



# Ebbsfleet Public Realm Hard Landscape Guide

Use this guidance to inform the specification and detailing of hard surfaces in Ebbsfleet public realm projects to achieve characterful, affordable, durable and sustainable hard surfaces and street furniture.

Introduction

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## **Ebbfleet's streets and public spaces should celebrate the richness and beauty of the local cultural landscape**

The Hard Landscape Guidance sets out a design approach to the specification of materials and street furniture that interprets and reflects the cultural heritage and landscape of the Ebbfleet area.

The hard landscape guidance builds on the landscape character assessment in Section 2 to provide a consistent hard materials strategy that enhances Ebbfleet's existing sense of place. The aim is to balance this consistency while also taking into account the 4 landscape character areas and the management and maintenance requirements for the 6 public realm typologies.

This section includes a materials palette for the hard landscape materials and signage as well as guidance on management and maintenance of the hard landscape for the 6 public realm typologies.

The management and maintenance tables sets out the life cycle expectations for hard materials, furniture, and site furnishings for each typology, to allow this to be incorporated into the stewardship planning for the public realm.

## How to use the Hard Landscape Guidance

This hard landscape strategy is intended to be used in the Design Process Step 2 and Step 3 ( See Section 1)

The guidance should be used in conjunction with;

Section 2 : Landscape Character Overview

Section 4 : Worked Examples

For example, Section 2 should be consulted upon to identify the character area, and then Section 4 provides typical plans for each of the 6 public realm typologies and guidance on the appropriate location, arrangement and quantity of specific materials and street furniture that are to be used. The guidance in these sections is then further developed in the Hard Landscape Strategy to clarify the colour palettes, material qualities, and design considerations for the hard landscape within the public realm. Items considered within the hard landscape strategy include paving, street furniture, walling materials, play on the way, and signage.

### Attention to detail

This section provides general rules of thumb for the integration of drainage, utilities, manholes, signage and lighting within each of the public realm types. These rules of thumb should be taken into account in step 3 of the design process and form a part of the design audit evaluation within that step of the design process.

### Management and maintenance

The section concludes with a series of pages outlining the management and maintenance requirements for the hard landscape. The management and maintenance requirements are organised by typologies in a series of tables that provide a general description, life expectancy, outline maintenance / management specification, and an anticipated frequency. Additional management and maintenance requirements specific to street furniture, play, and lighting have been provided at the conclusion of the chapter.

It is expected that these management and maintenance tables are first reviewed in step 2 of the design process. At this stage the design team should review and confirm the life expectancy and management requirements align with the design guidance for each typology within their project area. Then in step 3, a more thorough review and analysis of these tables should then be carried out as part of the establishment of the material palettes. It is expected that during this step the team evaluates and demonstrates the design meets the life expectancy and management requirements through the analysing of alternative options. Further details of how this fits into the overall design process can be found in Chapter 1 of this document.

### Life cycle analysis and stewardship

The life cycle expectations and maintenance requirements within this chapter were developed as part of a general life cycle costing analysis. This analysis was carried out on the landscape surface level of each of the 6 public realm typologies and has included input from capital costing and life cycle costing experts to develop a suitable and realistic hard materials strategy for Ebbsfleet Garden City.

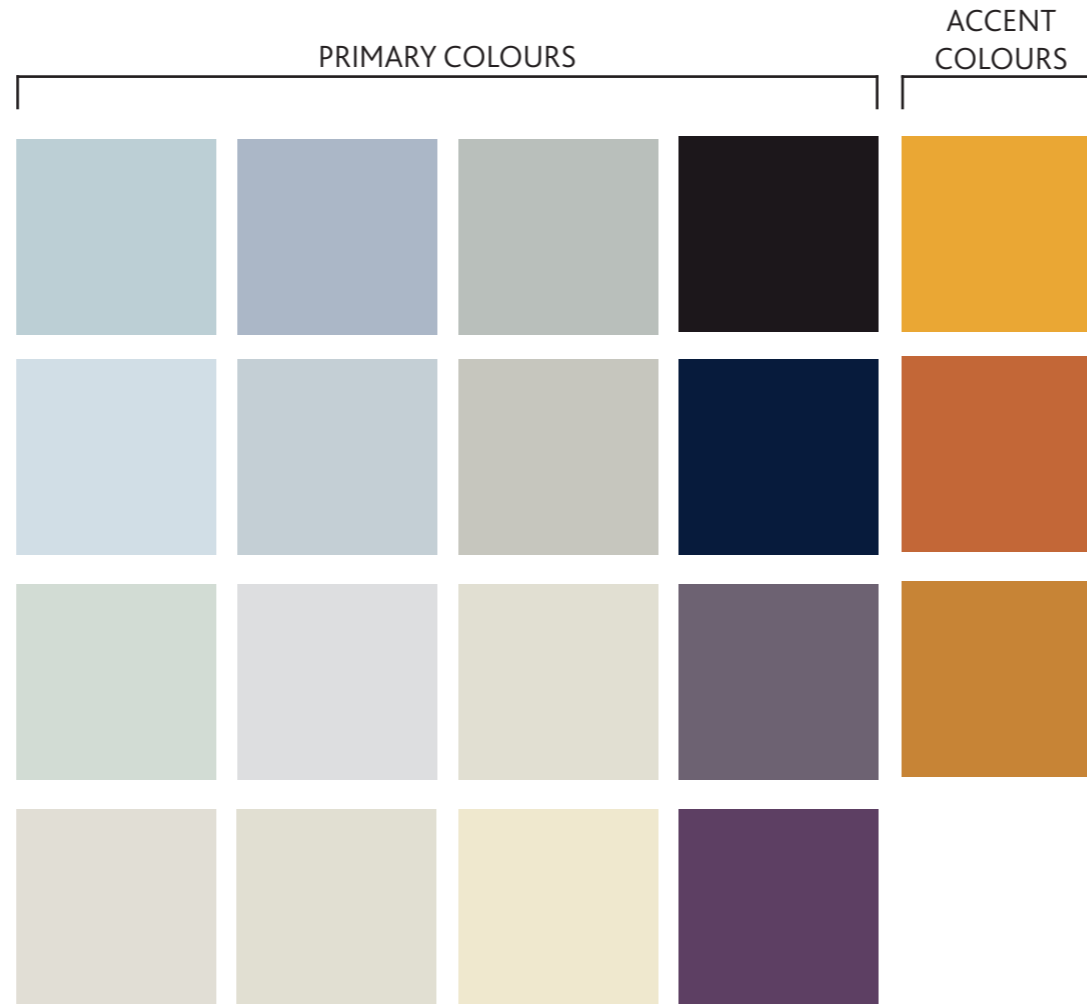
# Colour Palette

Paving, street furniture, & walling

## Chalk quarries and the Ebbsfleet river valley

The colour palette is designed to create a distinctive character for the Chalk Quarries and the Ebbsfleet Valley character areas by reflecting the local context and geology.

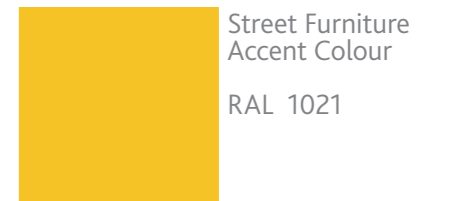
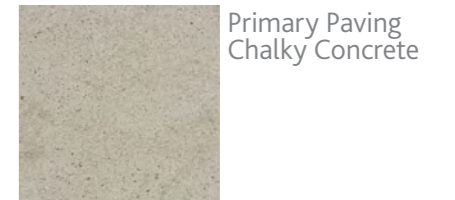
The palette references the pale hues of the sites distinctive chalk cliffs along with the blue greys of the flint found within the chalk and traditionally used as a building material in Kent. Warmer orange and browns will be used as accent colours in timber street furniture.



## Northfleet Riverside

The colour palette proposed for Northfleet Embankment is designed to reflect the local context (e.g. Thames Riverside) and the site's industrial heritage.

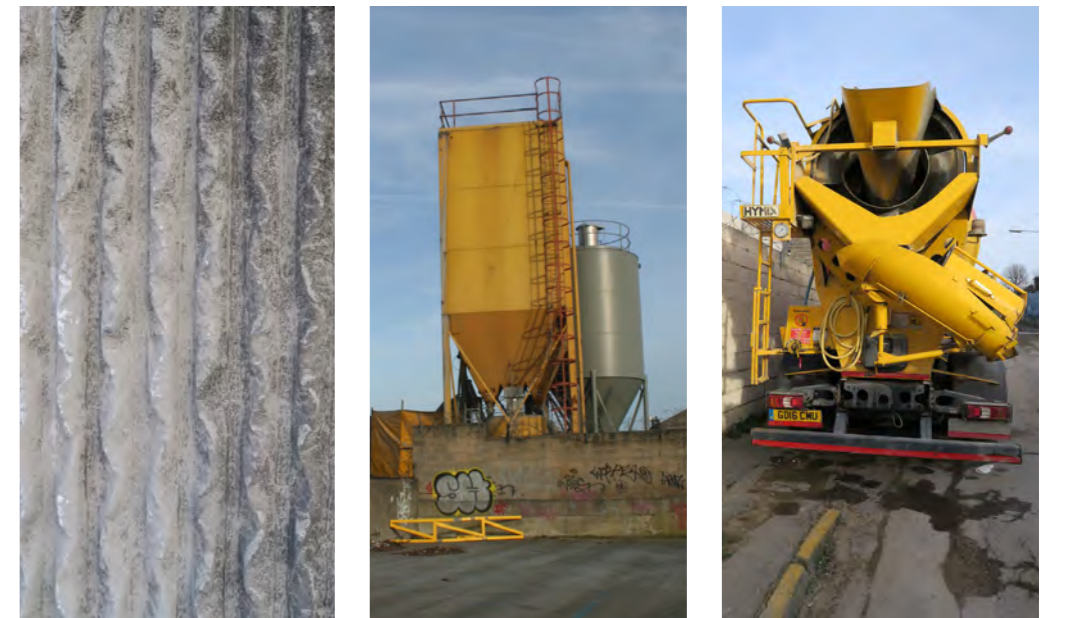
The industrial heritage of the cement industry at Northfleet Riverside suggests a specific palette of chalky concrete for paving and warm yellow as an accent colour in street furniture for these embankment areas.



Inspiration taken from the local landscape for the colour palletes for the chalk quarries and Ebbsfleet River valley

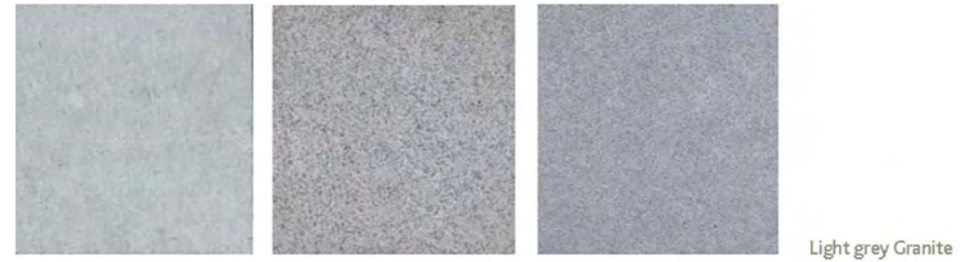
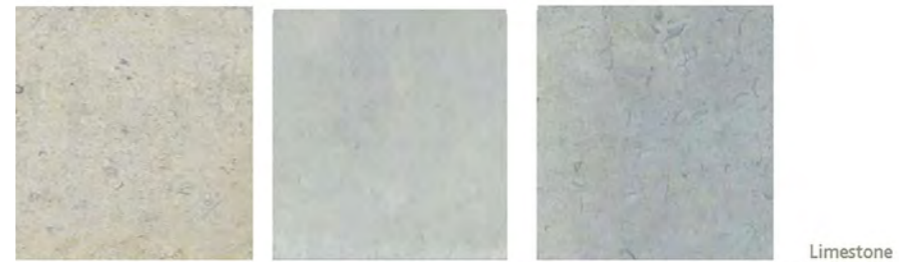
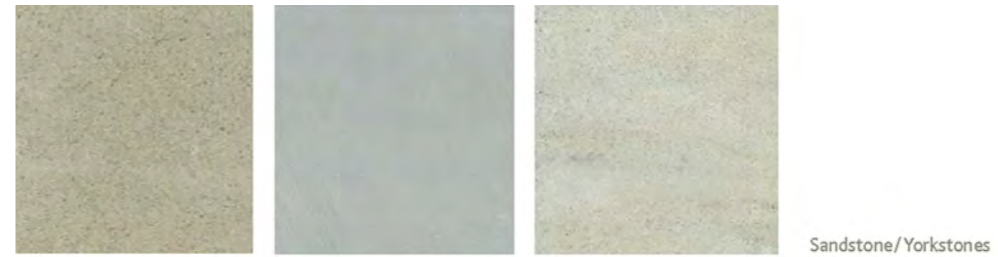
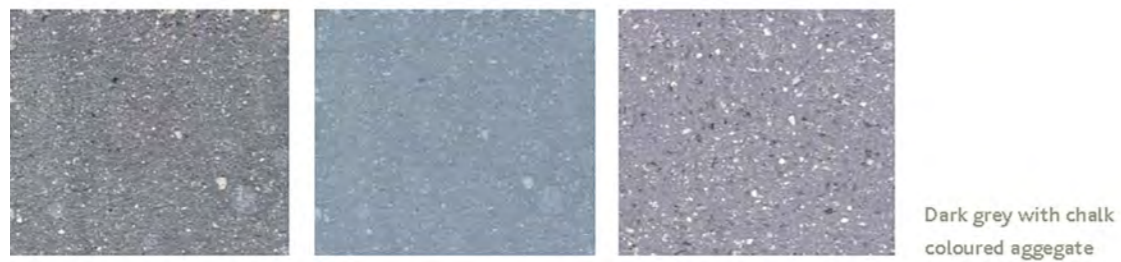
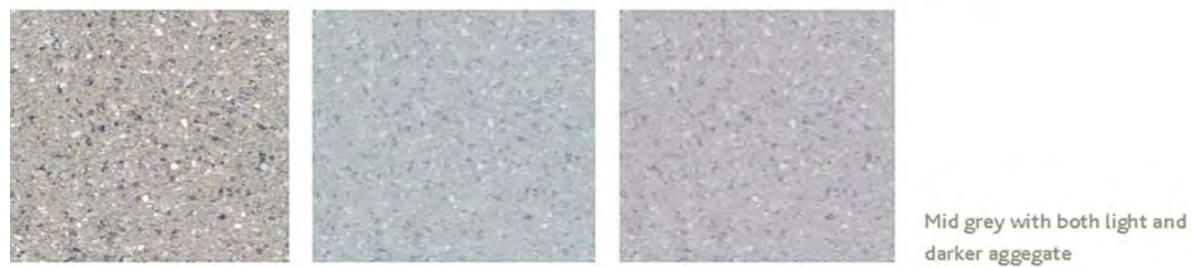
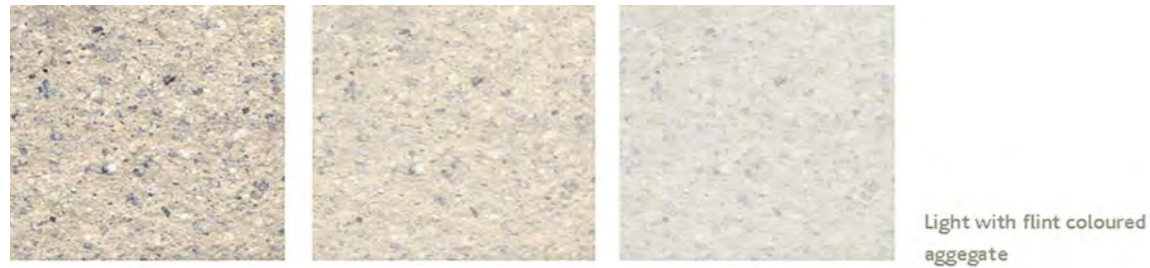


