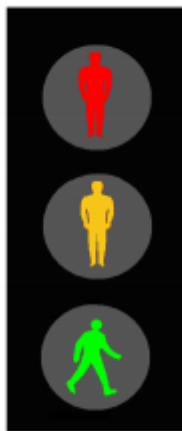


## **Request to increase the green man by 1 second and the amber time by 1 second for all pedestrian crossings.**

### **Current Operation**

For all pedestrian crossing in the Dublin City Council area a minimum green man time of 6 seconds is given, this is then followed by the amber time. The amber time is based on a walking speed of 1.2m/s over the complete crossing width. This is then followed by a red man of at least 2 seconds before opposing traffic can start. In essence wider roads have a longer amber time duration but the green time remains fixed regardless of road width. These timings are based on section 9.7.6 of chapter 9 of the Traffic Signs Manual.

It should be noted that the green man signal is an invitation to cross and that the amber time is the safety time required to cross the road for anyone who steps on to the road during the last second of Green time.



**Red Man** Minimum 2 Seconds

**Amber Man** Based on road width 1second for every 1.2 metres

**Green Man** Minimum 6 seconds – An invitation to start walking

### **Current Amber Times**

Currently in line with requests from members of the public in relation to areas with a large number of elderly people or school children pedestrian crossing times are reviewed and in some cases the amber man time is increased.

The motion proposed by the Transportation SPC is to add 1 second to the green man time and the amber man time for each site irrespective of the crossing width.

## Research on Crossing Width

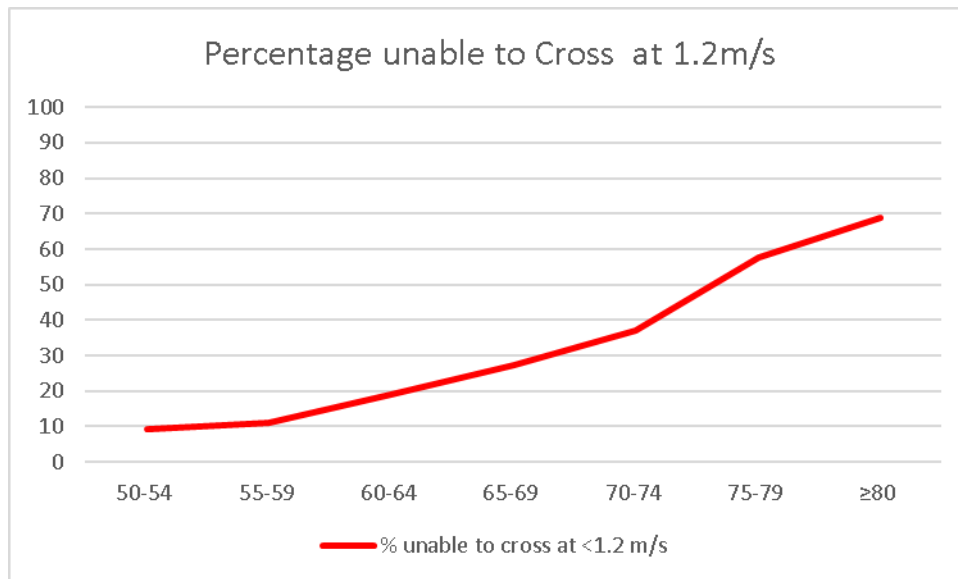
The Irish Longitudinal Study on Ageing (TILDA) is a large-scale, nationally representative, longitudinal study on ageing in Ireland. TILDA collects information on all aspects of health, economic and social circumstances from people aged 50 and over in a series of data collection waves once every two years. In 2015 Tilda carried out research into the usual walking speed in relation to crossing the road. Just under 5000 people participated in the survey, the results of the survey can be found in document, *Amber Cross Code – Walking speeds in middle-aged and older Irish adults and the implications for pedestrian traffic signals (Orna Donoghue, Rose Anne Kenny- November 2015)*, the main findings of the report are:

- One in three Irish adults aged 65-74 and three in five adults aged 75 and older walk slower than 1.2m/s
- Women walk slower than men

The research was carried out by recording the walking speed of participants on a computerised mat, participants started walking 2.5 metres before and ending 2 metres after the mat in order to simulate a steady state walking speed. The task was carried out twice, walking at a usual speed and walking at a usual speed while carrying out a dual task, e.g. to simulate real world activities, - talking to someone while walking.

