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Urban Realm Strategy: Design Guidance

DESIGN GUIDANCE

This section provides guidelines and recommendations for the main elements of the urban realm to complement the Urban Realm Principles set out in the previous chapter. It is split into the following sections:

- A. Sustainability
- B. Materials & Surfacing
- C. Street Furniture
- D. Lighting
- E. Signage
- F. Trees & Planting
- G. Water
- H. Public art
- I. Structures & Climate
- J. Shop Frontages
- K. Management & Maintenance

What is design guidance?

Design guidance sets out the parameters to achieve a prescribed set of objectives and principles. They provide an understanding of how the various elements of the urban realm interrelate and how they should be used to maximise the potential of a space or street. Design guidelines do not provide a design solution for each piece of urban realm, they are more about providing the tool kit and *know how* to implement a successful and quality urban realm scheme.

Guidelines alone are insufficient to achieve the urban realm objectives. Their application, implementation on site, workmanship, supervision, maintenance and aftercare are all vital to achieving quality in the urban realm.

A. SUSTAINABILITY AND DESIGN

There is now, more than ever, the obligation for us all to design in more sustainable manner to offset the impact we are having on our environment.

Sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. Environmental, social and economic impacts have to be considered throughout all stages of a development, recognizing the potential long term direct and indirect impacts of the development.

For a project to be sustainable in the long term it must enhance its surroundings, provide long lasting benefits for its stakeholders, and be economically self-sufficient or create an economy to support its maintenance.

In the short term projects incorporating sustainable solutions can be delivered with construction costs comparable to normal projects, but in the long-term these projects provide inherently higher residual value and investment returns. This is due to increased efficiency and resultant lower operating costs.

Sustainable design is a complex and in-depth topic, that goes beyond the scope of this design guide document. However the following narrative provides a checklist that covers the main principles of how sustainability should be incorporated into good design.

Sustainability Principles - Economic

Land Use – Reuse brownfield sites to rejuvenate run down areas and bring urban areas back into use.

Mixed Use – Promote mixed use developments that include housing, employment, retail and community/leisure facilities. This should create a more versatile and balanced and stable community that can evolve and respond to changing society needs.

Density - Higher residential densities can create a critical mass that ensures that long term infrastructure (such as public transport) and community facilities (such as parks and play areas) remain viable, maintainable and in demand.

Quality - New developments, even in run down areas, should contribute positively to urban regeneration. Buildings of a higher quality can be the catalyst for further economic investment and development for the future, and can provide economic stability to an area.

Flexibility - All new developments should be developed with flexibility in mind so that their use/function can change in the future where necessary. This should encourage the long term refurbishment of buildings rather than demolition as the requirements of a building changes.

Maintenance – New developments, and in particular the urban realm, should be robust and have a strong emphasis on creating places which are easy to maintain. This should ensure their longevity and success for the future.

Sustainability Principles - Social

New projects both built and spatially should look to improve peoples' quality of life and welfare.

Mixed Use – Promote mixed use developments that include housing, employment, retail and community/leisure to reduce the need for people to travel long distances by car. Everyday needs should be catered for within the local community, and should be accessible to all.

Density - High residential densities can promote better community cohesion and interaction

Anti Social Behaviour - Ensure that all buildings look out over community spaces and pedestrian routes to provide passive surveillance of the urban realm to create safer communities.

Community Amenities – Encourage new public facilities, or the refurbishment of existing, such as new parks, community gardens, sports/play areas to provide focal points for a community. All dwellings should ideally be within 5 minutes walk of a green space.

Access – Encourage walking and cycling as a means of getting around to promote a healthier lifestyle. Spaces and amenities should be developed in the context of a network of spaces that are all linked through safe, attractive green routes to promote cycling and walking. Highway alignments should be designed in a more pedestrian/cycle friendly manner. People and cycles should be give priority over vehicles where possible within local neighbourhoods, through homezone style approaches. Footpath and desire lines should be incorporated into any site to encourage pedestrian access. Provide convenient cycle routes that link in with the wider network and create designated cycle parking areas within new developments. Encourage safe and easy access to community spaces, schools and the wider countryside.

Social Inclusion - The urban realm should promote social inclusion and cater for all community, ethnicity and age groups by providing a range of activities and amenities.

