F10 FIXED BOLLARDS

Role and use

- Used to restrict vehicle movement on pedestrian areas such as footways and parks.
- Bollards should only be used where there is no alternative means of keeping vehicles from the footway.
- Bollards can also be used to create articulation and definition to the streetscape.
- Used as a security measure to some glass fronted buildings .

Example product with visibility band

Positioning

- Located outside of clear pedestrian zone.
- Spacing to allow for the passage of wheelchairs, push chairs and pedestrians but restrict the passage of vehicles - a maximum spacing of 1.8m centres.
- Allow 450mm clear space from the front edge of the kerb.

Example product

Material/finish

- Natural stainless steel finish (grade 316 preferred).
- Yellow Reflective band for increased visibility and safety required

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- 1000mm high.
- 500mm root depth.
- 100mm diameter.

Standards

- Bollards which have a security function must be fixed and specified in accordance with BSI Publicly Available Specification (PAS) 68 and 69.

Available from

Marshalls plc
Birkby Grange
Birkby Hall Road
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire, ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F10 FIXED BOLLARDS

Additional Comments

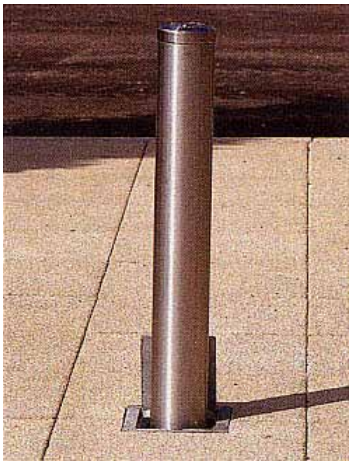
- It may be necessary to reconsider the design concept if there is a need for a large number of bollards.
- Consider opportunities for fixing signs and waymarks to bollards to avoid use of additional posts.
- The use of visibility bands may be required in areas of heavy pedestrian usage.
- If vehicles are required to mount the edge of the footway on rare occasions, design teams should consider local strengthening of the footway rather than introducing bollards.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F11 LOCKABLE BOLLARDS

Role and use

- Retractable lockable bollards are considered where intermittent vehicular access is required for emergency vehicles, servicing, delivery etc.



Example product

Positioning

- Bollards should be used sparingly therefore not to be used to prevent footway parking or damage occurring to footways.
- Located outside of clear pedestrian zone.
- Spacing to allow for the passage of wheelchairs, push chairs and pedestrians but restrict the passage of vehicles - a maximum spacing of 1.8m centres.
- Allow 450mm clear space from the front edge of the kerb.

Material/finish

- Natural stainless steel finish (grade 316 preferred).

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Include ASSA security padlock with standard key. Finish to match bollard.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- 1000mm high.
- 100mm diameter.

Available from

Marshalls plc,
Birkby Grange
Birkby Hall Road
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire, ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F12 REDWAY BOLLARDS

Role and use

- To mark Redway Routes where these are rolled out in a typical fashion within CMK.

Example product

Positioning

- To be positioned at junctions and other hazard points, where Redways cross carriageways or access roads.
- Spacing between bollards should not exceed 1.8m centres, but should allow the passage of cycles, wheelchairs, pushchairs and pedestrians.
- To be set back from the kerb a dimension that places them at the back of the inter-visibility envelope of cyclist and vehicle. This dimension shall not be greater than 3.0m. Where the visibility distance is 2.5m then they should be set 2.5m behind the kerb.
- In certain circumstances arising from the particular geometry of the crossing and its relationship to adjacent footpaths, the bollards may be brought forward and set at 1.9m behind the kerb.

Example product

Material/finish

- Galvanized mild steel bollard.
- Bollards to be galvanized tube with aluminium alloy cap prepared and finished in Stove Bonded Powder coated gloss finish Syntha Pulvin 12489.
- To be comprised of recycled material

Colours

- Yellow

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- 950mm high from ground level.
- 114mm diameter.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

Available from

Marshalls plc,
Birkby Grange,
Birkby Hall Road,
Birkby, Huddersfield
HD2 2YA
Tel: 0845 302 0600

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

F20 FREESTANDING LITTER BINS

Role and Use

- The provision of litter bins is purely functional but can have a considerable impact on the appearance of the street or location. It is therefore not considered appropriate that one single style can be used in all environments, but there should be a restricted range.
- Freestanding bins may be used where the use of column mounted bins, is not practical.

Positioning

- Litter bins should be provided in various "hot spots" particularly in parks, near seats and fast food outlets.
- Must be located at the front of the footway outside the pedestrian "clear zone" and should be aligned with other street furniture items such as bollards, guardrail and lamp columns. Positioning at the edge of the footway will aid emptying into collection vehicles.

Material/finish

- Natural stainless steel finish (Grade 316 preferred).
- Galvanized steel polyester powder coated RAL7030.
- RAL 7030 plastic.
- Anti- graffiti coating.
- All bins to be fire- proof, provided with a 20mm ballast base and galvanized steel liner as standard.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Height 800-1200mm.
- Width 410-780mm.
- Capacity 90 litres.

Example product

Example product

Available from

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire
ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F20 FREESTANDING LITTER BINS

Additional comments

- Consideration should be given to the selection of litter bins in particular areas of CMK. Three options (stainless steel, polyester powder coated galvanized steel and plastic) are available and should be selected with due consideration to the location, management and maintenance issues and predicted footfall.

- Milton Keynes has experienced problems with open topped bins in the past due to scavenging birds. For this reason despite open topped bins having the advantage of being easy to use, inspect and empty efficiently, CMK litterbins shall be supplied with lids.

F21 COLUMN MOUNTED LITTER BINS

Role and Use

- The use of column mounted bins aids in the reduction of street furniture clutter by integrating the bin with other street furniture elements.

