2.1. General

This section sets out the general area-wide guidance for the Brewery sector in the context of important considerations for the Quarter and the city centre. It sets out key objectives for land use, urban form and structure, movement and urban space for the sector.

2.2. Diversity, viability and vitality

City centres must function effectively and in a sustainable manner to meet the social, economic and environmental dimensions of sustainable development. A key aspect of sustainable city centres is diversity, a broad concept, which provides city centres with longer-term adaptability and robustness to survive ever-changing economic and social conditions.

Diversity encompasses, among other things, mix of uses, adaptability of built form, and variety of buildings and blocks. Diversity is recognised as the single most important component of urban vitality and viability.

Viability is the ability of the local, urban economy to exist and to continue to attract investment into the longer-term within levels which avoid depletion of resources and secure important aspects of social equity. Vitality, in contrast, is a shorter-term objective, which refers to the 'busyness' of urban centres. It is normally measured by a set of metrics including footfall, commercial yields, local rental values, vacancy rates, customer views and behaviour, and retailer representation.

For the Brewery area and the Quarter to contribute to the sustainability of the City Centre it must secure its own vitality and viability while contributing to the overall vitality and viability of the city centre.

It is essential that diversity underpins the vitality and viability of the Quarter and the area. An appropriate mix of uses, a mix of different building and block typologies and a new network of quality and activated public spaces will make a major contribution in this regard.

2.3. Complementing the City Centre

The consultation highlighted the need for the Code to be placed within the larger context of the City Centre. The Quarter will provide a very significant expansion of the functional area of the established City Centre. While this provides many opportunities for Kilkenny, it should not threaten the health of the established city centre streets through competition for investment, business or employment. Relocating established businesses from currently viable City Centre streets will not bring additional benefits for the city economy and is likely to lead to other planning issues and problems.

It is important that the development of the Quarter prioritises the expansion of the existing range of functions in the City Centre. It should also attract new investment for established and appropriate new functions with growth potential. It will be important in particular to ensure that:

- Retail and services expansion complements and underpins the retail and services functions of the High Street/Parliament Street and Irishtown and supports other primary uses in the Quarter;
- New retail and services are developed sequentially from the established retail core with direct physical connections between the established retail and future retail expansion;
- Destination and evening uses complement the existing offer in the city centre;
- The new amenity and cultural potential around the Abbey, the Linear Park and around the Brewhouse is seamlessly connected to the cultural attractions of the Medieval Mile; and
- New residents are integrated with the established community.

The distribution and location of new uses will be critical in achieving these considerations. For this reason these guidelines include spatial concepts for land use, urban form, urban spaces and movement.

2.4. Variety, Clustering and Scale

Mix of uses is supported by a wide range of planning policy as it has a number of benefits for City Centres. Mix of use can produce an expansion of the local economy through greater diversity of businesses (including evening uses), reduced travel demand and reduction in crime and anti-social behaviour.

It is important, however, when mixing uses in the city centre that they are compatible and can coexist, where necessary, in the same, building, block or area. While the range of uses currently permissible in the KCEDP zoning for the area is very broad, the Masterplan provides additional focus for the desirable range of uses by highlighting the potential for creative and cultural uses in the Quarter. This Code seeks to outline an appropriate mix of uses for this area that can best deliver the vision of the Masterplan.

Related variety

Related variety is a model for mixing uses in district quarters within a city centre. This model is particularly suited to this area as it allows a range of complementary uses to be targeted, which can complement and expand the established City Centre functions.

Clustering

The large scale of the area, relative to the established City Centre, means that a single range of uses cannot be applied broadly. This is because many uses need to be clustered for them to operate successfully. If they are spread out and disjointed they will not achieve the critical mass necessary to ensure their survival. Specialist retailers are a good example of this as they often require the presence of other specialist retailers to attract custom to the general location. Clustering also allows businesses to develop mutually beneficial business links. Creative, innovative, education and cultural uses are also known to require clustering.

Scale of land uses

The mix of use in the area should also seek to achieve diversity in the scale of land uses. Larger scale uses can play an important role in anchoring and driving land use mix in the sector. They generally develop relationships with other uses, which provide support or services. An example might be printers, stationers and cafes, which provide support to larger creative uses, such as software developers or animators.