Inspiration for the Northfleet Embankment palette



# Paving materials

## Colour palette



### CAST PAVING UNITS

The cast paving units will be limited to three colours which are derived from the site colour palette and reference the local geology;

- a light chalky coloured base with flint coloured aggregate
- a mid grey base with both light chalky coloured and darker flint aggregates
- a dark coloured base with chalky coloured aggregate

### APPLICATION

The palette will be used throughout the character areas. In general the light toned units will be used for the footpaths and pedestrian only areas. The mid and darker toned units will be used for trafficked areas and accent paving.

A range of unit sizes will be required for each colour which is discussed in more detail later in this chapter.

### NATURAL STONE PAVING MATERIALS

Natural stone paving may be used in key public spaces and streets across the site. The stones selected should:

- be robust and durable- tested to BS EN 1341:2001
- be available from either the UK or Europe to reduce the carbon emissions generated from freighting products long distances
- reference local context
- reference the site colour palette

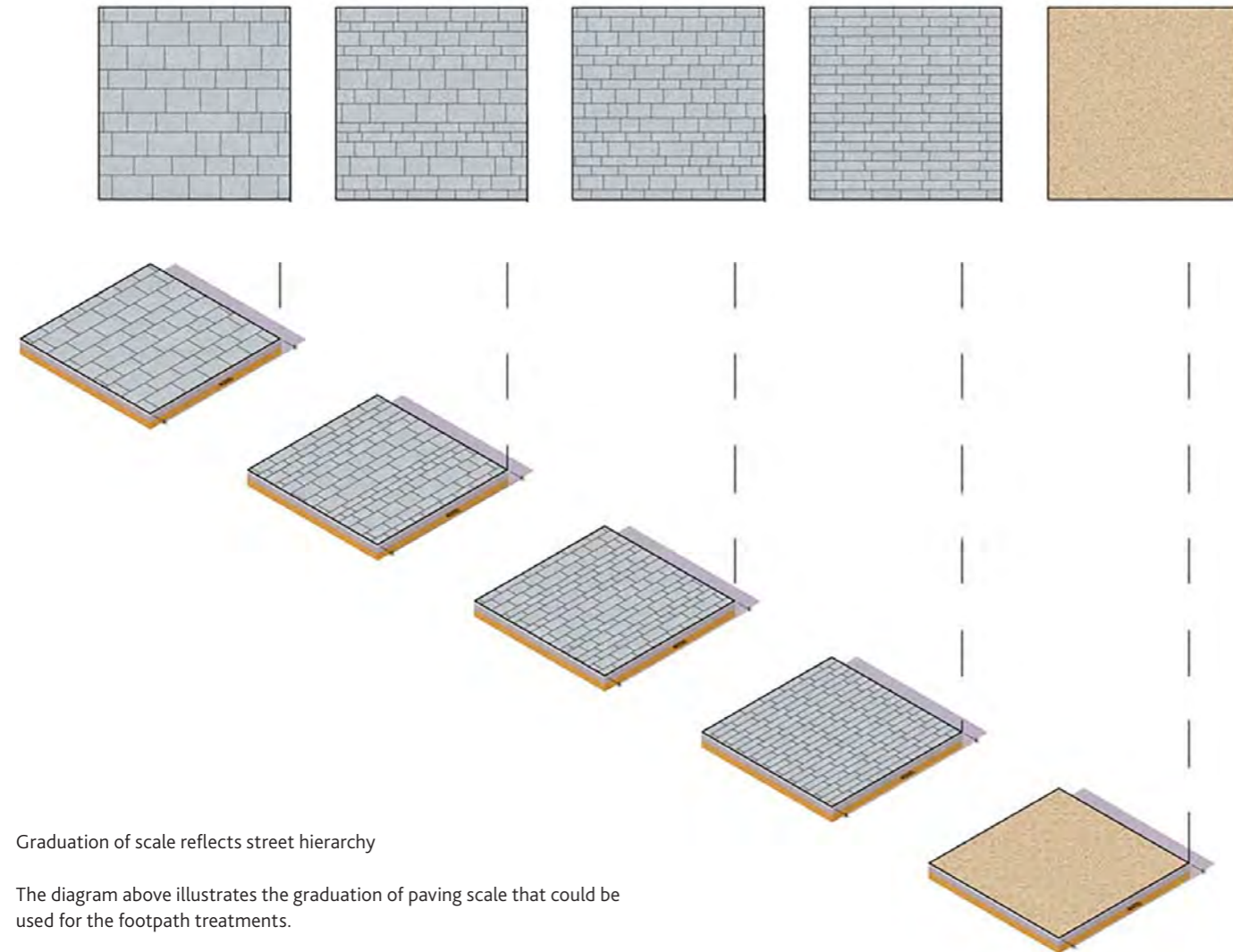
A choice of three stones have been included in the paving palette for the site giving designers of key spaces flexibility in their selection

- Sandstone / York stones
- Limestone
- Light grey Granite

# Paving materials

## STREETS & SQUARES

## PARKS ONLY



Graduation of scale reflects street hierarchy

The diagram above illustrates the graduation of paving scale that could be used for the footpath treatments.

Paving material selection should assist in establishing a cohesive and legible public realm.

A degree of variation is desirable and will ensure local visual interest and richness without detracting from the unified approach. Paving materials should be selected to:

- Reflect the street hierarchy in both level of investment and scale of module.
- Reflect the appropriate landscape character area within the Garden City.
- Provide a sustainable approach through the material selection and design.

## INVESTMENT HIERARCHY

Investment should be focused on the Ebbsfleet Centre, Level 1 Streets, and key public spaces such as the village centres and public squares. Materials also need to be assessed against their visual performance over time. Natural stone may have a high initial cost, but due to its longevity, can in some locations be a better long-term investment and improves in appearance with age as it develops a patina.

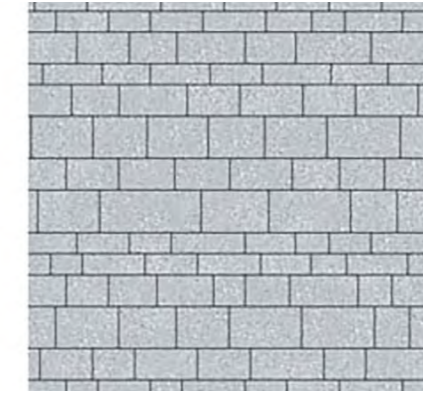
Where budgets are limited it may be possible to use natural stone for elements such as the kerb with cost effective man made materials used elsewhere.

## LEVEL 1 STREETS & SQUARES



Large unit high quality concrete flags (option - natural stone in Ebbsfleet Central, Villages Centres).

## LEVEL 2 STREETS



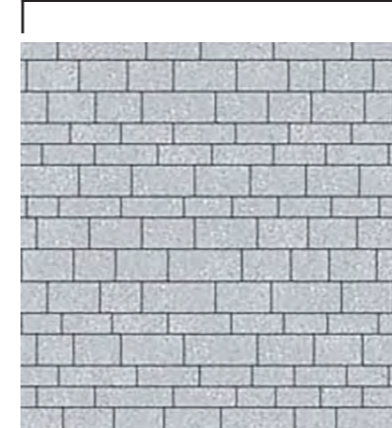
Smaller unit high quality concrete flags (option - natural stone in Ebbsfleet Central, Villages Centres).

## LOCAL PARKS

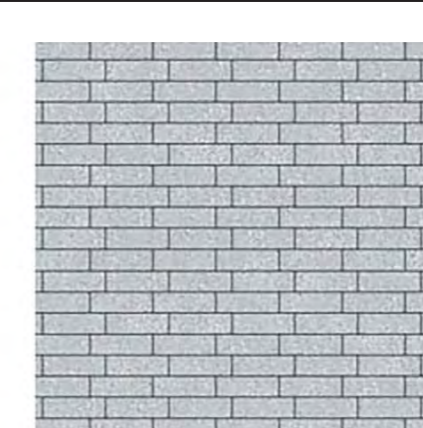


Range of high quality concrete flags (option - natural stone in Ebbsfleet Central, Villages Centres).

## LEVEL 3 & 4 STREETS



Concrete or clay sett/block pavers



Concrete or clay sett/block pavers

## LOCAL PARKS



Resin bound gravel

In the secondary and tertiary spaces and streets cost effective materials such as high quality concrete pavers or blocks can be used effectively.

Resin bound gravel is appropriate for footpaths within parks.

# Paving materials

## Resin Bound Aggregate



(1) Bound Gravel. Local Park footpaths.



(2) Bound Gravel. Local Park footpaths.

It is envisaged that bound gravel with aluminium or concrete edging will be used for footpaths in the local parks. Bound gravel is available in many aggregate finishes and provides a softer more informal appearance. Permeable bound aggregate is available for use around tree pits in paved areas.

Paving flags and blocks may be used for social seating areas and primary pathways.

## Asphalt



(3) Asphalt. Vehicular carriageways levels 1,2 & 3

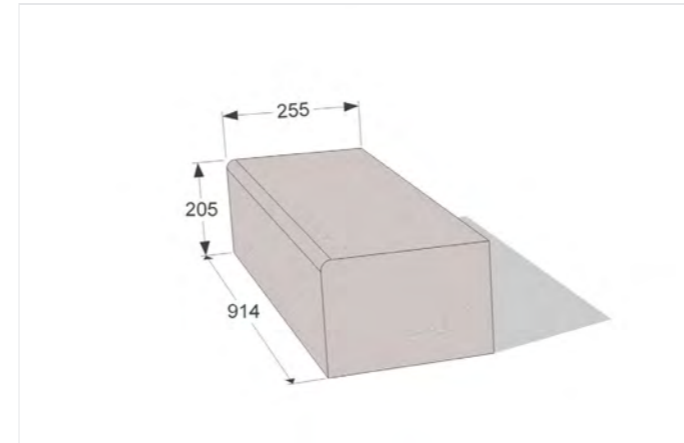


(4) Natural coloured asphalt. Cycle Paths.

Vehicular carriageways for levels 1, 2, and 3 of streets will be primarily asphalt. Concrete block paving or natural stone on levels 1,2, and 3 streets may be used for raised junctions and crossings as per the design guidance in chapter 4. Level 4 streets are to be designed as shared spaces with only concrete block paving.

Cycle paths should be clearly defined, surfaced with natural coloured asphalt e.g. buff coloured or silver-grey coloured.

## Wide Kerbs



(5) Wide topped concrete exposed aggregate kerbs. Material: Silver grey exposed aggregate concrete conservation finish. Level 1 Streets.



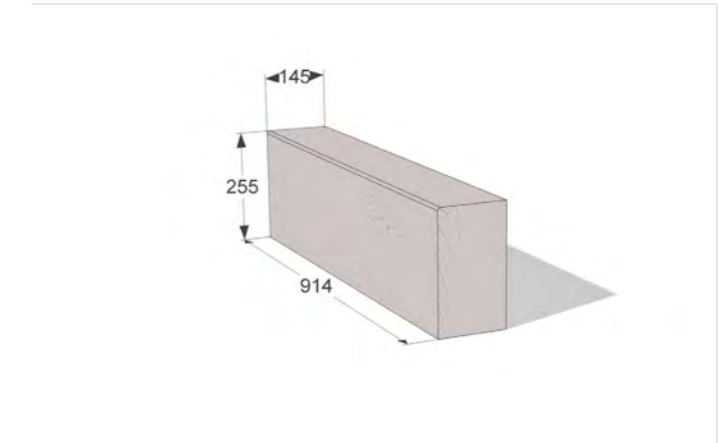
(6) Wide topped natural stone. Material: Silver grey granite flamed finish. Ebbsfleet Central, Villages Centres.

