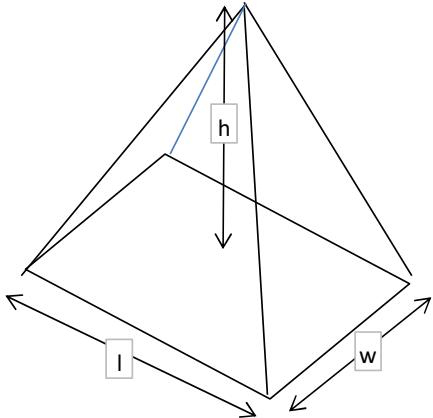
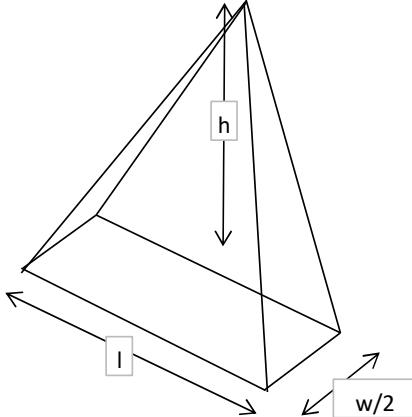


	Project 42 Shenley Avenue Part of Structure Hip to gable volume calc			Project no SKMPD/42SA Page of 1 1																								
	Drawing Ref	Prepared SKM	Date	Rev N/a	Date N/a																							
Subject Volume Check																												
<p>for a rectangular pyramid</p> <p>Volume = $(l * w * h) / 3$</p> 																												
<p>for half a rectangular pyramid</p> <p>Volume = $(l * (w/2) * h) / 3$</p> 																												
<p>Hip to gable volume = prism comprising gable side face, less half pyramid</p> <p>Triangular Prism Volume Proposed (including existing pitch):</p> <table> <tr> <td>Gable external height</td> <td>3</td> <td>m</td> </tr> <tr> <td>Gable base external length (overall house depth)</td> <td>7.9</td> <td>m</td> </tr> <tr> <td>Prism length (distance from gable wall to original ridge)</td> <td>3.88</td> <td>m</td> </tr> <tr> <td><u>Volume of triangular prism = $0.5 * h * b * l$</u></td> <td><u>45.98</u></td> <td><u>m³</u></td> </tr> </table> <p>Half Rectangular Pyramid Volume (volume of existing pitch):</p> <table> <tr> <td>w/2 i.e. distance from gable wall to original ridge</td> <td>3.88</td> <td>m</td> </tr> <tr> <td>l (i.e. 2 x gable base)</td> <td>7.9</td> <td>m</td> </tr> <tr> <td>h (same as height of gable)</td> <td>3</td> <td>m</td> </tr> <tr> <td><u>Volume</u></td> <td><u>30.652</u></td> <td><u>m³</u></td> </tr> </table> <p>Net additional volume required for hip to gable <u>15.326</u> <u>m³</u></p> <p>per gable</p>					Gable external height	3	m	Gable base external length (overall house depth)	7.9	m	Prism length (distance from gable wall to original ridge)	3.88	m	<u>Volume of triangular prism = $0.5 * h * b * l$</u>	<u>45.98</u>	<u>m³</u>	w/2 i.e. distance from gable wall to original ridge	3.88	m	l (i.e. 2 x gable base)	7.9	m	h (same as height of gable)	3	m	<u>Volume</u>	<u>30.652</u>	<u>m³</u>
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