7.3 ~ Street Furniture...

Introduction

This public realm strategy promotes the use of street furniture palettes that are distinctive to Chester and can be consistently applied to the city, in order to reinforce a sense of quality and identity that clearly sets Chester apart. A wide range of street furniture elements are found within Chester at present and there are only a few examples of consistently used street furniture (the timber bollard with stainless steel cap being one). However, the palettes proposed in this section seek wherever possible to build on successfully established precedents.

Examples of existing street furniture precedents in Chester

Chester's strong character and identity is primarily defined by its built form. As a result the street furniture within the public realm does not need to make a statement, but complement the architecture through simplistic and elegant forms, clean lines and the use of appropriate materials.

Signage and lighting material palettes are provided within the individual signage and lighting strategies (see Parts 5 and 6).

Street Furniture Palettes

Four complementary street furniture palettes are proposed to cover different areas within Chester City Centre (see Figure 7.10). These are defined and illustrated on pages that follow. The palettes have been put together with flexibility in mind, recognising that what is appropriate will differ depending on the individual setting and so a range of options are provided for use within each zone.

1) City Centre Core

In the city centre core a high quality and bespoke approach to street furniture specification is proposed. For example, it is suggested that bespoke seating be developed for the city centre core through collaboration between the product supplier, artist, landscape architect and council maintenance representative. These designs should be based on the existing products set out in the palettes which follow. Items within the palette have been selected for their simplicity, contemporary elegance and use of relevant materials.

Relevant Materials:

- Red sandstone
- Stainless steel
- Mild steel/cast iron
- Hardwood timber
- Bronze (for bespoke detailing)

2) Wider City Centre

Outside the city core, street furniture for the wider city centre has been chosen using primarily standard products which complement the city centre core range. Again items have been chosen for their simplicity and elegance, as well as being less elaborate and more cost effective than the city centre core range.

Relevant Materials:

- Mild steel/cast iron
- Some stainless steel
- Hardwood timber

3) Riverside

A palette of more traditional, Victorian style street furniture is proposed for this area, which is in keeping with the existing street furniture and the heritage of Grosvenor Park and riverside waterfront. In addition, the palette considers requirements for the more naturalistic areas along the riverside.

Relevant Materials:

- Mild steel/cast iron (generally painted in Jet Black RAL 9005)
- Hardwood timber

4) Canal

Street furniture has been selected for the canalside locations that has a distinct industrial/traditional feel, that also offers modern simplicity (as opposed to more ornate and traditional furniture proposed for parts of the riverside). This is in keeping with the heritage of this area and complements existing canalside furniture.

Relevant Materials:

- Mild steel/cast iron (generally painted in Jet Black RAL 9005)
- Hardwood timber

Bespoke Street Furniture to Key City Spaces and Gateways

The presentation of palettes of street furniture within the PRDG should not restrict designers from specifying bespoke street furniture for certain locations, particularly within the city centre core, in order to reflect the individual character of a street or space. Where bespoke furniture is commissioned it is important that it conforms to the materials palette set out for each area of the city on the previous page.

The following case studies provide examples of bespoke street furniture that has been designed and installed in other towns and cities. As the case studies show, these designs have been developed in response to the place and a similar approach should be used for bespoke street furniture in Chester ensure local distinctiveness .

Sheffield – The Gold Route

Sheffield's 'Gold Route' is a series of spaces and streets that takes a visitor arriving at the station to the University of Sheffield Campus. The entire route has a cohesive commitment to contemporary craftsmanship in the handling of natural stone, metals and the use of water, which serves to connect each of the spaces. Variation in detailing and the application of materials also gives each space its own distinctive character. The palette of materials used include flowing water, highly crafted bronze (used in more traditional/ historic settings), stainless steel (used in more contemporary settings) and Pennine sandstone; together these represent the fundamentals of Sheffield's history and character.

The following provides details of the bespoke street furniture and detailing used the Peace Gardens, which has been used in other location along the route.

The Peace Gardens was the first of the spaces to be implemented and is themed around arts and crafts, which is demonstrated in the commitment to use of traditional and local crafts in the design of bespoke features and elements of furniture. The walls in the Gardens are constructed from gritstone from the Stoke Hall Quarry in Derbyshire. The stone plinths contain carved references to the fish and plant life of Sheffield's eight main rivers.

The eight Bronze Water Vessels that surround the space represent the pouring of both water and molten metal and were designed by Derbyshire metal artist Brian Asquith. Brian Asquith also designed a complementary custom suite of street furniture working in collaboration with the City Council's Design Team. The suite includes tree grilles, drainage grilles, granite and bronze seats, planters, bollards and litterbins. A complementary palette of bespoke street furniture has also been produced in polished stainless steel and granite for use in more contemporary spaces along the route.

Whitehaven Harbour

As part of the 'The Renaissance of Whitehaven' project, Broadbent was chosen to produce a series of unique seating elements. These were:

- 'Trading Benches' - Nine bronze low-relief plaques illustrating the historic trades of the port of Whitehaven are set within a timber bench and supported by a cast aluminium base that houses a port - hole light fitting.
- Sculptural Millennium Fin Benches – sixteen of these were made from patinated bronze and timber and can be found along the Millennium Promenade and the Hub.
- Compass Seat - The compass seat includes bronze directional markers set on the outer handrail, containing information about the distances to significant trading positions around the world. Each seat incorporates a typography design, reflecting different events that have occurred in Whitehaven over the centuries, thereby personalising the design to the location.



Photograph credit: Broadbent (www.sbal.co.uk)

Fleming Square, Blackburn

This small neglected area has been transformed into a unique public space for Blackburn Town Centre. The design that evolved links the four existing plane trees, with a series of spiraling bronze seats and tree grilles.

The design is influenced by the area and the use of repeated Victorian pattern found in castings and fabrics. Cast in the top face of the seats is a poem entitled 'Possibility' by the celebrated poet Julia Copus.

The artwork is fully integrated into the whole landscape scheme and includes decorative railings. The 'fish railings' are formed out of steel, and include repeated bronze and glass fish, in recognition to the old market and the original fish stones in Fleming Square.

Set along the adjoining King Street are a series of bronze markers. The 4m high markers take the form of a chess piece and include coloured glass inserts.



Photograph credit: Broadbent (www.sbal.co.uk)

River of Life, Warrington

The River of Life project was developed in the aftermath of the 1993 IRA bomb in Warrington, which killed two boys - Tim Parry and Jonathan Ball - and injured dozens of people in Warrington City Centre. The desire was to bring hope, freshness and new life to Bridge Street, and a streetscape concept emerged, incorporating every aspect of the urban landscape and its elements including paving, seating units and lighting columns. Water cascades from a tear shaped feature onto a bronze dome, bearing the imprints of the hands of local school children, and etched copper faces of children, including Tim and Jonathan.

Inspiration for the 'River of Life' came from the powerful description of waters and the leaves of the trees - ' for the healing of the nations ' - described in the biblical book of Revelation. A symbolic water source is re-created over the full length of the pedestrianised section of Bridge Street. Natural stone and granite setts accurately mirror the meandering course of the River Mersey, and in this meandering path are 12 bronze discs, that are part of the 'Leaves of the Trees ' project and involved twelve primary schools from the borough.



Photograph credit: Broadbent (www.sbal.co.uk)

Sustainability and Maintenance Considerations

- The final design and specification of street furniture must be robust in order to cope with intense usage, weathering & potential vandalism.
- A high quality approach to the selection of materials and detailing, and consideration of maintenance in the initial design, will help ensure low maintenance and sustainability.
- The general specification of a standard range of products as a starting point will also help to minimise the cost of replacement and repairs.
- All timber should be FSC approved and a suitable source of natural stone should be used that is as local to Chester as possible.

Siting Street Furniture

The following general principles should be applied to the siting of street furniture in all public realm projects (further detail is provided in the street furniture subsections that follow).

- The approach to the location of street furniture should relate to and complement the function of buildings and spaces and aim to create a simple uncluttered environment.
- Opportunities should be exploited to combine elements of street furniture with signage, for example in order to minimise clutter.
- Highway signs should be kept to a minimum in number and reduced in size to the statutory minimum. Where several highway signs are required they should be mounted on a single support.
- Group street furniture elements together in zones away from heavy pedestrian flows and in parallel to the main direction of flow (changes in surfacing could assist in defining these areas).
- Consider the implications of street furniture locations in relation to the security of neighbouring property and the potential for anti-social behaviour. Where necessary and avoid isolated locations.
- The spacing and positioning of street furniture must also allow access for street cleaning and maintenance (including vehicle access where required).

