Materials and Technical Specification
Street furniture

The overall approach is to provide street furniture which fulfils the requirements of varied sites by providing a co-ordinated palette which will minimise clutter and contribute to a sense of place.

Figure 5.0 Street furniture various
The public realm should incorporate street furniture as set out in this document. The aim is to use a palette which will provide an appropriate quality which is contemporary, elegant, consistent and presents a co-ordinated approach.

During the consultation process a contemporary ‘off-the-shelf’ solution was agreed. The chosen range will complement furniture in Canary Wharf and surrounding areas. It is simple and elegant and will have a neutral effect within the streetscape.

The “GEO” range of street furniture supplied by Woodhouse is seen as a suitable family of street furniture for use throughout the Millennium Quarter. This range is finished in stainless steel, is manufactured to a high specification, is contemporary in style and has a robust construction making it suitable for urban areas.

The solutions proposed are primarily chosen to be used within the public domain and linking public space. It is accepted that within private development plots, alternative street furniture may be used to complement its immediate surroundings and architecture.

Within the MQ there is also a significant opportunity to incorporate unique bespoke street furniture as functional art installations.
Street furniture

Seating

Seating should be provided at intervals along streets or in clusters in open spaces to provide resting points. Locations must not impede pedestrian movement.

The benches and seating proposed are selected from the co-ordinated GEO range by the manufacturer Woodhouse. They are steel framed and timber slated and can be installed with or without back rests or end and mid-bar arms. They can be free standing or fixed to a structural wall.

An alternative to the bench is the Urbis ‘Aquila’ with blue coloured LED lighting under seat which will link with the street lamp columns.

Product Specification:

GEO G-SB 21 00 0 Seat without arms: 316 Shot peened stainless steel frame, Iroko hardwood timber slats, legs powder coated in RAL 7016, length 1800mm Height 790mm Width 525mm, Flange plate mounted at 150mm below finished ground level

GEO G-SB 11 00 0 Bench: 16 Shot peened stainless steel frame, Iroko hardwood timber slats, legs powder coated in RAL 7016, Length 1800mm Height 440mm Width 675mm, Flange plate mounted at 150mm below finished ground level.

Supplier: Woodhouse UK PLC
Bollards should be kept to a minimum to avoid cluttering the streetscape and used only for the protection of pedestrians by identifying vehicular movement.

The proposed bollard family from GEO will co-ordinate with other street furniture of the same manufacturer. They are bead-blasted stainless steel and come in a variety of sizes for different applications. Illuminated bollards and removable bollards are available in the same finish and design.

Product Specification

GEO G-BO 51 1 0 0 / G-BO 71 1 0 0 Standard 140mm or 204mm diameter Bollard, 316 bead blasted stainless steel body, 316 brushed stainless steel top cap, Height 1100mm, Flange plate mounted at 200mm below finished ground level

GEO G-BI 11 1 0 0 / G-BI 31 2 0 0 Illuminated bollard with MTR Refractor for 26w TC-T lamp, IP65 Rated, 140mm or 206mm diameter, Height 1100mm, Bead blasted 316 stainless steel bollard body, Brushed 316 stainless steel top cap, lass MTR Rings, Clear PMMA Diffuser, Buried flange mounting 200mm below finished ground level

Supplier: Woodhouse UK PLC
Street furniture

Litter Bins

Litter bins should be placed in areas of high demand to encourage people to use them, with the aim for the streets and spaces to be kept clean and tidy.

The proposed litter bins from the manufacture GEO will co-ordinate with other street furniture from the same manufacturer. They can be mounted on bollards or sign posts to minimise the clutter. An ash and chewing-gum bin can be integrated into the same system.

Product Specification:

GEO G-LB 01 60 0 Litter Bin, 70 litre capacity, Height 1150mm, Bin Body Diameter 500mm, Post Diameter 139mm, Brushed 316 stainless steel post, bin body and top cap, Buried flange mounting 150mm below finished ground level, Fire retardant polyethylene liner.

Supplier: Woodhouse UK PLC
Cycle stands should be installed at areas of high demand. The location of the stands should be chosen to economise space and not to interfere with direct pedestrian movements and to be in areas of high visibility. Stands should be regularly dispersed over the site particularly adjacent to the national cycle network, DLR station, any public buildings or key spaces.

The proposed cycle stands are from the manufacture GEO and will co-ordinate with other street furniture from the same manufacturer. The stands are stainless steel.

