

SUGGESTED MINIMUM PAVEMENT AND CARRIAGEWAY WIDTHS TO ENABLE THE INSTALLATION OF BCC ADOPTED STANDARD STREET TREE PITS

Introduction - The planting of trees in streets whether in new locations or in locations which have previously been occupied by trees needs to take account of both the existing conditions, Bristol City Council Standards and current best practice and guidance.

There are of course a range of possibilities for where and how trees might be planted. Added to this the various stakeholders (Local residents and businesses, Neighbourhood Partnerships, BCC Tree Team, BCC Engineering Partnership, statutory undertakers etc.) are likely to have views on what is possible and/or acceptable and these views may conflict.

The replacement of two trees in Devonshire Road presents an example of where the variance of opinion between different stakeholders on what is possible and/or acceptable can differ, may not be easily resolved and may as a result lead to confusion, anger and disappointment.

This paper therefore seeks to identify relevant Bristol City Council Standards and current best practice guidance and from them suggest what the minimum pavement and carriageway width parameters might be for the installation of BCC Adopted Standard Street Tree Pits.

The Variables - In seeking to set out the minimum width parameters for street tree planting it is suggested that the parameters for the zones marked W, X, Y and Z on figure one need to be considered where 'W' is the width of paved pedestrian surface required; 'X' is the width of tree planting zone required; 'Y' is the width of carriageway which may be used for parking; and 'Z' is the width of carriageway required for vehicular movement.

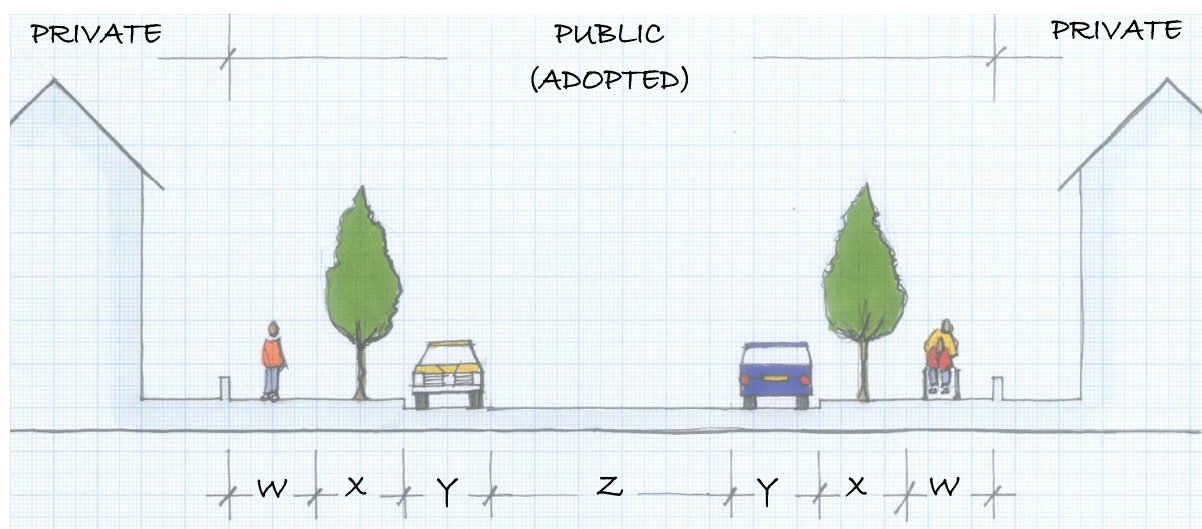


Figure 1: Zones for which width parameters need to be considered.

BCC Environmental Access Standards (2011) - this does not appear to give definitive widths for pavements and as such the guidance may be open to interpretation paragraph 3 of ‘Approaches and Routes’ on page 20 states that:

“All routes should be at least 1800mm in width. Any necessary width reductions for obstructions [the accompanying illustration shows a tree as an obstacle] should be an absolute minimum of 1000mm for no more than 6000mm.”