Temporary Outdoor Café Seating

General Principles/Guidance:

Temporary seating and tables should be encouraged to allow activity to spill out into the public realm, however it is important that activity is carefully controlled to maintain good pedestrian access and to ensure that it does not detract aesthetically from the appearance of streets. ‘Chester Alfresco’ (available from the council) provides detailed guidance on the design and permissions required for outdoor cafés. ‘Chester Alfresco’ and ‘The Rows Design Guide’ (also available from the council) also contain details on temporary café seating on the stalls in The Rows.

Design of Temporary Barriers:

- Temporary barriers should be used to define the extent of outdoor seating and to assist blind and partially sighted pedestrians navigating their way along streets.
- Temporary barriers and furniture should be high quality items that enhance the appearance of the street and respect historic settings.
- Temporary barriers should be robust enough to withstand strong winds (i.e posts and bases should be designed accordingly).
- Barriers should be designed to have a strong visual contrast with the surrounding surfacing and include a top rail/handrail and tapping rail. The tapping rail should be at least 150mm in width and positioned with its lower edge 300mm above the ground.
- Any advertisements contained in barriers should be kept to a discrete minimum (with lettering/ motifs occupying a maximum of 20% of the height of the barrier).
- Appropriate materials for temporary barriers and furniture would include stainless steel, black powder coated steel, hardwood timber and canvas.

Example of appropriate aesthetic and quality for temporary barriers (Posts and bases must be robust enough to withstand strong winds and tapping rail must be included)

Location/Arrangement:

- Barriers should be positioned at either end of the designated area, perpendicular to the building frontage. Occasionally it may be necessary to orientate barriers at 45° to the building in order to facilitate pedestrian movement.
- In busy locations a barrier will also be required across the front of the designated area to protect pedestrians.
- Barriers and temporary furniture should be cleared completely outside operating hours.
- Generally, the aim should be for the defined area not to conflict with other accesses or pedestrian crossing points.
- Brass studs should be used by the council to mark licensed areas within the public realm surfacing.

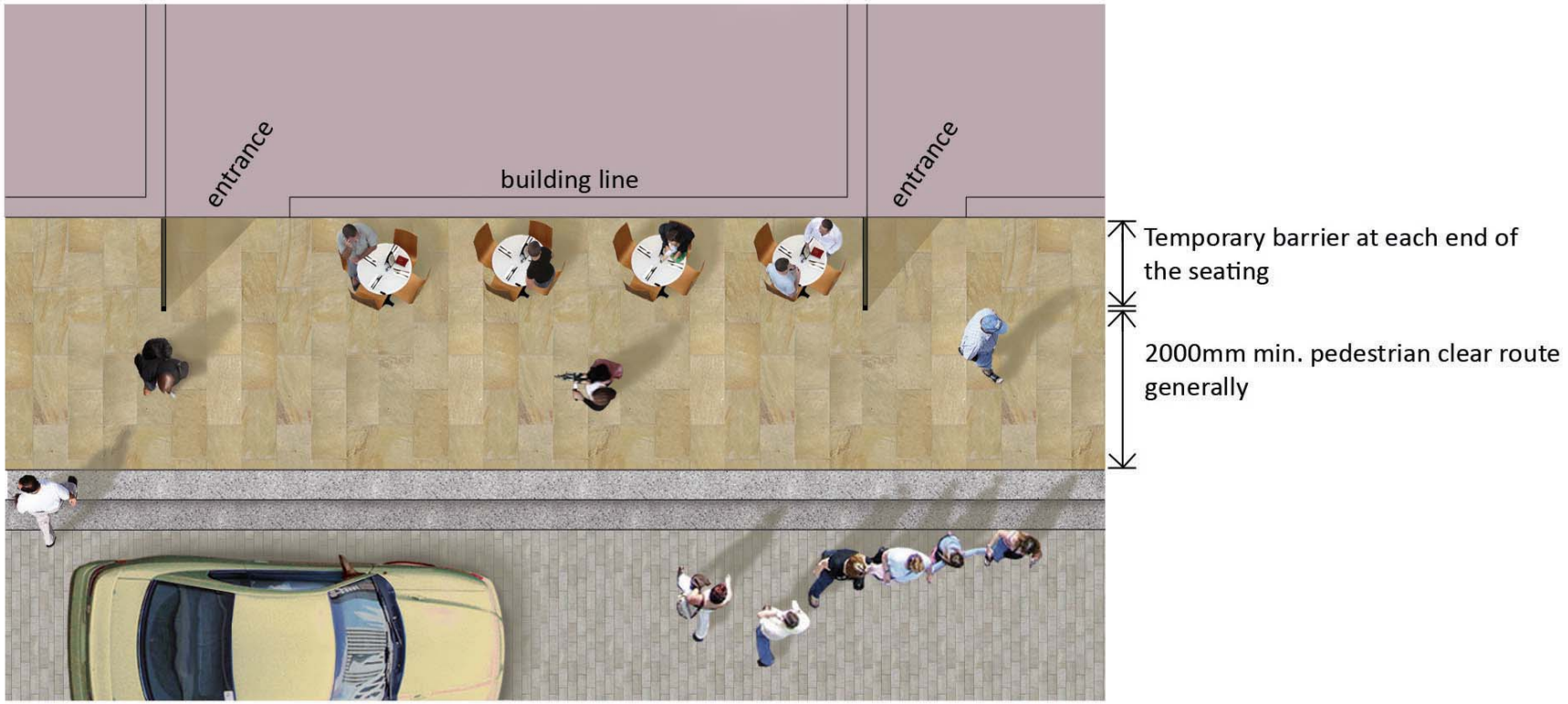
Permissions:

- Planning permission will be required for temporary outdoor café seating.
- Once planning permission has been granted a licence must also be obtained from the highway authority, which must be annually renewed.

Vehicle Access Streets:

- On streets with vehicle access, outdoor café seating should be positioned along the building line (see Figure 7.11.
- On streets with vehicle access it is important for the seating to not protrude too far from the building line.
- A minimum pavement width of 2000mm should remain free and unobstructed for pedestrians to use. Where possible a desirable pavement width of 2300mm should be sought particulary in locations where there is medium/high pedestrian use. This should not conflict with any other accesses or dropped crossings.

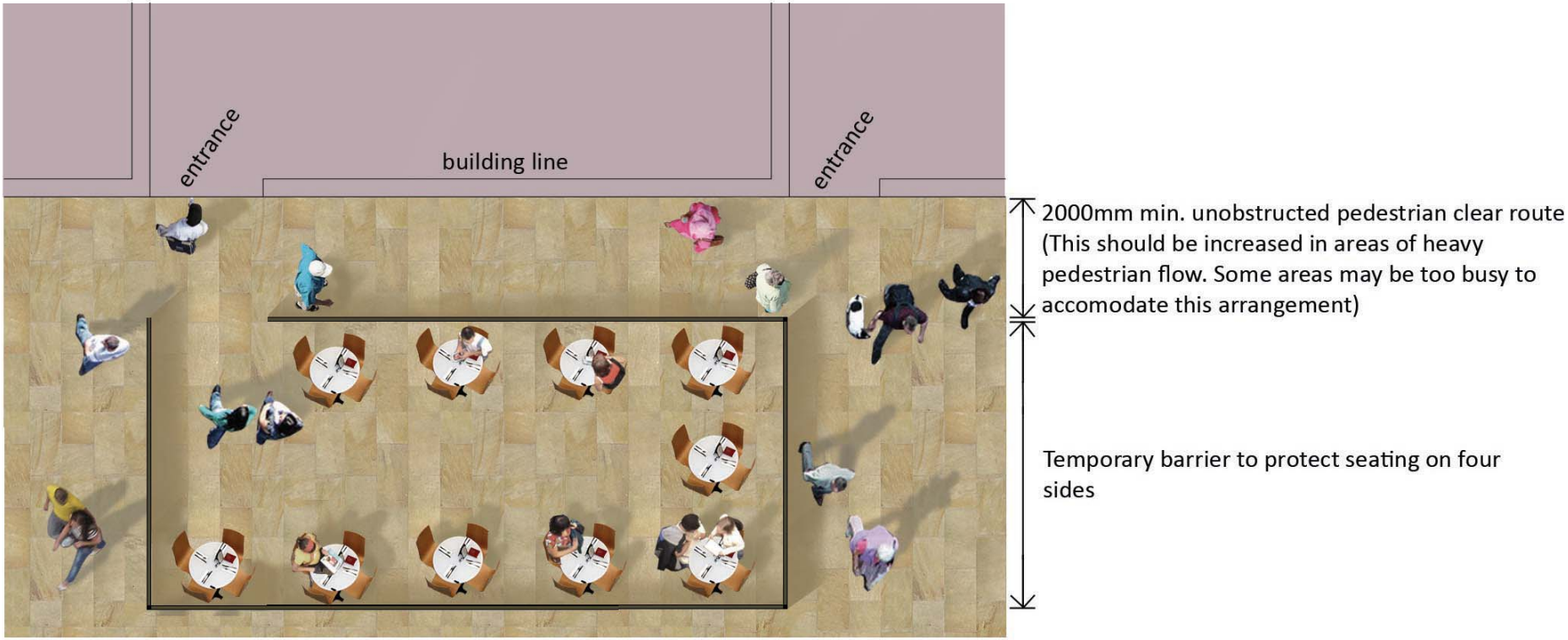
Figure 7.11 – Typical arrangement of outdoor café on vehicle access route with limited space (if space allows ideally a barrier should also be positioned along the front of the seating area to provide a continuous tapping rail for people with visual impairment)



