

# 1 Introduction to setback profiles

This section provides one way of describing building envelopes on a plan of subdivision. The method described in this section uses a series of building setback profiles to describe a 3-dimensional building envelope.

## 1.1 Three-dimensional building envelopes

Building envelopes set the parameters of a building on a lot. They are useful for showing the relationship between buildings on neighbouring lots and protecting the amenity of each building in relation to its neighbours.

A 2-dimensional building envelope sets out the maximum footprint of a building on the ground, by setting its maximum length and width.

A 3-dimensional building envelope is one that limits the height and other aspects of a building above the ground, as well as limiting the footprint of the building on the ground.

Three-dimensional envelopes provide more opportunities to plan each house so that it relates well to its neighbours.

A 3-dimensional building envelope, showing maximum heights of parts of the building, is necessary to address the overshadowing and overlooking impacts of a building.

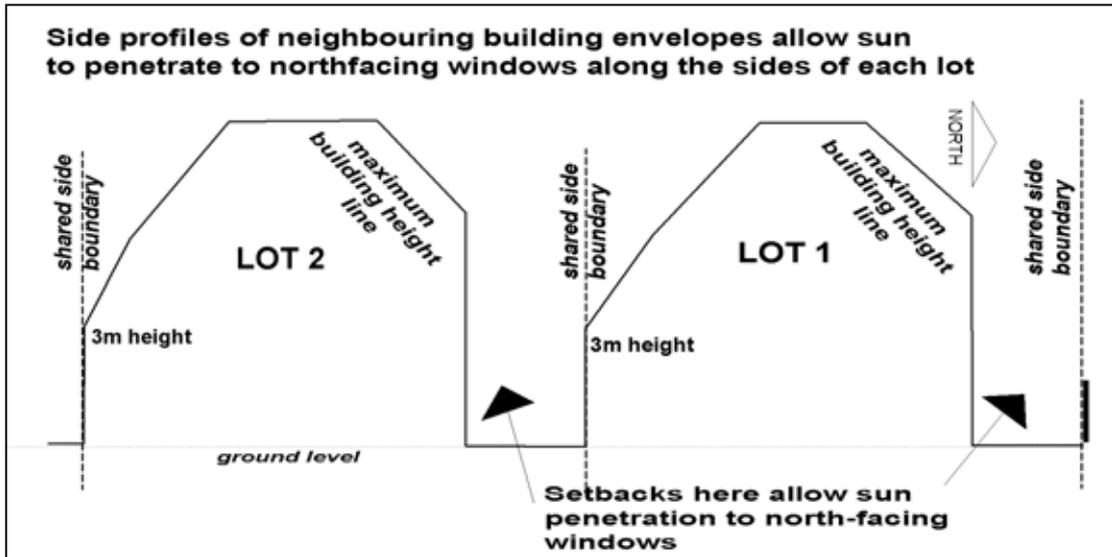
The examples of 3-dimensional envelopes in this section show one way of relating building envelopes on neighbouring lots in order to limit impacts of each building on its neighbours.

### **Solar access setbacks**

A simple example of the use of 3-dimensional building envelopes is their use in protecting solar access, and therefore energy efficiency.

A series of 3-dimensional solar access envelopes can ensure that neighbouring buildings are far enough away from each other to allow sunlight to fall on each of their northern facades.

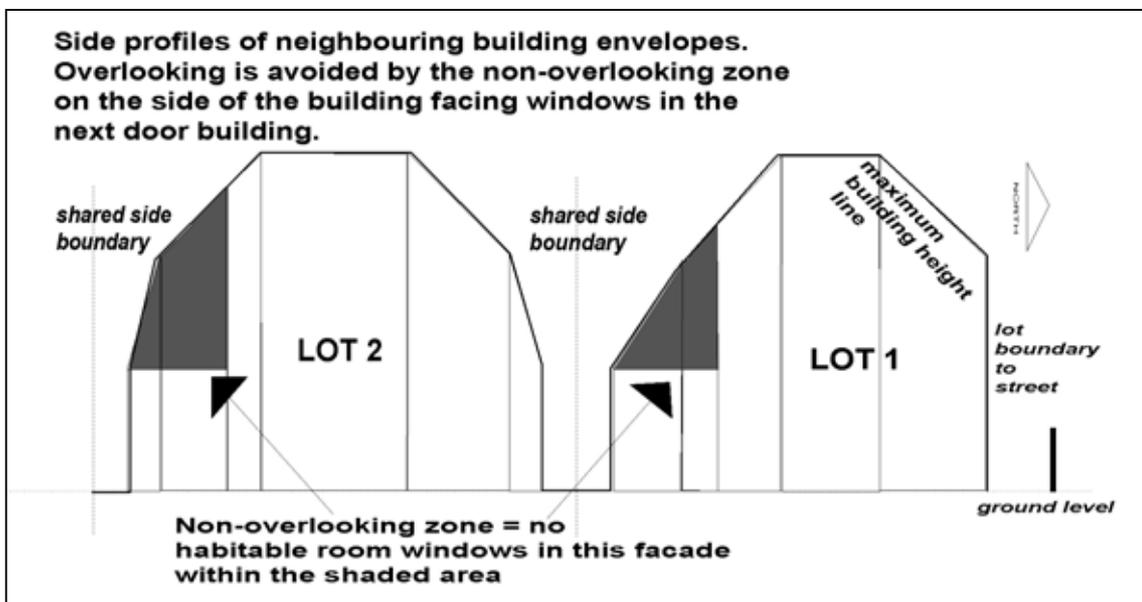
This use of envelopes to protect solar access to north facing windows and so promote energy efficiency is shown in the following diagram.