However the accompanying illustration also indicates that paths should be “2000mm min. This will allow two wheelchairs to pass”

Para two and three on page 64 notes that for both “Urban and Formal Landscapes” and “Urban fringe and managed landscapes” paths should be “...at least 2000mm wide. Obstructed paths should retain a clear minimum width of 1200mm”

BCC Bristol Engineering Practice Street Tree Pit adopted Standard - The agreed adopted Standard Street Tree Pit Planting detail is Bristol City Council Bristol Engineering Practice “Trees and Roots 1 Drawing SD04-019 Revision C Date Drawn SEP 2013” as shown in Figure 2.

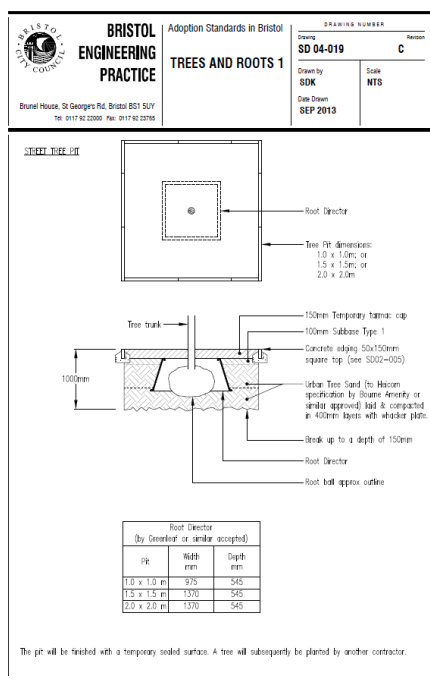


Figure 2: Trees and Roots 1 Drawing SD04-019 Revision C Date Drawn SEP 2013

This gives three alternative dimensions for tree pits namely 1m x 1m; 1.5m x 1.5m; and 2m x 2m.

Department for Transport Manual for Streets - *“The Manual for Streets”* published in 2007 notes that:

“the minimum unobstructed width for pedestrians should generally be 2m. Additional width should be considered between the footway and a heavily used carriageway, or adjacent to gathering places, such as schools and shops. Further guidance on minimum footway widths is given in Inclusive Mobility”