Wide conservation kerbs will be used for Level 1 Fastrack/Primary streets (5).

Natural stone kerbs could be used in the Ebbsfleet centre and local centres (6).

- Size: 255 wide x 205 x 914mm square edge.

## Narrow kerbs



(7) Narrow topped concrete exposed aggregate kerbs. Material: Silver grey exposed aggregate concrete Conservation finish. Level 2, 3 & 4 Streets.



(8) Narrow topped natural stone. Material: Silver grey granite flamed finish. Level 3 & 4 Streets.

Narrow conservation kerbs will be used for residential streets (7).

Natural stone kerbs could be used in the smaller streets of Ebbsfleet Centre (8).

- Size: 145 wide x 255 x 914mm square edge.

# Street Furniture

## Quality & life cycle expectations

Throughout Ebbsfleet the street furniture should be high quality, contemporary, and robust in design. Precedent images of locally available products have been provided on the following pages to support this table.

Street furniture should utilise a limited palette of quality materials to establish consistency across the Garden City. Careful, consideration must be given to the suitability of the material, with respect to its resistance to vandalism, potential damage, ease of repair and the maintenance requirements outlined at the end of this chapter.

The range of street furniture may be varied by the introduction of custom elements such as bespoke seating or specialised furniture elements (e.g. timber benches attached to planters) within specific public spaces. These should be integrated into the design of the space and should be used to create a unique identity for the space.

Element	Timber Benches	Seating Chairs	Bollards	Cycle Stands	Litter Bins
<b>General Description</b>	Timber slats with stainless steel, cast aluminium, cast iron or polyester powder coated supports. Root fixed. Some benches with arm rests and backrests	Timber slats with stainless steel, cast aluminium, cast iron or polyester powder coated supports. Root fixed. Some benches with arm rests and backrests	Brushed Steel or Anodised Aluminium. Reflective branding around the top (Polyester powder coated yellow reflective banding for Northfleet only)	Sheffield cycle stands - brushed stainless steel finish.	Contemporary aluminium or brushed stainless steel bins, polyester powder coated.
<b>Life Expectancy</b>	15 years	15 years	15 years	15 years	15 years
<b>Relevant Quality Standards</b>	Timber: FCS Certified Brushed Stainless Steel: Grade 316 or 316L Cast Aluminium BS EN 515:2017 Cast Iron: BS EN 1561:2011 Hot Dip Galvanised: BS EN ISO 1461 Polyester Powder Coated: BS EN 13438 All screws and fittings are supplied in acid-resistant or stainless steel.	Timber: FCS Certified Brushed Stainless Steel: Grade 316 or 316L Cast Aluminium BS EN 515:2017 Cast Iron: BS EN 1561:2011 Hot Dip Galvanised: BS EN ISO 1461 Polyester Powder Coated: BS EN 13438 All screws and fittings are supplied in acid-resistant or stainless steel.	Brushed Stainless Steel: Grade 316 or 316L Anodised Aluminium Passivated against corrosion Hot Dip Galvanised: BS EN ISO 1461 Polyester Powder Coated: BS 6496 and BS EN 12206-1 (Aluminium) BS EN 13438 (steel).	Brushed Stainless Steel Grade 316 or 316L Hot Dip Galvanised: BS EN ISO 1461 Polyester Powder Coated: BS EN 13438	Aluminium Passivated against corrosion Brushed Stainless Steel Grade 316 or 316L Hot Dip Galvanised: BS EN ISO 1461 Polyester Powder Coated: BS 6496 and BS EN 12206-1 (Aluminium) BS EN 13438 (steel).
<b>Additional Notes &amp; Considerations</b>	See design guidance in chapter 4 for design principles.	See design guidance in chapter 4 for design principles.	See design guidance in chapter 4 for design principles.	See design guidance in chapter 4 for design principles.	Should allow for separate compartments for waste and recycling.



# Street Furniture

## Design principles & rules of thumb

The table on the right provides general rules of thumb for the various types of street furniture expected to be used within the public realm. The table is provided in support of the Healthy Streets Evaluation Framework indicators outlined in Section 3 and the design guidance in Section 4. Collectively, this document aims to achieve the following design principles for the use of street furniture within the public realm of the garden city.

- Street furniture should be selected at village or local neighbourhood level except for continuous public spaces linking across multiple neighbourhoods (e.g. level 1 streets). This functions to help balance a desire for consistency in the public realm with the desire to create distinctive, identifiable neighbourhoods.
- Public spaces that connect across neighbourhoods should be designed using a consistent palette of street furniture.
- Street furniture should be incorporated with the ambitions outlined in the evaluation framework.
- Street furniture should be appropriately placed to maximise usability and avoid creating visual clutter.
- Unightly items, such as control boxes, should be located underground with a pop up mechanism or discretely placed. Casings for control boxes should be chosen to coordinate with the street furniture range.

Element	Benches & Chairs	Bollards	Cycle Stands	Litter Bins
<b>Rules of Thumb</b>	<p><b>Avoid</b> the use of metal surfaces for seating. The thermal properties do not promote year round use.</p> <p><b>Avoid</b> excessive use of single chairs or the random scattering of seating throughout the public space.</p> <p>Seating <b>should be</b> placed to respect pedestrian and cyclist flows and to avoid creating obstacles along the street.</p> <p>Seating <b>should be</b> coherently grouped to form social spaces within a clear pavement zone and used to help define spaces and pedestrian movement.</p> <p>Seating <b>should be</b> placed to provide qualitative views. Qualitative views may include views out to the open landscape (e.g. chalk cliffs, River Thames,) or views overlooking public spaces (e.g. for people watching).</p> <p>Seating <b>should be</b> placed to provide resting places for the young and elderly in line with the evaluation framework.</p>	<p><b>Avoid</b> the visual clutter created by the over use of bollards.</p> <p><b>Use</b> simple level changes or kerbs to restrict traffic movement in place long lines of bollards.</p> <p>Bollards <b>should be</b> minimal and contemporary in design as to blend in with their surroundings.</p>	<p><b>Avoid</b> the placement of cycle stands along the rear sides of the primary public spaces or in places that are inconvenient for users.</p> <p>Cycle Stands <b>should be</b> placed close to important destinations and entrances</p> <p>Cycle Stands <b>should be</b> placed adjacent to all bus stops and included with all streetscapes to provide public bike parking for visitors.</p> <p>Cycle Stands <b>should be</b> provided at all parks and public squares and placed to limit potential conflicts with pedestrians.</p>	<p><b>Avoid</b> the placement of litter bins within pedestrian desire lines.</p> <p><b>Avoid</b> the placement of litter bins within areas of shrub planting.</p> <p>Litter bins <b>should be</b> placed along, but not in conflict with pedestrian flows.</p> <p>Litter bins <b>should be</b> placed within primary social spaces.</p> <p>Litter bins <b>should be</b> placed near important entrances to public buildings or commercial frontages.</p>
<b>Recommended Quantity</b>	Varies. Seating to be provided in line with the Chapter 4: Design Guidance. Seating may be accommodated by a combination of timber benches, seating chairs, and bespoke seating elements.	Varies. As required to ensure safety, maintain accessibility, and prevent unwanted motorised vehicular usage.	L1 Street: 5 per 50LM L2 Street: 5 per 50LM L3 Street: 3 per 50LM L4 Street: 3 per 50LM Parks: 1 per 1,000 m <sup>2</sup> Public Square: Varies by context and size.	L1 Street: Bus stops & Social spaces L2 Street: As Required L3 Street: As Required L4 Street: As Required Parks: 1 per 1,500 m <sup>2</sup> Public Square: 1 per 500 m <sup>2</sup>

# Street Furniture

## Chalk quarries & Ebbsfleet Valley

### Eastern Quarry, Croxton Gary, Craylands Lane, Ebbsfleet Central, Ebbsfleet Green

The street furniture in the Chalk Quarries and Ebbsfleet Valley character areas should be simple, contemporary in style, elegant and robust in design and support inclusive design - e.g. seating with back rests and armrests should always be the standard and predominant typology.

- The street furniture should utilise a limited palette of quality materials.
- Primary materials should be timber (for seating) and metal (for seating structural supports, cycle stands, litter bins and bollards).
- Metal elements should be neutral colours that align with the provided colour palette for the Chalk Quarries and Ebbsfleet Valley.
- Street furniture should be integrated into the public space typologies in line with the design guidance outlined in chapter 4.
- Street furniture should be oriented toward prominent views of the local lakes, rivers and chalk cliffs.

#### Public Seating



Sineu Graff Opera Bench



Street Life - Rough & Ready Bench on bespoke concrete wall



Street Life Rough & Ready Bench with back rest



Bench seats on Windrush Square, Brixton



Street Life Rough & Ready Bench



Street Life Rough & Ready Bench along corten steel nt

#### Bollards



Rhinoguard™ 15/30 bollard

#### Cycle Stands



Sheffield Bike Stands



Crystal litter bin, mmcité



Crystal litter bin, mmcité

# Street Furniture

## Northfleet riverside

The street furniture along the Northfleet Riverside character area should be simple, contemporary in style, elegant and robust in design and support inclusive design - e.g. seating with back rests and armrests should be the standard and predominant specification.

- The street furniture should utilise a limited palette of quality materials.
- Primary materials should be timber (for seating) and metal (for seating structural supports, cycle stands, litter bins and bollards).
- Metal elements should be primarily warm yellow or utilise yellow as an accent colour to align with the provided colour palette.
- Street furniture should be integrated into the public space typologies in line with the design guidance outlined in chapter 4.
- Street furniture should be oriented toward prominent views and take of Northfleet's location along the River Thames.

## Northfleet riverside

### Public Seating



Street Life Rough & Ready Bench



Nanuk Litter Bin, mmcite



Bench seats on Windrush Square, Brixton



Bench seats on Windrush Square, Brixton



Multiminium litter bin, mmcite



Street Life Rough & Ready Bench

### Cycle Stands



Sheffield Bike Stands powder coated yellow

### Bollards



Rhinoguard™ 15/30 bollard

# Walling Materials

All character areas

Due to the sloping nature of the site, there will be a requirement for retaining walls within the public realm. Materials used should reference local materials and reflect the sustainable aspirations of the development.

Suitable walling materials include:

- Flint
- Kentish Ragstone
- Concrete walls
- Engineering brick

## Flint



(1)



(2)

Flint is a by-product of the chalk quarrying industry. This has traditionally been knapped and used in Kent's vernacular architecture (1,2).

## Kentish Ragstone



(3)

## Engineering brick



(4)

Kentish Ragstone is quarried locally at the Hermitage quarry. This is the only hard and durable stone in the area and has been used as a building material since Roman times (3).

Engineering brick - blue-grey colour references flint and this extremely durable material is available in a versatile range of special shapes (4).

## Concrete walls



(5)



(6)

Cement has been manufactured at Ebbsfleet for a very long time. There are aesthetic and structural advantages to this material as it is a versatile median with strong aesthetic links to the pale grey of the chalk cliffs. To cut down the use of cement-60-80% of the cement can be replaced with inert fillers such as pulverised fuel ash and blast furnace slag (5,6).

# Play on the way materials

## All character areas

Play on the way is an integral element to a number of the public realm typologies. For each typology 'play on the way' will need to be carefully developed to suit the setting, and to ensure that children are playing within areas that are suitable and safe. Specialist play equipment providers should provide guidance on siting equipment, soft fall requirements, maintenance and inspection.

It should be noted that almost any element of the public realm can be developed through thoughtful design to provide a play function. For this reason, play on the way elements may take various forms and require a varied palette of materials for successful inclusion. Based on the design guidance provided in Section 4, suitable materials for play on the way features could include the following:

- Paving variation in concrete block or natural stone
- Metal play elements selected to fit with the site's landscape character area
- Timber play elements, such as stepping logs or low level balancing logs
- Concrete stepping stones or natural stone boulders

### Paving variations



(1)

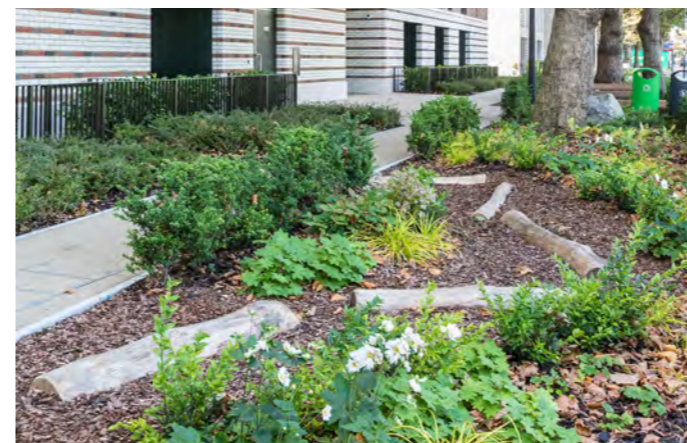
### Metal play elements



(2)

Concrete or natural stone paving variations can be integrated within all street typologies and public squares. The material selection should align with the provided paving colour palette, but it should contrast with the base material (1). Metal play on the way elements may also be integrated (2) into all 6 typologies. They should be selected to have a consistent grey or yellow colour to align with the street furniture palette provided on the previous pages.

### Timber play elements



(3)

Timber play elements are ideally suited for integrated within Ebbsfleet Garden City because of their natural aesthetic and easy integration within planting areas and parks. Where it is deemed safe by the designer's risk assessment, timber play elements can be integrated within green medians (3), pocket parks, small social spaces (4), parks and public squares.

### Concrete & natural stone



(5)

Quarrying and Cement have a strong historical connection to Ebbsfleet and are ideal for integrating play on the way within SuDS features and social spaces. Concrete stepping stones can provide fun crossing points for kids (5) and the use of limestone boulders or concrete blocks can create pockets that double as social spaces and play on the way (6).