## Overlooking

Building envelopes can also be designed in 3-dimensions to protect visual privacy.

This diagram of a cross-section of two building envelopes on adjoining pieces of land illustrates how 3-dimensional envelopes can control overlooking between neighbours along a shared side boundary.

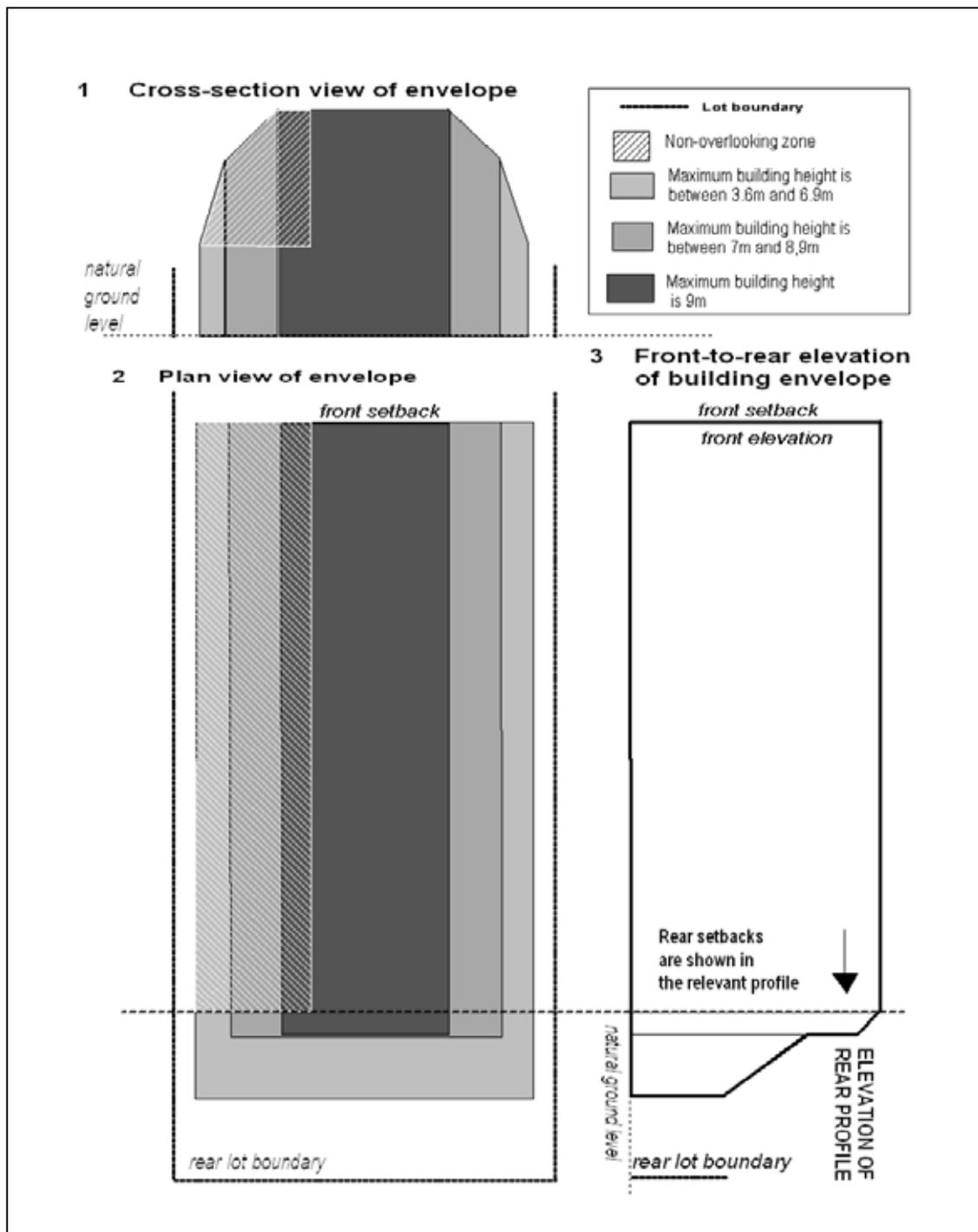


A 3-dimensional envelope for a lot needs to be represented in 2 dimensions on paper so that it can be included with other plans for the site. One way of indicating the extent of a 3-dimensional envelope on a plan is to use a series of diagrams showing the vertical sides, or planes, of the building envelope. These diagrams are setback profiles.

## 1.2 Setback profiles

Setback profiles are one way of making a building envelope work in 3 dimensions, to show the floor plan and height of a building. The profiles relate a setback from a lot boundary to a maximum allowable building height at that setback. Together, a series of intersecting profiles set the limits of what can be built on a lot.

The following diagram shows two side profiles and a rear profile for a lot and how those profiles correspond to a plan view of the envelope on the lot.