Pedestrianised/Partially Pedestrianised Streets:

- In pedestrianised or partially pedestrianised areas in a few locations it may be acceptable to reverse the arrangement so that a clear route can be kept clear directly adjacent to the building line, with outdoor seating located on the other side of the 'footway' from the building (see figure 7.12).
- Some pedestrianised areas are too busy to accommodate outdoor café seating.
- A minimum width of 2000mm should remain free and unobstructed for pedestrians along the building line.
- This arrangement can allow more space for tables and chairs, although consideration would need to be given to whether this arrangement will provide adequate supervision from the business premises and not compromise security.
- In partially pedestrianised areas, outdoor café seating should only be installed within the times designated for pedestrian use.

Figure 7.12 – Typical arrangement of outdoor café in pedestrianised/partially pedestrianised locations where space allows



Temporary Banners to Lighting Columns

Temporary banners used to promote visitor attractions and events should not be located in the historic streets where they would obscure views, create clutter and detract from the appearance of the street. Figure 7.13 indicates routes where the use of temporary banners to lighting columns would be considered appropriate. These are locations where banners would help to enhance the appearance of routes, creating a more welcoming environment.

The photographs (right and below) show the quality expected in the design and specification of banners to lighting columns.

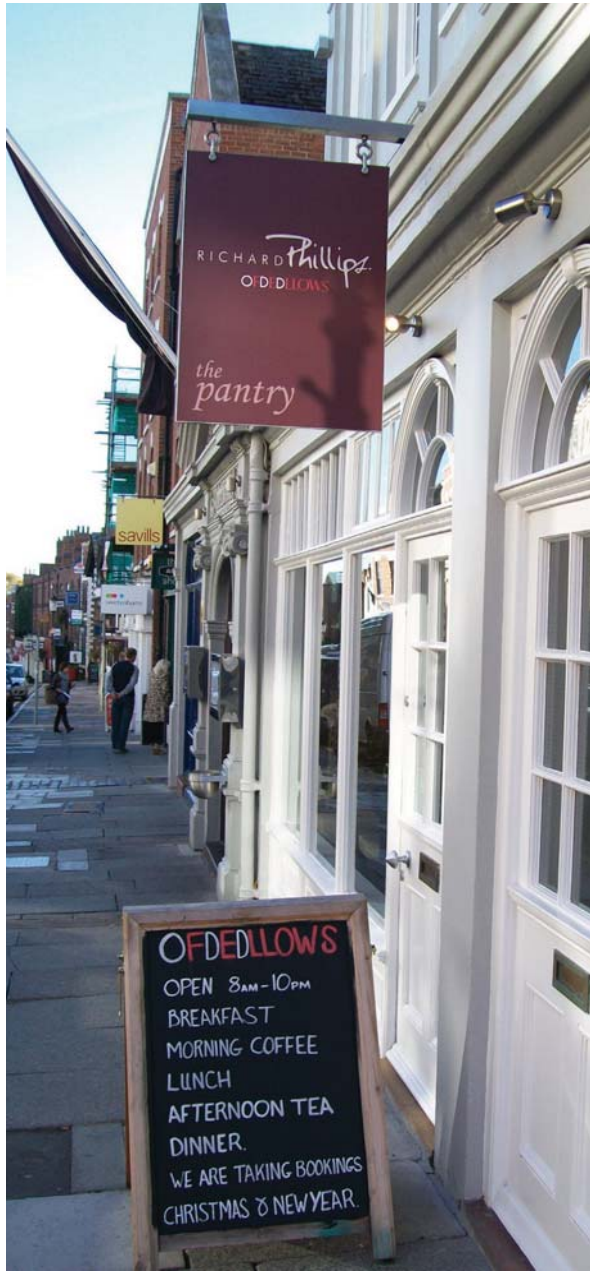
Example of high quality lighting banners (Ceramic themed banners along Potteries Way, Stoke-on-Trent)

A-frame Boards

It would be advantageous for the council to prepare a policy on the placement and enforcement of illegal obstructions, such as A-frame boards on the highway.

Feeder Pillars/Service Inspection Boxes

The impact of these boxes can be reduced by siting against buildings/boundaries, or preferably incorporating them into other structures or locating them below ground. If located on the street they should always be set back to the edge of the footway to prevent blockages to pedestrian flow. Boxes should be consistently painted in Telegray 2 (RAL 7046).



Example of A-frame board on pavement, Lower Bridge Street, Chester

Seating

Siting:
In siting formal seating (seats and benches) it is important to carefully consider key locations for seating opportunities, so as not to litter the public realm with empty seats. Formal seating should be provided at the busiest points of pedestrian activity.

- The seats themselves should be located away from the main pedestrian flow at locations that provide attractive or interesting views, generally have a favourable microclimate and feel safe to use.
- The aim should be to provide sheltered seating opportunities and seats in both shaded and sunny areas.
- Avoid, where possible, locating seating by polluted areas, i.e. next to busy roads.
- Avoid locating seats too close to litter and dog bins.
- A mixture of seats and benches should be incorporated, with consideration given to the location. For example, benches can allow for a more flexible seating arrangement as users do not have to face one way, however they would not be considered comfortable if people are likely to be sitting for a long period of time.
- Space should be provided to accommodate wheelchairs next to seating and also allow space for circulation around elements.
- Seats should be provided as resting points at regular intervals along well used routes (i.e. every 50m).
- Seats should be recessed 600mm from footpaths to provide legroom and avoid causing an obstruction.
- Avoid locating seats in areas where they might cause an obstruction to other services/facilities (i.e. in front of information boards).

As well as locations for formal seating, in the design of routes and spaces informal seating opportunities should be created. These could be steps, low walls or wide edges to planters. These types of informal seating supplement formal provision and provide additional capacity at busy times, such as during events.

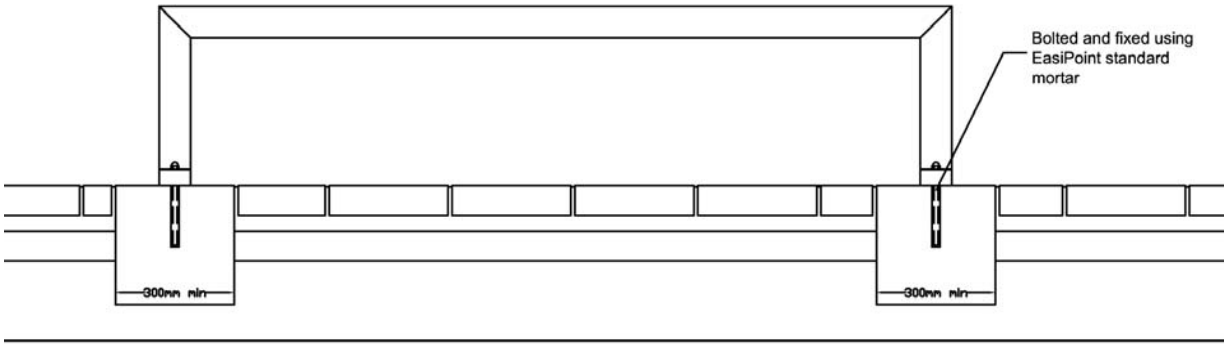
DDA Compliance:
It is important that at every seating area a range of alternative types of seat are provided to cater for a range of needs. This should include seats with backs and armrests as standard, as well as benches, some with and some without armrests. Section 7.5 – Accessibility gives further information on seat heights and the position of armrests. These factors should be considered in the final design of bespoke seats, as well as in the selection of standard products.

Fixing:
As Figure 7.14 illustrates seats can either be fixed using a surface fixing plate or root fixed (below ground). Although root fixing is a more robust method it does not allow for seats/benches to be removed without disrupting the surrounding paving.