Positioning

- Integrated with lamp columns, or other existing street columns.

Material/finish

- Natural stainless steel finish (Grade 316 preferred).
- Galvanized steel polyester powder coated RAL7030.
- RAL 7030 plastic.
- Anti- graffiti coating.
- All bins to be fire- proof and fitted with a galvanized steel liner as standard.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Fitted in accordance with manufacturer's instructions.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Height 580/880mm.
- Width 310mm.
- Capacity 40/60 litres in steel.
- Capacity 50 litres in plastic.

Additional comments

- Column mounted bins may require tactile pavers to reduce the incidence of collision by people with visual impairment who use a cane for navigation.
- Consideration should be given to the selection of litter bins in particular areas of CMK. Three options (stainless steel, polyester powder coated, galvanized steel and plastic) are available and should be selected with due consideration to the location, management and maintenance issues and predicted footfall.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

Example product

Available from

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire, ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

LINPAC Group,
3180 Park Square,
Birmingham Business Park,
Birmingham, B37 7YN

F22 RECYCLING BIN

Role and Use

- Increasing desire within the community and requirements within local and central government to recycle waste makes the adoption of recycling bins in Milton Keynes appropriate.
- Bins should have a descriptive sign stating which materials are allowed to be deposited within them.

Example product

Positioning

- Bins need to be positioned so as to not interfere with pedestrian movement. Recycling bins need to be positioned sensitively where they are visible but minimizing adverse visual impact.
- Recycling facilities should be located at the rear of the footway.
- All bins should be located outside the pedestrian “clear zone”.
- In building recesses.
- Off major pedestrian thoroughfares.
- In specially constructed enclosures.
- In multi-storey and other parking areas.

Material/finish

- Natural stainless steel finish (Grade 316 preferred).
- Galvanized steel polyester powder coated RAL7030.
- Anti- graffiti coating.
- All bins to be fire- proof, provided with a 20mm ballast base and galvanized steel liner as standard.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council’s “Specification for Highway & Construction works”.
- Fitted in accordance with manufacturer’s instructions.
- Maintained in accordance with manufacturer’s instructions.

Dimensions

- Height 1200mm.
- Width 770mm.
- Capacity 160 litres (2x 80 litres).

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the ‘Engineer’ to ensure full compliance with CMK Handbook requirements.

Available from

Broxap Ltd
Rowhurst industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire
ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

F22 RECYCLING BIN

Additional comments

- Consideration should be given to the selection of litter bins in particular areas of CMK. Three options (stainless steel, polyester powder coated, galvanized steel and plastic) are available and should be selected with due consideration to the location, management and maintenance issues and predicted footfall.

F30 Stainless Steel Benches

Role and Use

- Seats with back rests are to be located where longer periods of rest are required, eg. bus stops, parks or similar areas where people are encouraged to linger longer in the public realm.

Example product

Positioning

- In key 'dwell' and 'waiting' areas.
- On key pedestrian routes.
- Typically seats will be positioned within the street furniture zone along the street.
- Seating should be located where it does not cause an obstruction.
- Seats will be located at known points of demand – primarily within activity areas such as squares to prevent cluttering of the footway and away from the effects of traffic.
- Problems of antisocial behaviour and rough sleeping should be considered when determining location.
- Avoid very isolated seating, or seating where there is a poor view of those approaching.
- Consider the views – is there an interesting/attractive outlook?
- Provide a space next to a seat where wheelchairs can be positioned.
- Provision should be made at regular spacing (ideally 50m) along recognized key pedestrian routes.
- At least 1.8m width should be left unobstructed around seating to allow for the movement of wheelchairs, prams, etc.

Material/finish

- Natural stainless steel finish (Grade 316 preferred).

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Concealed ground fixings should be used.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Lengths up to 1800mm.
- Height 790mm (to top of backrest).

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

Available from

Macemain + Amstad Ltd
Boyle Road, Willowbrook Ind. Est.,
Corby, Northants
NN17 5XU
Tel: 01536 401331
Fax: 01536 401298
Email: sales@macemainamstad.com

Falco
Arunhithe Ltd
Barnfield Close
Barnfield Industrial Estate, Leek
Staffordshire, ST13 5EG
Tel: 01538 380080
Fax: 01538 386421
Email: sales@falco.co.uk

F31 STONE AND WOOD BENCHES

Role and Use

- Seats incorporating timber are preferred where people may sit for long periods of time and within areas of soft landscaping.

Example product

Positioning

- In key 'dwell' and 'waiting' areas and areas of soft landscaping, parks and gardens.
- Typically seats will be positioned within the street furniture zone along the street and facing away from the road. Avoid causing obstruction to main lines of movement.
- Seats will be located at known points of demand – primarily within activity areas such as squares to prevent cluttering of the footway and away from the effects of traffic.
- Problems of antisocial behaviour and rough sleeping should be considered when determining location.
- Avoid very isolated seating, or seating where there is a poor view of those approaching.
- Provide a space next to a seat where wheelchairs can be positioned. At least 1.8m width should be left unobstructed around seating, to allow for the movement of wheelchairs, prams, etc.

Material/finish

- Natural finished timber and stone (granite).
- Timber to be from Forestry Stewardship Council approved sources.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Concealed ground fixings should be used.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Lengths 2000mm.
- Height 445mm.
- Width 615mm.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

Available from

Bailey Streetscene
Bailey Business Park
Grimshaw Lane, Bollington
Macclesfield, Cheshire
SK10 5NY
Tel: 0870 6000 120
Fax: 0870 6000 130
info@baileystreetscene.co.uk

Streetlife BV
Onde Singel 144
2312 RG Leiden
Tel: 020 8352 1496
Fax: 020 8352 1496
streetlife@streetlife.nl

F31 STONE AND WOOD BENCHES

Additional comments

- Arm rests can be provided which assist less mobile people and help to discourage anti social behaviour.