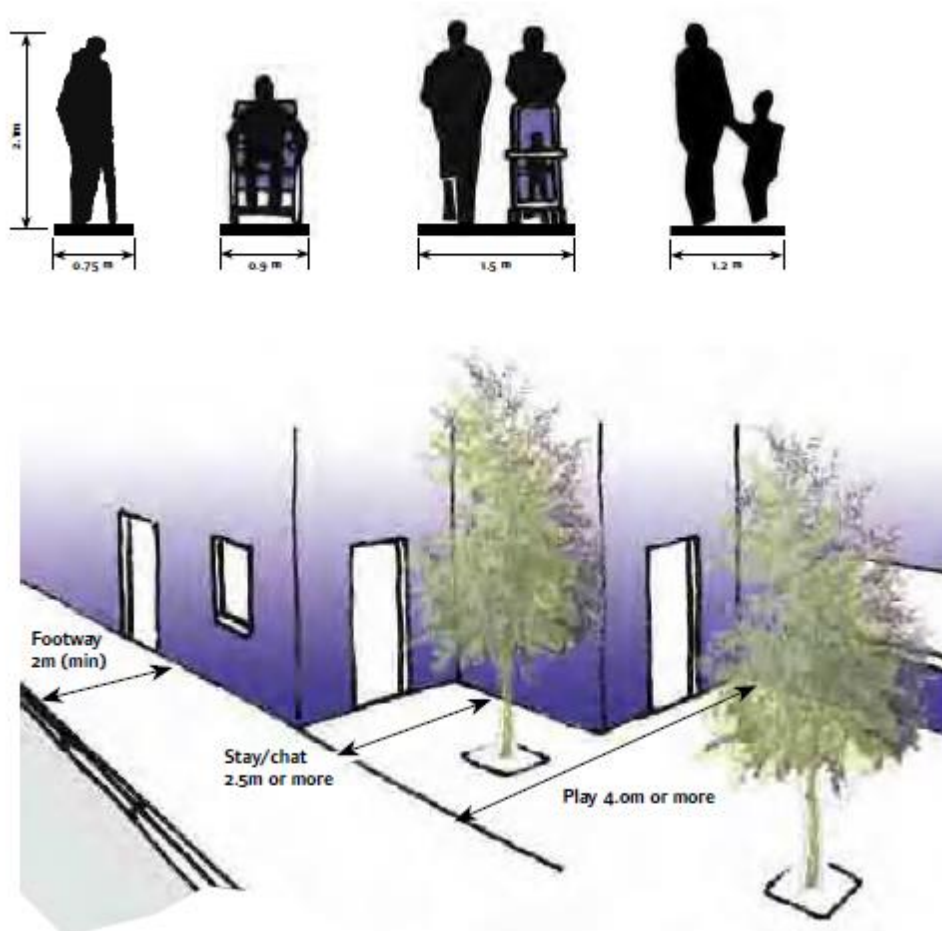


Figure 3: *Footway minimum widths for different users from Manual for Streets*

It also includes the following data for what different carriageway widths can accommodate:

2750mm – (single track) can accommodate cycle, lorry or car but none can pass.

4100mm – cycle and lorry can pass, two cars can pass.

4800mm – cycle and car can pass comfortably, two cars can pass comfortably, car and lorry can just pass.

5500mm – all vehicles can pass.

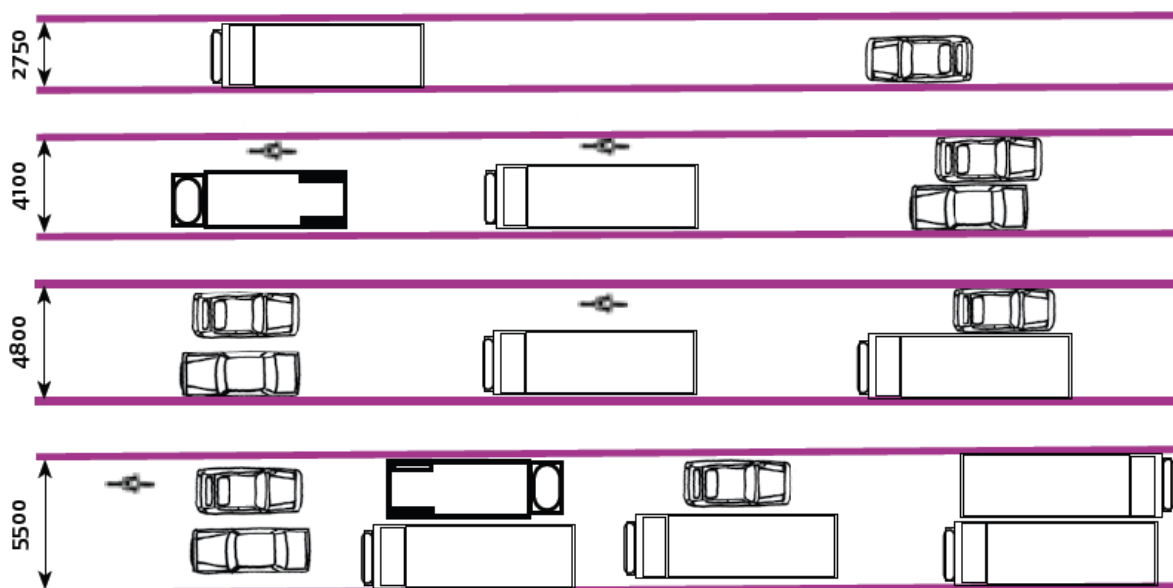


Figure 4: Carriageway widths from Manual of Streets

Department for Transport Inclusive Mobility - The Department for Transport guidance “*Inclusive Mobility*” published in December 2005 gives guidance for minimum pavement widths depending on use requirements as follows:

700mm – one person walking.

750mm – one person using a walking stick.

900mm – one person using two sticks, crutches or a walking frame.

1100mm – a blind person using a cane or an assistance dog.

1200mm – a visually impaired person being guided.

1500mm – a wheelchair user and an ambulant person side by side.

New Metric Handbook Planning and Design Data - The New Metric Handbook Planning and Design Data (1988 reprint) gives the following characteristics of various footway widths (page 40) as:

600mm – one person only.

900mm – two people just pass.

800mm – one pram only.