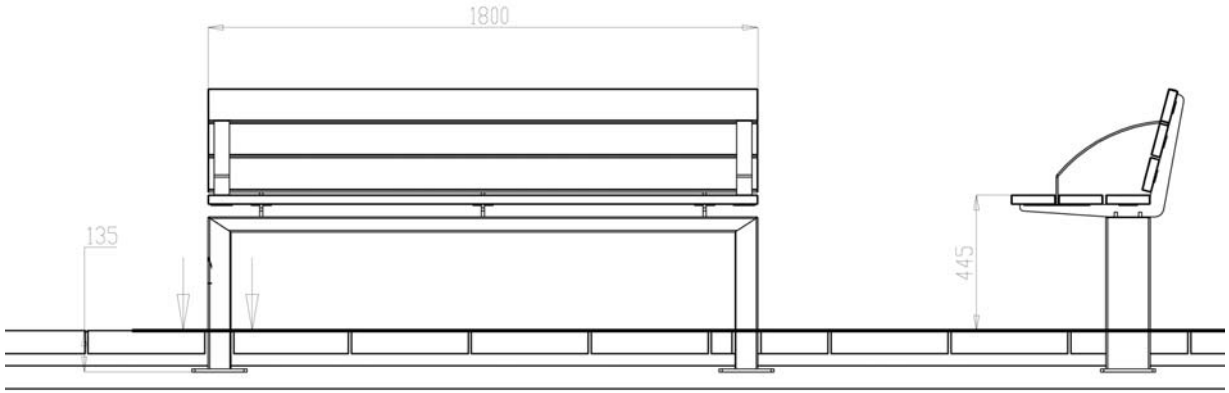
Seating recently installed at The Cross

Figure 7.14 – Seat Fixing Details

Surface Fixed



Root Fixed



Options for Bespoke Seats and Benches to City Centre Core:

The following tables provide palettes of seating recommended for use in each of the city centre areas.

Bespoke design to be based on existing product (or equal approved)	Materials/ Finish	Size	Fixing	Design notes
1. Street Design Ltd White City Seat – varying design	Red sandstone, FSC Iroko hardwood timber (untreated) and 316 grade stainless steel fixings and armrests.	Standard bench: Approx. 500mm wide, length varies.	Free standing base/wall with seat bolted to wall	Bespoke design to include seat with stainless steel armrests. Ensure all fixings are discretely concealed. Final design must ensure that no visible gaps are allowed which might attract litter or detritus. Seats must be easy to clean. Seats to be used in permanent locations only, away from vandal-prone areas. Consider incorporation of anti-skate lugs.
2. Street Design Ltd White City Bench– varying design	Red Sandstone, FSC Iroko hardwood timber (untreated) and 316 grade stainless steel fixings and some with armrests.	Approx. 500mm wide, length varies.	Free standing wall with bench bolted to wall	Bespoke design to include some benches with stainless steel armrests. Ensure all fixings are discretely concealed. Final design must ensure that no visible gaps are allowed which might attract litter or detritus. Seats must be easy to clean. Benches to be used in permanent locations only away from vandal-prone areas. Consider incorporation of anti-skate lugs.
3. Omos Street Furniture s83 seat	Red Sandstone, FSC Iroko hardwood timber (untreated) and 316 grade stainless steel fixings and armrests.	Length 2000mm, width 540mm, height 777mm	Epoxy resin dowel rods into concrete base or root fixed	Bespoke design to include seat with stainless steel armrests. Consider design modification to fixing to allow for temporary storage/relocation of seats during events. Consider incorporation of anti-skate lugs.
4. Omos Street Furniture s83 bench	Red Sandstone, Iroko hardwood timber (untreated) and 316 grade stainless steel fixings and some with armrests.	Length 2000mm, width 540mm, height 460mm	Epoxy resin dowel rods into concrete base or root fixed	Bespoke design to include some benches with stainless steel armrests. Consider design modification to fixing to allow for temporary storage/relocation of seats during events. Consider use of anti-skate lugs.

1.

2.

3.

4.

Options for Seats to Wider City Centre:

Product (or equal approved)	Materials/Finish	Size	Fixing	Use
1. Falco Street Furniture Afra Seat (Article number: 37.780.800)	Powder coated steel in grey with FSC Iroko hardwood timber slats.	Length 2040 mm, width 450 mm	Bolted to concrete base using base plates	For use in streets and hard landscaped public realm.
2. Falco Street Furniture FalcoLinea bench (Article number: 31.522.121)	Powder coated steel in grey with FSC Iroko hardwood timber slats.	Length 2071mm	Bolted to concrete base using base plates, or root fixed.	For use in streets and hard landscaped public realm where short rests are required and/or views required in either direction.
3. Omos Street Furniture s96w seat with armrests	Powder coated steel in grey with FSC Iroko hardwood timber slats and 316 grade stainless steel armrests.	Length 1800/2400mm, depth 565mm, height 790mm	Root fixed or above surface flange fixed.	For use in streets and hard landscaped public realm.
4. Omos Street Furniture s96w sym bench	Powder coated steel in grey with FSC Iroko hardwood timber slats.	Length 2000/2600, depth 455mm, height 445mm.	Root fixed or above surface flange fixed.	For use in streets and hard landscaped public realm where short rests are required and/or views required in either direction.
5. Luke Hughes and Company Chico seat (Ref: CH1)	FSC Iroko hardwood timber.	Length choice of 1500/2050/2400mm, width 600mm, seat height 435mm and overall height 787mm	Surface fixed using brackets and ground fixings.	Use in greenspaces.
6. Woodscape Type 2 bench curved or straight	FSC hardwood timber	Standard lengths of 2000 or 2500mm, height 400mm and width 400mm.	Surface fixing or below ground fixing to a depth of 200mm.	Use in greenspaces where short rests are required and/or where views are available in either direction.

1.

3.

5.

2.

4.

6.

Options for Seats to Riverside:

Product (or equal approved)	Materials/Finish	Size	Fixing	Use
1. Falco Valentino Seat with armrest (Article number: 37.736.202)	Cast iron supports painted in black with FSC Iroko timber slats.	Length 2000mm, seat height 420mm, overall height 695mm	Surface plates bolted to concrete footing.	For use in general riverside locations.
2. Broxap 2041-BP Riverside Cast Iron Framed Seat	Cast iron supports painted in black with FSC Iroko timber slats.	Length 1800mm, width 733mm and overall height 875mm.	Surface plates bolted to concrete footing.	For use in general riverside locations where armrests are not required.
3. Furnitubes or Broxap BX 2020_BP Eastgate Cast Iron Framed Seat	Cast iron frame painted in black with FSC Iroko timber slats.	Length 1800mm, width 620mm and overall height 830mm.	Surface plates bolted to concrete footing.	For use in The Groves riverside and within Grosvenor Park.
4. Broxap BX 2023_BP Eastgate Cast Iron Framed Bench	Cast iron frame painted in black with FSC Iroko timber slats.	Length 1800mm, width 892mm and height 482mm.	Surface plates bolted to concrete footing.	For use in The Groves riverside and within Grosvenor Park. Use where short rests are required and/or where views are available in either direction.
5. Broxap BX17 4019 Kennington Timber Bench	FSC Iroko timber	Length 1800/2400mm, width 650mm and overall height 900mm.	Steel straps bolted down or concreted in.	For use in Grosvenor Park
6. Woodscape Type 1 bench curved or straight	FSC hardwood timber	Standard lengths of 2000 or 2500mm, height 400mm and width 400mm.	Surface fixing or below ground fixing to a depth of 200mm.	For locations along riverside walk where short rests are required and/or where views are available in either direction.


1.


2.


3.


4.


5.


6.

Options for Seats to Canalside:

Product (or equal approved)	Materials/Finish	Size	Fixing	Use
1. Furnitubes Jubilee seat (ref: JUB6 BT)	Steel (plastic coated) in black or powder coated in black with FSC Iroko timber slats.	Length 1750mm, width 480mm, seat height 460mm and overall height 750mm.	Pre-drilled feet allow fixing to concrete base.	For use along canal towpath. Use plastic coated metal for locations prone to vandalism. Also option of using all steel version in these locations.
2. Furnitubes Jubilee bench (ref: JUB6 BT)	Steel (plastic coated) in black or powder coated in black with FSC Iroko timber slats.	Length 1750mm, width 550mm and height 460mm.	Pre-drilled feet allow fixing to concrete base.	For use along canal towpath where short rests are required and/or where views available in both directions. Use plastic coated metal for locations prone to vandalism. Also option of using all steel version in these locations.
3. Furnitubes Truro seat with armrests (ref: TRS 6GA)	Cast Aluminium frame, powder coated in black with FSC Iroko timber slats	Length 1890mm, width 455mm, seat height 435mm and overall height 825mm.	Ground fixed.	For use at canalside locations which link/are viewed from other parts of city. Less robust seat that should not be used in locations prone to vandalism.
4. Furnitubes Truro bench (ref: TRB 6G)	Cast Aluminium frame, powder coated in black with FSC Iroko timber slats	Length 1890mm, width 455mm and height 435mm.	Ground fixed.	As above, use benches where short rests are required and/or where views available in both directions.