Community Pride – Safeguard the character of existing communities by responding to the historical context, form, character and features of a place and either incorporating, responding or preserving it within any new design proposals. Artwork is one such medium that can celebrate the essence of a place and restore/maintain community pride.

Community Consultation - A sense of ownership of the urban realm is vital for its success. Ownership is fostered through involvement and engagement. All urban realm schemes should promote actively working with communities to ensure a scheme is right for them and it is what they want and need.

Community Integration – Provide physical and social links between new and existing communities, incorporating pedestrian and cycle links into design process.

Sustainability Principles - Environmental

Carbon Emissions - New developments should aim to design more energy efficient homes, buildings and communities to create carbon zero dwellings where possible in line with emerging national policies. Energy needs for a development can be reduced by 10% by on site generation of renewable energy.

Renewable energy – Alternative forms of energy production should look to be incorporated where possible. New technologies such as photovoltaics, solar panels, turbines for the production of electricity and hot water are gradually becoming more commercially viable, and should be considered.

Sustainable Rating – All new developments should look to comply with BREEAM standards for commercial, retail and industrial uses and ECO Homes standards for dwellings.

Urban Form, Layout and Orientation - Energy efficiency and consumption can be significantly improved by maximising solar gain. Buildings should be orientated so that they are south facing to make the best use of summer and winter sun. The amount of glazing and the depth of internal spaces will also have an effect on the artificial lighting and heating required. Floor plate depths and atrium spaces should also be considered for natural ventilation. Smaller units rather than large building masses do not lose as much heat. Smaller building masses also require lower energy inputs to heat and cool the internal spaces.

Energy Efficiency – New developments should include energy efficient fittings and appliances, use high quality glazing and insulation systems and consider materials with low embodied energy.

Microclimate - Grouping buildings together in denser developments can reduce the effect of wind on heat loss. Buildings should also be orientated and articulated to maximize solar gains, reduce the effects of wind and provide shelter where appropriate to the surrounding streets and spaces.

Water Management Systems - Developments should implement sustainable urban drainage systems (SUDS) to encourage water collection, flood reduction and reharvesting. Measures to consider include:

- Flood management - Temporary water storage such as balancing pools, swales and soakaways reduce the impact of storm water during peak run off periods. Permeable paving systems encourage water to percolate into the ground and green roofs reduce the run off from buildings, lessening the impact on the sewer system.
- Water conservation - Our climate may become drier with the effects of global warming. There may be a need to conserve scarce water resources. Recycling of grey water should be considered for toilet flushing, irrigation and industrial uses.

To create an holistic water management system all elements of the built environment and urban realm should be considered as a whole. SUDS should be seen as an opportunity for innovative design and the creation of features within the urban realm.

Materials Specification - Material specification should be considered in terms of the impact on the environment as well their technical and aesthetic properties:

- Material specifications should consider whole life costings - the cost of a material at the outset should be offset against its anticipated life span. Natural materials generally age and wear better and so will compliment the urban realm for longer than manmade concrete products. Thus in the longer term natural materials could be considered to be more sustainable than concrete products that need replacing more frequently.
- Material specifications should consider the embodied energy costs of producing, transporting and laying a material. BREEAM ratings should be considered when specifying materials.
- New developments should look to reflect the local vernacular to promote the character of an area, and where possible use locally sourced materials to reduce transport/haulage environmental costs.

Car Reduction – Encourage alternative forms of transport such as public transport, walking and cycling to reduce the impact of private cars and thus reducing carbon emissions and congestion. Locate higher densities of people around public transport routes and make public transport easily accessible on foot/cycle. Create safe, attractive and high quality urban realm that forms a network of routes between facilities to encourage pedestrian/cycle uses.

Recycling and Waste Management - New developments should include within them adequate room for storage and collection of recyclable wastes. Designated recycling centres should be developed within larger developments. Composting facilities should also be encouraged as a means of creating bio fuels and organic matter for local farms/gardens and allotments.

Construction Waste - New developments should be designed to minimise the amount of waste produced during the construction stage by balancing the amount of cut and fill of the existing topography.

Recycled Materials – Consider recycled materials when choosing specifications such as glass, plastics and steel.

