



WORTHING

STREET FURNITURE

AUGUST 2008

BDP.

INTRODUCTION

BDP were appointed in March 2008 to define a range of street furniture for Worthing Town Centre. This project builds upon The Worthing Masterplan which includes a public realm and seafront strategy where indicative elements of street furniture have been described and suitable images portrayed.

The conclusions of this commission will determine the components of street furniture for the Chapel Road and Marine Parade road safety and public realm scheme programmed to commence on site in September 2008.

The project programme seeks to determine the following:

- Approach to street furniture in Worthing
- Design and character styles
- Specifications and details

The elements which will be considered include:

- Seating
- Bins
- Bollards
- Signage
- Cycle racks
- Vegetation

During the initial stages of the project analysis was carried out to determine different character zones within Worthing with a view that this may determine an approach for the use of street furniture.

Through discussions with the steering group the proposed approach is now to determine a range of materials which will be used in different ways throughout the town centre - therefore adding continuity between the character zones in the Town Centre.

The following page suggests the range of materials to be used as the component elements of street furniture. Following on the specific street furniture items are shown with a description, specification and suggestion of where it is to be used

MATERIALS PALETTE

It is proposed to define a palette of materials which are then used in a family of street furniture appropriate to their setting rather than select a different piece of furniture for each setting

Stainless steel (figure 1.)

- low maintenance, durable, contemporary
- suitable for sea air and salt exposure
- grade 316, brushed finish
- for use on the visual components of the furniture such as hand rests and for bollards, bins and cycle racks



Figure 1.

Timber (figure 2.)

- comfortable, durable and
- does not react to extreme temperatures
- FSC certified hardwood
- for use on the horizontal seating component to benches, bollards and potential within signage



Figure 2.

Mild steel (figure 3.)

- durable and structural
- can be galvanised and painted to specified colour for use on the structural elements of components
- including sign posts and columns

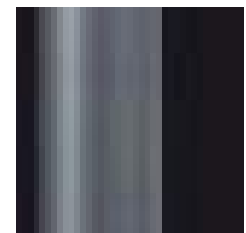


Figure 3.

Glass (figure 4.)

- clear and protects
- 10 mm toughened low iron content
- for use on display panels and information boards



Figure 4.

Stone (figure 5.)

- durable and robust
- granite - silver / dark grey, green, beige, black
- fine picked or honed finish
- for use as block seating and the base to plinths



Figure 5.

Fabric (figure 6.)

- visual and adds colour
- for use as banners and flags mounted to poles



Figure 6.

SEATING General

For general seating a palette should be agreed which will blend into the streetscape, however allowing the potential for a unique element within designated areas which will add discreet interest.



Figure 7. Bench with back and armrests, option 1



Figure 8. Bench with back and armrests, option 2

The design principal can be developed in different ways, further options can be explored based on the proposed design criteria. Both of these options seats use the same components.

Design criteria:

A flat platform with a back and armrests as additions.

Neutral and elegant in design.

Timber slats for the seating component, mild steel frame for the structure and stainless steel for the armrests and details.

Provided in areas where people want to sit with and without backrests in compliance with DDA.

Proposed unit:

The images adjacent are bespoke benches as designed by the supplier "Urban Elements".

Timber seat 1800 x 450mm frame to be in powder coated mild steel.

2 legs to enable easy cleaning.

Consideration to be given for additional armrests / studs in stainless steel.

Approximate cost £1200/£1500 dependant on design development.

SEATING Integrated

In line with the family of forms being suggested for street signage and identity, this circular bench seeks to provide an integrated solution where columns are to be located within the town centre