1.


2.


3.


4.

Bollards

Siting

As part of the overarching principle to minimise street clutter, the use of bollards should be carefully considered.

- Bollards should be used to prevent vehicle access and overrun.
- Bollards can be used to help define pedestrian crossing points.
- The spacing of bollards will vary depending on highway design, but typically spacing should be set at 1200mm as a minimum and wherever feasible spacing should be increased to reduce the amount of bollards required.
- In many instances it will be possible to use other items of street furniture, such as seats, lighting columns and planters, to perform the same function.
- Bollards may also have a dual function that can help minimise clutter, such acting as a signpost for traffic restrictions (see existing example in Chester opposite) or as informal seating opportunities (see sandstone cube bollard in palette).
- Consideration should be given to using a bollard of the appropriate size for its setting and use.

Existing timber bollards accommodate signage and reduce street clutter

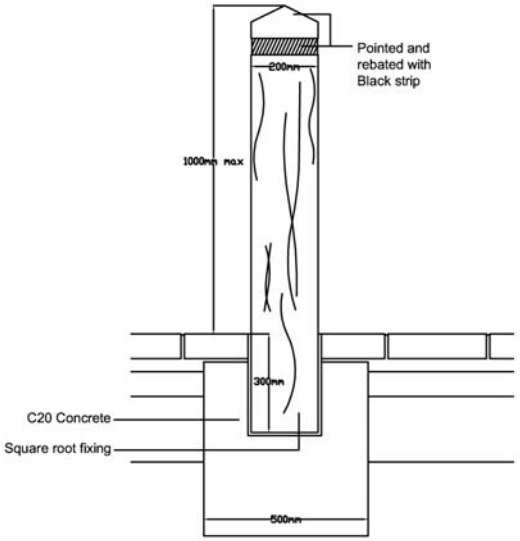
Fixing and Design

- Generally bollards should be root fixed into concrete. A square root is preferred where the bollard is to sit in paving (a round root would work better in tarmacadam).
- Surface fixing using a base plate should only be specified where there is a need to retain existing surfacing or where there are below ground constraints.
- Consideration should be given as to whether there is a need for an 'anti-ram' specification (to prevent any attempt at vehicle overrun), which would consist of a reinforced steel core and extended root. Timber bollards should not be used where an anti-ram specification is required.
- It is essential that all bollards either contrast in tone to their surrounding context/surfacing or incorporate a visibility band.

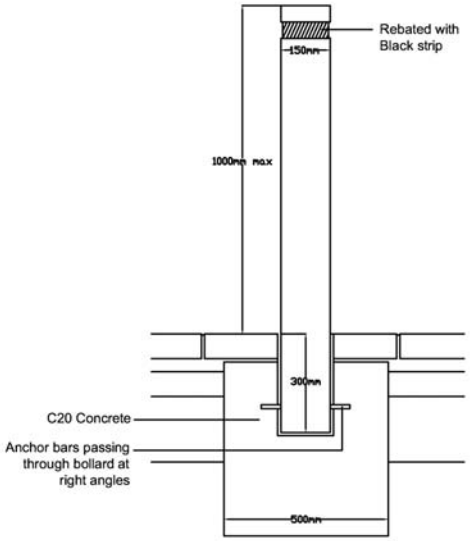
Examples of a range of fixing details are shown in Figure 7.15 overleaf.

7.15 – Bollard Fixing Details

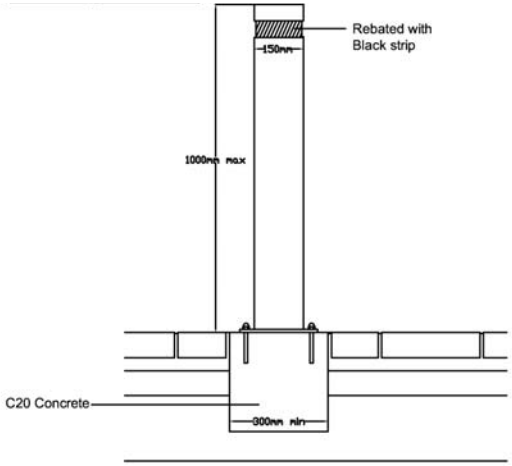
Timber Bollard - Root Fixing Detail



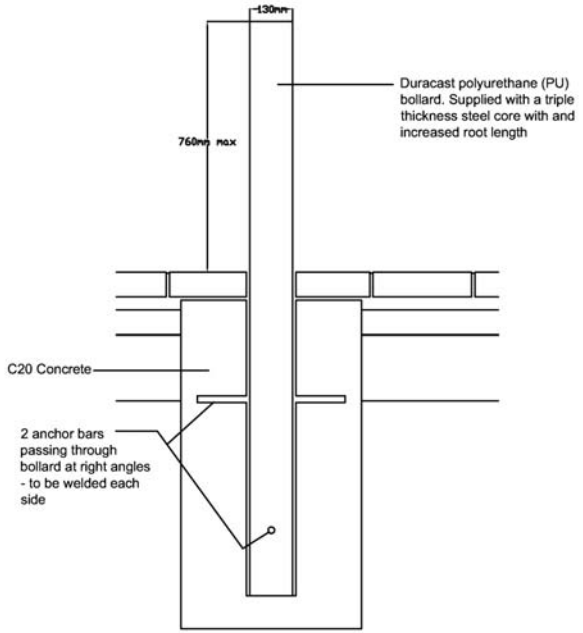
Steel Bollard - Root Fixing Detail



Steel Bollard - Base Plate Fixing Detail



Anti-ram - Root Fixing Detail



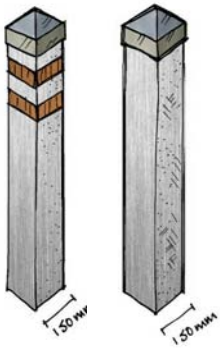
Options for Bollards

The following bollards are recommended for use in Chester city centre.

Product (or equal approved)	Materials/ Finish	Size	Use/ Application
1. Red sandstone bespoke cube bollard	Red sandstone with contrasting visibility band inlaid (i.e. stainless steel).	550x550x550mm	Use in city centre core spaces and wider city centre gateways. Use where appropriate to provide informal seating.
2. Large bespoke bollard	316 grade stainless steel with visibility bands in contrasting material (red sandstone).	300x300x1000mm	Selected locations in city centre core i.e Cathedral Quarter (could include contemporary developments). Use where robust bollard required. Scope to accommodate traffic signage.
3. Slim bespoke bollard	316 grade stainless steel (with option of visibility bands in contrasting material - red sandstone).	150x150x1000mm	Selected locations in city centre core, i.e Cathedral Quarter (could include contemporary developments). For use where space is more limited.
4. Large bespoke timber bollard	FSC Oak with 316 grade stainless steel cap and decoration	300x300x1000mm	Use in gateways and spaces (including greenspaces) and gateways across city.
5. Large timber bollard	FSC Oak with 316 grade stainless steel cap	300x300x1000mm (also available as 200x200mm and 150x150mm)	City-wide use Use where robust bollard required. Scope to accommodate traffic signage.

1.

2.



3.

4.

5.

Options for Bollards (continued)

Product (or equal approved)	Materials/ Finish	Size	Use/ Application
6. Broxap BX 1539-RT Classic Manchester bollard	Cast iron bollard finished in black	Diameter 227-190mm and height 985mm.	For use in historic streets/settings in: • City Centre Core. • Wider City Centre. • Riverside • Consider use of polyurethane version in areas of heavy use/ or areas prone to vandalism.
7. Sheffield Stainless Steel	316 Grade Stainless Steel with recessed visibility band in matt black or white.	Diameter 140mm and height 1000mm	Contemporary developments in Wider City Centre.
8. Broxap BX 1519_RT Waterloo	Cast iron bollard finished in black	Diameter 265-127mm and height 1211mm	Canalside Consider use of polyurethane version of Waterloo bollard in areas of heavy use/ or areas prone to vandalism.
9. Woodscape SG 'R' Square Grooved timber bollard	FSC European Oak with white reflective band	Either 150x150x1000mm or 300x300x1000mm	Riverside (beyond Groves).


6.


7.


8.


9.

