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## Height and floor space ratio

The purpose of this practice note is to provide guidance on the building height and floor space ratio provisions in the standard instrument and how they are to be applied in the preparation of principal local environmental plans.

### Introduction

Development standards for height and floor space ratios (FSR) are valuable planning tools for implementing strategic planning objectives and providing certainty to the community and land owners about the acceptable bulk and scale of development.

Height and FSR controls are used to help establish the primary building envelopes for new development and the gross floor areas available for retail, commercial and residential activities in centres. It is important that a consistent approach to the identification and application of height and FSR controls is utilised so that these controls are clearly understood by development and community interests alike.

### Standard instrument provisions

#### Clause 4.3 – Height of buildings

- This clause allows councils to set maximum building heights for development on the Height of Buildings Map.
- Different maximum heights may be applied for different zones and for different locations within the same zone.

#### Clause 4.4 – Floor space ratio

- This clause allows councils to specify maximum FSRs on a Floor Space Ratio Map.
- Different maximum FSRs may be applied for different locations within the same zone.
- The clause also allows for a table to be used in conjunction with a map so that separate FSRs may be set out depending on the mix of land uses or the dimensions of the site.

#### Clause 4.5 – Calculation of FSR and site area

- This clause provides a method of calculating FSR in a consistent manner by defining FSR and by setting out rules for the calculation of site area for the purpose of applying permitted FSRs.
- Clause 4.5 should be adopted if clause 4.4 is adopted.
- Attachment B contains examples of how to calculate FSR and site area in various circumstances in accordance with this clause.

#### Definitions

- Building height.
- Gross floor area.

### Requirements for LEP preparation

#### General requirements

Councils adopting clauses 4.3 and 4.4 must insert appropriate objectives into the clause and prepare the accompanying maps.

Height of Buildings Map and the Floor Space Ratio Map are to be prepared in accordance with *Standard technical requirements for LEP maps* (NSW Department of Planning 2007). Heights are to be shown in metres.

Councils are not able to include definitions of FSR or methods of calculating site area for the purpose of applying FSRs that are inconsistent with clause 4.5.

#### Height and FSR controls to be set out in LEPs

Although these clauses are optional in the standard instrument it is the Department's policy that building height and FSR controls be applied to strategic centres and set out within local environmental plans (LEPs) rather than development control plans (DCPs). This is to

provide certainty with respect to these key development standards and to ensure that any variations comply with the provisions of clause 4.5 – Variation to development standards.

DCPs may however include additional built form provisions such as building setbacks, storey controls and details of three-dimensional building envelopes. These should not exceed the maximum height and FSR controls that are set in the LEP.

### Heights and FSRs to be identified for strategic centres

Height and FSR controls should be adopted for all strategic centres nominated in the Metropolitan Strategy, a subregional strategy or a regional strategy, i.e. Global Sydney, regional cities, specialised centres and major centres under the Metropolitan Strategy and subregional strategies and regional cities and major regional centres nominated under a regional strategy.

In addition councils are encouraged to consider applying height and FSR controls in smaller local centres (i.e. towns, villages and neighbourhoods), where increased densities are planned or where density controls will have a substantial impact on the economic value of land.

Similarly councils should consider applying height and FSR controls where there is development pressure for taller buildings in sensitive locations, such as those centres along the coast, where there is the potential for significant environmental impacts.

In determining which local centres should have height and FSR controls imposed, councils should work with their regional office of the Department of Planning.

### Defining the extent of centres

Where height and FSR controls are required within centres in the Metropolitan Region they should be applied for:

- all business zones in the relevant centre radius
- the R3 Medium Density Residential zone and R4 High Density Residential zone in the designated centre radius or adjoining a business zone within the centre
- the R1 General Residential zone in the designated centre radius or adjoining a business zone within the centre where medium or high density development is to be permitted or significant housing growth is planned.

For major regional centres nominated under a regional strategy, councils should work with their regional office in the Department of Planning to define the extent of each centre. As a general rule, this would include the main business zones of the centre as well as any residential zones where significant housing growth is planned.

### Height and FSR controls in other areas

In areas where a regional or subregional strategy does not apply, councils should work with their regional office in the Department of Planning to consider whether they should apply height and FSR controls in centres.

Councils are also encouraged to consider the merit of applying height and FSR controls in other areas particularly where urban growth is planned such as the R3 Medium Density Residential and R4 High Density Residential zones.

### Variations to these requirements

The Department recognises that there may be cases where the application of height and FSR controls outlined above may not be practical and in such instances councils should contact their regional office in the Department of Planning to discuss whether a departure is justified.