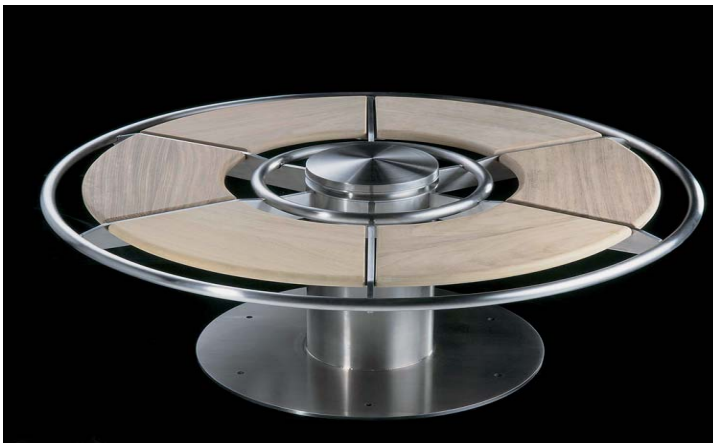
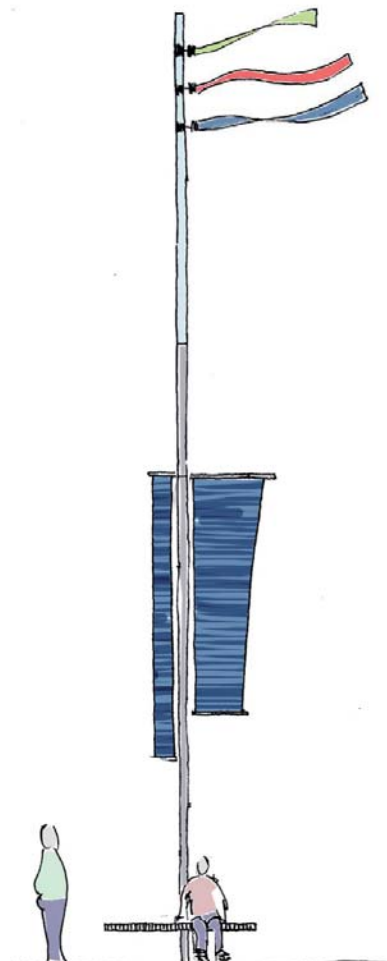


Figure 9. Circular bench that can be integrated with lighting or signage

This is an example of a circular bench.

This combines a timber seating surface with a stainless steel frame and protection bar.

Costs and exact sizes will have to be determined on a case by case basis.



The advertising unit (fig 10) shows how a column could be integrated to provide street lighting.

Figure 11 shows a circular seat with banners in the same style.

Figure 10 and 11. Options with columns

SEATING Stone Blocks

As an alternative to the standard palette solid granite cubes are proposed either as blocks or rectangles. these can be used as stand alone elements or as a base to a seating ledge or plinth



Figure 12 and 13. Granite cubes with shallow indentation and integrated timber

Solid granite blocks.

Cubes or rectangles - made to measure, typically 500mm above adjacent paving level.

Fine picked granite with a honed top.

A shallow indentation can be added to the top to define seating position.

Timber Slabs can be secured to the top of the blocks.

Secured to paving.

Colours:
silver/mid/dark grey
green
beige
pink
black

Cost dependant on size, typically £350 for a cube.



Figure 14. Granite blocks and rectangles units on urban square

SEATING Seafront

Ledges and plinths provide ideal seating areas without having to add further clutter to the streetscape. This opportunity exists on the sea front as present and should be considered in combination of a future sea wall

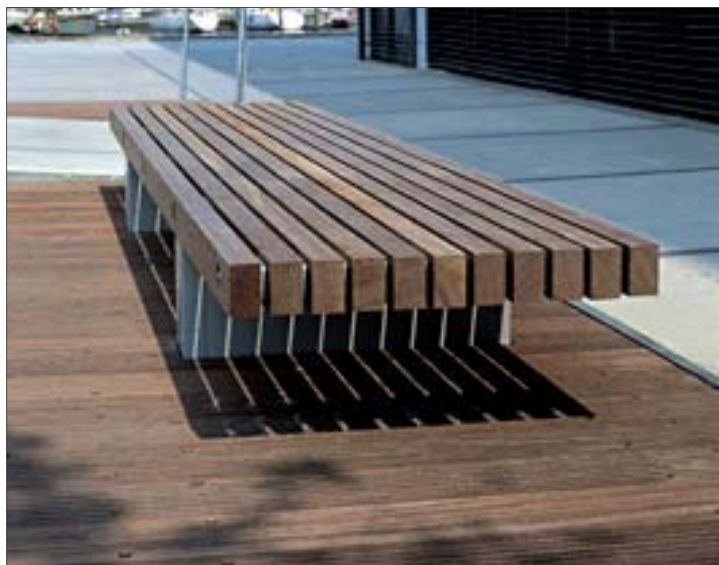


Figure 15. Timber deck with steel supports



Figure 16. Timber seats secured to wall



Figure 17. Free standing seat

Forms an intermittent strip along the sea front.