Ecology and Biodiversity – Aim to maintain, enhance and create new wildlife habitats and encourage biodiversity within new development. Where possible there should be a net gain in ecological value of a site, and new habitat areas should link in with existing wildlife corridors and habitat areas. Such habitat areas should also be promoted as local educational and recreational resources for the community.

As with all design guidance there are often many agendas that need considering. This can lead to competing design objectives. Good sustainability design principles may not necessarily result in an appropriate solution in urban design terms, and so it is important that design decisions are considered in the round to reach a balanced approach to a project.

B. MATERIALS & SURFACES

The approach to the surface treatment should be that of simplicity and elegance. Streets and spaces should act as a stage and backdrop for street activity, the surrounding architecture and furniture. Excess changes in colour and material will create a confusing environment and conflict, whilst a simple paving scheme will create a space that is legible and compliments all other elements of the urban realm.

Paving Principles

- Build upon the *character* of a space or street. When specifying the paving materials, the aim should be to:
 - Respond to the significance and scale of a space or street.
 - Respond to the function of a space, and how it will be used.
 - Indicate the status of a street or space in the hierarchy of quality.
 - Delineate of boundaries and highlight key features.
 - Highlight key routes, and the segregation between different uses.
 - Unify and provide a sense of cohesion between spaces within the town centres.
- Aim for simplicity. Avoid excessive patterns or changes in colour or materials.
- Introduce only subtle variety and character within the floorscape through:
 - Variety of sizes of paving or setts.
 - Variety of band widths or alternate band widths within paving.
 - Use a subtle mix of similar paving colours, in either a random, or incoherent pattern instead of one flat, homogenous colour.
 - Vary the orientation or scale of like materials.
 - integrate art and detailing where appropriate.
- Create a hierarchy of quality, to delineate space and function. This should be reflected in the quality of materials:
 - The importance of certain spaces may be further alluded to through the use of innovative or artistic paving features. Subtle variations may be incorporated to reflect the particular character and identity of an area.
 - Exceptions can be made for particular purposes. For example, to highlight significant entrances, denote ownerships or impart interpretive information. Selective use of embellishment in paving will maximise its impact, and contribute to the *readability* of the urban centres.
- Consider the interface of surface treatments between different spaces or streets:
 - Paving materials should be continued from public spaces to private developments/spaces where appropriate to provide continuity through the town centres.
 - Where an interface occurs the transition should be subtle and located in a suitable location.

SURFACE MATERIALS PALETTE

The palette of surface materials developed for Grimsby and Cleethorpes aims to create a distinctive and unique floorscape which provides a strong sense of place. This *sense of place* should be reflective of the area's character, historical precedence, geographical location and the vernacular context.

The recent Victoria Street pedestrianisation scheme forms the starting point and a *benchmark* for the quality of development. The proposed materials palette has been directly influenced by this important first scheme for the area.

In Premier Quality Areas, such as Riverhead Square and Dolphin Square, natural stone materials would be suggested in the form of granite setts and paving. A mix of silver greys, mid greys and black granite, with the introduction of warmer granite tones such as pinks and oranges, form the range of hues that should be used.

In focal areas or prominent areas, alternative materials such as timber, corten steel, ceramics etc could be introduced to add highlights to this base palette.

In these areas there should be the highest level of detailing and workmanship, bespoke paving elements and the introduction of artwork/unique details should be encouraged to enrich the urban realm.

In the high quality designation areas (such as Grimsby's retail core fringes, Freeman Street, and the majority of Cleethorpes), good quality concrete setts should be used, again using a range of hues such as greys, blacks and oranges. In focal areas (such as Market Square in Cleethorpes or the railway station forecourt in Grimsby), higher quality natural materials and detailing should be introduced to emphasise the importance of the particular space. Concrete setts will form the main palette for the bulk of the town centre urban realm, but there should be attempts to upgrade wherever possible to natural materials. Immingham will have a High Quality treatment within its main retail core.

The waterfront areas will also have a High Quality treatment but will have a more varied mix of materials to reflect the maritime setting. Timber boardwalks, exposed aggregate concrete, gabions and corten steel are suggested, with an emphasis on a simpler, bolder and more rustic approach to the design and layout.

Again in focal spaces a higher quality of materials may be introduced (such as granite setts or artwork) to act as highlights.