F32 STONE PLINTHS

Role and Use

- Stone plinths are to be located where shorter periods of rest are required.

Positioning

- In 'incidental stop' areas i.e. not suitable for areas where people are likely to be waiting for longer periods.
- Typically seats will be positioned within the street furniture zone. Avoid causing obstruction to main lines of movement.
- Located outside of clear pedestrian zone.
- Seats will be located at known points of demand – primarily within activity areas such as squares to prevent cluttering of the footway and away from the effects of traffic.
- Problems of antisocial behaviour and rough sleeping should be considered when determining location.
- Avoid very isolated seating, or seating where there is a poor view of those approaching.
- Consider the views – is there an interesting/attractive outlook?
- Provide a space next to a seat where wheelchairs can be positioned.

Material/finish

- Natural stone finish (granite).

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Height 450mm.
- Width 650 – 750mm.
- Length 1800 – 3000mm.

Additional comments

- Plinths can be fitted with anti-skate board studs, timber seating and back rests if necessary.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

Example product

Example product

Available from

Stonepave Ltd
Elizabethan House, Leicester Rd
Lutterworth, Leics, LE17 4NJ
Tel: 01455 559 777
Fax: 01455 559 111

CED Ltd,
728 London Road, West Thurrock,
Grays, Essex, RM20 3LU
Tel: 01708 867 237
Fax: 01708 867 230
sales@ced.ltd.uk

Marshalls plc
Birkby Grange, Birkby Hall Road
Birkby, Huddersfield, HD2 2YA
Tel: 0845 302 0600

F40 Cycle Stands - Uncovered

Role and Use

- Used for the parking of cycles in the public realm.
- The provision of cycle stands in appropriate locations will discourage people chaining bicycles to railings and posts and other undesirable places.
- Cycle parking should be provided where there is a need and it can be practically fitted within the street.
- Covered cycle stands are used where there is space and demand for cycles to be protected from the environment.
- The type of stand proposed is largely standardised although distinctive designs on special public realm areas may be appropriate.
- Uncovered cycle stands should be used as a short term parking facility.

Example product

Positioning

- Cycle stands need to be carefully located and designed to minimise their visual impact, and the potential to create an obstruction in the footway.
- Cycle stands should be positioned adjacent to key destinations of known demand eg library, shops, transport interchanges, etc and will relate to other street furniture components.
- Sufficient space must be allowed to ensure that bicycles will not project into the pedestrian "clear zone". Stands must be set back from main pedestrian thoroughfares.
- Locate in highly visible positions and grouped rather than in isolation.
- When cycle stands are grouped together, a minimum spacing of 1000mm should be provided between stands to allow access and 1200mm is preferred.
- Avoid obstructing pedestrian movement.
- Every cycle parking facility should be highly visible and well lit and clear of pedestrian/vehicle sight lines.
- Cycle stands should be positioned close to building entrances, or in locations that are convenient, safe and well visually surveyed.

Material/finish

- Natural stainless steel finish (Grade 316 preferred).
- Avoid paint finish due to maintenance implications.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

Available from

Bailey Streetscene
Bailey Business Park
Grimshaw lane, Bollington
Macclesfield, Cheshire, SK10 5NY
Tel: 0870 6000 120
Fax: 0870 6000 130
info@baileystreetecene.co.uk

Broxap Ltd
Rowhurst Industrial Estate
Chesterton
Newcastle- under- Lyme
Staffordshire, ST5 6BD
Tel: 01782 564411
Fax: 01782 565 357
sales@broxap.com

F40 CYCLE STANDS - UNCOVERED

Dimensions

- Height 800mm.
- Length 750mm.
- Tube diameter 50mm.

Additional Comments

- The incorporation of cycle storage facilities into new buildings is being explored as part of the CMK Cycle Strategy.

F41 CYCLE STANDS - COVERED

Role and Use

- Used for the parking of cycles in the public realm.
- Covered cycle stands are used where there is space and demand for cycles to be protected from the environment.
- The provision of cycle stands in appropriate locations will discourage people chaining bicycles to railings and posts and other undesirable places.
- The type of stand proposed is largely standardised although distinctive designs on special public realm areas may be appropriate.

Example product

Positioning

- Clear of the pedestrian movement zone.
- Cycle stands need to be carefully located and designed to minimise their visual impact, and the potential to create an obstruction in the footway.
- Cycle stands should be positioned adjacent to key destinations of known demand eg library, shops, transport interchanges, etc and will relate to other street furniture components.
- Sufficient space must be allowed to ensure that bicycles will not project into the pedestrian "clear zone". Stands must be set back from main pedestrian thoroughfares.
- Avoid obstructing pedestrian movement.
- Every cycle parking facility should be highly visible and well lit and clear of pedestrian/vehicle sight lines.

