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SWECO

Height of Buildings

Building Standards Guidance Note 18

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Introduction

It is critical that design teams use the correct method of determining the height of a building to ensure that the guidance given in Approved Document B (AD B) to establish compliance with the Building Regulations, is used appropriately. There are also some key regulatory uses of building height to consider.

This guidance note covers the various definitions of height used to establish:

- The level of fire precautions within a building, and
- Whether a building is a Higher Risk Building (HRB) and therefore subject to the Gateway process under the Building Safety Regulator (BSR).

There are two heights that are considered:

- **Top Storey Height**
- **Building Height**

Guidance

Top Storey Height

This is the height used for determining fire precaution standards within a building. This height is generally associated with the guidance for B1, B3, B5 and also for the definition of buildings relevant to Regulation 7(2), given in Building Regulation 7(4).

Key to establishing this height is understanding what qualifies as a storey.

A roof is not a storey if it only has access for maintenance and repair.

If the roof serves as an amenity space it would be a storey for the purpose of establishing the top storey height of the building.

If a top storey is used exclusively for plant this storey does not count towards the height.

This height is relevant when considering guidance on:

- Level and complexity of provision and protection of means of escape
- Provision of Sprinklers
- Compartmentation
- Structural Fire Resistance

Measuring this height is illustrated in Diagram D6, extracted from AD B, below.

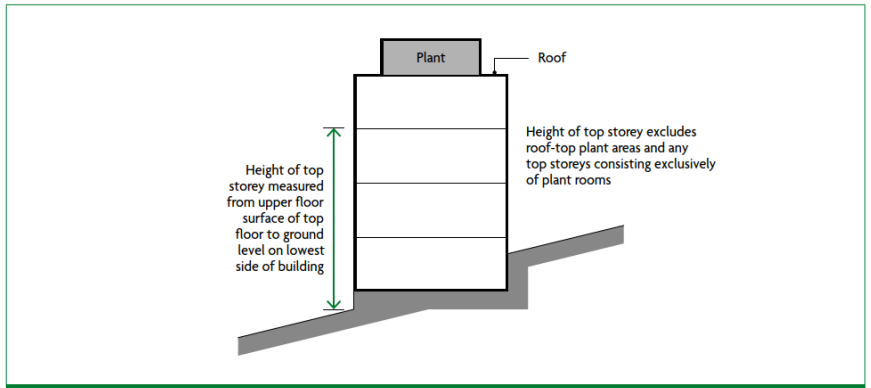

Diagram D6 Height of top storey in building

Guidance

Building Regulation 7(4) uses the top storey height of 18m in the definition of buildings relevant to Regulation 7(2). This is measured from the lowest external ground level to the top of the floor surface of the storey as in Diagram D6.

It should be noted that in determining the top storey height when applying the guidance to B5, the height is taken from the fire brigade access level, rather than the lowest external ground level, to determine the level of firefighting provisions.

The top storey height is used, with a notable deviation, to determine if a building is an HRB. The important distinction is that the top storey must be enclosed and not used exclusively for housing plant. See diagram 11 and 12, extracted from the .gov guidance on HRB.

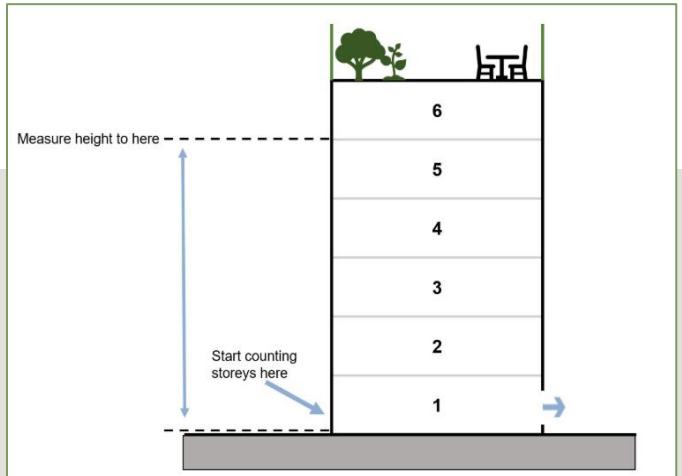

Diagram 11 shows a six-storey residential tower with a rooftop garden.

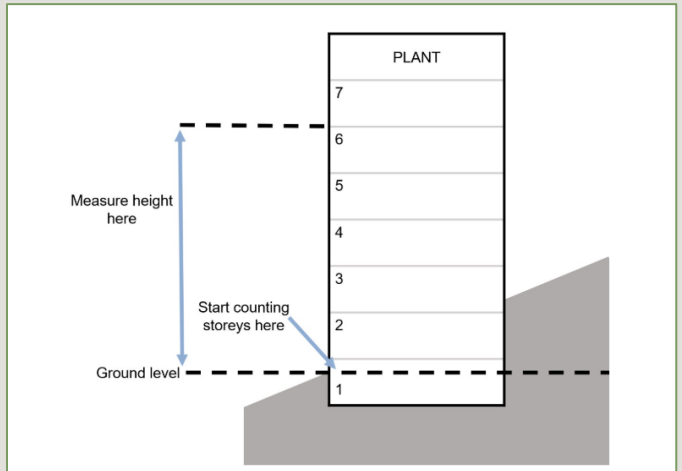

Diagram 12 shows a seven-storey residential tower on sloped ground with a rooftop plant room.

