer.

The Building Height Attribute also contains the VERSION attribute from OS MasterMap Topography Layer to identify which version of the TOID the building height values were calculated for.

In certain cases the VERSION number for a given TOID in OS MasterMap Topography Layer – Building Height Attribute may differ from the VERSION number in your Topography Layer holding. This can occur either because the feature has been modified in Topography Layer since the Building Height Attribute values were calculated or because you do not have the most recent holding of Topography Layer.

In certain cases a Building TOID in OS MasterMap Topography Layer may not have a corresponding row in OS MasterMap Building Height Attribute. This can occur either because the Building Height Attribute values were calculated using an older version of OS MasterMap Topography Layer and it is a new TOID that has been added since or because you are using an older version of OS MasterMap Topography Layer and the TOID has been deleted in a later refresh.