Example product

Material/finish

- Stainless steel.
- Galvanized steel polyester powder coated in black.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Height 2500mm-3000mm.
- Width 3600-4800mm.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

Available from

Vekso Street Design Ltd
15 Hollingworth Court
Turkey Mill, Ashford Road
Maidstone, Kent
ME14 5PP
Tel: 01622 609 000
Fax: 01622 609 006
info@veksoe.com

Urban Engineering
Urban House, PO Box 321
Southport, PR8 5GE
Tel: 01704 540405
Fax: 01704 544 229
sales@urbanengineering.co.uk

F50 PEDESTRIAN GUARD RAIL

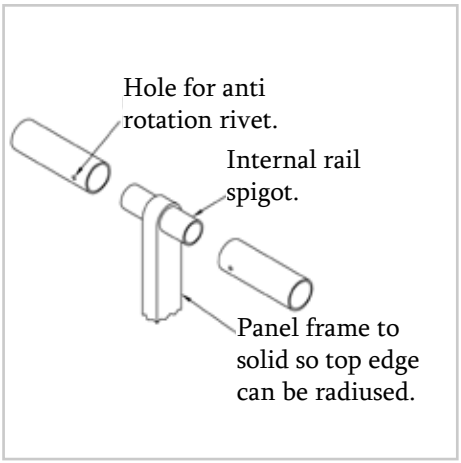
Role and Use

- Pedestrian guardrail provides a means of discouraging pedestrians from entering the busy carriageway and channelling them to a safer section of road where they can cross.
- Notwithstanding their prime safety functions, the effect of guardrails on the street scene can often be less than positive. Design teams should question the need for guardrail. Guardrail should not be used unless it can be shown to be needed to maintain pedestrian safety.
- The general principle is to reduce the need for guard railing and similar features as far as possible.

Example product

Positioning

- Set back 450mm from the roadside kerb face. Wherever possible remove or reduce guard rails to a minimum.
- Positioning of guard rails should consider the visibility of vulnerable pedestrians such as children.
- Guard rails should not be used as a deterrent to prevent footway parking or damage occurring to footways.
- Must be located in front of the footway outside the pedestrian "clear zone".



Example product

Material/finish

- Natural stainless steel finish (Grade 316 preferred) handrail.
- Galvanized steel polyester powder coated black frame & vertical bars.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Uprights set in concrete bases.
- Maintained in accordance with manufacturer's instructions.
- Where guardrail is damaged it should be replaced with matching panels.

Dimensions

- Height at least 1100mm (preferably 1200mm).
- Length 2000m.

Available from

Street Furniture Supplies
Crown Way
Crown Park
Rushden
Northamptonshire
NN10 6BS
Tel: 0845 230 3626

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F50 PEDESTRIAN GUARD RAIL

Additional Comments

- Guardrail should be designed to permit clear sight of people or objects behind the railing when observed from an acute angle.

F51 HANDRAIL

Role and Use

- Used as a handrail for steps and ramps.
- Lit on the underside as a safety and architectural feature.

Positioning

- Handrails are normally 900-1000mm above the pitch line of step or ramp.
- See ODPM Approved Document M.
- Secured to walls or freestanding.

Material/finish

- Stainless steel (Grade 316 preferred).
- LED lighting to underside either as stick (continuous) or single LED's at regular intervals (500mm centres).

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Rails nominally 50mm circular section.

Additional Comments

- These items are generally bespoke; design intent drawings will need to be produced for manufacturers to produce working drawings for installation.

Example product

Example product

Available from

Littlehampton Welding Ltd
Riverside Works
Riverside Industrial Estate
Littlehampton
West Sussex, BN17 5DR
Tel: 01903 721555
Fax: 01903 726805
Email: lhw@lhwelding.co.uk

Woodhouse UK plc
Spa Park, Leamington Spa
Warwickshire, CV31 3HL
Tel 01926 314313
Fax 01926 883778
Email: enquire@woodhouse.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F52 CENTRAL RESERVATION BARRIERS

Role and Use

- Only to be used where absolutely necessary to restrict vehicles mounting kerbs on the central reservation.
- Central reservation on Boulevards.

Positioning

- 450mm set back from the kerb.
- Alignment to coordinate both sides of central reservation.

Material/finish

- Galvanized steel painted black.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Uprights set in concrete bases.
- Annual safety checks.
- Replacement with matching as necessary.
- Repaint every 5-10 years.

Dimensions

- 50mm square section, length varies, uprights at regular intervals, maximum 1800mm centres, height 500mm.

Example product

Available from

Street Furniture Supplies
Crown Way
Crown Park
Rushden
Northamptonshire
NN10 6BS
Tel: 0845 230 3626

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F53 JUNCTION PARAPET RAILING

Role and Use

- Parapet railings are used at junctions where there is a change in level over 900m.
- Parapet railings are fixed to pre- cast concrete plinth walls.

Positioning

- Min. 450mm clear space from the front edge of the kerb.

Material/finish

- Mild steel polyester powder coated in black.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

- 600mm height.

Example product

Available from

Street Furniture Supplies
Crown Way
Crown Park
Rushden
Northamptonshire
NN10 6BS
Tel: 0845 230 3626

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F60 TRAFFIC SIGNS

Role and Use

- For traffic regulation and direction.

Example product

Positioning

- Signs mounted as presented by the Secretary of State as indicated in the Traffic Signs Regulations and General Direction 2002. Preferred positioning non-intrusive in order of preference as follows:

    1. On lighting columns, bollards or other posts.
    2. Stand-alone on single posts (cantilevered if necessary).
    3. Stand-alone on two posts.

Traffic signs should be co-located wherever possible so as to avoid a 'forest' of signage which can over clutter the public realm.

Example product

Material/finish

- Colour and type prescribed by the Secretary of State as indicated in the Traffic Signs Regulations and General Directions 2002.
- Internally lit signs preferred, but externally lit signs also accepted.
- Internally lit signs: MDPE body with black outer and matt white inner finishes; acrylic sign face with encapsulated legend.
- Supporting columns: stainless steel (Grade 304 or 316); bead blasted lacquered finish.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Clearance to signs: 2.4 metres above ground level; increased to 2.7 metres where cyclists are present.
- Mounted back to back where possible rather than single aspect (signs mounted this way to be the same size).
- Maintained in accordance with manufacturer's instructions.

