Preferably an aerosol-generating article is a heated aerosol-generating article, which is an aerosol-generating article comprising an aerosol-forming substrate that is intended to be heated rather than combusted in order to release volatile compounds that can form an aerosol. The aerosol formed by heating the aerosol-forming substrate may contain fewer known harmful constituents than would be produced by combustion or pyrolytic degradation of the aerosol-forming substrate. An aerosol-generating article may be, or may comprise, a tobacco stick.

In one aspect there is provided an elongate aerosol-generating device in which at least a portion of the device has a transverse external cross-section defined by a shape having at least five sides. It is preferred that the aerosol-generating device has a high aspect ratio and that a substantial proportion of the length has the defined cross-section. The entire length of the device may have the defined transverse cross-section.

The external cross-section may be a polygonal transverse cross-section. The polygon comprises at least five sides. The polygon may comprise at least six sides.

The device may be greater than 60 mm in length. The device may be less than 150 mm in length. For example, the device may be between 80 mm and 120 mm in length. The device may be between 90 mm and 1 10 mm in length.

An outer circumcircle of the transverse cross-sectional shape may have a diameter of greater than 10 mm. An outer circumcircle of the transverse cross-sectional shape may have a diameter of less than 20 mm. According to the above aspect, the external cross-section is a shape defining an outer circumcircle having a diameter of between 10 mm and 20 mm, the shape having at least five corners joined by curves. An outer circumcircle of the transverse cross-sectional shape may have a diameter of between 12 mm and 16 mm. The cross-section of a polygon may be defined by line passing from one edge of the polygon, through the centre of the polygon, and to an opposing edge. The length of this line may be between 10 mm and 20 mm, preferably between 12 mm and 15 mm. An even sided polygon may have a cross- sectional line that passes from a flat face of the polygon to an opposing flat face of the polygon. This distance may be, for example between 12 mm and 14 mm. An even sided polygon may have a cross-sectional line that passes from a corner of the polygon to an opposing corner of the polygon. This distance may be, for example between 12 mm and 14 mm. The corner to corner cross-section will be slightly longer than the face to face cross-section.

The sides of the cross-sectional shape may all have equal length. The sides of the cross-sectional shape may have differing lengths. Preferably one or more sides have a length greater than 2 mm, preferably greater than 3 mm or greater than 4 mm. It may be advantageous for one or more sides to have a length greater than 5 mm. The length of a side of the cross-sectional shape may be the same as a width of a facet of the three- dimensional device. For example, if the device is substantially cylindrical and has a cross-

section that is an equilateral hexagon with sides of length 5 mm, the device will have six longitudinal facets of 5 mm width.

~~The~~ As mentioned in the above aspect, the transverse cross-sectional shape ~~preferably~~ has at least five corners joined by ~~either straight lines or~~ curves to form the shape having at least five sides. Where the corners are joined by curves it is preferable that the curves have a large radius compared to the length of the side so that the side only slightly deviates from linear and gives the appearance of being almost flat. Alternatively, the at least five corners are joined by straight lines to form the shape having at least five sides.

The aerosol-generating device may be substantially cylindrical. The term cylindrical as used herein describes a three-dimensional shape that has substantially parallel sides and a base defined by a two-dimensional shape. The two-dimensional shape is that defined for the transverse cross-section, i.e., a shape having at least five sides. The term cylinder as used herein may be equivalent to the term prismatic. By substantially parallel it is meant that the sides do not need to be precisely parallel. For example, the sides may be within plus or minus 5 degrees from true parallel.

A portion of the aerosol-generating device may be shaped as an elongate frusto- pyramid having converging sides and a base defined by a two-dimensional shape. The two- dimensional shape is that defined for the transverse cross-section, i.e., a shape having at least 5 sides.

Preferably, each of the sides of the 2-dimensional shape defining the cross-section corresponds to an elongated face on an external surface of the device.

By providing an aerosol-generating device with such a multi-faceted cross-sectional shape the surface area of the device is increased as compared to a device having a circular cross-section. For example, a device that is substantially cylindrical and having a transverse cross-section in the shape of a polygon with at least 5 sides advantageously provides a user with a more ergonomic feel, while increasing the stability of the device when it is placed on a surface while it is not in use. It is anticipated that a user may wish to place the device on a flat surface, for example a table. If the device were to roll, the user may be inconvenienced. A device comprising shape features that help stabilise the device and resist rolling will be advantageous.

The cross-sectional shape, for example a polygon, may comprise between 6 and 16 sides, preferably between 7 and 12 sides. In one preferred embodiment the shape is a polygon comprising 10 sides.

The polygon may be a regular polygon. The term regular polygon refers to a polygon that is equiangular, all of the angles are the same, and equilateral, all of the sides are the same length. The sides may be straight or slightly curved. The angles may be formed by sharp corners or rounded corners. The aerosol-generating device may have a