Options for Access Bollards

The following access bollards are recommended for use in Chester city centre:

Product (or equal approved)	Materials/ Finish	Size	Use/ Application
1. Woodscape SG 'R' Square Grooved timber bollard	FSC European Oak with recessed white reflective visibility band	150x150x1000mm	• Riverside and Canalside. • Use where vehicle access required on occasional basis.
2. Broxap BX20 5301-4 Georgian manual telescopic bollard	Duracast polyurethane in black with lift assist and fold-down handle	Diameter 114mm and height 900mm.	• Use in historic streets/settings in City Centre Core and Wider City Centre. • Use where vehicle access required on occasional basis.
3. Furnitubes Removeable Manchester Bollard with round base – with F1 composite socket	Cast iron bollard in black and socket with cast aluminium spigot	Diameter 190mm and height 975mm	Use in historic streets/settings in City Centre Core and Wider City Centre where below ground space is restricted.
4. Broxap BX20 5376 stainless steel telescopic bollard	316 Grade Stainless Steel with recessed visibility band in white and fold-down handle	Diameter 139mm and height 900mm.	Use in contemporary settings in City Centre Core and Wider City Centre. Use where vehicle access required on occasional basis.
5. ATG VP200 Stainless automatic bollard	316 grade stainless steel automatic bollard with white reflective visibility bands	Diameter 168mm and height 700mm.	• Use in contemporary settings in City Centre Core and Wider City Centre. • Use where vehicle access required on regular basis.
6. ATG VP200 black automatic bollard	Galvanised steel bollard with black rubber sleeve and white reflective visibility bands	Diameter 200mm and height 700mm.	• Use in historic streets/settings in City Centre Core and Wider City Centre. • Use where vehicle access required on regular basis.


1.


2.


3.


4.


5.


6.

Cycle Stands and Secure Storage

Siting

- Cycle stands should be provided in areas with good natural surveillance and/or CCTV surveillance and located at key destinations, such as visitor attractions and main retail areas.
- Cycle stands should be located in groups of three, as a minimum and should be positioned so as not to impede pedestrian movement when the stands are being used.
- Cycle stands should be spaced so that they are easy to clean around.
- Secure and sheltered cycle storage should be provided within the city's main arrival points, which are the railway station, bus station and main surface car parks. Care should be taken to locate them sensitively within the public realm, so that they do not detract from streets or the settings of important buildings.

Fixing

- Generally cycle stands should be root fixed into concrete.
- Surface fixing should only be used where the existing surfacing needs to be retained or where there are below ground constraints.

Options for Cycle Stands and Storage

The cycle stands and storage below are recommended for use in Chester city centre:

Product (or equal approved)	Materials/ Finish	Size	Fixing	Use/ Application
1. BXMW/GS0 Sheffield Stainless Steel Cycle Stand	316 Grade Stainless Steel with recessed matt black visibility bands (incorporating Cycle Chester logo in White)	Height 800mm, Width 715mm.	Root fixed	City Centre Core
2. BXMW/GS0 Sheffield Polyurethane Cycle Stand	Galvanised steel with polyurethane finish in black (incorporating Cycle Chester logo in White)	Height 800mm, Width 715mm.	Root fixed	Wider City Centre, Riverside and Canalside
3. Cycle-Works Velosafe locker	Galvanised steel polyester powder coated in grey	Height 1200mm, Length 1900mm and tapered width 780-260mm	As per manufacturer's recommendations	• City wide locations – should be located sensitively (with consideration given to importance of building settings). • Tapered shape takes up less space and allows flexible arrangement (8 lockers in 1 parking bay)


1.


2.

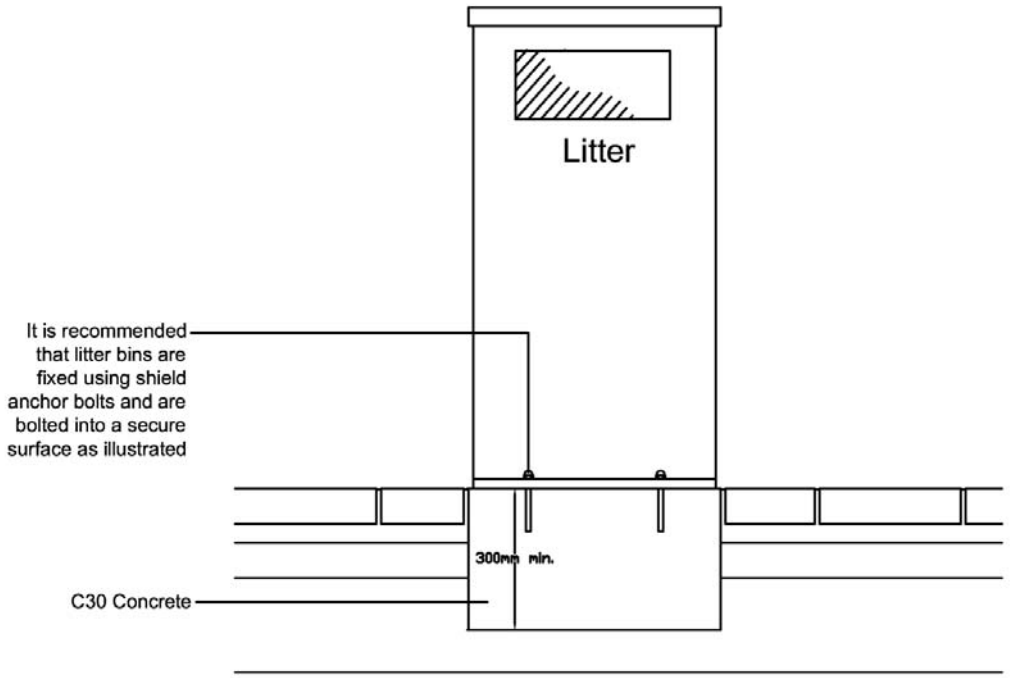

3.

Litter and Recycling Bins

Siting and General Design Principles:

- Bins must be carefully located where they are needed, such as on pedestrian desire lines, close to seating areas, bus stops and take-away food and drink outlets.
- The number and capacity of bins should respond to the expected levels of use.
- Bin locations must also consider ease of access for maintenance and street cleaning.
- The primary bins used in Chester should encourage recycling with a minimum of two sections. The primary bins should also have an ashtray to enable collection of smoking litter.
- Recycling compartments should be clearly labelled and 'seagull proof' flaps used to discourage pedestrians from using recycling compartments incorrectly.
- The other bins presented should be used in quieter locations or where space is restricted. These only need to be for litter but must have the ashtray fitted.
- Generally, unless space is limited all bins should have a capacity of at least 100 litres.
- All bins should be bolted to a concrete base (see the fixing detail shown in Figure 7.16).
- In order to accommodate a wide range of space and fixing requirements across the city centre a wide selection of bin sizes and types are provided in the palette. In general, it is recommended that bins from this range are specified, but again in key spaces and gateways a bespoke bin design may be appropriate.
- It is recommended that the addition of banding, laser cutting is kept to a minimum in order to maintain a clean and uncluttered look. Any detailing should be consistently applied across Chester.

Figure 7.16 – Bin Fixing Detail



Options for Litter and Recycling Bins

The following bins are recommended for use in Chester city centre.

Product (or equal approved)	Materials/ Design Features	Size/Capacity	Use/ Application
1. Broxap BX45 2550-DD-RC Derby Double Recycling Unit	Pyramid top Seagull proof flap to recycling compartment. Cigarette ashtray to top.	Size: Height 1020mm, width 915mm and depth 535mm Capacity: 2x120L	Primary bin for use city wide, where space allows.
	Option 1a for heritage locations: Galvanised steel, powder coated in black with gold bands and logo.		
	Option 1b for general locations: Galvanised steel, powder coated in Graphite Grey (RAL 7024) with white lettering and logo. Street name in white in Distinctively Cheshire font.		
	Option 1c for general locations: Galvanised steel, powder coated in Telegrey 2 (RAL 7046) with Graphite Grey (RAL 7024) lettering and logo. Street name in Graphite Grey in Distinctively Cheshire font.		
2. Broxap BX45 2596-DDS-RC Derby Double Slimline Recycling Unit	Galvanised steel, powder coated in black. Pyramid top Seagull proof flap to recycling compartment. Cigarette ashtray to top.	Size: Height 1200mm, Width 770mm and depth 420mm Capacity: 2x80L	Primary bin for use city wide. Use where space more limited.

1a.

1b.

1c.