Available from

Simmonsigns Limited
Stafford Park 5
Telford,
Shropshire,
TF3 3AS
United Kingdom
Tel: 01952 293333
www.simmonsigns.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F60 TRAFFIC SIGNS

Dimensions

- Size prescribed by the Secretary of State as indicated in the Traffic Signs Regulations and General Directions 2002.
- Minimum sign dimensions preferred.
- The letter 'x' height (and hence sign size) based on the lowest road speed estimates consistent with the Regulations and Council policy in CMK.

Additional Comments

- Further comply with the specification for illuminated signs within the general street lighting specification prepared by Milton Keynes Council (Section 5).

F61 ENHANCED ARRIVAL POINT

Role and Use

- Approximate Number Based on preliminary route network plans and locations it is envisaged that there will be 3 No. locations.

Example product

Purpose

- Introduction to Milton Keynes.
- To orientate visitor at strategic arrival point.
- Confirm location.
- Give overview of area visitor is entering and detail of destinations.
- Invoke emotive response of welcome.
- Indicate direction on onward movement.

Information Content

- Location (including area name).
- Pedestrian Map of Central Milton Keynes.
- 'You are here' locator.
- Walking distance indicator.
- Basic information on other movement (transport) systems.
- City overview map.
- Redway (city) Map (to rear).

Generic Location

- Main arrival points excluding the elevated primary arrival locations. i.e. Bus station, main surface car parks, Multi Storey Car Parks (MSCP's).
- Panels to be orientated parallel to Boulevards so that maps read heads up.

Specification

- Arrival point structures to be consistent in form, structure and size across the Central area.
- Monolithic structure to carry a map panel either side.
- Base/plinth to be constructed either from dark granite slabs or cast iron sections with wet applied paint finish.

Available from

To be confirmed.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

- Main map to be either toughened glass with rear applied graphic or to be fabricated from mild steel with a Vitreous Enamel finish and applied graphics. Glass panels are potentially cheaper but more susceptible to damage and vandalism, vitreous enamel is more expensive but more durable. Providing the map and other information is kept consistent on each panel the sufficient economies of scale will make vitreous enamel viable. Graphics on a glass panel can potentially be backlit if desired. Final choice of material will be determined by any desire for backlighting, capital budget and the maintenance regime that can be applied.
- Area identification panel and side cladding to be fabricated from mild steel with a Vitreous Enamel finish and applied graphics.

F62 ARRIVAL POINT

Purpose

- Introduction to Milton Keynes.
- To orientate visitor at strategic arrival point.
- Confirm location.
- Give overview of area visitor is entering and detail of destinations.
- Invoke emotive response of welcome.
- Indicate direction on onward movement.

Example product

Information Content

- Location (including area name).
- Pedestrian Map of Central Milton Keynes.
- 'You are here' locator.
- Walking distance indicator.
- Basic information on other movement (transport) systems.
- City overview map.
- Redway (city) Map (to rear).

Generic Location

- Main arrival points excluding the elevated primary arrival locations. i.e. Bus station, main surface car parks, Multi Storey Car Parks (MSCP's). Panels to be orientated parallel to Boulevards so that maps read heads up.

Specification

- Arrival point structures to be consistent in form, structure and size across the Central area.
- Monolithic structure to carry a map panel either side.
- Base/plinth to be constructed either from dark granite slabs or cast iron sections with wet applied paint finish.
- Main map to be either toughened glass with rear applied graphic or to be fabricated from mild steel with a Vitreous Enamel finish and applied graphics. Glass panels are potentially cheaper but more susceptible to damage and vandalism, vitreous enamel is more expensive but more durable. Providing the map and other information is kept consistent on each panel the sufficient economies of scale will make vitreous enamel viable. Graphics on a glass panel can potentially be backlit if desired. Final choice of material will be determined by any desire for backlighting, capital budget and the maintenance regime that can be applied.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

Available from

To be confirmed.

F63 STREET DIRECTORY

Purpose

- To orientate.
- Confirm location.
- Give directional information / overview of city centre destinations•. Indicate relative distance.
- Reinforce route.

Example product

Information Content

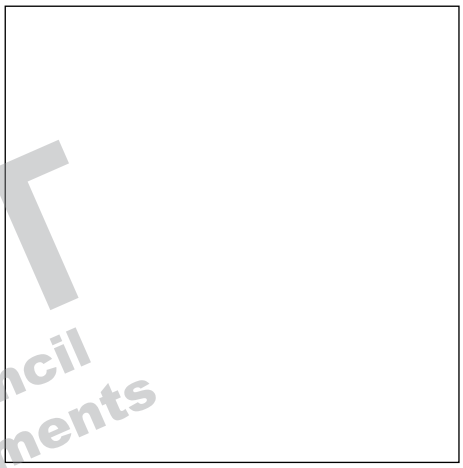
- Park-Station orientation.
- Linear street 'ahead'.
- Perpendicular street (Gate) names.
- Primary destinations.
- Building numbers.
- Walking distance indicator.
- 'You are here' locator.

Generic Location

- Along primary routes at main intersections with other primary routes and on other critical decision points on primary routes. Panels to be located on Boulevards and orientated perpendicular to Boulevards direction so that panel read 'heads up'.

Specification

- Directory structures to be consistent in form, structure and size across the Central area.
- Monolithic structure to carry directory panels either side. These signs are effectively a combination of directory and diagram. The face is made up of a number of replaceable panels that layout the Gate grid roads in sequential order. Each panel describes the content of contained blocks between the gates. The panel that depicts the block at which the sign is situated contains directional information to indicate direction of travel towards final destination. This system has devised especially for Central Milton Keynes to respond to it's consistent grid structure and system of linking underpasses.
- The majority of panels are consistent in content across the system allowing for economies of scale within production.
- Sign panels from mild steel with a Vitreous Enamel finish and applied graphics for a highly durable low maintenance product. Volume production with simple graphics and a minimal number of colours on a single panel exploit best value within the production technique.