**Product Specification**

GEO G-HB 32 11 0 Hoop Cycle Stand, 50mm Dia 316 Stainless Steel tube, 240 Grit brushed finish, Height 850mm, Width 900mm, 400mm Buried root mounting and backfilled with concrete. Stands should be erected in groups of five and spaced at 900mm centres.

Supplier: Woodhouse UK PLC
Street furniture

Bus shelters

Quality materials and design are essential for Bus shelters as they are a significantly large element of street furniture. There is currently a term contract with the supplier Adshel. The recommended model is the ‘Metropolis Shelter’. The shelter has a stainless steel frame and glass or advertising panels.

Product Specification:

Metropolis shelter. extruded safety glass, extruded aluminium frame finished, Height:2565mm Depth:1531mm Width:4176mm

Supplier: Adshel
All covers within the main foot paths should be recessed and in-filled with the paving material specifically cut to lie flush with the cover edge and surrounding paving. See the Design and Layout section of this report for the alignment strategy for utility covers.

Any historic cast iron covers should be retained and realigned

All utility companies should be contacted regarding realignment of utility covers and coordinated prior to commencement of works to prevent delays in construction program.

Product Specification

Recessed covers MHC 7200 SSE recessed series with variable sizes or MHC 7250 SSE 2-part recessed with variable sizes, finished in stainless steel which comply with BS EN 124 Class D400.

Supplier: Manhole Covers Ltd. or similar approved
Wayfinding Information

A minimal, co-ordinated and specific wayfinding strategy is proposed. It will be coherent and contemporary with the aim to provide legibility and ease of movement around the Millennium Quarter.

Figure 5.7 Wayfinding information various
The public realm should be designed and constructed using street wayfinding information as set out in this document. Wayfinding elements should be kept to a minimum to avoid introducing clutter to the street. The elements should be located at major junctions of pedestrian and cycle movements only.

To co-ordinate with the rest of the street furniture family the proposed signage is from the GEO range supplied by Woodhouse. The range of street furniture is finished in stainless steel to a high specification with a contemporary and robust aesthetic.
Wayfinding Information

Finger Signage

Finger signs should be located at the major intersections of pedestrian and cycle movements. They should be consistent throughout the Millennium Quarter and designed as part of a single strategy. The signs should identify important elements (buildings, transport stations, landmarks, etc) within the Millennium Quarter as well as providing directional guidance to important elements adjacent or nearby.

The proposed finger signs are from the manufacture Woodhouse and will co-ordinate with other street furniture from the same manufacturer.

Product Specification:

GEO G-FP 00 00 0 Fingerpost, 90mm Dia 316 Stainless Steel tube, 240 Grit brushed finish, Stainless steel finials and adjustable collars, Height 3200mm above finished ground level, Extruded Aluminium Fingers 800x100mm, Flange plate mounted at 200mm below finished ground level

Supplier: Woodhouse UK PLC
Wayfinding Information

Maps and Sign Boards

The use of street maps are important however they should be kept to a minimum. Street maps and sign boards providing information of the greater Isle of Dogs should be used. The maps should show the extent of the quarter, various access locations, and adjacent destinations. These should be located at major pedestrian intersections and public transport interchanges.

The proposed maps and sign boards are from the manufacture GEO and will co-ordinate with other street furniture from the same manufacturer. The stands are stainless steel.

Product Specification:

GEO Bespoke
Plaques and Etchings

Figure 5.10 Plaques and etchings various

Wayfinding strategies should not be restricted to signage. The ground plane through plaques and stone etching can be used to identify routes, places, and activity. This will be important along the Heritage trail where a series of plaques will identify past use of the dock. See the studies section for further detail.

It is the recommendation of this manual for an artist or crafts person to be appointed to design a series of plaques or etchings along the heritage trail.

Product Specification:

Bespoke by artist
Lighting

Light fittings and fixtures are chosen to complement the different character of spaces within the Millennium Quarter. The materials and styles are chosen to work together as a single comprehensive family.

Figure 5.11 Various Lighting
The public realm should be designed and constructed using street and pedestrian lighting as set out in this document.

Lighting should be elegant and simple. The daytime appearance of the lighting equipment should be considered in respects to both its design and siting and its relationship to other items of street furniture. It should blend into the scene set by the architecture and other street furniture.