While large scale uses will be required as potential drivers for the area, a good mix of medium and small scale uses are required to deliver vitality and viability for the area.

Small and medium size uses provide for small and medium size businesses and research has shown that a rich variety of these businesses tends to provide greater levels of longer-term, quality employment. These businesses also tend to be independent in nature. They also tend to develop strong links with other local business and make a strong contribution to the local economy. The evening economy, in particular, relies heavily on small and medium scale independent business.

The aim in the area will be to provide a proportionate mix of large, medium and small scale uses. In essence, there should be a relatively small number of larger scale uses, a greater number of primary or medium scale uses, and a larger number of small scale uses in the area. Figure 7 shows how this concept for a mix in the scale of uses works.

Temporary and meanwhile uses

Within the range of uses in the KCEDP and the masterplan document, there is potential to accommodate occasional or temporary uses such as entertainment, events, and markets, and 'meanwhile' uses such as car parking can be considered to encourage connectivity between the area and existing city centre in the short term. This can be done without compromising medium to long term objectives (see section 1.6).
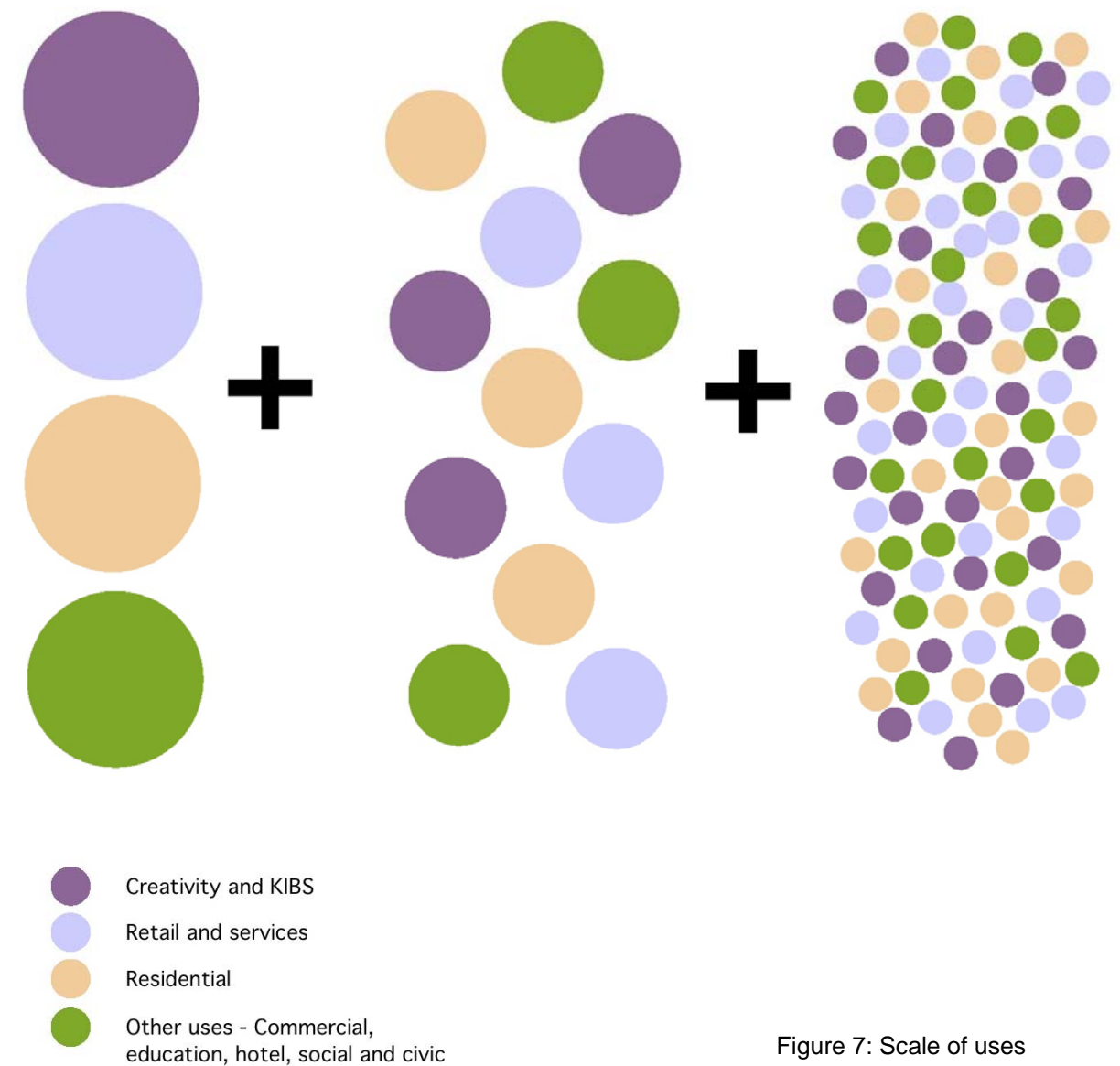