Example product

Available from

To be confirmed.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

- Individual panels can be removed and replaced for maintenance or updating of the system. By only including major destinations changes would be infrequent and much less often and cheaper than those needed for mapping components.

F64 STREET NAME PLATES

Purpose

- Confirm location.
- Primarily to improve orientation for pedestrians and cyclists but will also assist vehicular traffic once off the grid roads.

Information Content

- Street name.

Generic Location

- Inner block streets, particularly at the corners of blocks when exiting subway areas, and above subways entrances at underpasses. Both free standing and wall mounted.

Specification

- New/replacement free standing name plates must have black legs, white plate with black lettering.
- All name plates on Boulevards and Gates should have a black border with name plates on side streets having no border.
- Sign panels fabricated from mild steel with a Vitreous Enamel finish and applied graphics. Framework mild steel fabrications with a galvanized finish.
- Wall mounted signs to have single sign panel face. Free standing signs to have two panels back to back with graphics on both faces where appropriate.
- Typface must be centred and set in Helvetica Medium, 87mm X height with a 20% letter space tracking.

Please contact Milton Keynes Engineering and Highways department for further fabrication and Installation Details

Approximate Number

- Initial estimates have been made for the number of signs across sign types S1 and S3 with a total number of 180 No. freestanding signs and 200 No. wall mounted signs. Detailed location planning needed to confirm exact numbers.

Example product

Available from

To be confirmed.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F64 SIDE STREET NAME PLATES

Purpose

- Confirm location.
- Primarily to improve orientation for pedestrians and cyclists but will also assist vehicular traffic once off the grid roads.

Example product

Information Content

- Street name.

Generic Location

- Inner block streets, particularly at the corners of blocks when exiting subway areas, and above subways entrances at underpasses. Both free standing and wall mounted.

Example product

Specification

- New/replacement free standing name plates must have black legs, white plate with black lettering.
- Sign panels fabricated from mild steel with a Vitreous Enamel finish and applied graphics. Framework mild steel fabrications with a galvanized finish. Option for a wet applied paint finish that will facilitate on site reapplication for maintenance.
- Wall mounted signs to have single sign panel face. Free standing signs to have two panels back to back with graphics on both faces where appropriate.
- Free standing Stanchions: 50mm x 50mm x 2.5mm steel square hollow section
- Sign face width: multiples of 150mm, minimum 900mm
- Depth of sign 200mm
  Text layout: Typface must be centred and set in Helvetica Medium, 87mm X height with a 20% letter space tracking. No black border to be present

Please contact Milton Keynes Engineering and Highways department for further fabrication and Installation Details

Approximate Number

- Initial estimates have been made for the number of signs across sign types S1 and S3 with a total number of 180 No. freestanding signs and 200 No. wall mounted signs. Detailed location planning needed to confirm exact numbers.

Available from

To be confirmed.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F65 BOULEVARD AND GATE NAME PLATE

Purpose

- Confirm location.
- Primarily for vehicular traffic and cyclists.

Example product

Information Content

- Street name.

Generic Location

- On grid road junctions, both free standing and wall mounted

Specification

- New/replacement free standing name plates must have black legs, white plate with black lettering.
- Sign panel fabricated from mild steel with a Vitreous Enamel finish and applied graphics.
- Steel fabrications with a galvanised finish.
- Free standing name plate stanchions: 50mm x 50mm x2.5mm steel square hollow section
  Sign face width: multiples of 150mm, minimum 900mm
  Depth of sign: 350mm
  Text Layout : Two lines of Helvetica Medium 87mm (X height) size text
  All name plates to have a black 10mm border positioned 10 mm from edge of sign with rounded corners.

  Please contact Milton Keynes Engineering and Highways department for further fabrication and Installation Details

Example product

Approximate Number

- Initial estimates based on 280 No.sign. Detailed location planning needed to confirm exact numbers.

Available from

To be confirmed.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F66 PARK DIRECTORY

Purpose

- Introduction to Campbell Park.
- To orientate.
- Confirm location.
- Give overview of area visitor is entering and detail of paths and facilities.
- Invoke emotive response of welcome.
- Indicate direction of onward movement.
- Link to Uptown and Redways.

Example product

Information Content

- Marina-Uptown orientation.
- Location.
- Map of Campbell Park.
- Primary destinations in park.
- Recognised path.
- Walking distance indicator.
- 'you are here' locator.

Example product

Generic Location

- At primary entry/exit points to park and along primary routes at key intersections and decision points. Panels to be located and orientated perpendicular to length of park so that maps are all the same but read 'heads up'.

Specification

- Directory structures to be consistent in form, structure and size across the Central area.
- Monolithic structure to carry map panel, header and base panels. The face is made up of a number of replaceable panels.
- The map panels are consistent across the system allowing for economies of scale within production.
- Sign panels from mild steel with a Vitreous Enamel finish and applied graphics for a highly durable low maintenance product. Volume product with a minimal number of colours on a single panel exploit best value within the production technique.
- Base/plinth to be constructed either from dark granite slabs or cast iron sections with wet applied paint finish.

Available from

To be confirmed.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F67 REDWAY ENTRY/EXIT SIGN

Purpose

- To orientate.
- Confirm location.
- Invoke emotive response of welcome, two sided sign so both a welcome to the Redways and CMK
- Communicate change in pathway from shared cyclist and pedestrian on Redways to separate pavements and road use within the central area.
- Indicate direction of onward movement.

Example product

Information Content

- Instruct on movement behaviour.
- Directional relative to Rail Station and Central shopping & Campbell Park.