The sample profiles illustrated in Section 4 of this Part are designed for various lot orientations. Some are designed for side setbacks, and some for rear setbacks.

The following table indicates where each of the sample profiles in Section 4 of this Part of the Kit could be used.

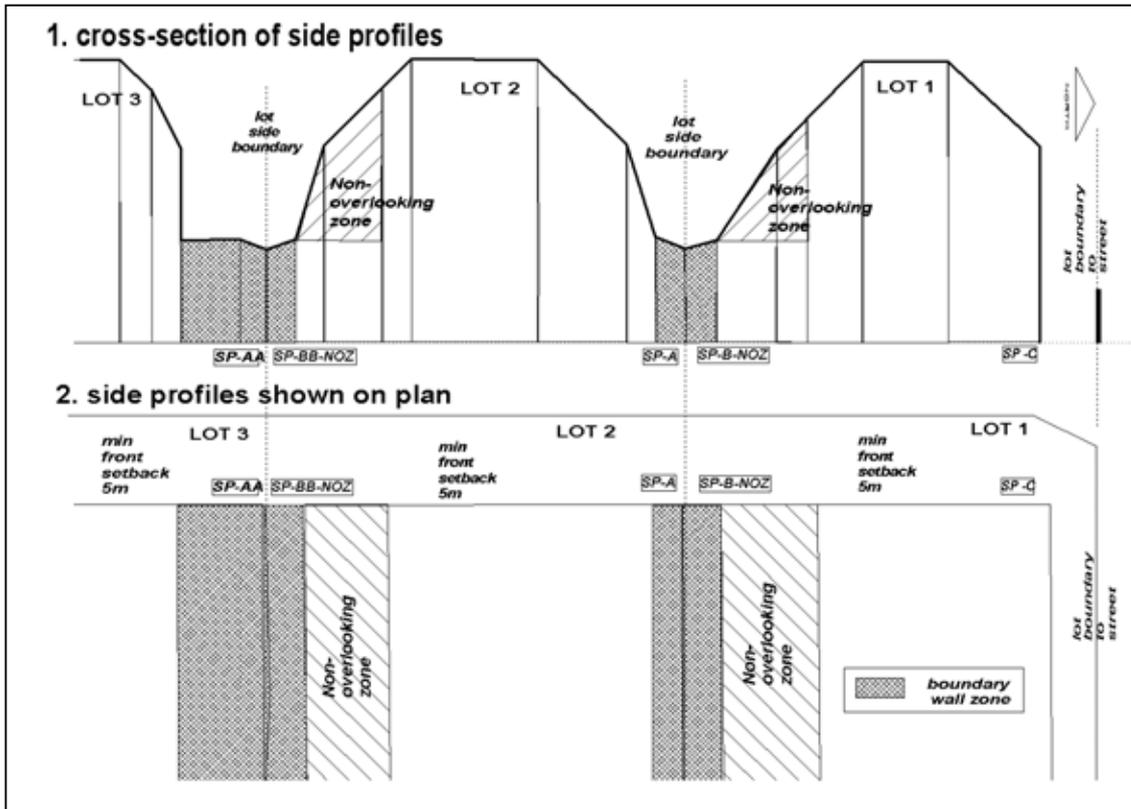
### Table of sample setbacks

<b>CODE</b>	<b>Name and Purpose of Setback Profile</b>
<b>Side profiles</b>	
SP-A	Side Profile A – for a side boundary facing north, east or west, and allowing habitable room windows within 3m of boundary.
SP-AA	<p>Side Profile AA – for a side boundary facing north, east or west with walls containing habitable room windows set back 3m or more along that side boundary to facilitate solar access to windows.</p> <p>This profile should be used for north-facing side facades wherever possible on wider lots, to promote and protect energy efficiency. The greater setback on the north side of the lot can be offset by modifying the side setback profile used on the south side of the boundary to allow more building on boundary, provided the south boundary does not adjoin a lot not in the agreement or restriction.</p>
SP-A-NOZ	Side Profile A (facing north, east or west) with a no-overlooking zone shown on the profile
SP-AA-NOZ	Side Profile AA – NOZ (north, east or west facing with habitable room windows set back 3m or more from boundary) with a non-overlooking zone shown on the profile. This profile would be rarely used, as devices to prevent overlooking could reduce the solar access to windows. It is preferable for such facades to face a non-overlooking zone on the neighbouring lot’s building envelope.
SP-B	Side Profile B – for a south-facing side boundary lot that is adjoining a lot with an envelope allowing habitable room windows within 3m of the boundary along that shared side boundary (e.g. SP-A)
SP-BB	Side Profile BB – for a south-facing side boundary adjoining a lot with an envelope specifying not allowing habitable room windows within 3m of that shared boundary (e.g. SP-AA)
SP-B-NOZ	Side Profile B (south-facing and adjoining lot allows windows within 3m of boundary) with a no-overlooking zone shown on the profile
SP-BB-NOZ	Side Profile BB (south-facing and adjoining lot does not allow windows within 3m of boundary) with a non-overlooking zone shown on the profile
SP-C	Side Profile C – for a side boundary where the adjoining lot is not in agreement or restriction. This profile only deals with height and setbacks (VPP Cl 54 standards A4, A10 and A11).
SP-D	Side Profile D – for a side boundary abutting a street or public open space.
SP-E	Side Profile E - setback profile for a north, east or west-facing side boundary adjoining the rear private open space of a lot in the same agreement or restriction.
SP-F	Side Profile F - Side profile for a south-facing side boundary adjoining the rear private open space on a lot in the same agreement or restriction.