- Creativity and KIBS
- Retail and services
- Residential
- Other uses - Commercial, education, hotel, social and civic

Figure 7: Scale of uses

2.5 Key uses for the Brewery Area

Creative uses

Creativity and creative uses underpin the concept of creative quarters. Creativity involves processes of exploration and examination in an effort to generate new ideas and reframe old ideas. Although originally associated with the artistic sector, it is now an important aspect of business, adminstration and commerce normally considered as office use. Creativity also involves innovative uses such as research and development and broad range of design.

Urban creativity is seen as a way to make cities more liveable and vital by harnessing imagination and talent. City centres can provide the possibilities and places where innovation can occur. In recent years planning policy has tended to focus on creativity as a means of replacing lost employment and providing new spin-off businesses and employment.

Urban creativity comes about in different ways. There are two basic models; the first is organic and self-organised in nature, developing from the bottom up, with little or no support or planning, and the second is 'top-down' in nature and is planned and supported. There are successful examples of both models in many city centres and one model does not exclude the other.

Clustering is a key requirement for creative uses as they benefit from a close association with other uses such as cultural, knowledge intensive business services (KIBS), retail and services and residential. Creativity also requires appropriate social captial (people and networks) and physical captial (places and spaces). Urban creativity has unique requirements, such as a creative milieu for potential collaborations, links to education and graduates, support facitlties and affordable spaces.

Creative uses include, but are not limited to, the following categories:

- Advertising;
- Architecture;
- Arts and Antiques;
- Animation;
- Designer Fashion;
- Video, Film and Photography;
- Music and the Visual and Performing Arts;
- Publishing;
- Digital design;
- Craft design;
- Education from 1st to 4th level;
- Software, Computer Games and Electronic Publishing; and
- Radio and TV.

Efforts should also be made to encourage and support the spill-over of creative uses to existing premises on High Street, Parliament Street and Irishtown.

Cultural uses

Culture is a means by which cities express themeselves though their identity, character and uniqueness. Culture has strong connections to creativity, in particular artiistic creativity, which often emerges from local culture. Indeed, the combination of culture and creativity is seen as providing a new wealth for cities to replace declining sectors and lost employment.

As with creative uses, cultural uses flourish in clusters. Cultural clusters depend on adequate social capital (artists and cultural entrepreneurs) and physical capital (places and spaces). While many cultural clusters have been organic in nature, there are many examples of successful clusters within planned cultural quarters.

Cultural clusters vary considerably in their nature and character. Kilkenny has an established cultural function with many cultural attractions located along the 'Medieval Mile'. These cultural attractions are supported by other cultural uses and activities including performance, heritage, and arts and crafts. Crucially, the cultural uses of Kilkenny are supported by many other uses, such as hotels, restaurants, cafes and pubs. As part of this urban mix, Kilkenny City Centre could be described as an urban cultural district, within which this area needs to function.

There is potential in the area to build on the cultural uses of the City Centre. This can be done with the consolidation of the Watergate Theatre and the development of robust urban spaces focused on the Abbey in front of the Brewhouse, Evan's Turret and the City Wall as shown in Figure 8. These cultural elements must be closely knitted into the existing cultural offer of the City Centre. The area also has potential to provide the necessary cultural support uses (e.g. retail, services, evening entertainment, accommodation etc.), many of which will be small in scale.

Figure 8: Creative and Cultural land use concept

Knowledge Intensive Business Services (KIBS)

Knowledge Intensive Business Services (KIBS) consist of a wide range of uses that exist to serve other businesses or public agencies. KIBS have flourished in recent years with the rise of the knowledge economy. They are heavily reliant on professional knowledge and they tend to employ many experts who are often leading users and developers of technology and IT. By this measure, KIBS are usually high in terms of graduate employment intensity.