Generic Location

- At entry and exit from Redway system and at the end of share paths.

Example product

Specification

- Sign panels fabricated from mild steel with a Vitreous Enamel finish and applied graphics. Framework mild steel fabrications with a galvanise finish. Option for a wet applied paint finish that will facilitate on site reapplication for maintenance.
- Pole: stainless steel (Grade 304 or 316); bead blasted lacquered finish.

Available from

To be confirmed.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F70 POLE-MOUNTED VEHICLE SIGNAL ASPECTS

Role and Use

- To display vehicle priorities instructed by the traffic controller.
- To enable central control and fault diagnosis.
- Clear signal in all weather conditions.
- Low power consumption.

Example product

Positioning

Signal heads mounted in order of preference as follows:

1. On lighting columns.
2. Pole-mounted back to back with other signal aspects.
3. Pole-mounted stand-alone.

- Where green arrow units are necessary 'four-in-a-line' mounting (rather than side-mounted) preferred.
- Dual primary and secondary traffic signals omitted where this can be demonstrated to be safe.

Material/finish

- Signal heads: metal and plastic painted black.
- Signal head backing boards: none.
- Signals: LED Central Light Source (CLS).
- Pole: stainless steel (Grade 304 or 316); bead blasted lacquered finish.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Regime as specified in the maintenance contract.
- Five year warranty required for new installations.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Signal heads: as specified by manufacturer.
- Poles: 114mm diameter.

Available from

Peek Traffic
Hazelwood House
Lime Tree Way
Chineham Business Park
Basingstoke
Hants
RG24 8WZ
Tel: 01256 891800
Fax: 01256 891870

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F70 POLE-MOUNTED VEHICLE SIGNAL ASPECTS

Additional Comments

- Fault diagnosis required.
- Where mounted on lighting columns, the compatibility of the electrical supply phases to the signal head with those to the street lighting needs to be checked.

F71 POLE-MOUNTED PEDESTRIAN SIGNAL ASPECTS

Role and Use

- To display pedestrian priorities instructed by the traffic controller.
- To register a demand for pedestrians to cross.
- To detect the presence (or otherwise) of pedestrians on the crossing.
- To enable central control and fault diagnosis.
- To be comprehended by all road users, including visually and mobility impaired.

Positioning

Mounted in order of preference as follows:

1. On lighting columns or other poles (e.g. traffic signals).
2. Stand-alone.

- Near-side pedestrian aspects are preferred. These may need to be mounted as pairs (repeater units) where pedestrian flows are significant.

Material/finish

- Black as standard.
- Rotating cones: used to indicate pedestrian stages, where applicable.
- Tactile knobs provided on off-side push buttons.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Regime as specified in the maintenance contract.
- Minimum one year warranty required for new installations.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- As specified by the manufacturer.

Additional Comments

- Toucan near-side pedestrian aspects required at some locations in Campbell Park (for cyclists using Redways).

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

Example product

Available from

Pedestrian Aspects:
Siemens Traffic Controls
Sopers Lane
Poole, Dorset
BH17 7ER
Tel: 01202 782070

Poles:
Stainton Metal Company Limited
Dukesway
Teeside Industrial Estate
Thornaby, Stockton-on-Tees
TS17 9LT
01642 766242
www.stainton-metal.co.uk

F80 PARKING MACHINES

Role and Use

- Parking machines have become an essential item of street furniture.

Positioning

- Position should relate to parking spaces and be in line with other street furniture.
- Must be located at the front of the footway or parking bay, outside of the clear pedestrian zone, and clearly visible to users.

Material/finish

- Colour coded to relate to parking charge system.

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Special fixing to unit foundation is required.
- This is to be carried out by a Milton Keynes Council parking contractor.
- Maintained in accordance with manufacturer's instructions.

Dimensions

- Standard type.

Additional Comments

- Standard type is solar powered.

Example product

Available from

PARKEON Ltd
Membrain House
Ferndown Industrial Estate
Wimborne, Dorset BH21 7PP
Tel: 01202 850 927
Fax: 01202 850 903

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F81 BUS SHELTERS

Role and Use

- To protect waiting passengers from inclement weather.
- To provide a fixing surface for displaying route information, timetables, maps and wait-time LED displays.

Positioning

- Shelters should be clear of the pedestrian zone.
- Open fronted shelters may be necessary to retain adequate space for wheelchair manoeuvring.
- Advertising panels shall be parallel to the road so as not to block field of vision along the street.
- Seating, information boards and litter bins should be provided where space allows - for instance, integral to the shelter.
- The offset of the front wall of the shelter from the kerb face should be 2m with 1.6m absolute minimum.

Material/finish

- Ensure materials / finish are in keeping with with other street furniture such as lamp columns and litter bins

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

Depends on structures selected. Speak to the Council for further guidance

Additional Comments

- RTPI must be incorporated into design of bus shelter
- The bus shelter and surrounding footway should be well illuminated and maintained.
- Street furniture should be cleared upstream of the bus shelter as far as possible, so that passengers have a clear view of approaching buses.
- Enclosed shelters are preferred due to the extra protection from weather.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

Available from

Trueform
Unit 4, Pasadena Trading Estate
Pasadena Close
Hayes
Middlesex
England
Tel: 020 8561 4959
Fax: 020 8848 1397
sales@trueform.co.uk

F90 CABINETS - TRAFFIC SIGNAL CONTROL BOXES

Role and Use

- Controllers: To apportion highway time between different road users in a safe, efficient and controlled manner.
- Feeder pillars: To co-ordinate power, fuses and information cables to feed the controller.
- Cabinets: to house the pillars and controllers.
- Required at locations where traffic signals are present.
- Compatibility with SCOOT and UTC/ UTMC control systems required.