SP-P	Side Profile P – Side profile for a side boundary intended for a party wall between adjoining lots. Party wall profiles would normally apply only to narrower “terrace” lots, for instance those under 10m in width.
SP-P-NOZ	Side Profile P (wall profile) with a no-overlooking zone shown on the profile. The profile caters for situations where the building may not be built to the party wall, and hence overlooking may occur. In a pair of facing party wall side profiles, only one would need a non-overlooking zone.
<b>Rear profiles</b>	
RP-A	Rear Profile A – Rear profile for a north, east or west-facing boundary adjoining the rear private open space of a lot in the same agreement or restriction, or a side boundary of a lot in the same agreement or restriction.
RP-B	Rear Profile B – Rear profile for a south-facing boundary adjoining the rear private open space of a lot in the same agreement or restriction. Profile is set back from south boundary to allow sunlight to private rear yards of both lots.
RP-C	Rear Profile C – For a rear boundary where the adjoining lot is not in same agreement or restriction. Deals only with height and setbacks (VPP Clause 54 standards A4, A10 and A11).
RP-X	Rear Profile X – the distance of the first setback from the rear boundary is shown on a plan. Intended for use on irregular lots or to vary rear setbacks on a lot by lot basis. Numbers written on each side of the code indicate the setback in metres from the rear boundary required at the junction of rear and side boundaries on that side of the lot, with setbacks between those two points defined by a straight line drawn between them.

## 1.3 Profiles and plan views

The diagram below shows how a series of side profiles, shown in cross section across several lots, correspond to setbacks shown on a plan.



In the plan view, the setback profiles are indicated by a setback profile code. Codes for setback profiles are explained below.

A boundary wall zone is also shown in this diagram. The concept of the boundary wall zone is covered below under the heading “Setbacks for different situations”.