Computers and related activities make up around one quarter of KIBS in terms of value to the economy. Although mostly associated with the private sector, KIBS can also be delivered by agencies of the public sector. KIBS have grown substantially in recent years and on average account for approximately 15% of Member State GDP in the EU.

There is a strong association and mutually beneficial relationship between creative uses and KIBS, with some uses being common to both categories (e.g. architecture and product design). Elements of R&D provide an obvious example of overlap between KIBS and creative uses. KIBS include a broad range of uses including:

- Legal, accounting, book-keeping and auditing activities; tax consultancy; market research and public opinion polling;
- Business and management consultancy; management activities of holding companies;
- Architectural and engineering activities and related technical consultancy;
- Technical testing and analysis;
- Advertising;
- Labour recruitment and provision of personnel;
- Photographic activities;
- Other business activities;
- Computer and related activities;
- Research and development sector; and
- Other smaller business sectors.

Computer and related services include software consultancy and supply, data processing, database activities, maintenance and repair of office, accounting and computing machinery, hardware consultancy and other computer-related activities.

Research and development includes research and experimental development in natural sciences and engineering, and research and experimental development in social sciences and humanities.

KIBS will play a key role in broadening the use range of area, the Quarter and the city centre. They will also provide strong associations with creative uses. In addition, KIBS provides significant multipliers in terms of employment in smaller support and spin-off businesses.

KIBS will benefit from clustering with other KIBS and creative and support uses (e.g. retail, personal services, business services etc.), many of which will be small in scale. Smaller scale KIBS would be appropriate on the mixed-use street and St Francis Bridge frontages as part of the mixed-use frontage. Larger scale KIBS will also be accommodated in the context of the scale of uses outlined in section 2.4 of the code.

Retail, services and hospitality

The area has potential to provide for new retail, services and hospitality as shown in figure 9. There is significant potential to provide for smaller-scale specialist retail to expand the existing range of the City Centre. This may be associated with creative and cultural uses in the area. Local-level convenience retail should be provided to meet 'everyday' needs of workers, residents and visitors. Retail to meet the needs of workers, residents and tourist/visitors should be considered in the area at a scale that would reflect the vision of the Masterplan.

Due to their form, large scale retail stores, such as supermarkets requiring extensive open areas of floorspace together with adjacent car parking, are not appropriate in this area given the vision of the Masterplan, the mix of uses identified, and the extensive site area such a use would require. It does not preclude however a large retail user within one of the blocks in the context of the scale of uses outlined in section 2.4 of the code.

Services include small-scale, customer services such as beauty and health, advice, consultancy and information. These uses should be part of the mixed-use support services for the larger-scale uses in the sector. These uses should be located in mixed-use street as part of mixed and active ground floor frontage. In emerging development proposals, developers will be expected to maximise service uses at ground floor level to provide for active ground floor frontage.

Hospitality uses include food, drink and entertainment and includes facilities such as restaurants, cafes and bars. These uses will be important in supporting the main uses in the sector, particularly creative, cultural, KIBS, retail and residential uses

These uses are essential in securing an evening and night-time economy, which should evolve around cultural activities in and near the area (e.g. events and performance art). It will be important to connect these uses to the established hospitality uses in the city centre. Hospitality will also be an important component of any hotel accommodation in the area.
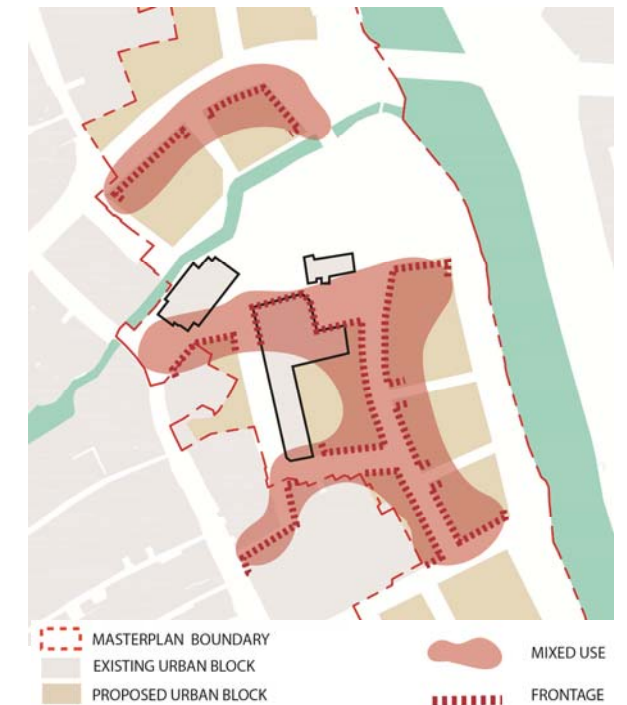