One of the main findings of the research was the average walking speed of the participants for the dual task was 1.09 (Standard Deviation 0.27) m/s.

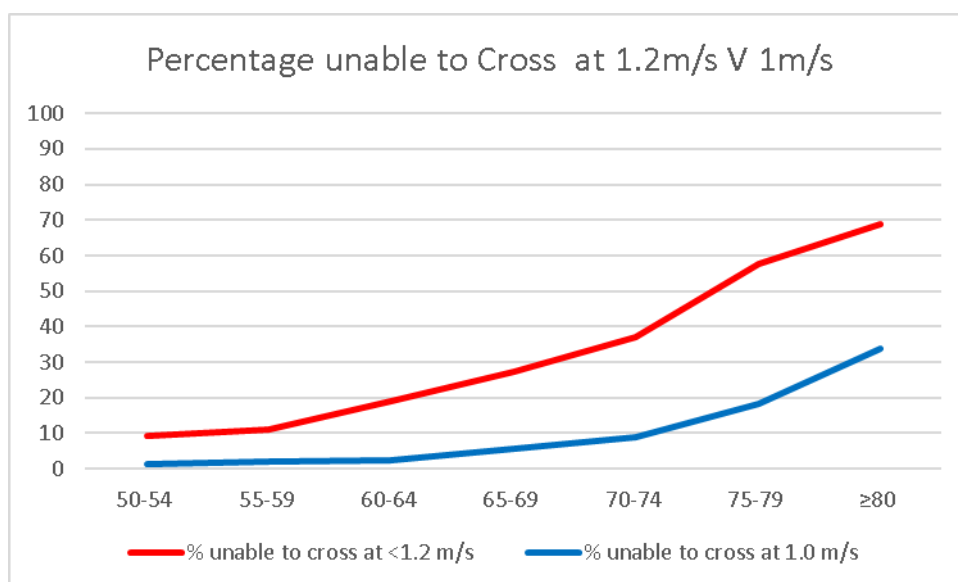
Figure 1 shows the percentage of participants whose walking speed is than 1.2m/s illustrating the number of people who would have difficulty comfortably crossing the road starting at the last moment of the green man.



**Figure 1 Percentage of people broken down by age group who are unable to walk at a speed of 1.2m/s**

### Increasing the Amber Time

As can be seen in Figure 2 if the amber man time was increased to 1m/s and the data set run again in the number of people under the age of 65 who do not have sufficient time to cross in each age group reduces significantly. In particular in the 65-69 age group it goes from 27.4 to 5.6.



**Figure 2 Percentage of people broken down by age group who are unable to walk at a speed of 1.2m/s v's 1m/s.**

To show the scale of the impact of this change Table 1 below shows the increase in time required for the longest crossings at a number of key junctions throughout the city:

**Table 1 Increase in Crossing times**

Location	Crossing Width	1.2m/s	1m/s	Increase
O Connell Bridge Northside	15.3	13	16	3
O Connell Bridge Southside	15.5	13	16	3
College Green	12	10	12	2
Harold's Cross	17	15	17	2
Clare Street/ Merrion Sq	19	16	19	3

## Conclusion

Based on the research carried out by the Irish longitudinal study on ageing in 2015 (Tilda), and research carried out relating to an aging population in western Europe, by leaving the walking speed for the amber man time at 1.2m/s the levels of the population which will not have sufficient time to cross the road will increase year on year.

By increasing the amber man time at all sites we would be able to increase by 35.1% the number of people who can cross the road during the clearance time. This increase in addition to the 6 second green man time which is an invitation to cross should allow sufficient time for all road users to cross with a minor reduction in traffic time for each traffic cycle.

We would propose not to arbitrarily alter the green man time by one second but instead concentrate on ensuring that the amber safety crossing times are changed.

In order to carry out this work each site would have to be checked individually, the sites which are connected to our centralised system can be updated remotely but sites not connected to the centralised system could be updated as part of the yearly principal inspection. The impact of the changes would be monitored and adjusted as required.