The standard urban realm designation refers to the residential suburbs and main road corridors. Here a standard surface treatment of tarmac surfacing and wide granite kerbs should be applied. In focal areas (such as gateways or key pedestrian crossings) an upgrade in quality should be considered.

The Lakeside and North Promenade area would also have this treatment using resin bound gravel or tarmac paths to reflect the more naturalistic setting.

Wide granite kerbs should be used throughout the urban centres as a unifying element. The kerbs would also act as a framework in standard quality areas. These can be upgraded to a higher quality in the future.



PREMIER QUALITY URBAN REALM HIGH QUALITY URBAN REALM STANDARD QUALITY URBAN REALM

FISH DOCKS & ALEXANDRA DOCK

RETAIL CORE & RIVERHEAD SQUARE

RETAIL CORE URBAN FRINGE

FREEMAN STREET RESIDENTIAL SUBURBS

CLEETHORPES ROAD CORRIDOR

URBAN MIXED USE ZONE

DOLPHIN SQUARE & MARKET SQUARE

PIER GARDENS & PROMENADES

RETAIL LOOP

NORTH PROMENADE / LAKESIDE

CLEETHORPES ROAD CORRIDOR

THE RETAIL HEART

THE COMMERCIAL GATEWAY

Laying Principles

The scale of the floorscape within a street should generally have larger units on the pavement areas (such as paving slabs), and smaller units (such as setts) on the carriageway.

In streets paving layouts should be perpendicular to both the kerb and building lines where possible. This helps to minimise the need for awkward pieces of paving that are formed from a poor alignment.

In Premier Quality Areas custom made paving and kerb units should be considered, where feasible and appropriate, to enrich the character of the floorscape. Such instances include: paving laid around corners, delineation of key features and waterfront edge treatments.

Ensure that all street furniture is orientated parallel/perpendicular to paving joints to avoid awkward junctions and cuts.

Paving cuts should be carefully considered around utility covers, street furniture and building lines to minimise the number of cuts required, and their visual impact.

Gullies and channels should be integrated into the paving design in a sensitive and simple manner.

Ensure that there is a clear distinction/demarcation in type, colour or scale of floorscape where there is a change in emphasise between vehicles and pedestrians.

Ensure that shared surfaces or pedestrian orientated spaces are designed to

accommodate the overrun of vehicles such as service wagons and emergency services; the finished surface material is only as strong as the sub structure below it.

Jointing should be nominally 10-15mm for setts and 2-6mm for paving. Joints should be carefully considered in terms of their position in relation to one another and other surface elements.



Paving Specification

- **Appropriate material selection is vital:**

High quality materials should be specified where possible. Natural stone products are superior to concrete products, and age far better.

- **Durability of the material and its longevity:**

All materials specified should be robust so as to avoid premature replacement and repair. This is particularly important along promenade and waterfront areas. Natural stone products if laid and specified correctly are more durable in terms of their appearance.

- **Availability of material:**

Specialist materials should be used in small areas to provide interest, however the predominant surface materials in a space should be a readily available material to avoid problems sourcing replacements in the future.

Avoidance of fussy patterns and using a plethora of materials will help ease the burden on maintenance regimes because there are less materials to keep in stock.

- **Health and safety:**

Unit sizes should be considered in terms of handling/installation of the material during construction. The type/finish of material will affect its suitability for end users (slip resistance etc).

- **Surface finish:**

The surface treatment should be considered in relation to its location. In more historic/industrial areas such as The Docks a bush hammered/riven or cropped finish to granite setts may be considered to give a more rustic look. In the premier quality areas such as Riverhead Square a diamond sawn/flamed/fine picked finish may be considered which gives smoother surface.

- **Construction build up and jointing:**

Good jointing and foundations are key to a high quality surface treatment. A rigid construction build up where the mortar bed and jointing compound binds the paving and setts units together is recommended. Steintec are one of many suitable products on the market for this kind of application. Flexible paving systems should be used in less heavily trafficked areas as they cannot withstand rigorous street cleansing and heavy vehicular movement to the same extent.

Providing for Mobility

All areas in the public realm should be accessible and Local Authorities have a statutory duty to ensure this is provided where possible. The requirements of parents with prams, those in wheelchairs or with special mobility needs should be addressed, and proper provision made for them.