### Other issues and considerations

In general, if councils wish to adopt a building height development standard then a FSR development standard should also be applied, and vice versa. There may be exceptions to this, such as in rural or open space areas, where in some cases a height control may be appropriate but FSR is not relevant.

*Standard technical requirements for LEP maps* (NSW Department of Planning 2007) details the requirements for development standard maps and includes a section on complex development standards.

### Further information

A copy of this practice note, the standard instrument for LEPs, the Metropolitan Strategy, and regional and subregional strategies can be accessed on the Department of Planning's website [www.planning.nsw.gov.au](http://www.planning.nsw.gov.au).

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### Important note

This note does not constitute legal advice. Users are advised to seek professional advice and refer to the relevant legislation, as necessary, before taking action in relation to any matters covered by this note.

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## **ATTACHMENT A. FREQUENTLY ASKED QUESTIONS**

**Q:** Do maximum heights and FSRs have to be identified for the whole local government area?

**A:** No. Heights and FSRs are only required in strategic centres and other areas as identified in this practice note.

**Q:** Can different FSRs be set depending on the mix of land uses on the one site or the site area?

**A:** Yes, although this approach will usually be suitable only in centres and redevelopment areas. A table may be added to clause 4.4 to set out more detailed FSR standards in these cases. The table should refer to an area identified on the FSR Map (see complex mapping standards in the LEP mapping requirements).

**Q:** Can storeys be used on the Height of Buildings Map instead of metres?

**A:** No. Heights should be shown in metres on the Height of Buildings Map. The maximum number of storeys in a building can still be specified as a development control (within the overall maximum building height in metres) as this can be useful for achieving certain design outcomes. However this should be addressed in the DCP.

**Q:** Can wall or ceiling heights be specified in the LEP as an alternative?

**A:** If wall or ceiling heights are to be specified these should be addressed in the DCP.

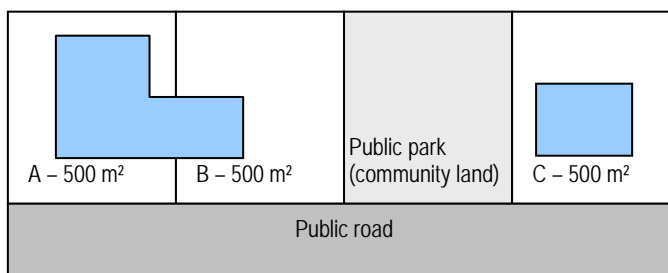
## ATTACHMENT B. CALCULATION OF FLOOR SPACE RATIO AND SITE AREA – EXPLANATION OF KEY PROVISIONS

The following is an explanation of some of the key provisions relating to the calculation of floor space ratio (FSR) and site area in accordance with clause 4.5 in the standard instrument for principal local environmental plans.

### 1. Only lots that share a common boundary to be included in site area

Where a proposed development will be carried out on two or more lots, only those lots that share a common boundary may be aggregated as part of a site area for applying a FSR. If a development application (DA) relates to two or more lots that do not share a common boundary (or which are separated by a public place or community land), then separate calculations must occur for the purposes of applying FSR development standards to the land.

Figure 1. Floor space ratio for all land — 3:1



**Example 1:** Two new buildings are proposed to be erected over three lots in Figure 1: Lots A, B and C. Only Lots A and B may be aggregated to form a single site area for the purposes of applying a FSR. A separate calculation must occur for Lot C, as it does not share a common boundary with the other lots. The community land must be excluded.

To comply with the FSR development standard for the site, the maximum gross floor area (GFA) for the proposed development would be determined as follows:

$$\begin{aligned}
 \text{Calculation 1: Max. GFA (Lots A + B)} &= [\text{site area (Lot A) + site area (Lot B)}] \times \text{FSR} \\
 &= [500 \text{ m}^2 + 500 \text{ m}^2] \times 3:1 \\
 &= [1000 \text{ m}^2] \times 3:1 \\
 &= 3000 \text{ m}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{Calculation 2: Max. GFA (Lot C)} &= \text{site area (Lot C)} \times \text{FSR} \\
 &= 500 \text{ m}^2 \times 3:1 \\
 &= 1500 \text{ m}^2
 \end{aligned}$$

Up to 3000 m<sup>2</sup> of floor area could potentially be constructed on the combined sites A and B without exceeding the FSR standard, and up to 1500 m<sup>2</sup> on site C. However the Max GFA cannot be aggregated between Lots (A + B) and Lot C to facilitate compliance with the FSR standard:

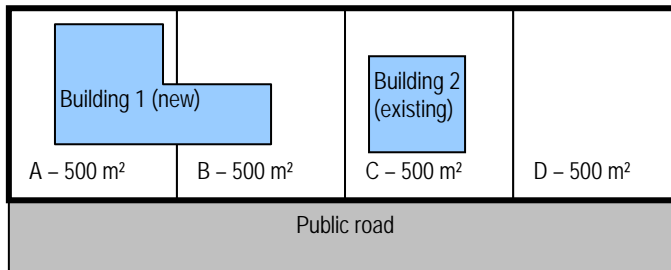
	Maximum GFA to comply with FSR	Proposal that complies with FSR	Proposal that does not comply with FSR
Lots A + B	3000 m <sup>2</sup>	2800 m <sup>2</sup> ✓	2600 m <sup>2</sup> ✓
Lot C	1500 m <sup>2</sup>	1400 m <sup>2</sup> ✓	1600 m <sup>2</sup> ✗
(Total)	(4500 m <sup>2</sup> )	(4200 m <sup>2</sup> )	(4200 m <sup>2</sup> )

In the second calculation example, the development does not comply with the FSR for Lot C.

## 2. Only significant development to be included

Only lots on which significant development is proposed may be included in site area.

Figure 2. Floor space ratio for all land — 3:1



**Example 2:** The site area for a development application (DA) is identified as Lots A, B, C and D (see Figure 2). The application proposes:

- a new building on Lots A and B (Building 1)
- a complete refurbishment of an existing building on Lot C (Building 2, existing GFA of 1000 m<sup>2</sup>)
- no works proposed on Lot D, which is within the same ownership.

Only Lots A, B and C may be included in the site area for the purposes of applying a FSR because they are the only lots on which significant development is proposed. The maximum permissible GFA would be as follows:

$$\begin{aligned}
 \text{Calculation 1: Max GFA (sites A + B + C)} &= [\text{site area (Lot A) + site area (Lot B) + site area (Lot C)}] \times \text{FSR} \\
 &= [1500 \text{ m}^2] \times 3:1 \\
 &= 4500 \text{ m}^2
 \end{aligned}$$

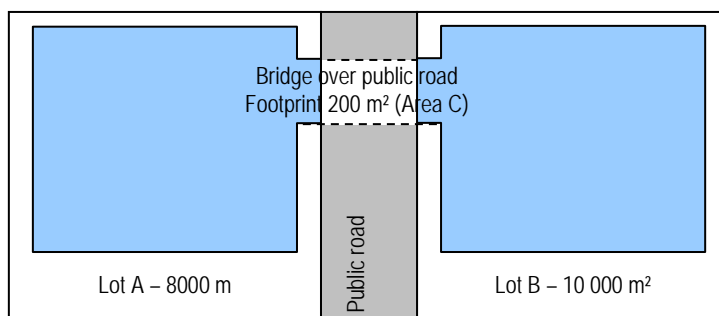
The existing floor area of Building 2 (1000 m<sup>2</sup>) which is to be retained and substantially refurbished, must be taken into account as required under subclause (8). Therefore the maximum additional GFA that may be created by the proposed development will be (4500 m<sup>2</sup> – 1000 m<sup>2</sup>) = 3500 m<sup>2</sup>.

## 3. Certain public land to be considered separately

Where development is proposed on, above, or below community land or a public place, there must be a separate calculation of FSR for that area of land.

The effect of this provision will need to be taken into account by councils when setting FSRs that will apply to community land or public places (within the meaning of the *Local Government Act 1993*).

Figure 3. Floor space ratio for all land — 3:1



**Example 3:** An application is lodged for a shopping centre to be built on Lots A and B which are separated by a public road (see Figure 3). The two parts of the shopping centre are to be joined by a 2 storey bridge over the public road, which will be completely enclosed and lined with shops. The footprint for the area of the bridge that is over the public road is 200 m<sup>2</sup> (Area C).

The effect of subclause (7) is that any area of land that is on, above, or under community land or a public place must be subject to a separate FSR calculation. The site area for the purposes of applying a FSR is the area which will be ‘occupied or physically affected by the proposed development’ — in this case the footprint of the proposed bridge. Therefore, for the area of proposed development that is over the public road, the maximum GFA permitted without exceeding the FSR for the land would be:

$$\begin{aligned} \text{Calculation 1: Max. GFA (Area C)} &= [\text{area occupied or physically affected by the proposed development}] \times \text{FSR} \\ &= [200 \text{ m}^2] \times 3:1 \\ &= 600 \text{ m}^2 \end{aligned}$$

As the proposal is for a two storey bridge, with a GFA of 400 m<sup>2</sup>, the proposal meets the FSR standard applying to the land. However, the additional 200 m<sup>2</sup> that could potentially be built without exceeding the FSR development standard cannot be ‘transferred’ to either Lot A or Lot B – those Lots must be subject to separate FSR calculations.