The quality and level of light should respond to the specific nature of the setting. Likewise the scale and mounting heights of the lighting equipment should be in context to their surroundings and background, use of the space and type of traffic whether it is vehicular or pedestrian.

Materials chosen are selected to be maintainable within the London Borough of Tower Hamlets construction and maintenance specification.
The areas where more major vehicular traffic routes exist will require higher lighting columns and lanterns. Refer to the Design and Layout Guidance section of this manual for the heights of columns on specific streets.

The proposed street lighting is Hestia from the Urbis range. The columns and lanterns are simple, elegant and made from aluminium, coloured to match the other items of street furniture. All columns shall be fitted with blue LED lights on their tops.

**Product Specification:**

- **Urbis / Schreder- Hestia 2** Single or double head lighting column with body made in aluminium alloy, die cast. Blue LED lights on top. Miniature photocell fitted to upper body casting and wired to lantern control gear. Dimensions: Height: 165mm; Width: approx. 350mm; Length: approx. 950mm. Column height: 6 000/8 000/10 000 mm depending on location (see the Design and Layout Guidance section of this manual for individual street requirements). Lamp: 140w (60w pedestrian lamp) cosmopolitan metal halide lamp IP65 Rated
- Marsh Wall: lighting class CE1, 30 lux; and 0.4 uniformity.
- Millharbour: lighting class CE2, 20 lux; and 0.4 uniformity.
- Mastmaker Road: lighting class CE2, 20 lux; and 0.4 uniformity.
- Lightermans Road: lighting class CE2, 20 lux; and 0.4 uniformity.
- Byng Street: CE2, 20 lux; and 0.4 uniformity.

Supplier: Urbis Lighting Limited.
Lighting for pedestrians should be designed to reflect the scale and speed of movement of the pedestrians.

The proposed pedestrian light columns are the Parklight from the GEO range to match the other street furniture.

Product Specification:

GEO Parklight Direct with 35/70 w HCI-T lamp; Symmetric Reflector; Cast aluminium lantern body; Pole top fixation; IP65 lamp and gear compartment; To suit pole diameter 90mm; Finish: Stainless steel; Underside reflector colour - white Lantern height 750mm; column height: 4000 mm Lamp: 70w metal halide lamp IP65 Rated Dockside: lighting class CE2, 20 lux; and 0.4 uniformity.

Supplier: Woodhouse UK PLC
Surface Treatments

Streets and connected spaces will form the platform on which the architecture will stand. The ground plane and ultimately the paving and surfacing have the potential to reinforce this relationship connecting buildings and spaces.

Figure 5.14 Typical surface treatments
The public realm should be designed and constructed using surfacing materials as set out in this document. The aim is to use a palette which will provide a contemporary, consistent, and co-ordinated approach to design.

To encourage consistency of design and workmanship, this document provides a technical description of the material. Additionally a potential supplier is given for each material.

Yorkstone paving will be used on all footpaths within in the public highway. On Millharbour the Yorkstone paving will extend to the building facade on each side of the carriageway including areas within private ownership.

Blue granite will be used along the Dockside Heritage Trail. This material will be selected to a consistent specification agreed by British Waterways.

The specification within this document includes, colour, stone dimensions, and laying techniques. Materials will be selected and constructed to comply with the London Borough of Tower Hamlets maintenance requirements.

Privately owned developments will have the flexibility of design and choice of materials. Wit the exception of the extension of the footpath on Millharbour and the Dockside.
Footpaths

All footpaths within the public highway will be Yorkstone flag paving. This material is of high quality and hard-wearing with an appropriate aesthetic appeal. Additionally, the Yorkstone footpaths along Millharbour will be extended to the building facade to create a sense of importance for this central axis.

Product Specification:

Yorkstone slabs – 600mm wide, 75mm thick, random lengths not exceeding 0.5m or 1.5m in length laid perpendicular to the kerb edge. Diamond sawn on all sides. Laid on 25mm moist mortar on 150mm C20 concrete foundation over type 1 to formation level. Existing sub bases should be used where possible providing they achieve the desired CBR rating. A propriety slurry jointing material such as ‘Easipoint Granatech’ is to be used for pointing, joints to be maximum 6mm. Yorkstone tactile paving to be used for uncontrolled crossings.

The stones physical characteristics: 20% Buff colouring, minimum slip resistance 75SRV, maximum water absorption 3.2, minimum flex and strength 15mpa.