Example product

Positioning

- Preferred location of new equipment in central reservation of Boulevards (but away from locations of potential vehicle damage) or other locations may be allowed but are to be determined by prior agreement with MKC.
- Located outside of clear pedestrian zone.
- All equipment housed in a single cabinet if possible (i.e. a single feeder pillar and single controller preferred for each junction).
- Clearance from the kerb edge of at least 450mm required.
- Clearance required to allow the outer case door and panels to be opened without causing unnecessary obstruction on the footway and provide sufficient clearance for signal operatives and maintenance contractors to work.
- Avoid obstructing visibility splays at road junctions or at pedestrian crossing points.
- Existing equipment not moved if possible.

Example product

Material/finish

- Galvanized steel coated grey.

Installation & Maintenance

- Fitted in accordance with manufacturer's specification.
- Two lockable isolators required for the feeder pillar.
- Connected to the power and fibre-optic networks.
- Maintained in accordance with manufacturer's specification.

Dimensions

- Traffic Controller: Standard outer case dimensions of: height 1160mm, diameter 420mm, width 725mm.
- Feeder Pillar: in accordance with manufacturer's specification.

Available from

Siemens Traffic Controls
Sopers Lane
Poole, Dorset
BH17 7ER
Tel: 01202 782070

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F90 CABINETS - TRAFFIC SIGNAL CONTROL BOXES

Additional Comments

- For further information on the fibre-optic network, contact Pell Frischmann consulting engineers.
- A review of installations at 'isolated' junctions (e.g. Campbell Park) required to assess the potential for MOVA facilities to be installed.
- Software provided by Siemens or PEEK (01256 891800).
- Future conversion of fibre-optic network from multi-mode to signal-mode may see CCTV wired onto the same network as traffic signal controls.
- Separate fibre-optic cabinets are needed adjacent to signal control boxes to house UTC equipment. However, the feeder pillar can be shared provided two lockable isolated power feeds are specified.

F91 CABINETS - UTILITIES

Role and Use

- To house utilities, in particular gas governors, electrical transformers and telephone equipment.
- Where existing Portes Cochere housing utilities are displaced and utilities cannot be accommodated within the building curtilage.

Positioning

- Location in central reservation of Boulevards. Other locations to be determined by prior agreement with MKC.
- For large utility equipment consider combining with a landscaping opportunity, to achieve discreteness. Easy access must be provided.
- Located outside of clear pedestrian zone.
- All equipment housed in a single cabinet if possible.
- Clearance from the kerb edge of at least 450mm required.
- Clearance required to allow the outer case door and panels to be opened without causing unnecessary obstruction on the footway and provide sufficient clearance.
- Avoid obstructing visibility splays at road junctions or at pedestrian crossing points.

Material/finish

- Galvanized steel coated grey.

Installation & Maintenance

- Fitted in accordance with manufacturer's specification.
- In accordance with manufacturer's specification.

Dimensions

- In accordance with manufacturer's specification.

Additional Comments

- Many existing Portes Cochere house utility equipment which will be removed as a result of redevelopment. If equipment cannot be relocated within development curtilage, new replacement utility boxes will be required to suit the above criteria.

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F92 GRIT STORES

Role and Use

- Grit bins are installed in CMK at locations that reflect the routes of high pedestrian flows and areas of higher risk that are inaccessible by conventional gritting methods.

Positioning

- Should be located at places that could become hazardous during icy conditions and where their use will be convenient, without obstructing or causing damage to property or landscaping by salt leakage.
- Located outside of clear pedestrian zone.
- The preferred location shall be either at the entrances to underpasses adjacent to the footway or in the apron adjacent to the pedestrian footbridges that link into CMK, both positioned such as to allow clear use of pedestrian routes.

Material/finish

- Grey granite effect finish plastic containers. Should be weatherproof, fireproof and durable.

Installation & Maintenance

- In accordance with manufacturer's specification.
- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works"..

Dimensions

- Dimensions vary, typically 800-1250mm width x 400-700mm depth x 600-750mm height.
- Manufacturers often supply 'Slimline' versions which may be appropriate for locations with high pedestrian flows to maximise available space.

Additional Comments

- Grit stores should be replenished throughout the winter and consideration given to their removal and storage once the danger of ice has receded.

Example product

Available from

LINPAC Group,
3180 Park Square,
Birmingham Business Park,
Birmingham,
B37 7YN

Glasdon UK Limited,
Preston New Road,
Blackpool,
Lancashire,
FY4 4UL
Tel: 01253 600410
Fax: 01253 792558,
Email: sales@glasdon-uk.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.

F93 PLANTER BOXES

Role and Use

- To be used where there is inadequate topsoil depth in public places due to services or hard formation below ground.
- Can also be used as architectural elements or where some flexibility in location is required.

Positioning

- Planters should be located so as to not obstruct pedestrian movement.
- Minimum distances between planters to allow access is 1.8m, however they could be positioned adjacent to each other to form a line if access is not required.

Material/finish

To be agreed

Installation & Maintenance

- Installation to be in accordance with Milton Keynes Council's "Specification for Highway & Construction works".
- Maintained in accordance with manufacturer's instructions.

Dimensions

To be agreed

Available from

Birkby Hall Road
Birkby
Huddersfield
HD2 2YA
Tel: 0845 302 0600

Escofet at Woodhouse UK Plc
Spa Park
Leamington Spa
Warwickshire
CV31 3HL
Tel: 01926 314 313
Fax: 01926 883 778
Email: enquire@woodhouse.co.uk

Note: All listed products shall be from approved suppliers. Alternative suppliers of products meeting the specifications listed above may be used following submission of alternatives for approval by the 'Engineer' to ensure full compliance with CMK Handbook requirements.