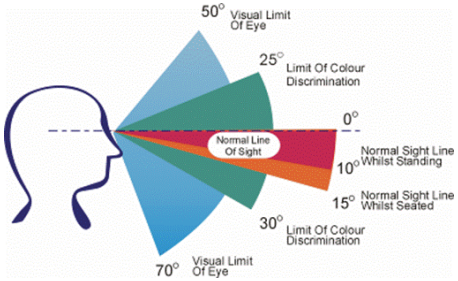
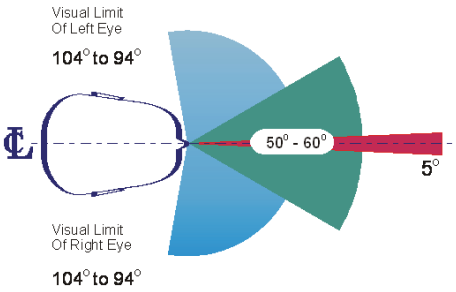
10.2 Prediction of Visual Impact Based on Field of View

10.2.1.1 The visual impact of a development can be quantified by reference to the degree of influence on a person's field of vision referencing the typical parameters of human vision based on anthropometric data. These data provide a basis for assessing and interpreting the impact of a development by comparing the extent to which the development would intrude into the centre field of vision (both vertically and horizontally, see in the below figures).



Vertical field of view



Horizontal field of view

10.2.1.2 Vertical field of view – Objects which take up 5% of this cone of view (5% of 10º = 0.5º) would only take up a small proportion of the vertical field of view, and are only visible when focused on directly. Given the varying number and heights of built structures in the YLS development, the tallest building has been chosen as a reference point for assessing the visual impact based on vertical field of view. The highest structures in YLS are approximately 110m, **Table 10.1** shows the relationship between the impact of a new structure and the distance of view, considering what proportion of the vertical line of sight it occupies.

Table 10.1 Visual impact based on vertical field of view

Vertical Line of Sight	Visual Impact	Distance of view to a approx. 110m tall structure
< 0.5º of vertical angel	Insignificant A thin line in the landscape	>12,500m
0.5º – 2.5º of vertical angel	Potentially noticeable The degree of visual intrusion will depend on the development's ability to blend in with the surroundings.	200m – 12,500m
>2.5º of vertical angel	Visually evident Usually visible, however the degree of visual intrusion will depend of the width of the object and its placement within the landscape	<200m

10.2.1.3 As shown in **Table 10.1**, these calculations suggest that the impact of a 110m tall structure would reduce to insignificant at about 12,500m away, as they would form less than 0.5º of the vertical field of view.

10.2.1.4 Horizontal field of view –The central field of vision for most people covers an angle of between 50º and 60º. The visual impact of a development will vary according to the proportion in which a development impacts on the central field of vision. Developments which take up less than 5% of the central binocular field, are usually insignificant in most landscapes (5% of 50º = 2.5º). The YLS development is comprised of continuous clusters of buildings, in assessing the visual impact, it is therefore assumed that the largest horizontal components are clusters of buildings as approximately 200m. **Table 10.2** shows the relationship between the impact of new structures and the distance of view, considering what proportion of the horizontal line of sight it occupies.

Table 10.2 Visual impact based on horizontal field of view

Horizontal Field of View	Visual Impact	Distance of view to a approx. 200m wide structure
< 2.5º of view	Insignificant The development will take up less than 5% of the central field of view (5% of 50º = 2.5º). The development, unless particularly conspicuous against the background, will not intrude significantly into the view. The extent of the vertical angle will also affect the visual impact.	>2300m
2.5º – 30º of view	Potentially noticeable The development may be noticeable and its degree of visual intrusion will depend greatly on its	100m – 2300m

Horizontal Field of View	Visual Impact	Distance of view to a approx. 200m wide structure
	ability to blend in with its surroundings.	
>30º of vertical angel	Potentially visually dominant Developments that fill more than 50% of the central field of vision will always be noticed and only sympathetic treatments will mitigate visual effects.	<100m

10.2.1.5 As shown in the **Table 10.2**, the calculations suggest that the impact of proposed new structures would reduce to insignificant at approximately 2300m, when they would form less than 2.5º of the horizontal field of view.