- **Level changes:** Where site conditions necessitate changes in level, or stepped access to an existing building is required, ramps not steeper than 1 in 15 should be an integral feature of the design solution.

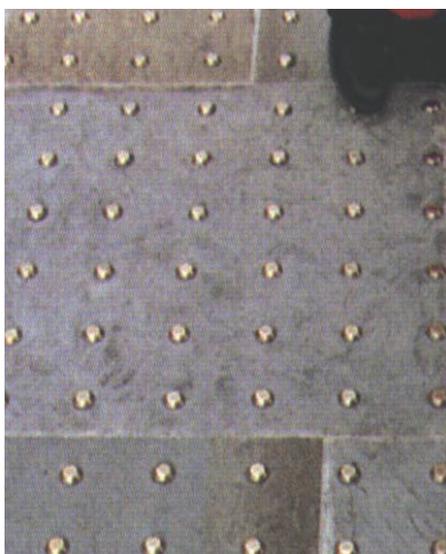
- **Paving cross falls:** Exaggerated crossfalls across paving should also be avoided. Gradients of between 1:30 - 1:40 is a good standard to aim for.

- **Visual Impairment:** Consideration is required to assist those with mobility or sight impairment. Tactile paving is required to denote changes in level (such as steps), or at controlled pedestrian crossings. The layout and materials for areas of tactile paving should be carefully designed to both fulfill the statutory requirements and fit within the design and character of the street.

The installation of tactile paving should avoid awkward junctions and cuts with adjacent surfaces. Care must be taken when using brass studs to avoid a lack of grip when wet. In Premier and High Quality areas consider using custom made tactile paving using natural materials.

Contrasting tones and colours of tactile paving can help to cater for visually impaired users. Their inclusion however is a finely balanced issue that needs careful consideration with regards to the overall design treatment of a space; poor use will result in a patchwork of materials that will detract from the design and lessen the quality of the space.

- **Maintenance:** The surface materials of the public realm need to be well specified at the outset to reduce the need for premature maintenance. Where existing materials are in place regular maintenance is needed to ensure that surfaces are kept as smooth, flush and even as possible (bearing in mind some of the existing sandstone setts around the town that are worn and can provide an uneven surface). Where works are carried out paving surfaces must be reinstated to a high standard to avoid trip hazards, uneven surfaces or the potential for subsidence.



Kerb Design

The line of the kerb is significant to divide the floorscape. It has an important role to play in maintaining the scale and proportions of a street. It is recommended that kerb lines are retained or reinstated wherever possible in Grimsby and Cleethorpes to reinforce the character and form of the street.

Kerbs should be used to:

- define and reinforce the street scale and character
- delineate uses, boundaries and spaces
- provide margins or plinths to buildings and features
- delineate between publicly and privately maintained surfaces
- highlight changes in levels through the formation of steps to create interest in a space

Key principles:

- Use a consistent kerb and channel detail throughout. This should be the unifying element throughout each character area. It is suggested that a wide granite kerb is used through Grimsby and Cleethorpes as the unifying surface material.
- The role of a kerb should determine its height. A full height kerb should be used to create clear segregation between busy vehicular routes and pedestrian areas. Shared pedestrian and vehicular spaces should aim to have a flush kerb or a small kerb check to lesson the segregation.
- In Premier Quality areas custom-made kerb units may be considered where appropriate on corners that have a radius less than 25m to reinforce the smooth geometry and line.

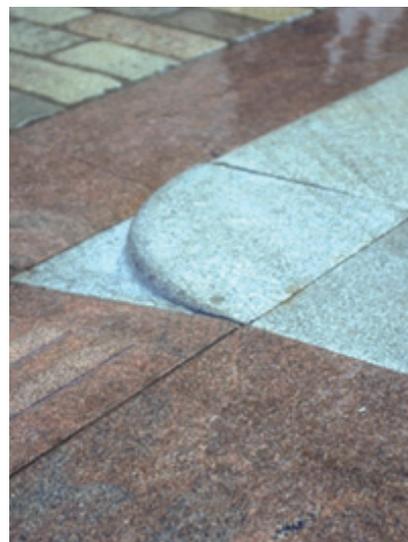
Waterfront Edge

The transition between the water and land is an important one that should be celebrated. Large granite/concrete units are recommended to create a strong delineation and edge to any waterfront space. Where access down to the water is desirable a more softer edge approach may be appropriate using timber and boardwalks.