Options for Litter and Recycling Bins (continued)

Product (or equal approved)	Materials/ Design Features	Size/Capacity	Use/ Application
3. Broxap BX45 2550 Derby Quad Recycling Unit	Galvanised steel, powder coated in black. Pyramid top Seagull proof flap to recycling compartments. Cigarette ashtray to top.	Size: Height 1020mm, width 1830mm and depth 535mm Capacity: 4x120L	Primary bin for use in City Centre Core (areas of heaviest use and where night time economy is found). Locate where space allows.
4. Broxap BX45 2550-S Derby Standard Steel Litter Bin	Galvanised steel, powder coated in black. Pyramid top Cigarette ashtray to top.	Size: Height 1020mm, width 535mm and depth 535mm Capacity: 120L	Secondary bin for city wide use in quieter locations and where space is limited.
	Option 4a for heritage locations: Galvanised steel, powder coated in black with gold alloy bands and logo.		
	Option 4b for general locations: Galvanised steel, powder coated in Graphite Grey (RAL 7024) with white logo. Street name in white in Distinctively Cheshire font.		
	Option 4c for general locations: Galvanised steel, powder coated in Telegrey 2 (RAL 7046) with Graphite Grey (RAL 7024) logo. Street name in Graphite Grey in Distinctively Cheshire font.		

4a.

4b.

4c.

Options for Litter and Recycling Bins (continued)

Product (or equal approved)	Materials/ Design Features	Size/Capacity	Use/ Application
5. Broxap BX 2371 Pierhead Tall Litter Bin	Stubbing plate ashtray Cast iron	Size: Height 1200mm and Diameter 500mm. Capacity: 100L	Secondary bin for City Centre Core use.
	Option 5a: painted in Graphite Grey (RAL 7024) with white logo and street name (in Distinctively Cheshire font).		
	Option 5b: painted in Telegrey 2 (RAL 7046) with Graphite Grey (RAL 7024) logo and street name		
6. Broxap BX50 2550-SSS Derby Stainless Steel Smooth Litter Bin	Pyramid top Bead blast grade 304 stainless steel Graphite Grey (RAL 7024) logo and street name Cigarette ashtray to top	Size: Height 1020mm, Width 535mm and depth 535mm Capacity: 120L	Secondary bin for City Centre Core use in contemporary settings.
7. Woodscape LBS 112 Litter Bin	FSC Hardwood timber. Galvanised mild steel liner.	Capacity: 112L	Secondary bin for use at riverside locations and in informal greenspaces.
8. Broxap BX45 2550 Derby Steel Wall Litter Bin	Galvanised steel, powder coated in black. Flat top Cigarette ashtray to top.	Size: Height 1020mm, width 535mm and depth 315mm Capacity: 80L	Secondary bin for city wide use in locations where space is very limited and pedestrian flows are low.
9. Broxap BX 2556 Derby Hercules Post Mounted Steel Litter Bin	Galvanised steel, powder coated in black. Flat top	Size: Height 580mm, width 310mm and depth 310mm Capacity: 40L	Secondary bin for city wide use in locations where space is extremely limited and pedestrian flows are low.

5a.

5b.

6.


7.

Tree Grilles

Where trees are located in hard surfacing they should be planted as rootballed semi-mature specimens (20cm girth +), with a stem clearance of 2.1m minimum. The size of tree and use of underground guying will preclude the need for tree guards.

Where smaller trees might be specified for soft landscape areas, use of traditional softwood timber staking will be an adequate means of protecting and supporting trees until established.

Tree Grille Palette

The following tree grilles have been selected as suitable for use within Chester. Grilles should be fixed as per the manufacturer's specification (see tree pit details in section 7.6 - trees and ornamental planting).

Options for Tree Grilles

Product (or equal approved)	Materials/finish	Size	Use/Application
1. Jones of Oswestry Arborslot Grille	Galvanised steel cover and frame, with infill material to match surrounding paving	Range from 1000x1000mm – 2000x2000mm	City Centre Core
2. Greenleaf Clyde Grille	316 grade stainless steel grille with galvanized steel frame	Can be made to any size (typically 1000x1000mm and 1200x1200mm)	City Centre Core – in contemporary developments
3. Greenleaf Arboresin porous tree pit surfacing	Galvanised steel frame with resin bound natural stone in buff colour. 200mm wide granite kerb edge.	Range of frame sizes available 800x800mm – 2000x2000mm	City-wide (including City Centre Core)


1.


2.


3.

Planters

General principles

- The volume of the planter must be sufficient for the planting intended and must ensure good anchorage (otherwise a means of fixing must be supplied).
- In general, tree planting in containers is not considered appropriate.
- Planters should be designed/selected to be light in colour as the soil will be less susceptible to overheating and drying out.
- Generally planters should be in keeping with other surrounding furniture.
- Planters should include a means of water storage/self watering.
- Planters should be designed/selected so that they have a means of drainage.
- Off the shelf planters should be located close to/ over drainage gullies so that large areas of paving do not get wet.

Permanent raised beds/planters

Section 7.6 on ornamental planting provides details of the locations where shrub and perennial planting in permanent planters would be appropriate.

The preferred approach to provision of planters is that they should be bespoke and permanent features, which form an integral part of the design of new spaces within the public realm.

Consideration should be given to the provision of formal or informal seating and the incorporation of interpretive artwork elements in the design of permanent planters.

It is recommended that all permanent planters be constructed from red sandstone in ashlar blocks. Although it is anticipated that most permanent planters would be located in the City Centre Core, this approach would also be appropriate in gateway spaces in the wider city. The photographs opposite provide some examples.

Sandstone raised planting areas

Red sandstone permanent planter, coping offers informal seating edge.

Existing sandstone planter in Chester city centre

Portable planters

Where there is a need for planters, but there is also a need for them to be moved to offer a more flexible space, high quality durable and portable planters may be incorporated into schemes. Planters should be selected that are easy to clean and utilise high quality materials, such as cast stone, stainless steel and hardwood. The following planters are considered suitable for use city-wide across Chester.

Options for Portable Planters

Product (or equal approved)	Materials/finish	Size	Design notes
1. Woodscape Hardwood Modular Planter	FSC Iroko hardwood	Size flexible (height in multiples of 140mm and width/length can vary between 600 – 2400mm).	Optional timber base. Modular assembly on site.
2. Marshalls Sineu Grass Roseraie Large Square Planter (ref. 299561AB1)	Galvanised powder coated steel and hardwood. Galvanised liner with built in water reservoir.	Height 900mm, width 920mm and length 920mm. Capacity: 400L	Stainless steel feet enable planter to be leveled on gradients.
3. Marshalls Monoscape Ovito planter (ref. SD900005)	Cast stone in grey granite with fine shot blast finish	Height 600mm, width 480mm and length 1040mm	Separate concrete base to allow leveling of planter.
4. Marshalls Monoscape Scala planter (ref. SD902001)	Cast stone in mid grey granite with high quality ground finish	Height 600mm, width 1200mm and length 1200mm	Separate concrete base to allow leveling of planter.

1.

2.

3.

4.

Temporary planters/containers

Each year the council uses temporary planters and containers for seasonal bedding displays as part of 'Chester in Bloom'. Further detail on their use and location is provided in Section 7.6 - Trees and Ornamental Planting. Hanging baskets are likely to be mounted on hanging basket trees (standard products are shown in the photographs below).

It may be appropriate for a bespoke hanging basket tree design to be developed for Chester in the future that might also be integrated into the design of other elements of street furniture. The following products show the types of self-watering containers considered suitable for use.

Options for Temporary Planters / Containers

Product (or equal approved)	Materials/finish	Size
1. Amberol Ltd Self Watering Full Barrier Basket (ref. BBU-1P)	Black moulded plastic with steel brackets.	Length 1290mm, Width 380mm and Depth 280mm
2. Amberol Ltd Self Watering Half Barrier Basket (ref. HBB-2P)	Black moulded plastic with steel brackets.	Length 1270mm, Width 260mm and Depth 240mm
3. Amberol Ltd Self Watering Hanging Basket (on hanging basket tree) (ref. CAS-1P)	Black moulded plastic	Diameter 530mm, Depth 265mm
4. Amberol Ltd Self Watering cup and saucer 'Up the Pole' Basket (Ref. CNS-1P)	Black moulded plastic	Diameter 650mm, Depth 300mm
5. Amberol Ltd Self Watering Floral Fountain Planter (ref. FF-2P)	Black moulded plastic	Base diameter 800mm and Height 1700mm
6. Amberol Ltd Self Watering Metre Squared Planter (ref. MSP-0P)	Black moulded plastic	Length 1040, Width 1040mm and Depth 750mm


1.


3.


5.


2.


4.


6.

Railings, Gates and Handrails

Use and Siting

High quality railings, gates and handrails are an important element within the public realm. However, in order to avoid unnecessary physical obstruction and visual clutter they should only be included in the design of streets and spaces where there is a clear need, such as to:

- define streets and spaces, where building lines are fragmented;
- distinguish between public and private realm;
- secure private property; and
- protect pedestrians from hazards (i.e steps/ ramps, falls from height and vehicle traffic).