(6)

# Signage and wayfinding

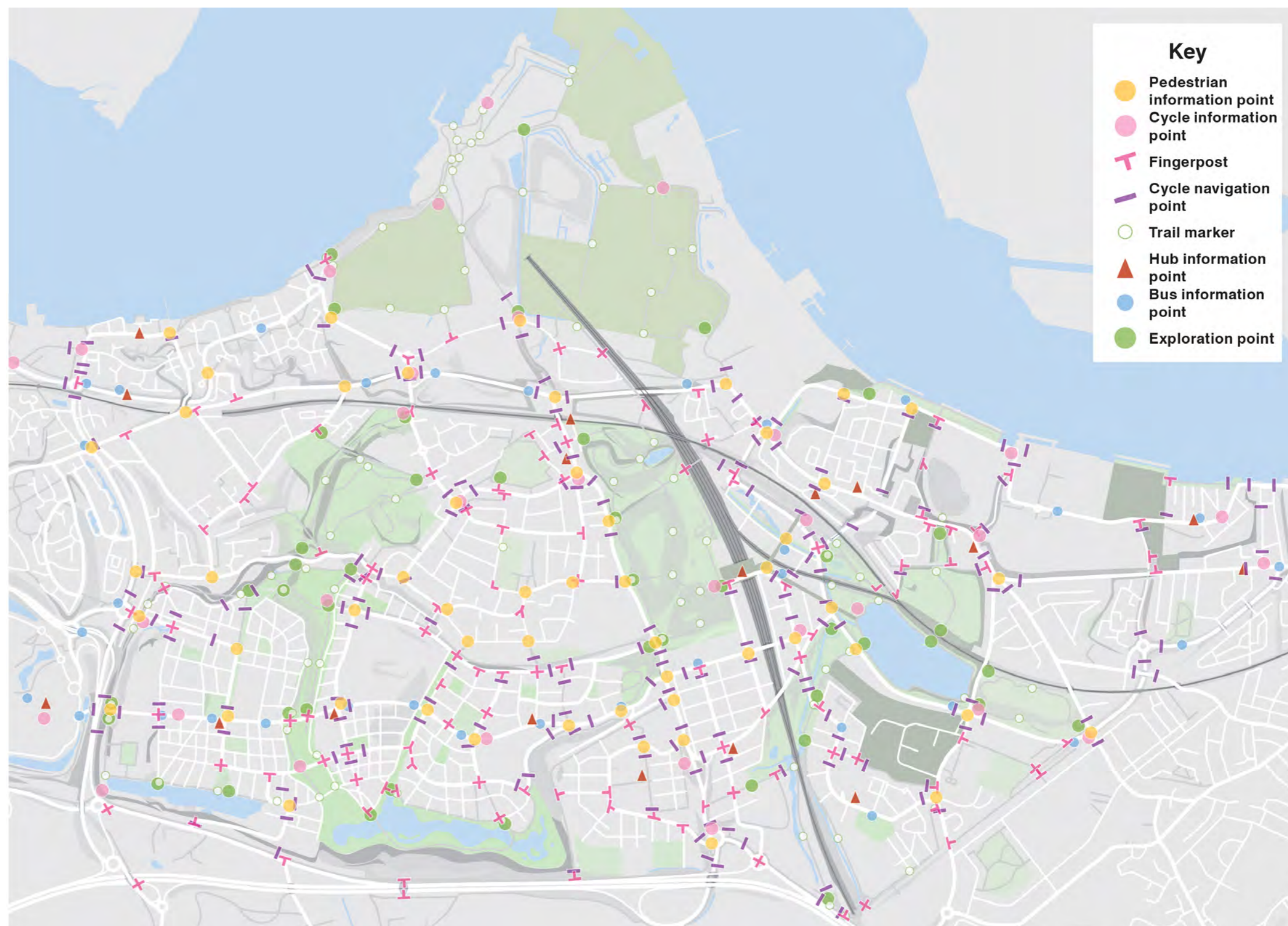
**All public realm projects should be developed to align with the Ebbsfleet Public Realm Strategy.**






The objective is to ensure appropriate signage and wayfinding information is incorporated into the public realm in appropriate locations to support walking, cycling and public transport, without cluttering the street.

A suite of wayfinding furniture has been developed for use in public realm projects;

- Hub Information Points
- Bus Information Points
- Pedestrian Information Points
- Cyclist Information points
- Cycle-route Markers
- Trail markers
- Fingerposts
- Exploration Points

The map to the right sets out the concept placement strategy for wayfinding furniture. Refer to the Ebbsfleet Wayfinding Strategy document for further information on where wayfinding furniture should be incorporated,



	6. Hub Information Point (HIP)	7. Bus Information Point (BIP)	8. Exploration Point	9. Interpretation Lectern	10. Street Name Plate (SNP)
					
Function	<p>Primary user: pedestrians</p> <ul style="list-style-type: none"> <li>– Identify current location (user orientation)</li> <li>– Direct to local and/or wider destinations</li> <li>– Enable route planning</li> <li>– Enable destination finding</li> <li>– Encourage exploration</li> <li>– Promote active / sustainable travel modes</li> <li>– Contribute to local identity</li> <li>– Support local interpretation</li> <li>– Generate advertising revenue (optional)</li> </ul>	<p>Primary user: pedestrians and bus users</p> <ul style="list-style-type: none"> <li>– Identify current location (user orientation)</li> <li>– Direct to local and/or wider destinations</li> <li>– Enable onward route planning</li> <li>– Enable destination finding</li> <li>– Encourage exploration</li> <li>– Promote active / sustainable travel modes</li> <li>– Provide bus stop / route / network info</li> <li>– Contribute to local identity</li> <li>– Generate advertising revenue (optional)</li> </ul>	<p>Primary user: pedestrians &amp; cyclists</p> <ul style="list-style-type: none"> <li>– Identify current location (user orientation)</li> <li>– Support local interpretation</li> <li>– Encourage planned or unplanned exploration</li> <li>– Encourage active outdoor activities</li> <li>– Enable route planning</li> <li>– Enable destination finding</li> </ul>	<p>Primary user: pedestrians &amp; cyclists</p> <ul style="list-style-type: none"> <li>– Identify current location (user orientation)</li> <li>– Support local interpretation</li> <li>– Encourage planned or unplanned exploration</li> <li>– Encourage active outdoor activities</li> <li>– Contribute to local identity</li> </ul>	<p>Primary user: pedestrians, cyclists, drivers</p> <ul style="list-style-type: none"> <li>– Identify current location (user orientation)</li> <li>– Contribute to local identity</li> </ul>
Information	<ul style="list-style-type: none"> <li>– Current address information</li> <li>– Welcome statement</li> <li>– Directional content</li> <li>– Local area and wider context maps</li> <li>– Indices e.g. key attractions, transport etc.</li> <li>– Journey times and/or distances (optional)</li> <li>– Interpretative information (optional)</li> <li>– Advertising (optional)</li> </ul>	<ul style="list-style-type: none"> <li>– Current address information</li> <li>– Local area and wider context maps</li> <li>– Indices e.g. key attractions etc.</li> <li>– Bus stop/route/network information</li> <li>– Journey times and/or distances (optional)</li> <li>– Advertising (optional)</li> </ul>	<ul style="list-style-type: none"> <li>– Current address information</li> <li>– Welcome statement</li> <li>– Local area and wider context map</li> <li>– Indices e.g. key attractions</li> <li>– Local facts and interpretative information</li> <li>– Directional content, with a focus on local and/or wider destinations (optional)</li> <li>– Statutory / regulatory (optional)</li> </ul>	<ul style="list-style-type: none"> <li>– Current address/destination/asset information</li> <li>– Welcome statement</li> <li>– Local facts and interpretative information</li> </ul>	<ul style="list-style-type: none"> <li>– Street name</li> </ul>
Placement	<ul style="list-style-type: none"> <li>– Transport hubs e.g. rail and bus stations</li> <li>– Local centres and popular dwelling spaces e.g. major high streets</li> </ul>	<ul style="list-style-type: none"> <li>– Fastrack bus stops</li> </ul>	<ul style="list-style-type: none"> <li>– Major entrances to leisure, open and green spaces or trails</li> <li>– Key dwelling points within leisure, open, green spaces or along trails (TBC following further area development)</li> </ul>	<ul style="list-style-type: none"> <li>– Areas of artistic, cultural, historical, scientific or geographic interest e.g. public art, vistas and view points, buildings of architectural merit etc.</li> <li>– These are not included the wayfinding placement plan. They are to be positioned at EDC's discretion.</li> </ul>	<ul style="list-style-type: none"> <li>– At entrances to all named streets</li> <li>– These are not included the wayfinding placement plan. They are to be positioned at EDC's discretion.</li> </ul>

# Arts & culture in the public realm

**The design of the public realm should support the ambitions set out in Ebbsfleet's Cultural Strategy to support the growth of a strong cultural life in Ebbsfleet. Arts and culture within the public realm can help to establish a sense of identity, a stronger sense of community, a thriving communal life, and a dynamic, inclusive and prosperous economy.**

In support of these ambitions the design of the public realm should consider how innovative and site responsive artwork and meanwhile programmes can be developed. While respecting Arts and Cultural Strategies for each development, opportunities should be explored for art which crosses boundaries within the public realm, and may include;

- Water attenuation in the urban environment
- Play and a playful environment / play on the way opportunities
- Community engagement activities
- Activating the area through outdoor arts, dance and festival projects
- Temporary and ephemeral art through the construction period (refer also to the section on "public realm during construction" and 'Meanwhile Improvements').
- Street furniture
- Lighting the public realm
- Initiatives might explore these themes through a range of potentially artist-led mechanisms which could include, but are not limited to:
  - Repeating motifs colour or light effects
  - In-setting graphic content into pavements, access covers and service cabinets
  - Developing trails and sequences of related artworks
  - Installing large-scale pieces establishing instantly recognisable icons in the urban landscape.



Activation of a local park through a local dance group's performance in Elephant Park



Public art in Castle Hill, referencing the site's rich history



Interactive public art piece in Leicester Cathedral Gardens



## Artist involvement

Artworks should aim to explore Ebbsfleet as the context for new development and to promote the Garden City as an attractive, vibrant and creative area. It may express aspects of the cultural heritage, and design teams should consider both the landscape character set-out within the Public Realm Strategy, and related narratives described in the sister guidance '[Design for Ebbsfleet](#)'.

Scheme promoters and design teams should collaborate through EDC to ensure artists' designs are coherent, and compatible in terms of location and content and where possible seek to commission new work which is site sensitive and responds to the immediate public realm and community context. Artist involvement can manifest in many and varied ways, including but not limited to:

- Input to design teams and concepts
- Embedded or stand alone artworks in the public realm
- Lighting strategies
- Creative design of temporary boundaries, hoardings, in between unused spaces
- Creative community engagement approaches
- Artist or Writer in residence
- Live outdoor arts such as dance, performance, events
- Pop up theatre, film, community gardening

The arts commissioning process is key to successful and sensitive outcomes and should be led by experienced curators or creative producers, in collaboration with designers.

## Meanwhile / activation projects

The design of the public realm affords opportunities for temporary creative projects, which reference the local cultural heritage, and can help promote, raise awareness and add value to development. At a basic level, artist's treatment of hoardings have long been used to stimulate interest, intrigue and enhance the visual amenity of development sites for everyday users.

Project teams should consider the opportunities for artist contributions to temporary site hoardings, boundaries or underutilised spaces, in prominent or long-lived locations as part of a rolling programme of art, consultation and communication. Teams should explore the opportunities of employing an 'artist in residence' to contribute to the public realm during construction. The consideration of an artists' contributions and best value should include an assessment of:

- The duration of the hoarding, artwork or intervention
- The visual impacts of the work on surrounding completed areas and through routes
- The environmental benefits (noise, dust, visual mitigation) it might afford to neighbouring areas
- Opportunities for community engagement
- Potential for new arts commissioning



# Attention to detail : Streets



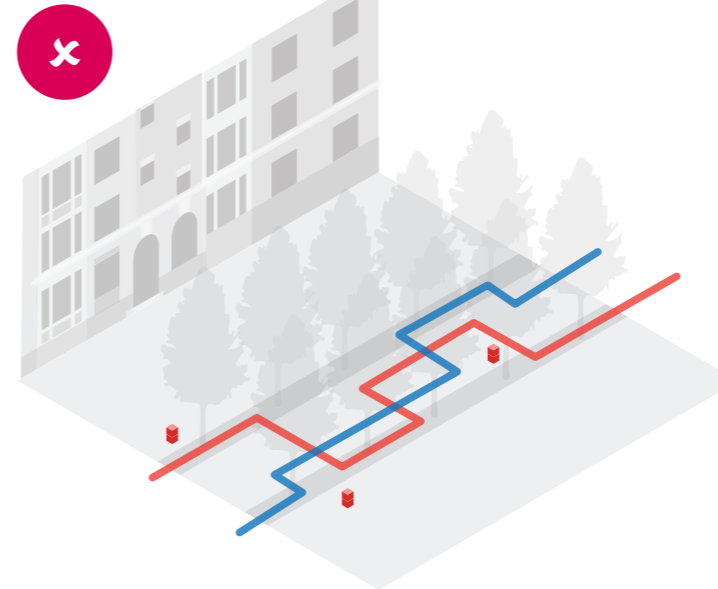
## DRAINAGE—WHAT NOT TO DO

- Failure to properly drain a pavement:
  - Encourages mosses, algae and other vegetation
  - Creates dangerous slip hazards in icy conditions
  - Damages paving by standing water
  - Do not provide steep long falls (>5% or 1:20) or shallow ones (>1% or 1:100).
- Do not place gullies and drains in odd locations
- Do not provide insufficient below-ground capacity  
Collaborate with a competent drainage engineer
- Do not drain at surface level onto surroundings



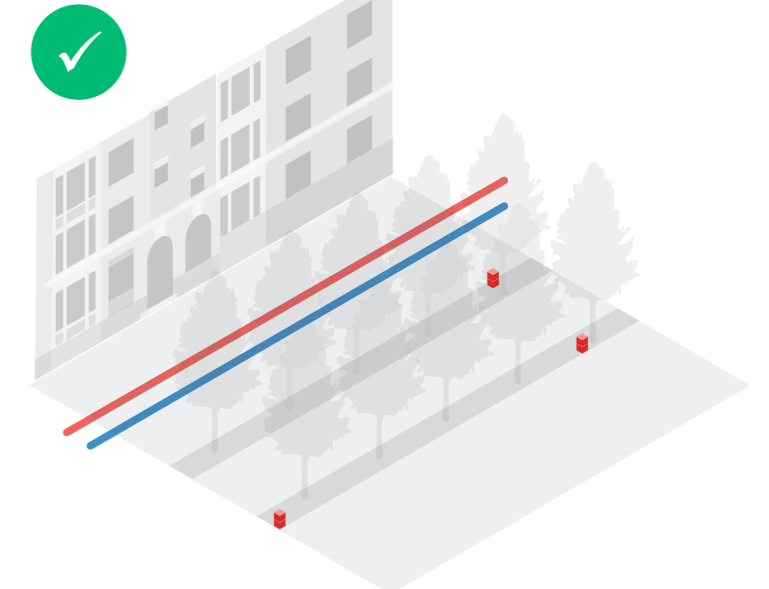
## DRAINAGE—BEST PRACTICE

- Paving must provide a sound surface usable in all weather.
- Design paving falls to direct surface water away from buildings and into drainage system.
- Create acceptable gradients and cross-falls for pavements - max 2.5% / 1:40, min 1% / 1:100.
- Integrate gullies and drains at consistent low points and neatly, around soft landscaped areas.
- Implement Sustainable Urban Drainage Systems where possible - planted Rain gardens, permeable paving, infiltration and attenuation systems, filter drains, swales, ponds.