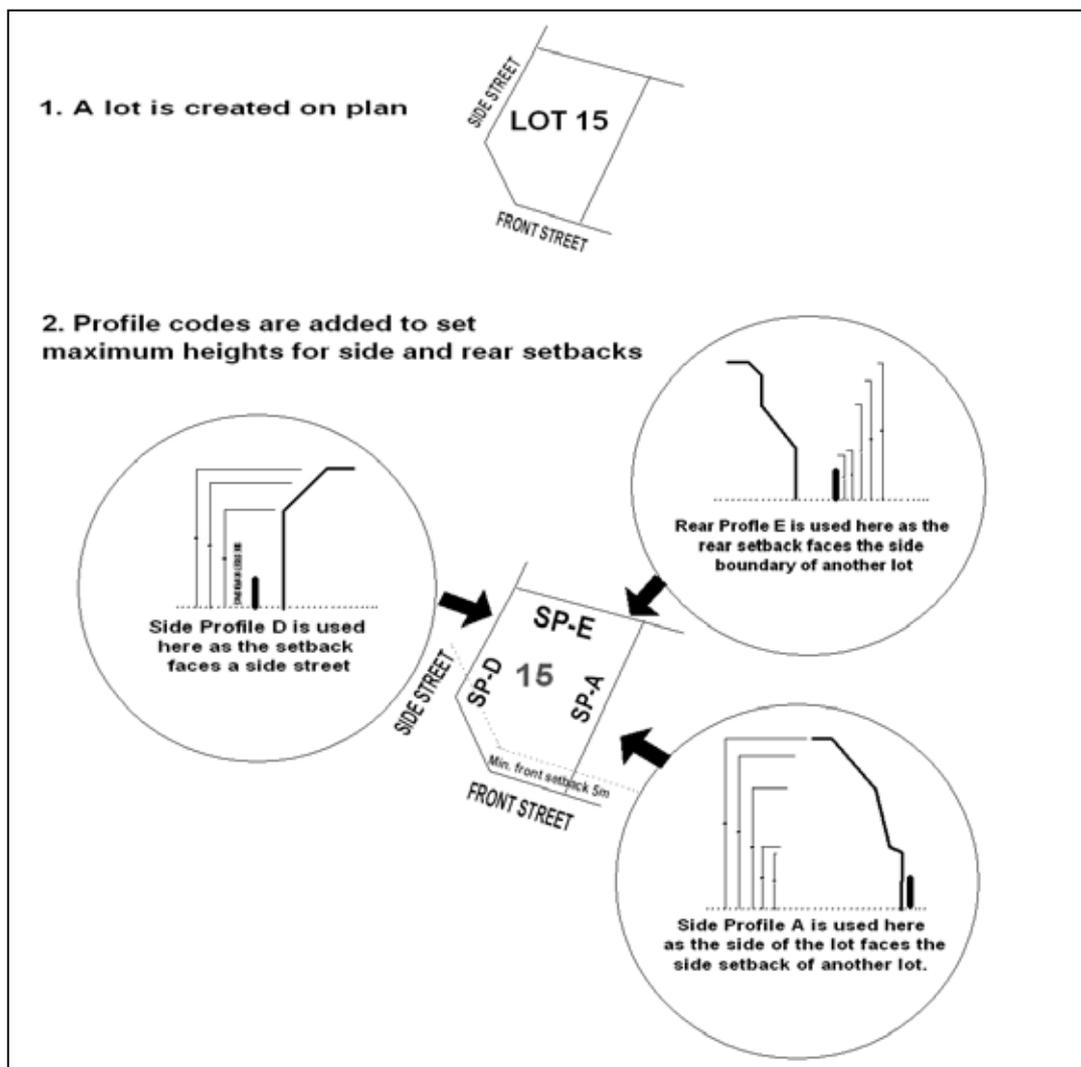
## 1.4 Codes for profiles

The various profiles that can be used to show the sides of the building envelope each have a short code name. Using codes to indicate the setback profiles that apply to each boundary saves space on the subdivision plan and helps keep the plan readable.

The codes indicating which profiles set the parameters of the envelope are written onto each lot in a plan of subdivision.

The codes, together with any dimensions on or with the plan, then define a 3-dimensional building envelope (height, width and length) within which buildings can be built on a lot.

The following diagram shows how a 3-dimensional envelope is put on a plan of subdivision by using setback codes along the various lot boundaries.



The profiles in Section 4 that have been designed for side boundaries have a code name beginning with SP. For example “SP-A” denotes Side Profile type A.

Profiles designed for rear boundaries have a code name beginning with RP.

The nearest code name to a boundary marked on the plan indicates the setbacks and maximum heights that will apply to buildings on or near that boundary.

If NOZ appears in the code name for a profile, it denotes a Non-Overlooking Zone. This means portions of the walls within this profile that will not be able to contain habitable room windows or raised open space with a direct view of the neighbouring property.

Some building envelope profiles achieve the same objective by calling that portion of wall the Overlooking Zone, meaning the area of wall within which direct views must be restricted.

## 1.5 Selecting profiles for a lot

The profiles that apply to shared boundaries of neighbouring lots should be planned together.

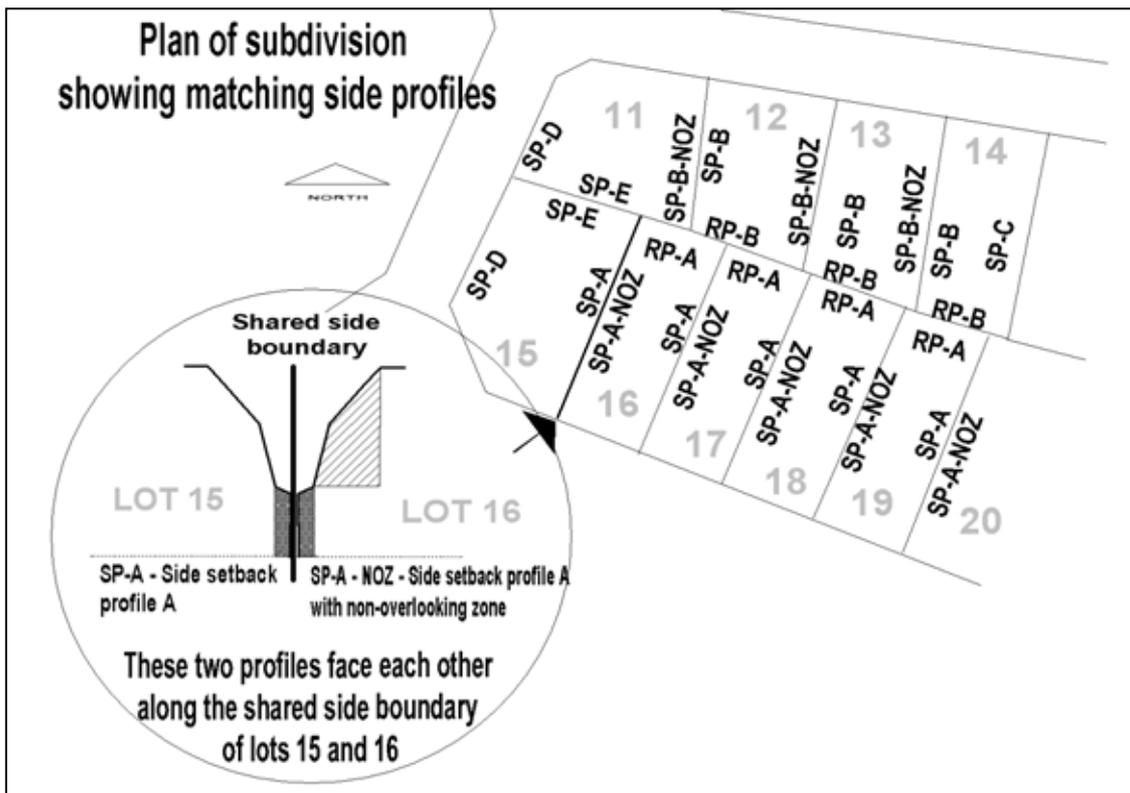
The general principles for designing envelopes and selecting particular profiles for a lot boundary are:

- Minimise overlooking and overshadowing
- Maximise opportunities for north-facing facades containing windows and which will not be overshadowed
- Minimise south-facing private open space that is overshadowed by building on the lot or on adjoining lots

For example, to minimise overlooking a profile which includes a non-overlooking zone could face the side of a building on the next door lot that can contain windows. There would no need to have overlooking zones facing each other across a shared side boundary.

