$$\begin{aligned} &\text{If } \; x \le 2h_o \; : \;\; h_y = \min\left[0.8h_o,\; 0.6h\right] \\ &\text{If } \; 2h_o < x < 6h_o \; : \;\; h_y = \min\left[1.2h_o - 0.2x, 0.6h\right] \\ &\text{If } \; x \ge 6h_o \;\; : \;\; h_y = 0 \end{aligned} \tag{3.5}$$

where h_0 is the average height of the surrounding structures, h is the height of the building, and x is the distance between the building and surrounding structures. In cases where it is not possible or feasible to determine the average height of the surrounding buildings, it will be assumed that h_o=15 *m*.

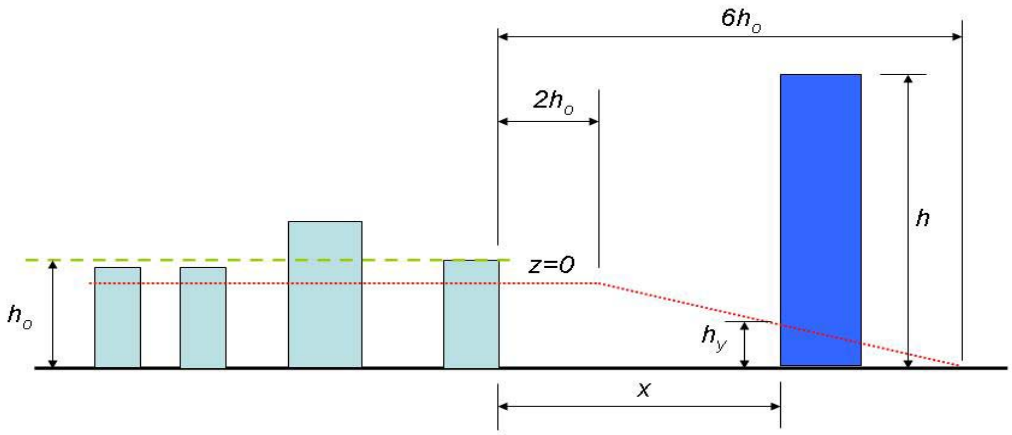

Figure 3.4. Effect of surrounding buildings on the average wind velocity.

3.2. FLUCTUATING WIND VELOCITY (TURBULANCE)

The dynamic component of wind velocity is called the wind turbulance, and is assumed to be a zero-mean Gaussian random variable. It is defined by its standard deviation, σ_w, whose value is defined in terms of the basic wind velocity, V_b, by the following equation

$$\sigma_w = k_r V_b \tag{3.6}$$