Guidance

It has been reported that a First Tier Tribunal found against this definition, where a roof was used as an amenity space, and said that it should have been counted as a storey for height purposes. However, an Upper Tribunal set aside this ruling. Even so, it is understood the government is still considering the confusion in the industry the definition has caused. Currently the definition stands. So, where a roof that serves as an amenity space would be a storey for the purposes of Part B it is not for the purposes of establishing the top storey height on HRBs.

Guidance

Building Height

Broadly speaking, the Building Height is determined by establishing the mean ground level and roof height, see Diagram D4 extracted from AD B.

This height's use is limited to two considerations around external walls.

The first is when considering the guidance on "Reaction to fire performance of external surface of walls" given in the B4 section of Approved Document B 10.5.

External surfaces

10.5 The external surfaces (i.e. outermost external material) of external walls should comply with the provisions in Table 10.1. The provisions in Table 10.1 apply to each wall individually in relation to its proximity to the relevant boundary.

Table 10.1 Reaction to fire performance of external surface of walls

Building type	Building height	Less than 1000mm from the relevant boundary	1000mm or more from the relevant boundary
'Relevant buildings' as defined in regulation 7(4) (see paragraph 10.14)		Class A2-s1, d0[1] or better	Class A2-s1, d0[1] or better
All 'residential' purpose groups	More than 11m	Class A2-s1, d0[2] or better	Class A2-s1, d0[2] or better
	11m or less	Class B-s3, d2[2] or better	No provisions

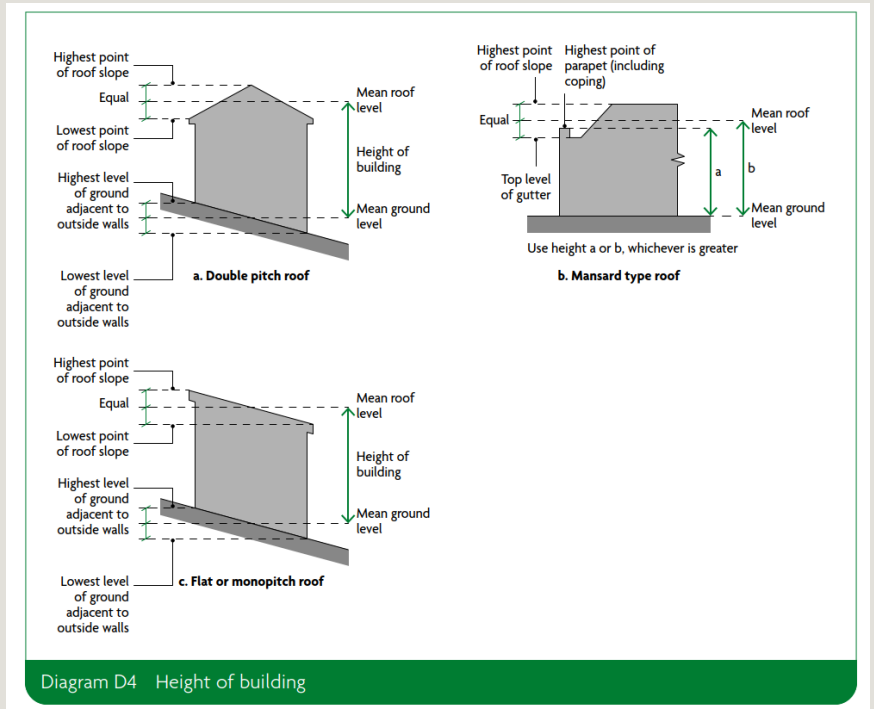

Diagram D4 Height of building

Guidance

Interestingly, BS 9991 2024 does not follow this approach, and uses height of top finished floor level above ground level to determine applicable guidance for external wall surfaces. This may be an indication that the guidance in AD B will be altered for consistency purposes as part of the current review. BS 9999 2017 currently uses the same convention as AD B. This standard is under review as well. It seems logical to make the guidance approach of BS 9999 consistent with that of BS 9991 2024.

Secondly it is used with regards to Material Change of Use. Regulation 6 stipulates which parts of Schedule 1 should be applied. B4(1) is captured by 6 c) “in the case of a building exceeding eleven metres in height”. This means where a building subject to any class of material change of use is over 11m in height, consideration must be given to the existing external walls compliance with current day guidance.

The definition of height, used in Regulation 6, is contained in Building Regulation 2 - Interpretation.

“Height” means the height of the building measured from the mean level of the ground adjoining the outside of the external walls of the building to the level of half the vertical height of the roof of the building, or to the top of the walls or of the parapet, if any, whichever is the higher”. This definition is illustrated in Diagram D4 on page 6 of this guidance note extracted from AD B.

Guidance

Summary

Height Type	Application	Measurement method
Top Storey Height – Fire Precautions	B1, B3, Reg 7(2)	Diagram D6 ADB V1&2
Top Storey Height – Fire Precautions	B5	Taken from Fire Service Access Level
Top Storey Height – HRB	Is it an HRB	Diagram 12 and 13 of government guidance on HRBs
Building Height	Material Change of Use B4(1) External Walls	Diagram D4 ADB V1&2
Mean Roof Level	Escape into a courtyard or inaccessible back garden (Dwellings only)	Diagram 2.5 of AD B1

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