Timber slats mounted on either existing walls, concrete blocks or metal upstands.

Dimensions to suit location and wall, if freestanding typically up to 1m wide, 450mm above paving level and minimum 2m length.

Structural support in galvanised mild steel powder coated to preferred colour.

Consideration of stainless steel studs to prevent damage to edges through skateboarding.



Figure 18. Studs to prevent skateboarding

SEATING Parks and Gardens

Within parks and gardens it is accepted that a timber seat is more appropriate within these softer, greener environments



Figure 19. Timber bench with back and armrest

Hardwood timber bench with backrest and armrest.

Natural mid brown colour.

Fixed to the paving surface.

Generally 1.8m long.



Figure 20. Timber bench with armrest



Figure 21. Timber bench

CYCLE STANDS

Popular and reliable stainless steel Sheffield Stand cycle rack. Allows the front and back of two bicycles to be locked to a single stand.



Figure 22. Stainless steel cycle stand

Stainless steel Sheffield Stand.

Measuring 800x715x50mm.

Fixed into the ground with concrete footing.

Both front and back of the cycles can be fixed to the stand.

Approximate supply cost £100.

These should be located perpendicular to the carriageway in groups of 3-6 stands in locations which do not impede pedestrian flows.

Groups of cycle stands must always be located in areas which are overlooked preferable within main streets.

BINS General

Bins are an essential part of the public realm they must be placed strategically and their design considerate of maintenance and emptying procedures.



Figure 23. Stainless steel housing unit



Figure 24. Detail of the removable wheelie bin

The general design for bins are to be plastic wheelie bins secured within a stainless steel housing unit.

Capacity 120 litre, the wheelie bin is removable and exchangeable while emptying.

Single opening hinged door with key and slam locking device.

2 mm 304 grade stainless steel with perforated flat areas to deter fly posting and graffiti.

Available from Broxap with an approximate cost per unit

- . wheelie bin + fixing product: £80

- . stainless steel housing: £1000

BINS Recycling Unit

Recycling bins are to be located at strategic location around the town, these will be reliant on the development of street cleansing recycling processes



Figure 25. Recycling Bin

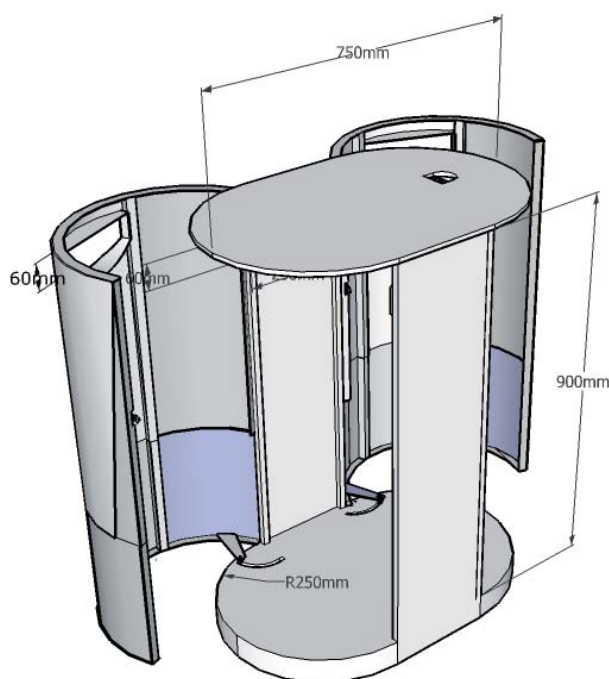


Figure 26. Recycling bin detail

Bespoke dual litter and recycling bin.