## UTILITIES: WHAT NOT TO DO

- Do not locate utilities prior to design development
- Avoid 'spaghetti' junctions constraining design heavily
- Avoid kinks and random changes in direction
- Reduced depth of fill will compromise tree planting, drainage and paving
- Do not locate services in areas of the green medians / boulevard where tree planting is required.
- Do not allow contractors to adjust planned lines of services



## UTILITIES: BEST PRACTICE

- Locate utilities after design development
- Plan, larger trenches of multiple cables where possible
- Locate trenches within pavement and shared space street with concrete block paving to minimise impact of future utility work on the longevity and maintenance of the proposed design.
- Plan service locations to avoid clash with tree avenues.
- Use root protection barriers where trees are close to services.
- Plan tree zone locations and protected from start of the project, do not locate services in these zones





### MANHOLES : WHAT NOT TO DO

- Avoid locating manholes covers before the design
- Avoid random and scattered locations and ugly covers
- Avoid manhole covers at key kerb / edges junctions or in between soft and hard
- Avoid covers within soft landscape and planted areas
- Avoid hard covers in areas of play on the way due to obvious safety issues
- Avoid excessive concrete joints to paving edges, cracked small pieces of paving or wide mortar/ concrete joint
- Avoid covers set at incorrect height for surroundings



### MANHOLES: BEST PRACTICE

- Design first! Locate covers in appropriate discreet locations.
- Use recessed manhole covers wherever possible, to minimise visual impact, infill to match adjacent paving bond.
- Align manhole covers neatly and preferably within hard landscape. Ensure lid is parallel to paving pattern.
- Minimise size of frame where possible
- Consider weight of manhole cover and maintenance (lift and slide or 2 person operation/ shallow depth pave in pedestrian areas subject to weight loading).



### SIGNAGE : WHAT NOT TO DO

- Do not overuse signage or place signage in random locations. This creates conflicts in movement patterns and clutter along the street.
- Don't clutter the street, combine sign faces on one post where possible. Sign faces to be minimum regulation size.
- Signage should not be placed behind trees or other elements that can obstruct its view.



### SIGNAGE : BEST PRACTICE

- Advisory signage is to be restricted to the minimum required to assist in wayfinding.
- Use alternative wayfinding measures to reduce need for excessive signs - e.g., clear landmarks, clear sight-lines, clear path & street hierarchy of designed routes.
- Clear street name and gateway signage positioned to assist legibility and clear way-finding.
- Signage design to align with strategy provided on previous spread



# Attention to detail : Public Squares



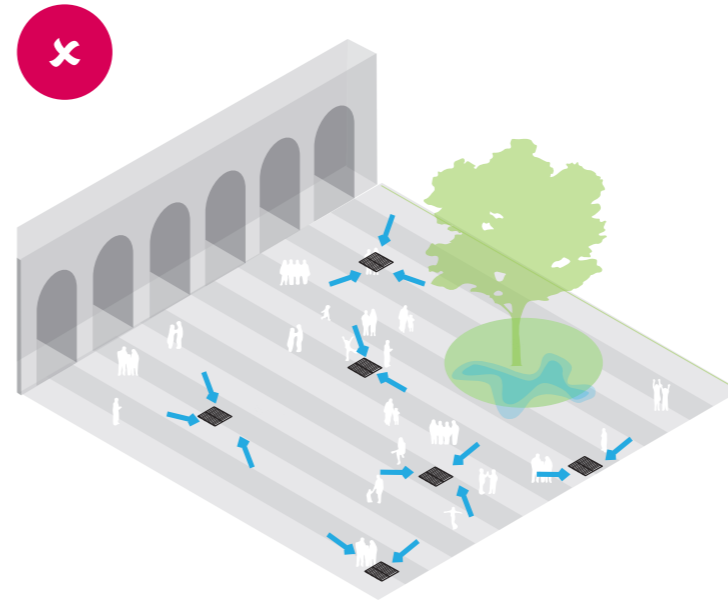
## LIGHTING : WHAT NOT TO DO

- Do not forget to adapt lighting to the design and character or use of areas.
- Do not provide insufficient level of light, making spaces unsafe.
- Do not create light spills into the adjacent dwellings.
- Do not space fittings randomly or too close together.
- Do not create clutter or over provide lighting columns.
- Do not use low quality or over designed light fittings.



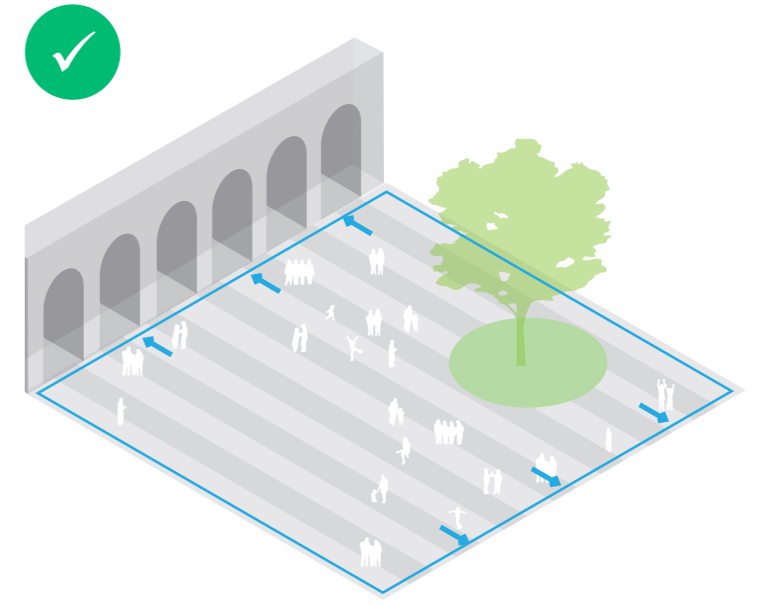
## LIGHTING : BEST PRACTICE

- Provide safety and security to key spaces. (Lighting levels calculations by lighting specialist).
- Introduce functional and decorative lighting appropriate to the character of the public square.
- Provide quality light fittings that are robust, durable, modern, minimal and belong to a coordinated palette.
- Locate all fittings in a neat manner, with consistent spacing, along inner edges of soft planting and to corners.
- Consider building mounted lighting in key areas and accent lighting to trees and site furniture.



## DRAINAGE : WHAT NOT TO DO

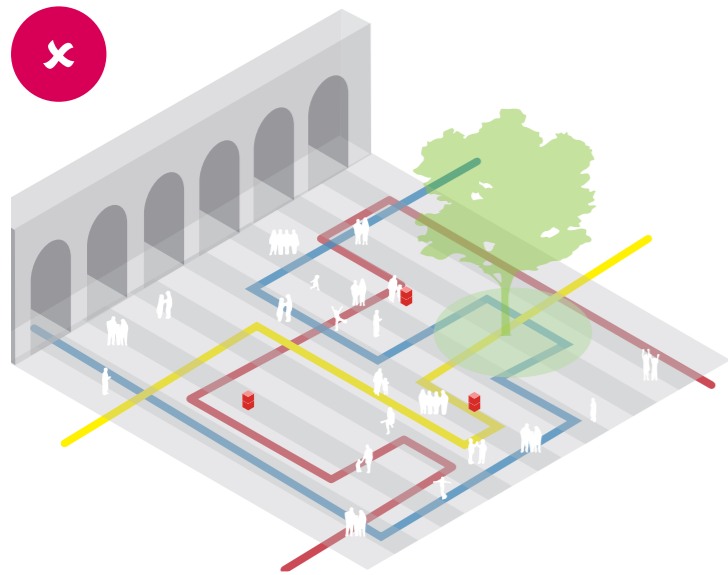
- Failure to properly drain a pavement:
    - Encourages mosses, algae and other vegetation
    - Creates dangerous slip hazards in icy conditions
    - Damages paving by standing water
    - Do not provide steep long falls (>5% or 1:20) or shallow ones (>1% or 1:100).
  - Do not place gullies and drains in odd locations
  - Do not rely on draining into open ground
  - Do not provide insufficient below-ground capacity
- Collaborate with a competent drainage engineer



## DRAINAGE : BEST PRACTICE

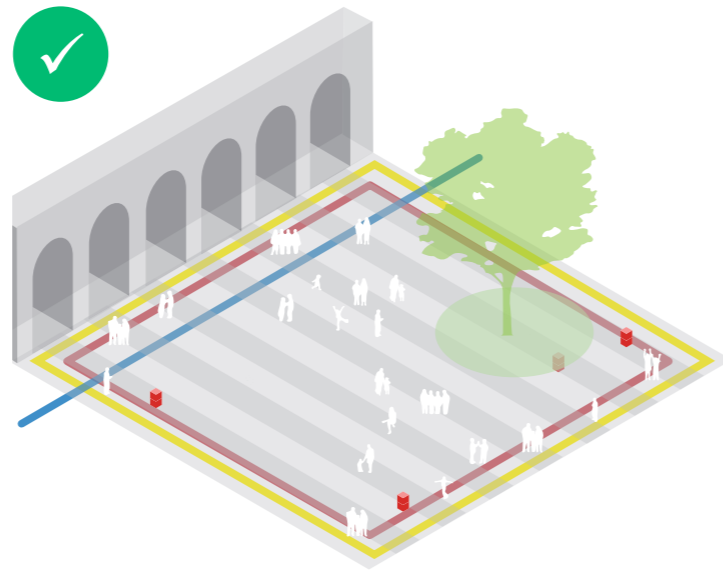
- Paving must provide a sound surface usable in all weathers.
- Design paving falls to direct surface water away from buildings and into drainage system as quickly and efficiently as possible.
- Create acceptable gradients and cross falls for pavements— max 2.5% / 1:40, min 1% / 1:100.
- Integrate gullies and drains at consistent low points and neatly, around soft landscaped areas/edge of the plaza.
- Implement Sustainable Urban Drainage Systems where possible - eg. permeable paving, attenuation





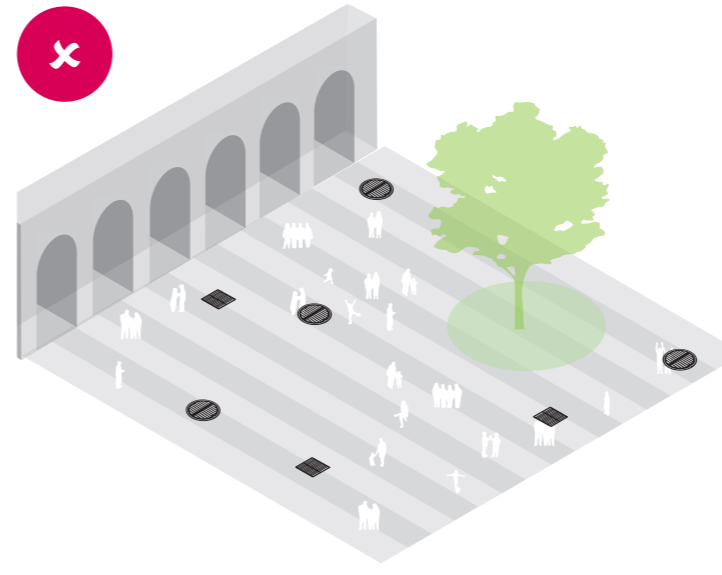
### UTILITIES : WHAT NOT TO DO

- Do not locate utilities prior to design development
- Avoid 'spaghetti' junctions constraining design heavily
- Avoid kinks and random changes in direction
- Reduced depth of fill will compromise tree planting, drainage and paving
- Do not scatter ventilation shafts and / or substations within key spaces or soft landscape (e.g.. on routes, gardens, central open space, social hubs).