An example in the following diagram is on the shared side boundary between lots 15 and 16.

As the side setback for lot 16 includes a non-overlooking zone (with the code NOZ), the side setback for the building envelope on lot 15 does not need a non-overlooking zone.



## **1.6 Notes to a plan**

### **Annotations on plan**

Some common, simple or unusual aspects of a building envelope may be better described by a notation or a dimension on the plan than by nominating a standard setback profile.

For example the minimum front setback from the main street frontage may differ from lot to lot. Minimum front setbacks could be indicated by noting the relevant setback dimension on the plan.

### **Notes to the envelopes**

The notes that accompany a set of envelopes should explain any aspects of a setback that are not explained by the notation on the plan.

For example, the notes can clarify that the front setback measurement on the plan applies to the street frontage giving most direct access to the front door, as lots may have more than one street frontage.

Notes to the envelopes should explain how the setback profiles are interpreted in various situations, and define all the terms used in the envelopes.

The notes to the envelopes may include common dimensions that apply to all lots. For example if a 5 metre front setback is to be common to all lots, it may only need to be specified in the notes to the envelopes rather than written on the plan for each lot.

The notes to the attached sample envelopes include a common dimension, of 5 metres, for all front setbacks.

The sample notes also set out some provisions that are common to all setback profiles, including allowable encroachments and definitions of terms.

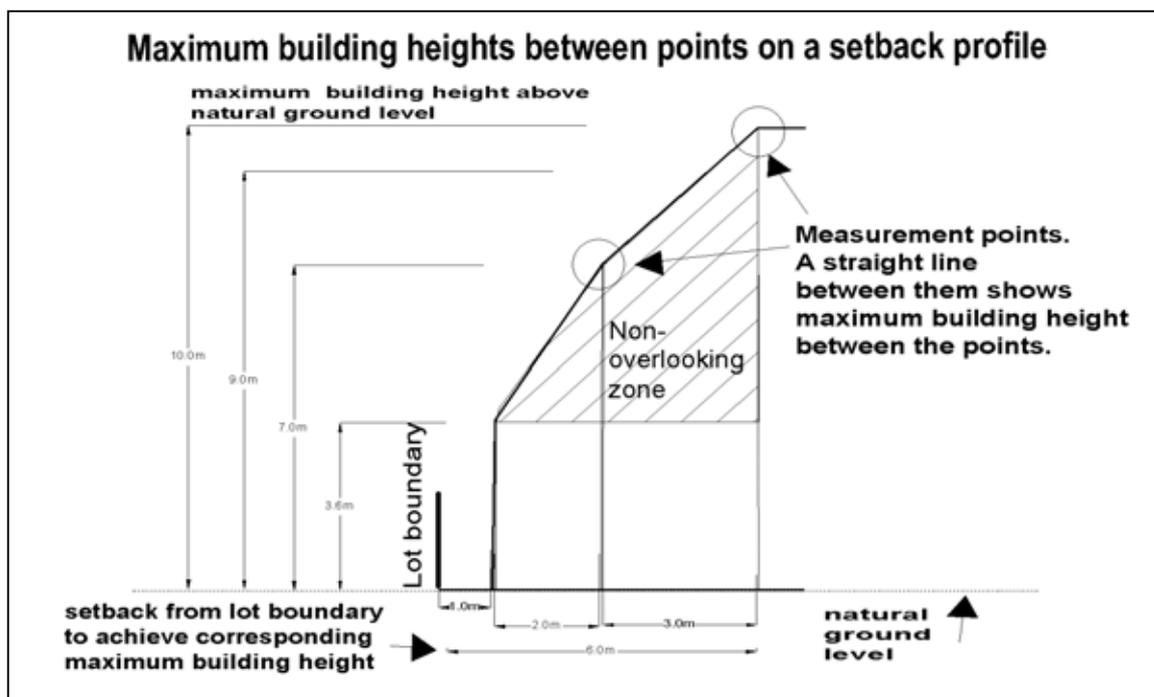
Generic notes to support and clarify building envelope plans and profiles can be lodged as a Memorandum of Common Provisions when a subdivision plan is registered. This will make plans of subdivision with envelopes less cumbersome.

## 1.7 Tips for interpreting setback profile diagrams

### 1. Maximum building height between points

There will be some points in a setback profile where the maximum height of a building is not shown because that part of the diagram is between points where a setback to height relationship is shown.