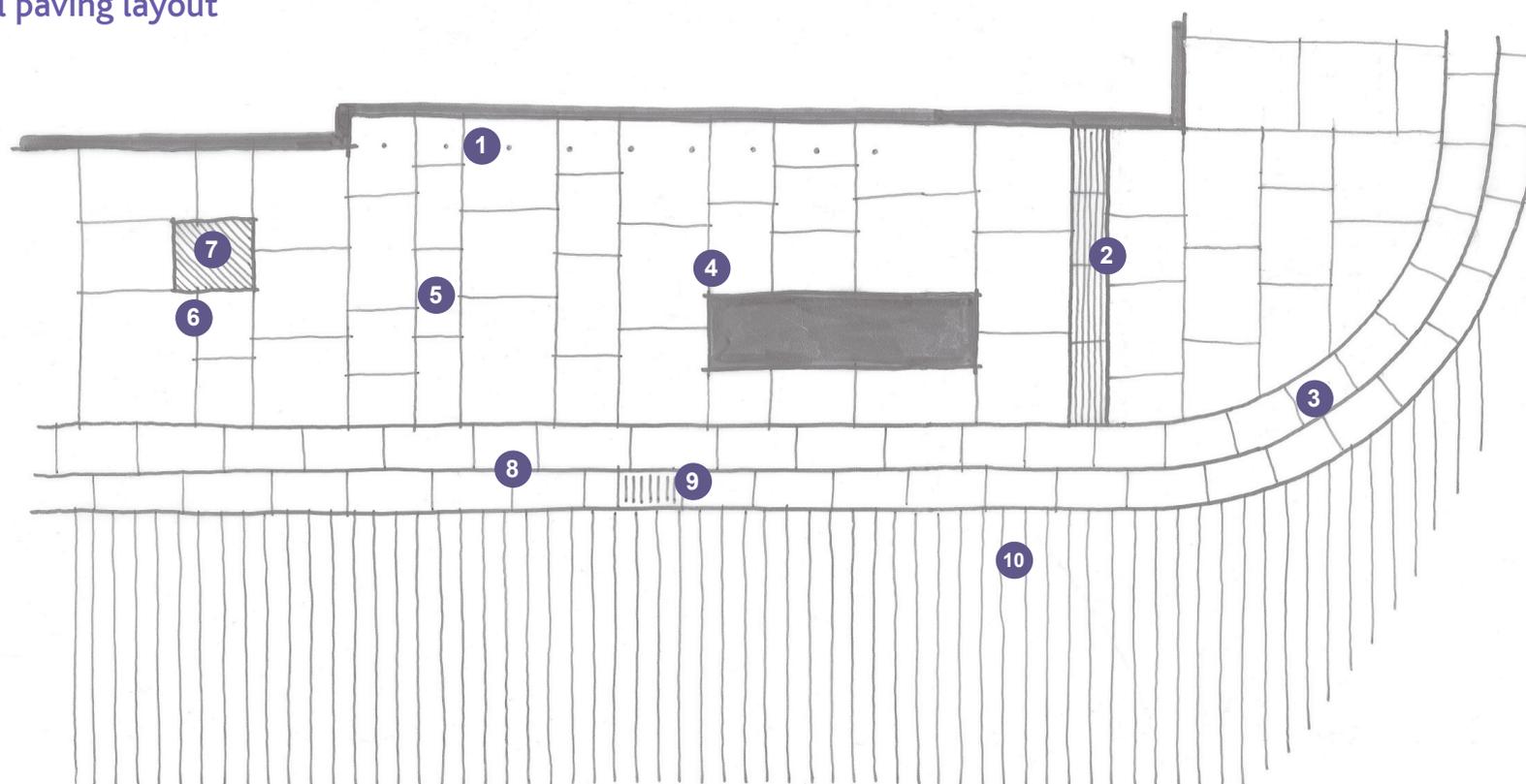
Carriageway Design Principles

Most of the carriageway treatment in Grimsby and Cleethorpes is of a standard tarmac construction. This is a principle that should generally be continued for all major highway routes. There are however many locations where alternative surface treatments should be encouraged to create a more people orientated environment.