Two apertures - one for general litter and rubbish, the second clearly marked for recycling products as agreed - eg bottles and newspapers.

Integral ashtray on top of unit.

Powder coated mild steel or stainless steel with internal plastic molded liners.

Double door system with key opening and slam shut locking mechanism.

Approximate costs
painted mild steel: £1400
stainless steel: £2000

BOLLARDS General

Bollards should be kept to a minimum and only used to control vehicular movements or access. Functional and streamline stainless steel bollards are proposed within the town centre



Figure 27. Stainless steel bollard

All bollards to be 1.1m tall, 100mm diameter made from grade 316 stainless steel

A removable option where the bollards fold into a coffin are proposed for areas where controlled access is necessary.

Bollard can be hinged down and locked into its "coffin" when necessary.

Coffin measures:
1146 x 174 x 174 mm

Bollard measures:
1100 x 100 mm (diameter)

Approximate costs
stainless steel bollard: £200
stainless steel "coffin": £750



Figure 28. Stainless steel "coffin"

BOLLARDS Sea Front

Feature bespoke bollards made from timber and metal for appropriate to a sea front setting reflecting the groynes which are a characteristic element of the sea front.

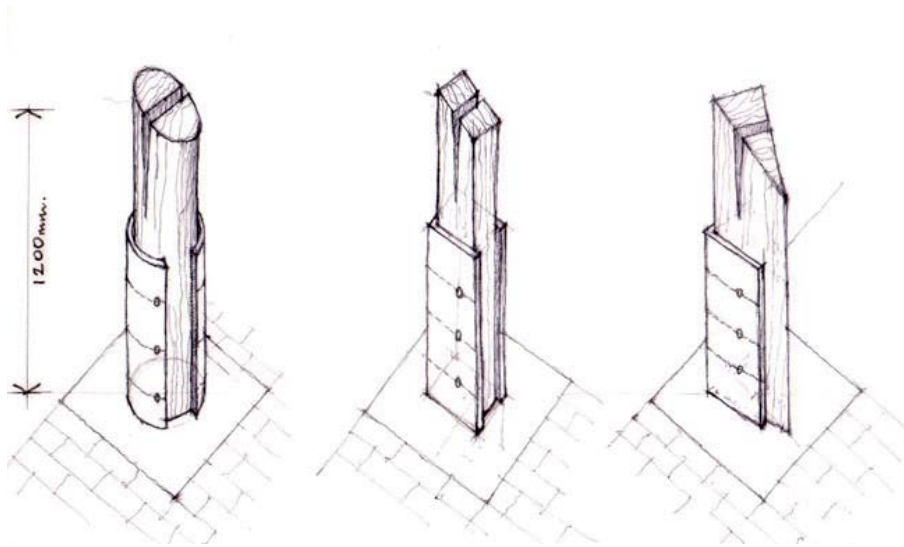


Figure 29. Bespoke timber and metal bollards

Hand crafted timber and metal bespoke bollards contribute to the unique character of a space.

All bollards to be 1.1m tall and either circular or square section minimum 150mm diameter

Metal rings to be corten steel or similar.

Root fixed into ground up to 50% of bollard height.

Approximate costs:
timber section: £120
timber with steel: £200



Figure 30. Standard timber bollard

TREES & SURROUNDS

Street trees are an asset to urban areas as they provide structure and interest when located appropriately. Due to the nature of the environment special care must be taken in the installation and aftercare for the successful development of the tree.



Figure 31. Typical resin bound tree pit

Trees to be planted must have a clearstem of 2.2m and a crown suitable to its location.

The tree pits are to be a minimum of 2 m² in a shape suitable to fix in with underground services. Root barriers and trainers are to be installed to protect services.

Trees are to be accompanied by urban tree soil, root cells, under guying and full irrigation systems as supplied by Greenleaf.

Tree pit surfaces to be resin bound gravel laid over permeable gravel and structural urban tree soil.

This surfacing will ensure that an even surface is formed over the tree pit where pedestrians can walk and litter and debris can not collect.