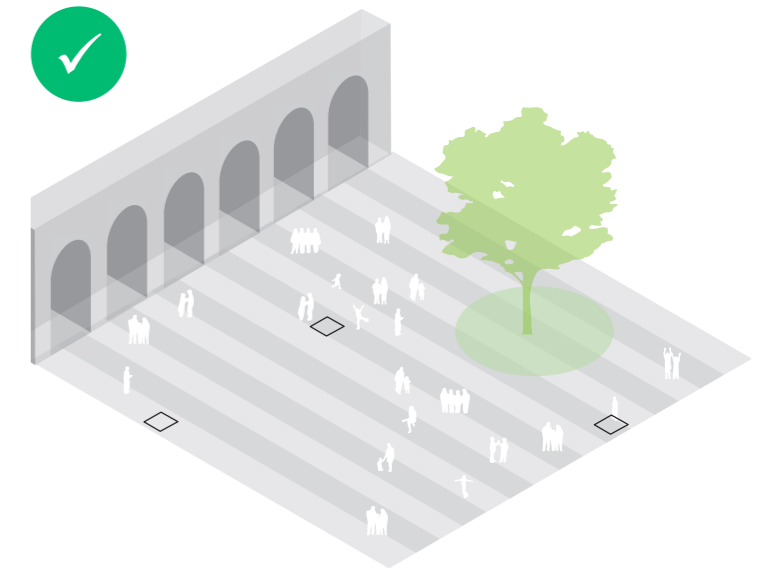
### UTILITIES : WHAT TO DO

- Locate utilities after design development
- Structured design and single, larger shared trenches accommodating multiple cables
- Locate trenches within appropriate areas to minimise impact of future utility work on the longevity and maintenance of the proposed design
- If required, carefully embed ventilation shafts and / or substations within the design (e.g.. hidden corners, perimeter, within furniture).



### MANHOLES : WHAT NOT TO DO

- Avoid locating manholes covers before the design is fully developed!
- Avoid random and scattered locations and ugly covers
- Avoid manhole covers at key kerb / edges junctions or in between soft and hard.
- Never locate covers on steps!
- Avoid covers within soft landscape and planted areas.
- Avoid hard covers in playground for safety issues.
- Avoid covers set at incorrect height for surroundings.



### MANHOLES : BEST PRACTICE

- Design first! Locate / place manhole covers in appropriate locations after design is fully developed.
- Use recessed manhole covers wherever possible, to minimise visual impact. Multiple surfaces can be laid into covers—eg. pavers, rubber)
- Align manhole covers neatly and preferably within paving. Ensure lid is perpendicular / parallel to paving pattern.
- Minimise size of frame where possible.
- Set height of cover appropriately and to fit with levels strategy.



# Attention to detail : Neighbourhood Parks



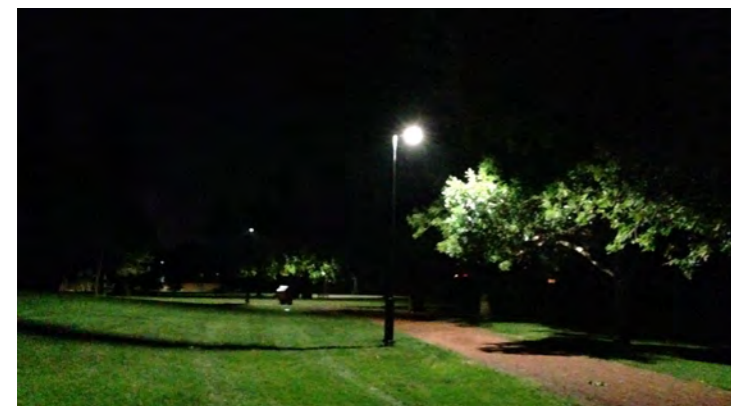
## LIGHTING : WHAT NOT TO DO

- Do not forget to adapt lighting to the design, character or use of areas. Small local parks adjacent to residential many not require lighting.
- Do not provide insufficient level of light, making spaces unsafe.
- Do not space fittings randomly or too close together.
- Do not use low quality or over designed light fittings.



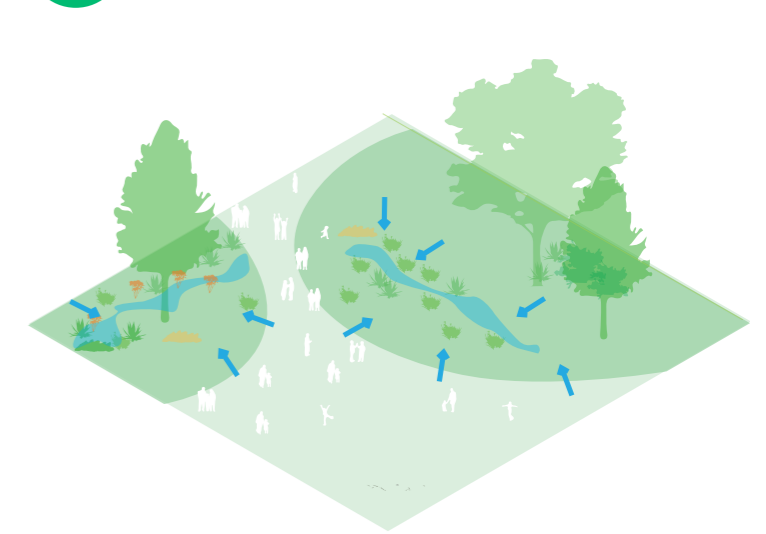
## LIGHTING : BEST PRACTICE

- Provide safety and security to primary routes and key spaces within larger village greens. (Lighting levels calculations by lighting specialist).
- Provide quality light fittings that are robust, durable, modern, minimal and belong to a coordinated palette.
- Use low level lighting (e.g.. bollards) along key routes, and garden areas, with columns (6m height) for larger spaces.
- Locate all fittings in a neat manner, with consistent spacing, along inner edges of soft planting and to corners.



## DRAINAGE : WHAT NOT TO DO

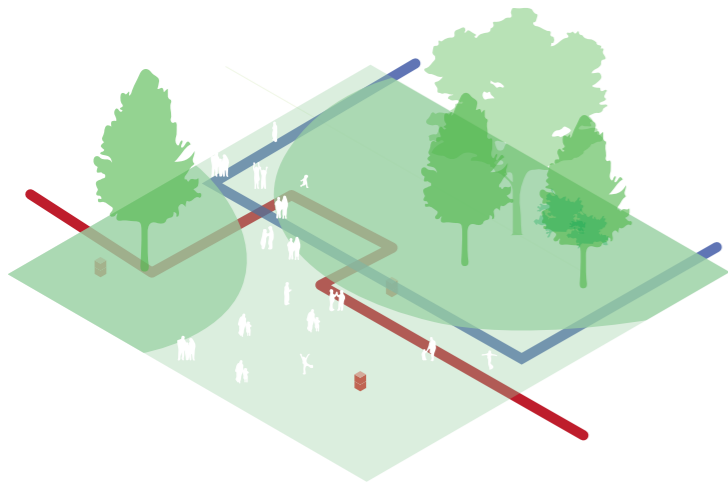
- Failure to properly drain a pavement:
  - Creates dangerous slip hazards in icy conditions
  - Damages paving by standing water
  - Do not provide steep long falls (>5% or 1:20) or shallow ones (>1% or 1:100).
- Do not place gullies and drains in odd locations
- Do not rely on draining into open ground
- Do not provide insufficient below-ground capacity
- Collaborate with a competent drainage engineer
- Do not drain at surface level onto surroundings



## DRAINAGE : BEST PRACTICE

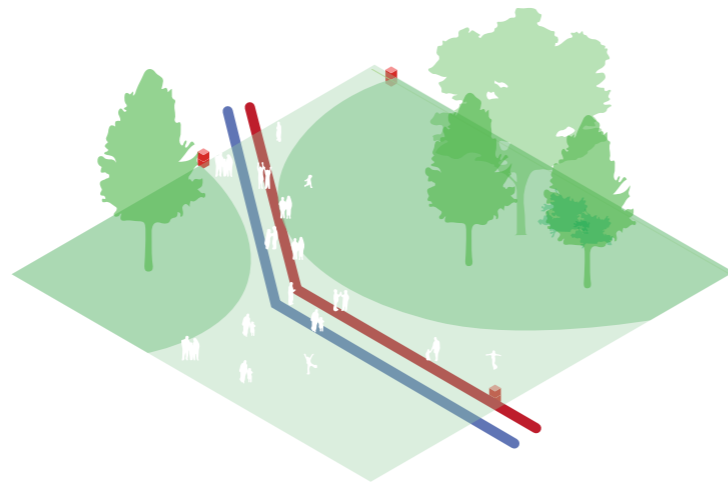
- Paving must provide a sound surface usable in all weathers.
- Design paving falls to direct surface water away from buildings and into drainage system as quickly and efficiently as possible.
- Create acceptable gradients and cross-falls for pavements - max 2.5% / 1:40, min 1% / 1:100.
- Integrate gullies and drains at consistent low points and neatly, around soft landscaped areas.
- Implement Sustainable Urban Drainage Systems where possible - permeable paving, infiltration, etc..





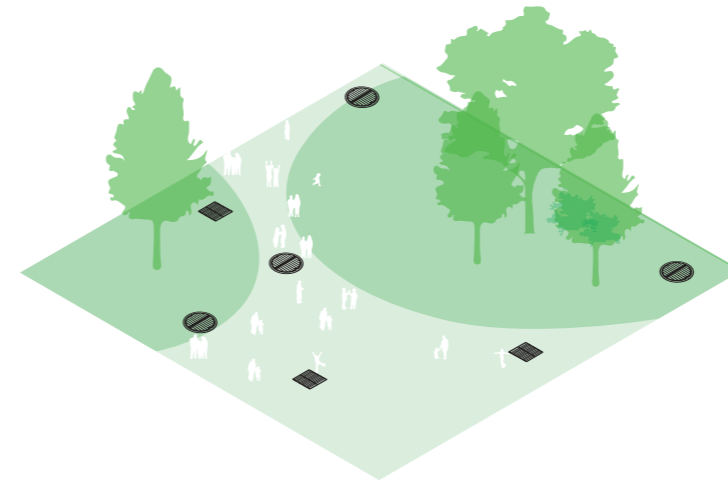
### UTILITIES : WHAT NOT TO DO

- Do not locate utilities prior to design development
- Avoid 'spaghetti' junctions constraining design heavily
- Avoid kinks and random changes in direction
- Reduced depth of fill will compromise tree planting, drainage and paving



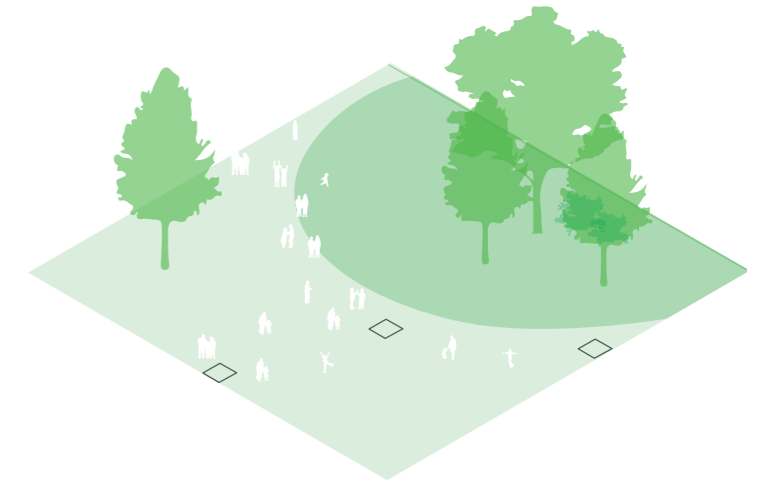
### UTILITIES : BEST PRACTICE

- Locate utilities after design development
- Structured design and single, larger shared trenches accommodating multiple cables
- Locate trenches within appropriate areas to minimise impact of future utility work on the proposed design

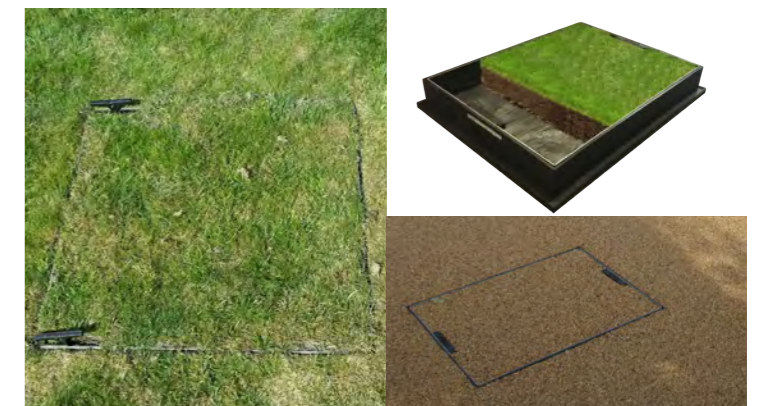


### Manholes—WHAT NOT TO DO

- Avoid locating manholes covers before the design is developed!
- Avoid random and scattered locations and ugly covers
- Avoid manhole covers at key kerb/edges junctions or in between soft and hard.
- Never locate covers on steps!
- Avoid covers within soft landscape and planted areas.
- Avoid hard covers in playground for safety issues.
- Avoid covers set at incorrect height for surroundings.



- Design first! Locate/place manhole covers in appropriate locations.
- Use recessed manhole covers wherever possible, to minimise visual impact. (Multiple surfaces can be laid into covers - pavers, rubber, etc.)
- Align manhole covers neatly and preferably within hard landscape. Ensure lid is perpendicular / parallel to paving pattern.
- Minimise size of frame where possible.
- Set height of cover appropriately



# Hard Landscape - Specification, Management & Maintenance

## How to use the Hard Landscape Guidance

A full and detailed specification for all hard landscape will be required at the detailed design stage that is appropriately drafted with references to the relevant British Standards and the National Building Specification (NBS). This specification will cover all aspects of the material quality, handling, installation technique and product life cycle.

## Landscape management

Landscape Management Plans should be produced for each of the development areas setting out the long term objectives for the public realm, identified by typology and location.