1150mm – pram + child.

1200mm – two people pass comfortably.

1700mm – two prams or wheelchairs pass comfortably.

It gives the following widths for in line parking against a kerb (page 41):

1800mm – can accommodate most European cars.

2000mm – can accommodate large European cars.

It gives the following characteristics for various carriageway widths (page 37):

5500mm – all vehicles can pass each other.

4800mm – two cars can pass each other; car and lorry can just pass.

4100mm – lorry and a cycle can pass; two cars can just pass.

3000mm – car and cycle can pass.

Potential Minimum width Parameters - Taking the above data into consideration it is suggested that the minimum pavement and carriageway width parameters for the installation of BCC Adopted Standard Street Tree Pits should be as follows:

1200mm – minimum width of unobstructed trafficable pavement – this will meet the BCC standard and will allow those with disability to use the pavement.

1000mm – minimum tree pit width this will meet the BCC Adoption standard.

1800mm – minimum width of carriageway to allow on street parking.

4800mm – minimum width of unrestricted carriageway (free of planting, parking and any other obstruction) this will allow a lorry and a car to pass.

Taken together these give minimum width required for pavement and carriageway that will allow for the installation of Bristol City Council Bristol Engineering Practice street tree pits as follows:

Pavement minimum width 2.2m

Carriageway minimum width 8.4m

So the general rule would apply as follows:

If the pavement is less than 2.2m in width it cannot accommodate a Street Tree Pit.

If the Road is less than 8.4m in width it cannot accommodate a Street Tree Pit.

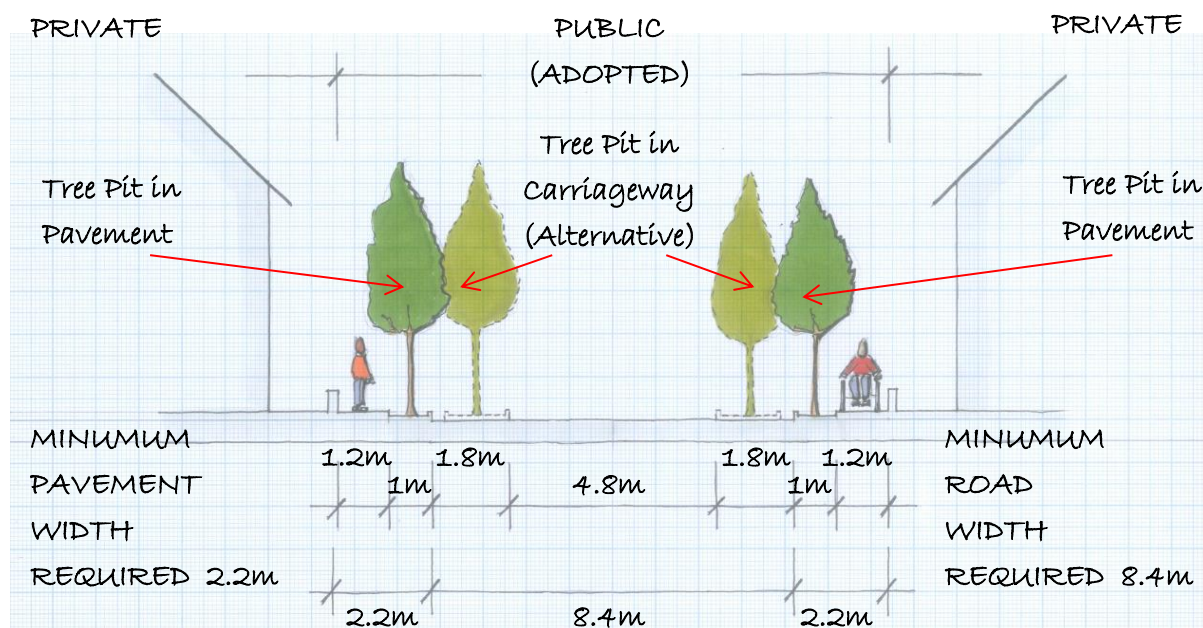


Figure 5: Suggested minimum width requirement for pavement and carriageway in order for them to be able to accommodate a BCC Adopted Standard Street Tree Pit.