- Premier streets and spaces should use roadway setts to create a pedestrian friendly space that has an emphasis on restricted vehicular access.
- Pedestrian crossing points and major junctions should have a change in surface material to emphasise the importance of the crossing.
- Bus laybys, disabled parking bays, and taxi ranks should be delineated from the carriageway by a change in surface material.
- Important main roads within the centres (such as Frederick Ward Way, and Victoria Road in Grimsby or Alexandra Road or High Street in Cleethorpes) should consider the use of different colour asphalt, or one with a higher density of chippings to change the character of the road corridor. Chippings create a more distinctive surface in terms of colour and texture; the road surface emphasises to the vehicles that they are using a different type of space whilst also creating a more harmonious environment.
- The implementation of space for cycle routes should be actively encouraged within the highway network. Cycle space should be delineated in a subtle and simple way that provides a clear distinction but also compliments the surrounding surface treatment.



Typical paving layout



1 Continuous paving up to building line, demarcate ownership boundary subtly

2 Incorporate gullies to drain downpipes from adjacent buildings

3 Custom made radial kerb units

4 Align street furniture with paving alignment and jointing

5 Variation in paving unit lengths and course widths creates a random pattern

6 Ensure joints are carefully considered in relation to utility covers

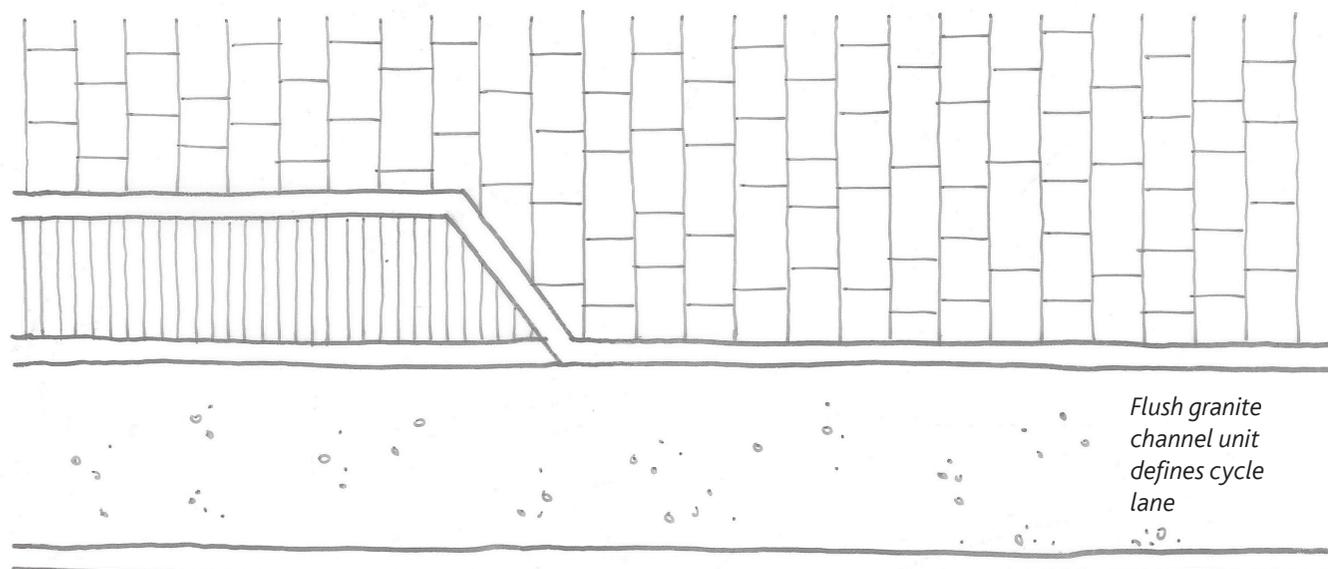
7 Utility covers over 400mm square should have a recessed cover and realigned with paving joints where possible

8 Kerb and channel detail reinforce street pattern

9 Drainage gully to be in line with channel units

10 Paving slabs and setts laid perpendicular to kerb

Parking, service, bus and taxi bays should be surfaced using granite setts to delineate space from carriageway



Flush granite channel unit defines cycle lane

Subtle change in carriageway surface reduces the impact of a road surface on the public realm