Plans should include details of the body that will be responsible for long term management of the public realm assets, and will provide guidance for that body to provide continuity in management to deliver the Ebbsfleet Garden City vision.

## Landscape maintenance

An appropriate hard landscape maintenance regime is required to ensure that the public realm meets the high standards required for Ebbsfleet Garden City.

Sustainable landscape maintenance should be considered at an early stage in developing the public realm design and coordinated with the hard landscape maintenance recommendations outlined in Chapter 6.

Details of hard landscape maintenance should be set out for each public realm typology and location, including schedules of operations and programme.

Guidelines for the maintenance of Streets Levels 1-4, Parks and Squares are provided in the following pages.



# Hard Landscape maintenance guidelines

## Ebbfleet Garden City - Public Realm Maintenance

Type	Element	Description	Location	Life expectancy	Outline maintenance/ management	Anticipated frequency *		
Hard Landscape	<b>Hardscape: Level 1 Streets - Primary Streets and Fastrack</b>							
	Concrete flag paving units	Footpaths - Larger unit high quality concrete flags with flint coloured aggregates.	Level 1 Streets	25 years	<b>General Tidying and litter picking</b> <ul style="list-style-type: none"> <li>Collect rubbish from litter bins weekly</li> <li>Paving to be swept to remove wet leaves and debris to avoid slip hazards. Remove arisings from hard surfaces.</li> <li>Footpaths to be kept free from encroaching vegetation and leaf fall.</li> </ul> <b>Leaf litter</b> <ul style="list-style-type: none"> <li>Maintain soft and hard landscape free of leaf litter. Keep drainage covers and slot drains clear of debris.</li> </ul> <b>Snow &amp; ice clearance</b> <ul style="list-style-type: none"> <li>Clear snow on reaching a depth of 10mm.</li> <li>De-ice hard surfaces with Rock salt to BS 3247, avoiding planted areas, when freezing precipitation is forecast. Spread Rock salt evenly at a rate of 20g/m<sup>2</sup>.</li> </ul> <b>Site deep cleaning &amp; Stain removal:</b> <ul style="list-style-type: none"> <li>Allow for one annual deep clean and one deep clean of the works in its entirety after any scheduled event</li> <li>Paving and kerbs shall be cleaned using a steam cleaner. Sweep the area with a stiff bristle brush to remove any loose material. Protect or move any vulnerable items.</li> <li>Inspect area post cleaning to ensure that joints are full.</li> <li>New chewing gum to be scraped off using a mechanical scraper. Steam clean paving to remove old chewing gum.</li> </ul> <b>Topping up of joints:</b> <ul style="list-style-type: none"> <li>Jointing: Ensure joints are inspected and topped up annually. Remove to depth of 25mm and regROUT.</li> </ul>	<b>General tidying/ cleaning:</b> Quarterly Sweeping <b>Removal of leaf litter:</b> September to November <b>Snow and Ice clearance:</b> October to March or as required. <b>Deep Clean:</b> <ul style="list-style-type: none"> <li>1 annually</li> <li>After every scheduled event.</li> <li>After major maintenance operations</li> </ul> <b>Topping up of Joints:</b> <ul style="list-style-type: none"> <li>Annually</li> </ul> <b>Weed killing:</b> <ul style="list-style-type: none"> <li>Twice annually</li> </ul> <b>Gum removal:</b> <ul style="list-style-type: none"> <li>Annually</li> </ul>		
	Narrow "Conservation" type textured concrete kerb	145mm wide concrete kerb. Material: Concrete with exposed exposed aggregate. Colour: Silver grey. Square edge.	Level 1 Streets	25 years				
	Natural coloured asphalt	Cycle Paths (off carriageway). Natural colour to contrast with carriageway and paving e.g. Beige. (NB. Avoid bright green/red/blue etc.)	Level 1 Streets	30 years				
	Concrete blister tactile paving	Concrete paving flags with raised blister pattern. 400x400 x (d) 50mm. Colour: contrast to surrounding paving, e.g. Buff	Level 1 Streets	25 years				
	Resin bound aggregate - hardscape tree pit surfacing	Tree surrounds in hard landscape - Porous resin bound gravel.	Level 1 Streets	15 years				
	Wide "Conservation" type textured concrete kerb	225mm wide concrete kerb. Material: Concrete with exposed exposed aggregate. Colour: Silver grey. Square edge.	Level 1 Streets	25 years				
	Asphalt	Vehicle carriage ways. Colour: Dark grey.	Level 1 Streets	30 years				
	<b>Level 1 Streets - option for higher profile areas, e.g.Ebbfleet Central</b>							
	Natural stone flag paving units	Footpaths - Sandstone / Yorkstones, light grey granite or lime stone.	Level 1 Streets	80 years				
	Natural stone blister tactile paving	Natural stone paving flags with raised blister pattern of stone or metal. Colour: constrast to surrounding paving, e.g. Buff.	Level 1 Streets	80 years				
	Narrow granite kerb	145mm wide, natural stone. Material: Silver grey granite flamed finish. Square edge.	Level 1 Streets	80 years				
	Wide granite kerb	225- 300mm wide natural stone. Material: Silver grey granite flamed finish. Square edged with 10mm pencil radius to edge.	Level 1 Streets	80 years				
	Other materials, as Level 1 above							

# Hard Landscape maintenance guidelines

## Ebbsfleet Garden City - Public Realm Maintenance

Type	Element	Description	Location	Life expectancy	Outline maintenance/ management	Anticipated frequency *		
Hard Landscape	<b>Hardscape: Level 2 Streets - Residential Distributors</b>							
	Concrete flag paving units	Footpaths - Medium unit high quality concrete flags with flint coloured aggregates.	Level 2 Streets	25 years	<b>General Tidying and litter picking</b> <ul style="list-style-type: none"> <li>Collect rubbish from litter bins weekly</li> <li>Paving to be swept to remove wet leaves and debris to avoid slip hazards. Remove arisings from hard surfaces.</li> <li>Footpaths to be kept free from encroaching vegetation and leaf fall.</li> </ul> <b>Leaf litter</b> <ul style="list-style-type: none"> <li>Maintain soft and hard landscape free of leaf litter. Keep drainage covers and slot drains clear of debris.</li> </ul> <b>Snow &amp; ice clearance</b> <ul style="list-style-type: none"> <li>Clear snow on reaching a depth of 10mm.</li> <li>De-ice hard surfaces with Rock salt to BS 3247, avoiding planted areas, when freezing precipitation is forecast. Spread Rock salt evenly at a rate of 20g/m2.</li> </ul> <b>Site deep cleaning &amp; Stain removal:</b> <ul style="list-style-type: none"> <li>Allow for one annual deep clean and one deep clean of the works in its entirety after any scheduled event.</li> <li>Paving and kerbs shall be cleaned using a steam cleaner. Sweep the area with a stiff bristle brush to remove any loose material. Protect or move any vulnerable items.</li> <li>Inspect area post cleaning to ensure that joints are full.</li> <li>New chewing gum to be scraped off using a mechanical scraper. Steam clean paving to remove old chewing gum.</li> </ul> <b>Topping up of joints:</b> <ul style="list-style-type: none"> <li>Jointing: Ensure joints are inspected and topped up annually. Remove to depth of 25mm and regROUT.</li> </ul>	<b>General tidying/ cleaning:</b> Quarterly Sweeping <b>Removal of leaf litter:</b> September to November <b>Snow and Ice clearance:</b> October to March or as required. <b>Deep Clean:</b> <ul style="list-style-type: none"> <li>1 annually</li> <li>After every scheduled event.</li> <li>After major maintenance operations</li> </ul> <b>Topping up of Joints:</b> <ul style="list-style-type: none"> <li>Annually</li> </ul> <b>Weed killing:</b> <ul style="list-style-type: none"> <li>Twice annually</li> </ul> <b>Gum removal:</b> <ul style="list-style-type: none"> <li>Annually</li> </ul>		
	Narrow "Conservation" type textured concrete kerb	145mm wide concrete kerb. Material: Concrete with exposed exposed aggregate. Colour: Silver grey. Square edge.	Level 2 Streets	25 years				
	Natural coloured asphalt	Cycle Paths (off carriageway). Natural colour to contrast with carriageway and paving e.g. Beige. (NB. Avoid bright green/red/blue etc.)	Level 2 Streets	30 years				
	Resin bound aggregate - hardscape tree pit surfacing	Tree surrounds in hard landscape - Porous resin bound gravel.	Level 1 Streets	15 years				
	Concrete blister tactile paving	Concrete paving flags with raised blister pattern. 400x400 x (d) 50mm. Colour: contrast to surrounding paving, e.g. Buff	Level 2 Streets	25 years				
	Asphalt	Vehicle carriage ways. Colour: Dark grey.	Level 2 Streets	30 years				
	Concrete sett/ blocks paving units	Vehicle/ pedestrian cross overs, visitor parking spaces. Small unit high quality concrete setts and blocks.	Level 2 Streets	25 years				
	<b>Level 2 Streets - option for higher profile areas, e.g.Ebbsfleet Central</b>							
	Natural stone flag paving units	Footpaths - Sandstone / Yorkstones, light grey granite or lime stone.	Level 2 Streets	80 years				
	Natural stone blister tactile paving	Natural stone paving flags with raised blister pattern of stone or metal. Colour: contrast to surrounding paving, e.g. Buff.	Level 2 Streets	80 years				
	Narrow granite kerb	145mm wide, natural stone. Material: Silver grey granite flamed finish. Square edge.	Level 2 Streets	80 years				
Natural stone sett/ blocks paving units	Vehicle/ pedestrian cross overs, visitor parking spaces. Small unit high quality natural stone setts and blocks. E.g. Silver grey granite.	Level 2 Streets	80 years					
Other materials, as Level 2 above								

# Hard Landscape maintenance guidelines

## Ebbfleet Garden City - Public Realm Maintenance

Type	Element	Description	Location	Life expectancy	Outline maintenance/ management	Anticipated frequency *
Hard Landscape	<b>Hardscape: Level 3 Streets - Residential Streets</b>					
	Concrete flag paving units	Footpaths - Medium/Small unit high quality concrete flags with flint coloured aggregates.	Level 3 Streets	25 years	<b>General Tidying and litter picking</b> <ul style="list-style-type: none"> <li>Paving to be swept to remove wet leaves and debris to avoid slip hazards. Remove arisings from hard surfaces.</li> <li>Footpaths to be kept free from encroaching vegetation and leaf fall.</li> </ul> <b>Leaf litter</b> <ul style="list-style-type: none"> <li>Maintain soft and hard landscape free of leaf litter. Keep drainage covers and slot drains clear of debris.</li> </ul> <b>Snow &amp; ice clearance</b> <ul style="list-style-type: none"> <li>Clear snow on reaching a depth of 10mm.</li> <li>De-ice hard surfaces with Rock salt to BS 3247, avoiding planted areas, when freezing precipitation is forecast. Spread Rock salt evenly at a rate of 20g/m2.</li> </ul> <b>Site deep cleaning &amp; Stain removal:</b> <ul style="list-style-type: none"> <li>Allow for one annual deep clean and one deep clean of the works in its entirety after any scheduled event.</li> <li>Paving and kerbs shall be cleaned using a steam cleaner. Sweep the area with a stiff bristle brush to remove any loose material. Protect or move any vulnerable items.</li> <li>Inspect area post cleaning to ensure that joints are full.</li> <li>New chewing gum to be scraped off using a mechanical scraper. Steam clean paving to remove old chewing gum.</li> </ul> <b>Topping up of joints:</b> <ul style="list-style-type: none"> <li>Jointing: Ensure joints are inspected and topped up annually. Remove to depth of 25mm and regrout.</li> </ul>	<b>General tidying/ cleaning:</b> Quarterly Sweeping <b>Removal of leaf litter:</b> September to November <b>Snow and Ice clearance:</b> October to March or as required. <b>Deep Clean:</b> <ul style="list-style-type: none"> <li>1 annually</li> <li>After every scheduled event.</li> <li>After major maintenance operations</li> </ul> <b>Topping up of Joints:</b> <ul style="list-style-type: none"> <li>Annually</li> </ul> <b>Weed killing:</b> <ul style="list-style-type: none"> <li>Twice annually</li> </ul> <b>Gum removal:</b> <ul style="list-style-type: none"> <li>Annually</li> </ul>
	Narrow "Conservation" type textured concrete kerb	145mm wide concrete kerb. Material: Concrete with exposed exposed aggregate. Colour: Silver grey. Square edge.	Level 3 Streets	25 years		
	Concrete blister tactile paving	Concrete paving flags with raised blister pattern. 400x400 x (d) 50mm. Colour: contrast to surrounding paving, e.g. Buff	Level 3 Streets	25 years		
	Edging "Conservation" type textured concrete	50mm wide concrete flush edging. Material: Concrete with exposed exposed aggregate. Colour: Silver grey.	Level 3 Streets	25 years		
	Asphalt	Vehicle carriage ways. Colour: Dark grey.	Level 3 Streets	30 years		
Concrete sett/ blocks paving units	Vehicle/ pedestrian raised tables at junctions, visitor parking spaces. Small unit high quality concrete setts and blocks.	Level 3 Streets	25 years			