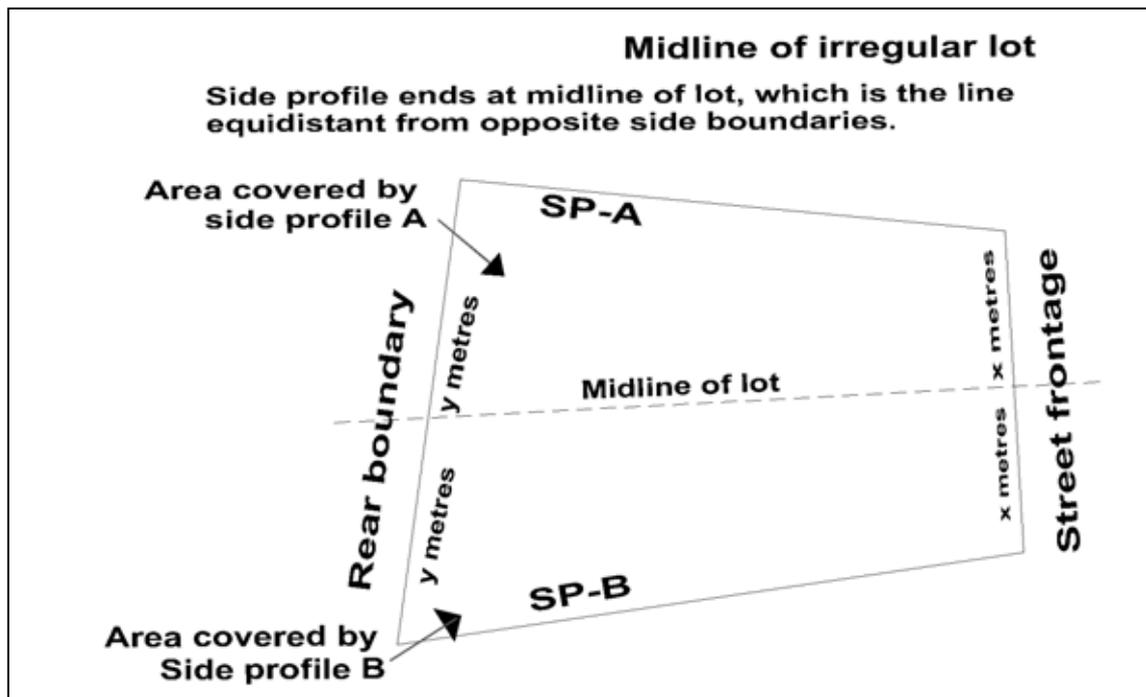
The maximum building height above natural ground level at any point between two maximum building heights shown in a side or rear setback profile lies on a straight line drawn between the two specified maximum heights. This diagram shows a line drawn between the two points.



## 2. Extent of side setback profiles

If not otherwise indicated, a side setback profile ends at the midline of the lot, which is the line through the lot that is equidistant from opposite side boundaries.

This is shown in the diagram below, a plan view of an irregularly shaped lot.

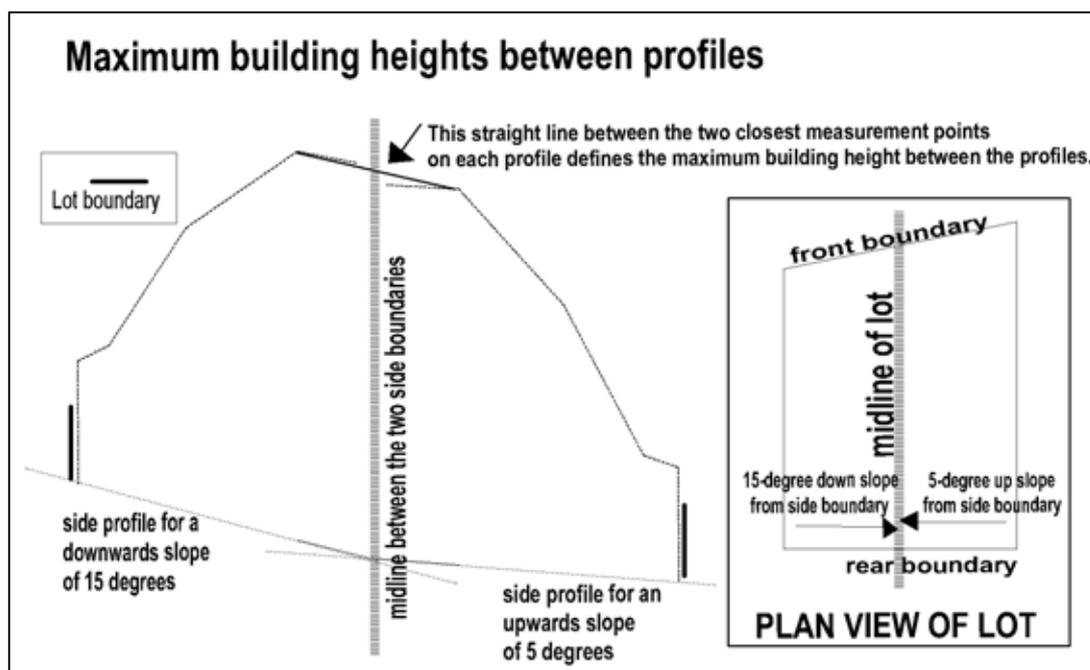


### 3. Maximum building heights between two matching profiles

Generally, side setback profiles extend from the boundary to the midline of the lot. At the midline of the lot, a setback profile will meet the profile designated for the other side of the lot.

However variations in natural ground level across the site may mean that maximum heights differ where the two side profiles meet in the middle of a lot. Where maximum heights between abutting profiles differ, or are not clearly specified, the maximum building height lies on a straight line between the closest measurements points on each profile.

The diagram below shows a straight line drawn between two profiles, one on each side of the lot. The two side profiles are at different heights because the slope on each side of the lot differs.