Railings to Public Realm

A range of railing types are currently found within the city centre (see photos opposite). Where painted, existing railings should be maintained to a gloss black finish.

Examples of existing railings found in Chester City Centre

A review of the existing types and styles of railings found in Chester has led to the development of the options presented in the table overleaf. The table provides details of the anticipated application or use. The height of railings will vary depending on application.

Where new black finish railings are specified, consideration should be given to whether it is feasible to manufacture with a polyurethane finish to prevent problems of paint chipping and repainting.

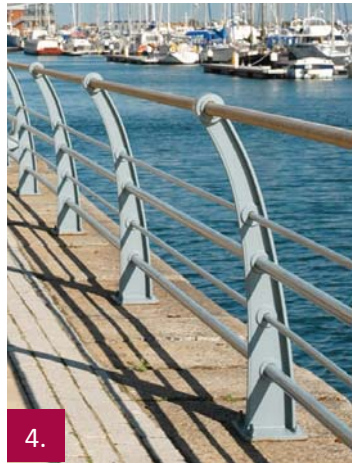
Options for Railings:

Type	Supplier/ Suggested Suppliers (or equal approved)	Application/Use	Materials/Finish
1. Plain vertical bar railings	Zaun Ltd Solid Vertical Bar Railings	City wide use - simple design would complement a wide range of settings.	Galvanised steel, polyester powder coated in black.
2. Decorative vertical bar railings	B Rourke & Co Ltd bespoke railings	Bespoke design and traditional manufacture for use in historic settings (design to match existing locally appropriate styles/designs).	Cast iron finished in black or galvanised steel polyester powder coated in black.
3. Bespoke stainless steel railings	Architectural Street Furnishings (ASF) or Geo Woodhouse	For use within contemporary developments in the city centre.	316 grade stainless steel
4. Riverside railing	Broxap BXPU 1577-3-RT Quayside Curved PU –5 rail	For riverside walk (not including the Groves)	Duracast polyurethane in black
5. Canalside railing	Broxap BX 1543-2-RT Rockport Cast Iron 2 rail.	For canalside locations.	Cast iron, painted black.


1.


2.


3.


4.


5.

Options for Railings (continued)

Type	Supplier/ Suggested Suppliers (or equal approved)	Application/Use	Materials/Finish
6. City Walls railing	Bespoke design (Bespoke fabricators – IAE Fencing, B Rourke & Co Ltd, Ken Brogden Ltd).	City Walls	Galvanised steel or powder coated painted finish.
7. Bespoke timber post and rail	Jacksons	City greenspaces	Oak posts, with stainless steel caps and galvanized mild steel or stainless steel rails (depending on location). Dimensions, post spacings etc. to vary depending on application.
8. Cheshire railings	IAE Fencing (5 rail Moorland Estate fencing)	City wide locations (particularly greenspaces)	Galvanized steel, flat bar railings, painted in black and white.
9. Estate railings	IAE Fencing	City greenspaces	Galvanised steel flat bar railings, polyester powder coated in black.
10.Bespoke railings	Dependent on design.	City centre gateways and spaces (in the City Centre Core and Wider City Centre). Design to be guided by locally appropriate themes/concept for spaces.	- Oak - Stainless steel - Powder coated steel in black


6.


7.


8.


9.


10.

Highway Guard Rails

General Principles

There will be a general presumption against the use of pedestrian guard railing to highways and elsewhere in this document it is proposed that, wherever possible, existing highway guard rails are removed. If barriers are required within the public realm to guide or protect pedestrians from motorists, it is recommended alternative elements should be used, such as strategically placed signage, planters or bollards.

Where there is a risk of vehicle overrun at junctions, a combination of adequate pavement construction and kerb upstands should be used, with bollards used as a last resort.

Where highway guard rails are still considered absolutely necessary for safety reasons it is recommended that one of the following products (or similar) are used.

Options for Highway Guard Rails

Product (or equal approved)	Application/Use	Material/Colour	Dimension/Size
1. Marshalls Ferrocast Decorguard Regent 3	To match existing. For use in historic parts of public realm in the City Centre Core and Wider City Centre.	Galvanised steel posts with a protective ferrocast polyurethane coating, polyester powder coated in black. Steel railing panels polyester powder coated in black.	Post dimension choice of 89mm or 114mm. Suggest use of 89mm to minimise visual impact of posts. Panel size: 2000x900x12mm.
2. Hugh Logan Engineering Visimax Rail	Simple, visually unintrusive design that would complement a wide range of settings in the Wider City Centre. Use particularly in locations where visibility of pedestrians is a concern.	Galvanised steel polyester powder coated in black.	Panels can be purpose made to suit requirements on site. Choice of V2, V4 or V8 panel types (suited to different sight angles).
3. Broxap BX47 4250-SS Bespoke Pedestrian Guardrail	For use within contemporary developments in the City Centre Core and Wider City Centre.	Grade 316 stainless steel	Panel size: 2000x900mm.

1.

2.

3.

Security Railings/Fencing

General Principles

Security fencing should only be used where absolutely necessary. Where security fencing is required, this should be as high quality as possible with weldmesh/paladin fencing specified as a minimum in wider city centre locations (see options provided below).

The height of railings should be kept to a minimum but will vary depending on location. Planting should be used in combination with fencing to improve the appearance of boundaries and assist with screening.

Options for Security Railings / Fencing

Type	Suggested Supplier/Product (or equal approved)	Materials/Finish	Use/Application
1. Bespoke design	Dependent on design.	Example shown: galvanised steel frame with powder coated finish. Hardwood timber infill.	City Centre Core in contemporary developments.
2. Tall vertical bar	Orsogril Aumina or Zaun Ltd Solid Vertical Bar Railings	Galvanised steel, powder coated in black or grey.	City Centre Core in historic settings.
3. Higher quality mesh security fencing	Orsogril Pleione or SteropEX steel grating fence	Galvanised steel, powder coated in black or grey.	In Wider City Centre locations (outside City Centre Core).
4. Weldmesh/paladin	Zaun Duo Perimeter or Dual Guard Fencing	Galvanised steel posts and wire mesh, polyester powder coated in black or grey.	In Wider City Centre locations (outside City Centre Core).


1.


2.


3.


4.

Handrails

The separate Section 7.5 - Accessibility, sets out design parameters for handrails. For reasons of comfort, the preferred material for handrails in the city centre is a close grained, smooth finish hardwood timber. Handrails should be of bespoke design to suit their location. The aim should be to integrate handrails into the design of railings, retaining walls and buildings.

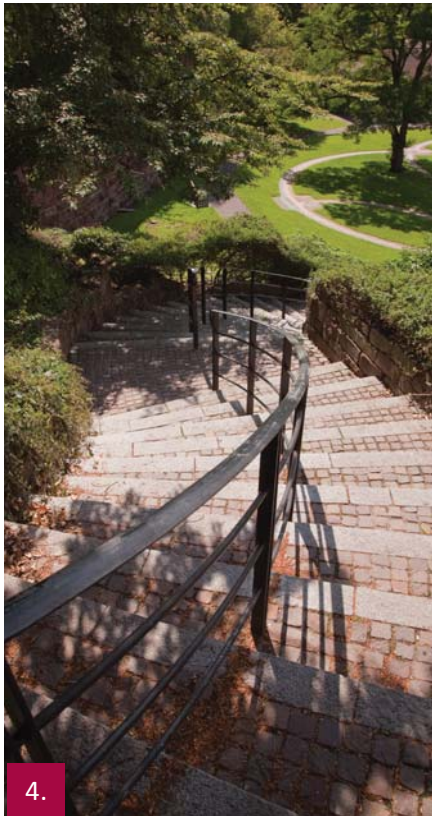
Options for Handrails

Type	Application/use
1. Hardwood timber	For city-wide use where vandalism is not a concern.
2. Stainless steel	For use in City Centre Core where hard wearing solution required.
3. Steel (polyester powder coated in black)	Wider City Centre, where hard wearing solution required.
4. Steel estate-style (polyester powder coated in black)	City-wide greenspaces, where hard wearing solution required.


1.


2.


3.


4.

Kneerails

Kneerails are sometimes of use in controlling access and protecting an area without the need for a full height boundary treatment. It is important that knee rails are located well away from pedestrian routes so that they do not form a trip hazard. The examples below are provided of knee rails that would be considered acceptable for use across Chester (city-wide).

Timber post (with stainless steel cap) with powder coated steel (black) or stainless steel rail

Powder coated galvanized steel post and rail (in black)

Gates

Generally gates should match the boundary treatments they are set within. Bespoke gates maybe appropriate in the following instances:

- To highlight a visitor destination.
- To decorate/screen access to service yards along important streets.
- As part of bespoke boundary treatments to city centre spaces and gateways.

Example of bespoke gates