# Hard Landscape maintenance guidelines

## Ebbfleet Garden City - Public Realm Maintenance

Type	Element	Description	Location	Life expectancy	Outline maintenance/ management	Anticipated frequency *
Hard Landscape	<b>Hardscape: Level 4 Streets - Homezones and Mews</b>					
	Concrete flag paving units	Footpaths - Small unit high quality concrete flags with flint coloured aggregates.	Level 4 Streets	25 years	<b>General Tidying and litter picking</b> <ul style="list-style-type: none"> <li>Extraneous rubbish not arising from the contract work: Collect and remove from site daily.</li> <li>Paving to be swept daily to remove wet leaves and debris to avoid slip hazards. Remove arisings from hard surfaces.</li> <li>Footpaths to be kept free from encroaching vegetation and leaf fall.</li> </ul> <b>Leaf litter</b> <ul style="list-style-type: none"> <li>Maintain soft and hard landscape free of leaf litter. Keep drainage covers and slot drains clear of debris.</li> </ul> <b>Snow &amp; ice clearance</b> <ul style="list-style-type: none"> <li>Clear snow on reaching a depth of 10mm.</li> <li>De-ice hard surfaces with Rock salt to BS 3247, avoiding planted areas, when freezing precipitation is forecast. Spread Rock salt evenly at a rate of 20g/m2.</li> </ul> <b>Site deep cleaning &amp; Stain removal:</b> <ul style="list-style-type: none"> <li>Allow for one annual deep clean and one deep clean of the works in its entirety after any scheduled event.</li> <li>Paving and kerbs shall be cleaned using a steam cleaner. Sweep the area with a stiff bristle brush to remove any loose material. Protect or move any vulnerable items.</li> <li>Inspect area post cleaning to ensure that joints are full.</li> <li>New chewing gum to be scraped off using a mechanical scraper. Steam clean paving to remove old chewing gum.</li> </ul> <b>Topping up of joints:</b> <ul style="list-style-type: none"> <li>Jointing: Ensure joints are inspected and topped up annually. Remove to depth of 25mm and regROUT.</li> </ul>	<b>General tidying/ cleaning:</b> Quarterly Sweeping <b>Removal of leaf litter:</b> September to November <b>Snow and Ice clearance:</b> October to March or as required. <b>Deep Clean:</b> <ul style="list-style-type: none"> <li>1 annually</li> <li>After every scheduled event.</li> <li>After major maintenance operations</li> </ul> <b>Topping up of Joints:</b> <ul style="list-style-type: none"> <li>Annually</li> </ul> <b>Weed killing:</b> <ul style="list-style-type: none"> <li>Twice annually</li> </ul> <b>Gum removal:</b> <ul style="list-style-type: none"> <li>Annually</li> </ul>
	Narrow "Conservation" type textured concrete kerb	145mm wide concrete kerb. Material: Concrete with exposed exposed aggregate. Colour: Silver grey. Square edge.	Level 4 Streets	25 years		
	Concrete blister tactile paving	Concrete paving flags with raised blister pattern. 400x400 x (d) 50mm. Colour: contrast to surrounding paving, e.g. Buff	Level 4 Streets	25 years		
	Edging "Conservation" type textured concrete	50mm wide concrete flush edging. Material: Concrete with exposed exposed aggregate. Colour: Silver grey.	Level 4 Streets	25 years		
	Asphalt	Vehicle carriage ways. Colour: Dark grey.	Level 4 Streets	30 years		
Concrete sett/ blocks paving units	Vehicle/ pedestrian raised tables at junctions, visitor parking spaces. Small unit high quality concrete setts and blocks.	Level 4 Streets	25 years			

# Hard Landscape maintenance guidelines

## Ebbfleet Garden City - Public Realm Maintenance

Type	Element	Description	Location	Life expectancy	Outline maintenance/ management	Anticipated frequency *		
Hard Landscape	<b>Hardscape: Public Squares</b>							
	Concrete flag/setts/blocks paving units	Footpaths - High quality concrete flags or block pavers with flint coloured aggregates.	Squares	25 years	<b>General Tidying and litter picking</b> <ul style="list-style-type: none"> <li>Collect rubbish from litter bins weekly</li> <li>Paving to be swept to remove wet leaves and debris to avoid slip hazards. Remove arisings from hard surfaces.</li> <li>Footpaths to be kept free from encroaching vegetation and leaf fall.</li> </ul> <b>Leaf litter</b> <ul style="list-style-type: none"> <li>Maintain soft and hard landscape free of leaf litter. Keep drainage covers and slot drains clear of debris.</li> </ul> <b>Snow &amp; ice clearance</b> <ul style="list-style-type: none"> <li>Clear snow on reaching a depth of 10mm.</li> <li>De-ice hard surfaces with Rock salt to BS 3247, avoiding planted areas, when freezing precipitation is forecast. Spread Rock salt evenly at a rate of 20g/m2.</li> </ul> <b>Site deep cleaning &amp; Stain removal:</b> <ul style="list-style-type: none"> <li>Allow for one annual deep clean and one deep clean of the works in its entirety after any scheduled event</li> <li>Paving and kerbs shall be cleaned using a steam cleaner. Sweep the area with a stiff bristle brush to remove any loose material. Protect or move any vulnerable items.</li> <li>Inspect area post cleaning to ensure that joints are full.</li> <li>New chewing gum to be scraped off using a mechanical scraper. Steam clean paving to remove old chewing gum.</li> </ul> <b>Topping up of joints:</b> <ul style="list-style-type: none"> <li>Jointing: Ensure joints are inspected and topped up annually. Remove to depth of 25mm and regrout.</li> </ul>	<b>General tidying/ cleaning:</b> Quarterly Sweeping <b>Removal of leaf litter:</b> September to November <b>Snow and Ice clearance:</b> October to March or as required. <b>Deep Clean:</b> <ul style="list-style-type: none"> <li>1 annually</li> <li>After every scheduled event.</li> <li>After major maintenance operations</li> </ul> <b>Topping up of Joints:</b> <ul style="list-style-type: none"> <li>Annually</li> </ul> <b>Weed killing:</b> <ul style="list-style-type: none"> <li>Twice annually</li> </ul> <b>Gum removal:</b> <ul style="list-style-type: none"> <li>Annually</li> </ul>		
	Resin bound aggregate -hardscape tree pit surfacing	Tree surrounds in hard landscape - Porous resin bound gravel.	Squares	15 years				
	Other materials, e.g kerbs, if required, as Level 1 Streets above							
	<b>Public Squares - option for higher profile areas, e.g.Ebbfleet Central</b>							
	Natural stone flag/setts/blocks paving units	Footpaths - Sandstone / Yorkstones, light grey granite or lime stone.	Squares	80 years				
Other materials, e.g kerbs, if required, as Level 1 Streets options for higher profile areas, above								

# Hard Landscape maintenance guidelines

## Ebbfleet Garden City - Public Realm Maintenance

Type	Element	Description	Location	Life expectancy	Outline maintenance/ management	Anticipated frequency *
Hard Landscape	<b>Hardscape: Neighbourhood Parks</b>					
	Resin bound aggregate -footpaths	Resin bound gravel, neutral colours e.g. Buff, Silver grey.	Parks	15 years	<b>Tidying and Litter pick</b> rubish from litter bins weekly. Footpaths and paving to be kept free from encroaching vegetation, leaf fall and grass clippings. Remove arisings from hard surfaces. <b>Leaf litter</b> Maintain soft and hardscape free of leaf litter. All drainage installations to be maintained free from debris and leaf litter <b>Snow &amp; ice clearance - footpaths, paved areas</b> • Clear snow on reaching a depth of 10mm. Use a plastic snow shovel on areas of resin bound gravel. • De-ice hard surfaces with Rock salt to BS 3247, avoiding planted areas, when freezing precipitation is forecast. Spread Rock salt evenly at a rate of 20g/m2. <b>Site deep cleaning &amp; Stain removal:</b> • Allow for one annual deep clean and one deep clean of the works in its entirety after any scheduled event. • Paving shall be cleaned using a steam cleaner. Sweep the area with a stiff bristle brush to remove any loose material. Protect or move any vulnerable items. • Inspect area post cleaning to ensure that joints are full. • New chewing gum to be scraped off using a mechanical scraper. Steam clean paving to remove old chewing gum. <b>Topping up of joints:</b> • Jointing: Ensure joints are inspected and topped up annually. Remove to depth of 25mm and regrout.	<b>Visual Check</b> • Daily (to include all play elements) <b>Tidying and Litter pick</b> • Quartely Sweeping <b>Leaf litter</b> • September to end of November. <b>Snow &amp; ice</b> October to March, or as required. <b>Deep Clean:</b> • 1 annually • After every scheduled event. • After major maintenance operations <b>Topping up of Joints:</b> • Annually Weed killing: • Twice annually <b>Gum removal:</b> • Annually
	Resin bound aggregate -hardscape tree pit surfacing	Tree surrounds in hard landscape - Porous resin bound gravel.	Parks	15 years		
	Edging for resin bound aggregate	Aluminium strip edging/natural stone setts/small unit high quality concrete setts and blocks.	Parks	30 years		
	Concrete flag paving units	Social spaces - Medium unit high quality concrete flags with flint coloured aggregates.	Parks	25 years		
Other materials, e.g kerbs, if required, as Level 1 Streets, above						

# Hard Landscape maintenance guidelines

## Ebbfleet Garden City - Public Realm Maintenance

Type	Element	Description	Location	Life expectancy	Outline maintenance/ management	Anticipated frequency *
<b>Street Furniture: Streets, Squares and Parks</b>						
Street Furniture	Long timber benches	Timber with stainless steel or polyester powder coated supports. Root fixed. Some benches with arm rests and backrests. Allow for protective Osmo oil finish where required.	Streets, Squares and Parks	15 years	<ul style="list-style-type: none"> <li>Inspect for damage.</li> <li>Tighten loose fixings.</li> <li>Repair or replace any missing or damaged timber slats with matching slats from same original source as specified.</li> <li>Remove chewing gum, graffiti.</li> </ul>	Monthly
	Seating chairs - single seat, 2 seater, 3 seater, informally arranged groups	Timber with stainless steel or polyester powder coated supports. Arm rests and back rests. Root fixed. Allow for protective Osmo oil finish where required.	Streets, Squares and Parks	15 years		
	Timber bench with a planter	Predominantly timber. Bench combined with a planter. Allow for protective Osmo oil finish where required.	Level 4 Streets - Homezones, Mews, other areas as required	15 years		
	Bus shelter - Fastrack	Fastrack Clear Channel Bus-shelter. To Fastrack specification.	Level 1 Streets Fastrack only	25 years	Operational inspections to carried out to manufacturer's recommendations and Fastrack requirements. Inspect for damage, remove chewing gum, graffiti, clean.	Monthly and as required to Fastrack specifications.
	Cycle stands	Sheffield cycle stands - Brushed stainless steel finish, (Polyester powder coated yellow for Northfleet Embankment only).	Streets, Squares and Parks	15 years	<ul style="list-style-type: none"> <li>Inspect for damage.</li> <li>Tighten loose fixings.</li> <li>Repair or replace any missing or damaged parts with matching parts from same original source as specified.</li> <li>Remove chewing gum, graffiti.</li> <li>Clean bins and signage.</li> </ul>	Monthly
	Bollards	Brushed Steel or Anodised Aluminium. Reflective banding around the top (Polyester powder coated yellow reflective banding for Northfleet Embankment only).	Streets, Squares and Parks	15 years		
	Litter bins	Recycling Bins: separate compartments to separate recycling/waste. Contemporary aluminium or brushed stainless steel bins, Polyester powder coated. (Polyester powder coated yellow for Northfleet Embankment only). Fixed.	Streets, Squares and Parks	15 years		
	Dog waste bins	Contemporary aluminium or brushed stainless steel bins, polyester powder coated. Fixed. (Polyester powder coated yellow for Northfleet Embankment only).	Streets, Squares and Parks	15 years		
	Signage - pedestrian/cyclist Signage - vehicular	Contemporary coordinated range, robust design with polyester powder coated steel.	Streets, Squares and Parks	15 years for signage cores, reprints for graphics panels to manufacturer's recommendations, e.g. 5-10 years for vinyl.		

# Hard Landscape maintenance guidelines

## Ebbfleet Garden City - Public Realm Maintenance

Type	Element	Description	Location	Life expectancy	Outline maintenance/ management	Anticipated frequency *
Play	<b>Play: Streets, Squares and Parks</b>					
	Playground equipment, soft fall surfaces - formal fenced playgrounds	Fixed play equipment, soft fall surfacing, fencing. Predominantly timber, galvanised/stainless steel feet/standoffs. Natural play elements - grassy mounds, whole logs, boulders, planting.	Parks	15 years	• Daily routine visual inspections to identify any hazards resulting from vandalism, extreme weather etc. Remove litter, and rake to re-level loose soft fall materials.	Daily
					• Operational inspections to carried out to manufacturer's recommendations.	Monthly
					• Inspect for damage. • Playground fencing - Tighten loose fixings or otherwise repair/replace parts in order to maintain barrier to exclude dogs and keep children in. • Annual inspection to manufacturer's recommendations.	Annual
	Play on the way - informal low height elements	Various items e.g stepping stones, timber balancing logs, balancing beams/ Low height or flush level. Predominantly timber with galvanised/stainless steel feet/standoffs. Paving - concrete or natural stone.	Streets, Squares and Parks	15 years	• Weekly routine visual inspections to identify any hazards resulting from vandalism, extreme weather etc. Remove litter.	Weekly
					• Operational inspections to carried out to manufacturer's recommendations.	Monthly
• Annual inspection to manufacturer's recommendations.					Annual	
Lighting	<b>Lighting: Streets, Squares and Parks</b>					
	Street lighting columns with twin bracket arms at heights 8 and 10m. Column height 10m.	8-10m tapered lighting column for mounting post-top amenity lanterns.	Streets Levels 1 & 2	20 years	Operational inspections to carried out to manufacturer's recommendations. • Inspect for damage. • Tighten loose fixings. • Repair or replace any missing or damaged parts with matching parts from same original source as specified. • Remove chewing gum, graffiti.	Annually, or as required to replace lamp fittings.
	Lighting columns, height varies.	Amenity/feature lighting to footpaths and facilities in Parks.	Parks and Squares	20 years		
	Lighting bollards	Stainless steel or anodised Aluminium lighting bollards. (Polyester powder coated yellow for Northfleet Embankment only).	Squares and Parks	20 years		