Figure 9: Retail, services and hospitality concept

Hotel and guest accommodation

Guest accommodation and hotel can act as a resource for tourism in the city and support new uses in the area, in particular, business, creative and cultural uses. Hotel accommodation can also serve as a destination/events venue. Hotels can provide a range of hospitality services to support business in the area. A hotel in the sector is likely to be small to medium in scale, most likely in a boutique format, given the character of the area, the size of available blocks and potential access arrangements.

There are a number of potential locations for a boutique hotel. Options examined are: (a) fronting and framing the Abbey (Block B-9) with frontage on to the mixed use street and the riverfront, (b) at the corner of Bateman Quay and the riverfront garden and (c) fronting St Francis Bridge with frontage also to the Bregagh River.

Residential

Over recent census periods, the population of the City (former Borough area) has remained relatively static at about 8,700. This increased slightly to approximately 9,400 in 2016. While this is welcome new residential use in the City, it will be essential to ensure that the area will be strong and vibrant both by day and by night. It will also provide the possibility for working and living in the same location. Residential use will also ensure that the area is lively and passively supervised after normal business hours. This will also have benefits for safety and the attractiveness of the area for visitors.

The area should provide for a range of household sizes and tenures. Residential use should be focused on the river frontage and it should be an important component of the mixed use street, above the ground floor. These residential areas will be connected to surrounding communities by different spaces and streets, notably the new spaces and streets and the riverside garden. The active residential frontage to the riverside garden may also include uses such as café and restaurant.

MASTERPLAN BOUNDARY
EXISTING URBAN BLOCK
PROPOSED URBAN BLOCK
LIVING
ACTIVE FRONTAGE

Figure 10: Residential concept

Civic and social

New civic and social infrastructure will include a range of uses and services to support the community. These will span recreation, education, health and other public services.

A significant higher-level educational use to support the economy and more specifically creative uses would be very desirable in the area. The blocks fronting St Francis Bridge could be considered for any lower level (primary education) facility, if it is so required. Further investigation and consultation would be required with the Department of Education and Skills to fully determine the exact location.

There is also potential for developing community and health uses in the area.

MASTERPLAN BOUNDARY
EXISTING URBAN BLOCK
PROPOSED URBAN BLOCK
RECREATIONAL
CIVIC
SOCIAL

Figure 11: Civic and social infrastructure concept

Other uses

Other smaller scale uses will be encouraged if they add to the mixed-use nature of the area and satisfy the statutory zoning objectives and land use policies for the area.
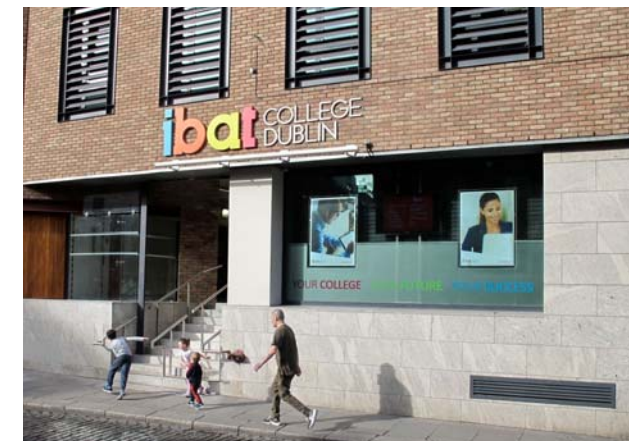
2.6. Land Use Mix

This Code sets out a mix of land use for the area based on the Masterplan vision for the Quarter. The mix is based on some key objectives:

- There should be a minimum residential component, which is adequate to provide a strong community of residents in the area;
- There should be a minimum of small and medium size retail and services business to enliven the mixed-use frontages and support other uses in the area;
- There should be a critical mass of creative and KIBS uses in the area;
- Land use mix should assist in delivering the vision of the masterplan. It should allow significant flexibility to attract other uses to the area, including boutique hotel, education, social and civic uses and other commercial uses; and
- There should be potential to expand creative and KIBS uses and residential use in the area, should this be desirable.