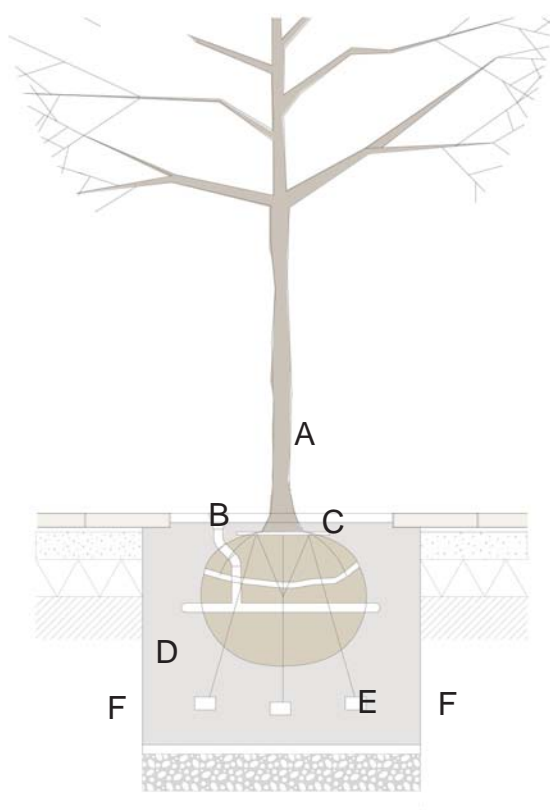


Figure 32. Typical tree pit detail

Legend:

- A. Semi mature tree
- B. Surface inlet for deep root irrigation
- C. 50 mm resin bound gravel
- D. Pits should be back filled with approved tree soil, laid and compacted in 300mm layers
- E. Tree pits with full components (root barriers, guying and irrigation.
- F. Tree root cells

TREES Sea Front

Mature palm trees instantly give a seaside character.



Figure 33. *Phoenix canariensis*

The Canary Island Date Palm would be the most suitable for the promenade being the hardiest of palms.

It may still be subject to some wind damage and will not withstand constant temperatures below 1°C.

They should be planted as 6.5 m high plants which are available from the Palm Centre (020 8255 6191).

This will ensure immediate impact.

TREES Street

These are a variety of trees that do well by the sea. There are different cultivars for all of the following trees which would provide better form in an urban setting than those of a pure native variety. All have inherent characteristics such as silver leaf colour, waxy leaves or branch habit which make them salt-tolerant and suitable for coastal locations such as Worthing.



Figure 34, 35 and 37. *Sorbus aria*, *Salix Alba* and *Pinus pinea*



Figure 38, 39 and 40. *Acer pseudoplatanus*, *Quercus ilex* and *Populos alba*

Some suitable coastal species:

- . *Acer campestre* 'Streetwise'
- . *Acer pseudoplatanus*
- . *Crataegus monogyna*
- . *Pinus nigra*
- . *Pinus pinea*
- . *Populus alba*
- . *Populus italica*
- . *Quercus ilex*
- . *Salix alba*
- . *Sorbus aria*

PLANTING Specimen Sea Front

These species will be planted as single specimens amongst the groundcover plants, giving height and structure to the planting beds whilst enabling clear visibility. They include hardy phormiums, tamarisk and dwarf fan palm; the hardiest of the palms for a coastal situation.



Figure 41, 42 and 43. *Chamaerops humilis*, *Phormium tenax* and *Phormium 'sundowner'*

Some suitable species:

- . *Chamaerops humilis*
- . *Phormium tenax*
- . *Phormium 'Sundowner'*
- . *Phormium 'Tricolour'*
- . *Tamarisk gallica*



Figure 44, 45 and 46. *Tamarisk gallica* and *Phormium 'tricolour'*

PLANTING Structural Sea Front

These are the structural plants which will form the bulk of the planting, providing low-maintenance groundcover. They should be kept at a maximum height of 600mm to ensure visibility over the tops of the planting beds. They are all suitable for coastal environments, in particular European Dune Grass, which naturally grows on the beach.