As Lots A and B do not share a common boundary once the land that is a public place or community land (i.e. the public road) is excluded, they must be subject to two separate FSR calculations, and potential GFA cannot be ‘transferred’ between the sites, i.e.:

$$\begin{aligned} \text{Calculation 2: Max. GFA (Lot A)} &= [\text{site area (Lot A)}] \times \text{FSR} \\ &= [8000 \text{ m}^2] \times 3:1 \\ &= 24\,000 \text{ m}^2 \end{aligned}$$

$$\begin{aligned} \text{Calculation 3: Max. GFA (Lot B)} &= [\text{site area (Lot B)}] \times \text{FSR} \\ &= [10\,000 \text{ m}^2] \times 3:1 \\ &= 30\,000 \text{ m}^2 \end{aligned}$$

Therefore a maximum of 24 000 m<sup>2</sup> can be built on Lot A, a maximum of 30 000 m<sup>2</sup> on Lot B, and a maximum of 600 m<sup>2</sup> can be built on Area C. The GFA may not be aggregated across the three sites for the purposes of complying with the FSR development standard.

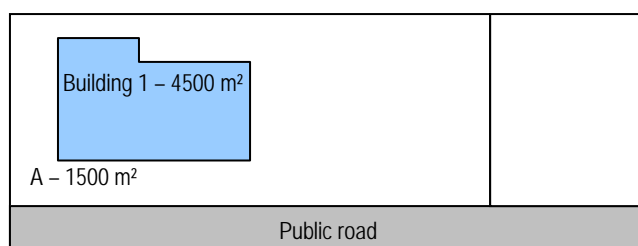
	Maximum GFA to comply with FSR	Proposal that complies with FSR	Proposal that does not comply with FSR
Lot A	24 000 m <sup>2</sup>	22 000 m <sup>2</sup> ✓	18 000 m <sup>2</sup> ✓
Lot B	30 000 m <sup>2</sup>	30 000 m <sup>2</sup> ✓	34 400 m <sup>2</sup> ✗
Area C	600 m <sup>2</sup>	600 m <sup>2</sup> ✓	200 m <sup>2</sup> ✓
(Total)	(54 600 m <sup>2</sup> )	(52 600 m <sup>2</sup> )	(52 600 m <sup>2</sup> )

In the second proposal, the development does not comply with the FSR for Lot B.

#### 4. Covenants to prevent ‘double-dipping’

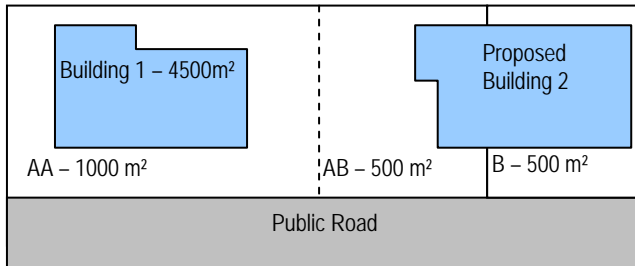
Covenants may be used by a consent authority to prevent a site area being used more than once to facilitate the creation of GFA on certain land (‘double-dipping’).

Figure 4A. Floor space ratio - 3:1



**Example 4:** In the above example in Figure 4A, Building 1 is approved on Lot A, which achieves the maximum permitted FSR for Lot A by containing 4500 m<sup>2</sup> of GFA. As the permissible FSR for that lot has been exhausted, the consent authority may decide to require as a condition of consent that a covenant be registered for Lot A which would prevent the use of any part of that site area in applying FSR to another site at a later date (see below).

Figure 4B. Floor space ratio — 3:1



If Lot A in Figure 4A were to be later subdivided (into Lots AA and AB) and Lot AB is bought by the owner of a lot next door, the covenant that is registered on Lot AB may prevent the site area of that Lot being used toward the calculating the permitted additional floor area for any new development. In this case, if an application were lodged to construct Building 2 on Lots AB and B, only the area of Lot B would be able to be included in the site area for the purpose of applying a FSR (see subclause [10]). To comply with the applicable FSR of 3:1, Building 2 would therefore be able to include a maximum of 1500 m<sup>2</sup> of GFA.

Councils should keep an up-to-date and accessible record of any such covenants that are imposed in relation to FSRs.