The land use targets are to be applied across the area. The mix is based on overall gross floor area (GFA). This will allow flexibility around land use mix at the individual block level, which will be necessary to deal with changing market conditions and requirements. I that scenario it is not a requirement that the block would have the targeted mix of uses but as the area is progressively developed, the requirement is to achieve the mix of uses as targeted in it (table 2.1) across the entire area. At the same time it will be important that progress towards are good mix of uses is maintained during the development of the area.

This will require ongoing monitoring and review of land use mix across the area. A monitoring and review mechanism is recommended to be carried out at appropriate times, such as yearly or bi yearly or at development plan revision, or the chief executives progress report on the city development plans.

It should also be noted that not all elements of land use are flexible. At block level, the Code requires that certain elements of land use that are fundamental to the success of the area (such as active ground floor uses to some frontages) are delivered. Based on these objectives the following breakdown of mix of land use categories should be targeted:

Broad land use category	Target
Creative and KIBS	At least 10%
Retail and services	Between 15% and 20%
Residential	Between 30% and 35%
Other uses including commercial, education, boutique hotel, social and civic uses, or, additional creative and KIBS and/or residential use.	The remainder

Table 2.1: Target land use mix

A generous provision is made for the 'Other uses' category. This provides flexibility for other land uses which could contribute to a richness of land use mix in the area e.g. retail destination, hotel, education, health etc. The other uses category will also allow for significant destination uses or uses of scale in the area. This category also allows for the expansion of creative and KIBS, and residential uses, should this be required in the area.
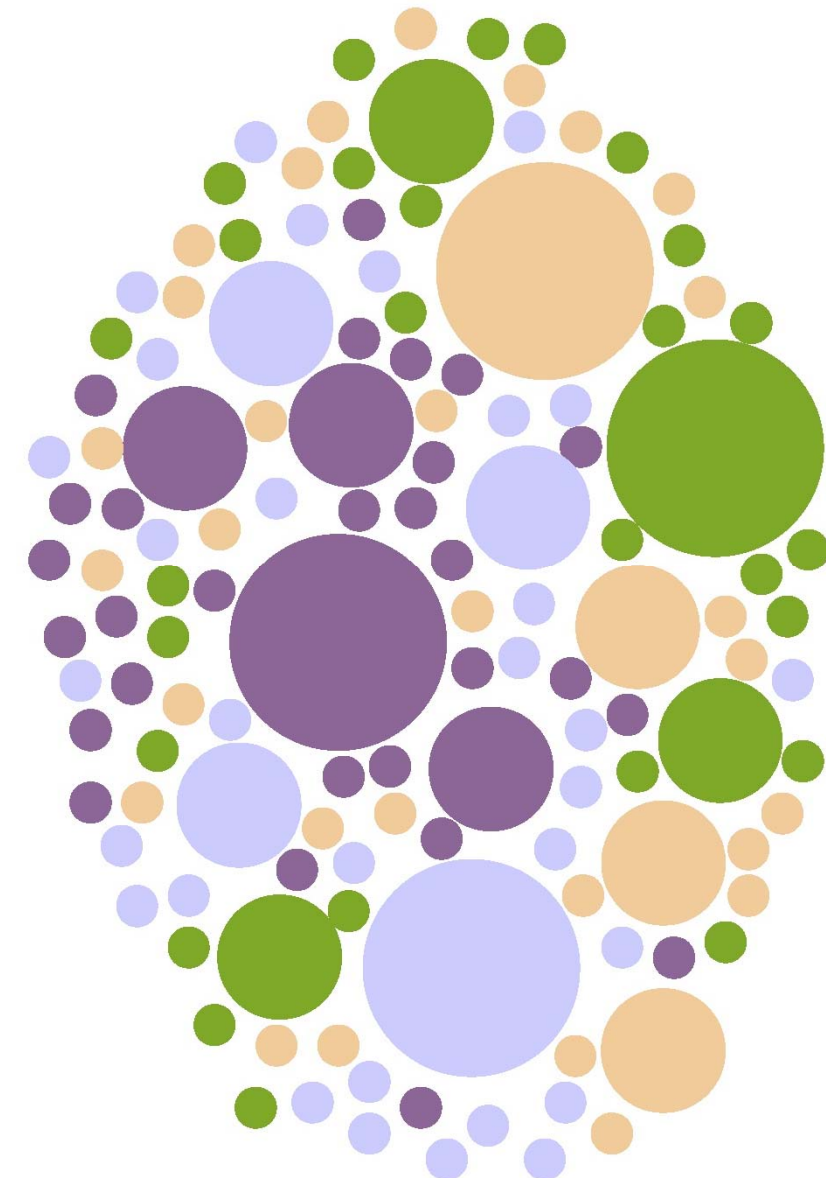
- ● Creativity and KIBS
- ● Retail and services
- ● Residential
- ● Other uses - Commercial, education, hotel, social and civic