#### 4. Specifying front setbacks

Front setbacks (the setback of the house from the main street frontage) are generally specified on the notes that accompany the envelope plans and profiles, but may be specified on the plan for particular lots.

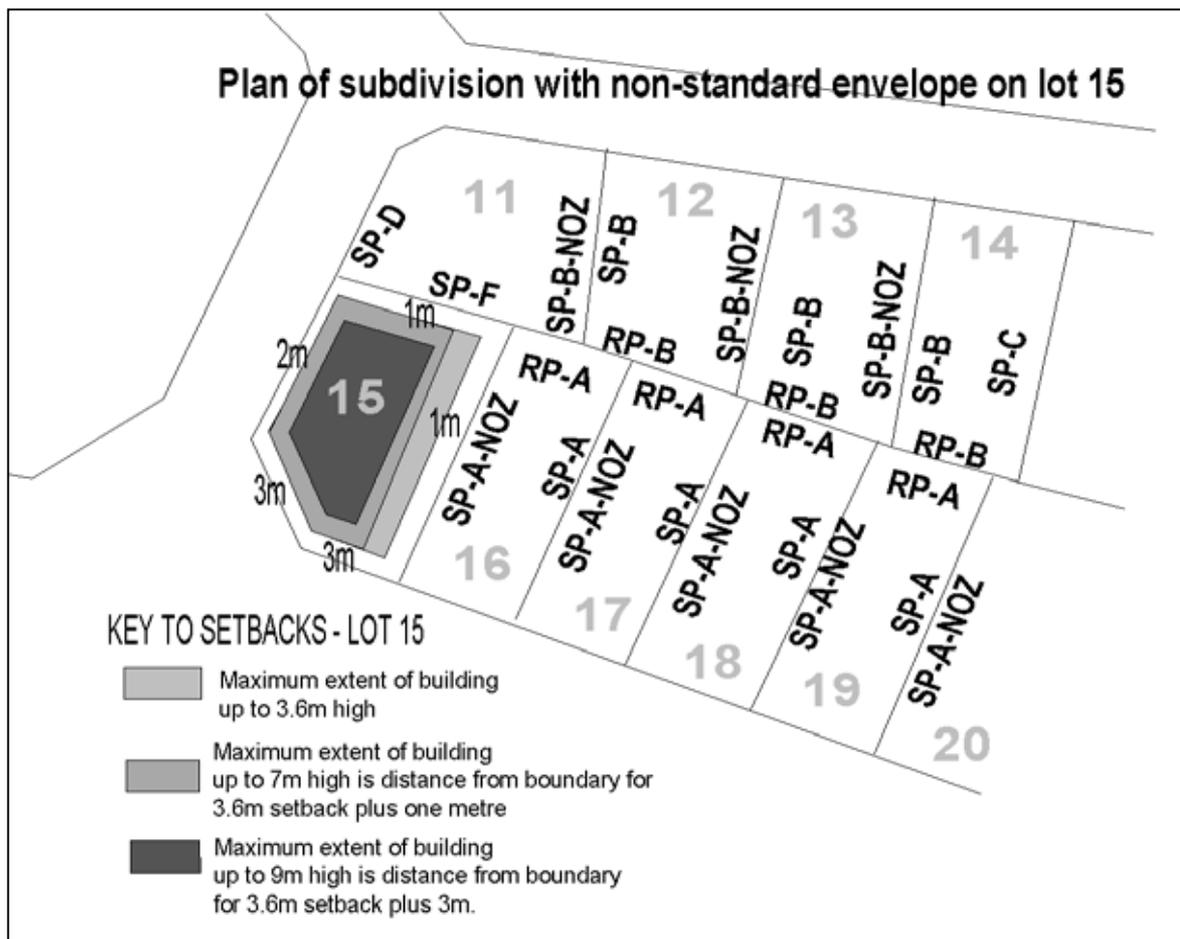
#### 5. Non-standard profiles

If setbacks differ from the typical or standard setback profile codes indicated by a code on the subdivision plan, the side and rear setback distances can be written on the plan in place of a code name for a standard profile.

In the following diagram, lot 15 is an example of a plan with side and rear setback distances written on the plan rather than indicated by a code for a standard setback.

Noting specific side and rear setback measurements on plans will take more space than using standard codes for profiles, so plans showing specific setback measurements may need to be drawn at a larger scale.

A rear profile with the code RP-X is included in the attached sample profiles. It provides for a non-standard rear setback while minimising the measurement notations that are needed on the plan to indicate a non-standard setback.



## 6. Joining side and rear profiles

Side and rear setback profiles both show maximum building heights that can be achieved at specified setbacks from the lot boundary.

The following points and the diagrams show how rear and side setbacks work together to set maximum heights and minimum setbacks where rear and side profiles meet.

- Rear setback profiles only apply up to the point where they reach their maximum height. From that point forward, the side setback profile applies.
- All side setbacks are determined by the side setback profile. The height of the building is determined by the side setback profile except where the rear setback profile also applies. (That is, both side and rear setback profiles apply in the area covered by the rear profile).
- If a conflict between a side and rear setback height limit arises where they meet and the notes or plans do not indicate which height limit applies, the conflict should be resolved by taking the lower of the two height limits.

