

ARCHITECTURAL FORM

PASSIVE TECHNIQUES

ACTIVE TECHNIQUES

Shape and Orientation	Fenestration	Envelope shading	Sunspace	Shading with trees	Glazed balconies	Green envelope	Labyrinth thermal system	Trombe wall	Algae facade
 <p>building form</p>	 <p>summer winter</p>	 <p>summer winter</p>	 <p>summer winter</p>	 <p>summer winter</p>	 <p>summer winter</p>	 <p>summer winter</p>	 <p>summer winter</p>	 <p>summer winter</p>	 <p>summer winter</p>
<p><b>Technical working</b></p> <p>Visual comfort</p> <ul style="list-style-type: none"> <li>optimal use of solar path</li> </ul> <p>Spatial comfort</p> <ul style="list-style-type: none"> <li>enhances routing and area experience</li> </ul> <p>Social value</p> <ul style="list-style-type: none"> <li>can create room for social gathering</li> </ul> <p>Score <b>8</b></p>	<p>Visual comfort</p> <ul style="list-style-type: none"> <li>maximum daylight penetration</li> </ul> <p>Spatial comfort</p> <ul style="list-style-type: none"> <li>potential layout difficulties due to large wall openings</li> </ul> <p>Social value</p> <ul style="list-style-type: none"> <li>no added social value</li> </ul> <p>Score <b>6</b></p>	<p>Visual comfort</p> <ul style="list-style-type: none"> <li>reduced visual comfort in summer</li> </ul> <p>Spatial comfort</p> <ul style="list-style-type: none"> <li>overhangs pose potential for additional outdoor space</li> </ul> <p>Social value</p> <ul style="list-style-type: none"> <li>no added social value</li> </ul> <p>Score <b>4</b></p>	<p>Visual comfort</p> <ul style="list-style-type: none"> <li>reduces direct sunlight, especially in summer</li> </ul> <p>Spatial comfort</p> <ul style="list-style-type: none"> <li>can be utilized as extra outdoor space, even in winter</li> </ul> <p>Social value</p> <ul style="list-style-type: none"> <li>creates a social space for residents and visitors of the area</li> </ul> <p>Score <b>8</b></p>	<p>Visual comfort</p> <ul style="list-style-type: none"> <li>reduced visual comfort in summer</li> </ul> <p>Spatial comfort</p> <ul style="list-style-type: none"> <li>no added spatial comfort</li> </ul> <p>Social value</p> <ul style="list-style-type: none"> <li>enhances natural cooling of the area and creates potential for social gathering</li> </ul> <p>Score <b>6</b></p>	<p>Visual comfort</p> <ul style="list-style-type: none"> <li>reduces direct sunlight, especially in summer</li> </ul> <p>Spatial comfort</p> <ul style="list-style-type: none"> <li>can be utilized as extra outdoor space, even in winter</li> </ul> <p>Social value</p> <ul style="list-style-type: none"> <li>no added social value</li> </ul> <p>Score <b>6</b></p>	<p>Visual comfort</p> <ul style="list-style-type: none"> <li>no added visual comfort</li> </ul> <p>Spatial comfort</p> <ul style="list-style-type: none"> <li>no added spatial comfort</li> </ul> <p>Social value</p> <ul style="list-style-type: none"> <li>creates a natural cooling effect and humidity balance in the area</li> </ul> <p>Score <b>5</b></p>	<p>Visual comfort</p> <ul style="list-style-type: none"> <li>the system is applied in the basement so no visual comfort is hindered</li> </ul> <p>Spatial comfort</p> <ul style="list-style-type: none"> <li>no added spatial comfort</li> </ul> <p>Social value</p> <ul style="list-style-type: none"> <li>no added social value</li> </ul> <p>Score <b>5</b></p>	<p>Visual comfort</p> <ul style="list-style-type: none"> <li>the system obstructs daylight penetration</li> </ul> <p>Spatial comfort</p> <ul style="list-style-type: none"> <li>no added spatial comfort</li> </ul> <p>Social value</p> <ul style="list-style-type: none"> <li>can be seen as architectural statement</li> </ul> <p>Score <b>4</b></p>	<p>Visual comfort</p> <ul style="list-style-type: none"> <li>the algae panels can be used as adaptable shading systems</li> </ul> <p>Spatial comfort</p> <ul style="list-style-type: none"> <li>no added spatial comfort</li> </ul> <p>Social value</p> <ul style="list-style-type: none"> <li>can be seen as architectural statement and signature piece of an area</li> </ul> <p>Score <b>6</b></p>
<p><b>Carbon footprint</b></p> <p>0,00 kg CO2/m2</p> <p>36% energy reduction</p> <p>Score <b>6</b></p>	<p>0,00 kg CO2/m2</p> <p>0% energy reduction</p> <p>Score <b>4</b></p>	<p>-114,58 kg CO2/m2</p> <p>19% energy reduction</p> <p>Score <b>4</b></p>	<p>96,64 kg CO2/m2</p> <p>36% energy reduction</p> <p>Score <b>5</b></p>	<p>-98,04 kg CO2/m2</p> <p>19% energy reduction</p> <p>Score <b>4</b></p>	<p>91,60 kg CO2/m2</p> <p>30% energy reduction</p> <p>Score <b>4</b></p>	<p>-40,39 kg CO2/m2</p> <p>20% energy reduction</p> <p>Score <b>4</b></p>	<p>106,50 kg CO2/m2</p> <p>31% energy reduction</p> <p>Score <b>4</b></p>	<p>89,48 kg CO2/m2</p> <p>30% energy reduction</p> <p>Score <b>4</b></p>	<p>254,01 kg CO2/m2</p> <p>50% energy reduction</p> <p>Score <b>4</b></p>