Supplier: Source to be approved, available from BBS Brick and Stone Specialists, product Hayfield Chatsworth Gritstone
The Dockside heritage trail will be identified with its own unique paving and pattern. Blue granite slabs will be used along the entirety of the dockside. This material is of high quality and hard-wearing with an appropriate aesthetic appeal which contrasts with the Yorkstone.

The stone will be sourced from one supplier to maintain consistency and to achieve a fine continuous finish to the stone.

**Product Specification**

Blue Granite with a fine picked finish, 250x80x60mm laid perpendicular to the dock-side edge. Laid on 25mm moist mortar on 150mm C20 concrete foundation over type 1 to formation level. Existing sub bases should be used where possible providing they achieve the desired CBR rating. A propriety slurry jointing material such as ‘Easipoint Granatech’ is to be used for pointing, joints to be maximum 3-5mm.

Supplier: source to be approved, available from CED Engineering Ltd, product ref: s816/300
Pedestrian Crossings

Pedestrian crossings and pedestrian areas with vehicle run-over such as entrances to developments will be constructed with granite setts. This material is of high quality and hard-wearing with an appropriate aesthetic appeal. The stone will be a combination of mid-grey and silver-grey colour to add further interest.

Product Specification:

Granite setts – 200mmx100mmx100mm thick laid in a running bond perpendicular to vehicle direction. Diamond sawn on all sides. Laid on 25mm moist mortar on 150mm C20 concrete foundation over Type 1 to formation level. Existing sub bases should be used where possible providing they achieve the desired CBR rating. A proprietary jointing material such as ‘Easipoint Setpoint’ is to be used. Jointing at 6mm wide.

Colour: random 85% silver-grey fine picked and 15% mid-grey flamed finished.

Supplier: Source to be approved, available from CED Engineering Ltd.
The carriageway to all streets will be a typical asphalt construction. This will provide good durability and ease of maintenance. Construction will be in accordance with the current LBTH highways standard specification.

All white lining and diagrams to be narrow marking (50mm) and to be thermoplastic.

Product Specification

All road construction to be the current LBTH Adoptable standards.
The existing street trees are an asset to the Millennium Quarter. They provide a strong green structure which give a sense of place to the Millennium Quarter. These trees should be retained and enhanced to maintain this valuable character.

Figure 5.19 Existing trees at Millennium Quarter
Street trees within public realm spaces should be planted to the specification set out in this document. The aim is to provide a consistent avenue aesthetic through the planting of similar species and specific planting techniques.

During the consultation process it was decided to diversify the species of trees present within the Millennium Quarter. This was seen to achieve greater biodiversity and interest within the Millennium Quarter. Hence all trees will be semi-mature and be chosen from the short list of hardy species identified in this document as appropriate for urban streets.

The locations and layout of trees are shown on the Millennium Quarter Street Plan. The existing avenues adjacent to the street will form the precedent for new tree planting. The new trees will be in the same alignment as the existing with the aim to enhance and strengthen the avenue character.

Dockside trees will all be of the same species and specification enhancing the Historic Heritage Trail.

A set back to the suggested building facade location is proposed to allow for the growth and maturity of both the street and dockside trees. This set back is illustrated in the Millennium Quarter Street Plan.
The existing tree structure should be retained by protecting existing trees throughout the construction period and reinforced with new planting as set-out in the Millennium Quarter Street Plan. Trees should be planted in groups of three or five of the same species (from the list below).

The proposed species for streets and public spaces (groups of the following):

*Acer Platanoides*
*Fraxinus excelsior ‘Westhof’s Glorie’*
*Tilia cordata*
*Quercus robur*
*Ginkgo biloba*

**Planting Specification:**

Semi mature trees with a 30-35mm girth. Planted with a minimum 2.2m clear stem, within 1.5x1.5m pits where possible, back-filled with structural tree soil, irrigation system, underground guying, root barriers and trainers, and permeable surfacing.

See the Design and Layout section of this manual for the typical tree pit detail.
Dockside Trees

Figure 5.21 Alnus cordata

Tree planting introduced along the dockside should be a single species planted to a consistent standard.

The proposed species for the dockside is:

*Alnus cordata*

**Planting Specification:**

Semi mature trees with a 30-35mm girth. Planted with a minimum 2.2m clear stem, within 1.5x1.5m pits where possible, backfilled with structural tree soil, irrigation system, underground guying, root barriers and trainers, and permeable surfacing.

See the Design and Layout section of this manual for the typical tree pit detail.