Figure 47, 48 and 49. *Pittosporum tobira*, *Euphorbia wulfenii* and *Santolina chamaecyparissus*



Figure 50, 51 and 52. *Kniphofia northiae*, *Leymus arenarius* and *Hebe parviflora angustifolia*

Some species that can be used:

- . *Euphorbia wulfenii*
- . *Hebe parviflora angustifolia*
- . *Kniphofia northiae*
- . *Leymus arenarius*
- . *Pittosporum tobira* 'Nanum'
- . *Santolina chamaecyparissus*

PLANTING Pereneals Sea Front

These plants can be interspersed with the groundcover in appropriate situations to reinforce the seaside theme. The plants with coastal origins such as Sea thrift, Sea lavenders, Sea kale are particularly appropriate.



Figure 53, 54 and 55. *Crambe maritima*, *Festuca californica* and *Eryngium variifolium*

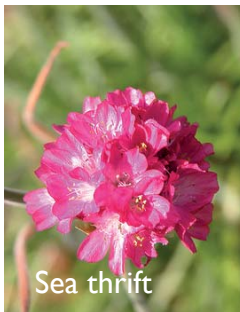


Figure 56, 57 and 58. *Erigeron karvinskianus*, *Armeria maritima* and *Limonium platyphyllum*

Suitable examples:

- . *Armeria maritima*
- . *Crambe maritima*
- . *Eryngium variifolium*
- . *Erigeron karvinskianus*
- . *Festuca amethystina*
- . *Limonium platyphyllum*

SIGNAGE Monolith

There are numerous different sign types required within an urban environment. These must be carefully co-ordinated to help way finding and orientation without cluttering the streetscape.



Figure 59. Bespoke Monolith

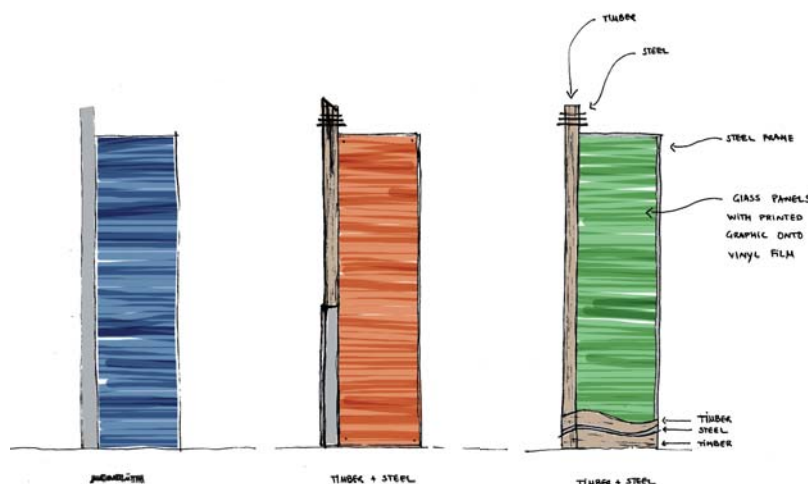


Figure 60. First ideas

This monolith sign is based on an extruded main post and 100 x 600 aluminium modular 'fingers' which can be interchangeable. It will have a standard thickness of 25mm. The post will be 150mm diameter

The display panels are a glass and aluminium sandwich 600mm wide, allowing different media to be used on each side. This could just as easily be transparent or different materials. The bottom kickplate and the section between the glass could be an alternate materials such as timber.

The modules would be slotted into channels in the post and into a machined aluminium bar forming the end post. They would be secured using countersunk security bolts through the end bar.

This design uses predominantly standard components so repair and maintenance is simplified. with lots of flexibility.

An even surface is formed over the tree pit where pedestrians can walk and litter and debris can not collect.

SIGNAGE Banners Pole

Banner signage is an ideal to promote a venue or add interest and colour within the streetscape



Figure 61. Banners Pole front



Figure 62. Banners pole perspective

This design uses a 168mm diameter base up to 3m from ground level, it then continues at 76mm diameter up to a height of 10m. This is capable of hanging a 600mm wide 5m long banner and lighting attachments.

The design builds upon the structural spine of the monolith to ensure the development of a family of forms.