Figure 12: Mix of uses concept

2.7. Urban Form

2.7.1. General

The urban form and structure of the area must provide a robust framework for the realisation of the range and diversity of functions and activities that will make the area a successful place. The Masterplan has already set out the main urban structure of the area, establishing the new route and block structure. It has also provided general guidelines on how buildings should be developed within the blocks. This Code focuses on the urban grain, scale and key elements of building detail. The vision in the Masterplan is to create a similar complement to the Medieval City.

Robust urban blocks

The urban blocks represent the developable parcels of land in the area, when all public spaces are excluded. The Masterplan provides for a pattern of urban perimeter blocks to reflect the character of the city centre of Kilkenny. The perimeter block allows all frontages of the block to be developed, by bringing continuous building frontages forward to the street or space. This has a number of benefits including the possibility of activity to all streets and spaces and a clear definition between public streets and spaces and internal areas such as private or semi-private courtyards. This allows for a mix of use type and sizes to be developed which will compliment the existing pattern of development in the city centre. As outlined in section 1.6, this Code focuses on the urban blocks of the Brewery area.
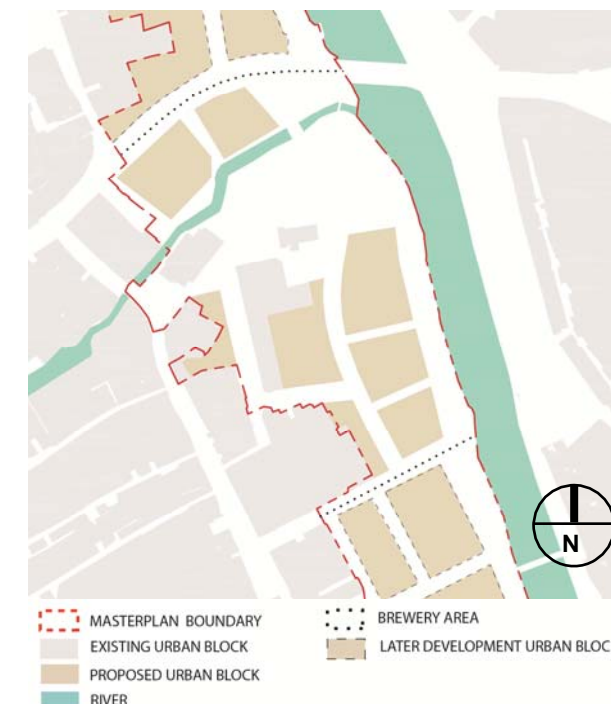
The success of the perimeter block, depends on some key criteria, including:

- Clearly defined extent of urban block;
- Carefully considered building lines and building set-backs to reflect ground floor uses and the function of the street or space;
- Massing to the perimeter of the block;
- Building frontage to all sides, including the shorter sides (secondary street frontage) of the block;
- Proper design and attention to corners, avoiding dead or windowless gables;
- An appropriate scale of buildings to provide the appropriate level of enclosure of the streets and spaces/courtyard;
- Adequate back-to-back distances within the block to ensure adequate light and privacy and internal open space;
- Appropriate building set-backs from the street to suit the use of ground floors; and
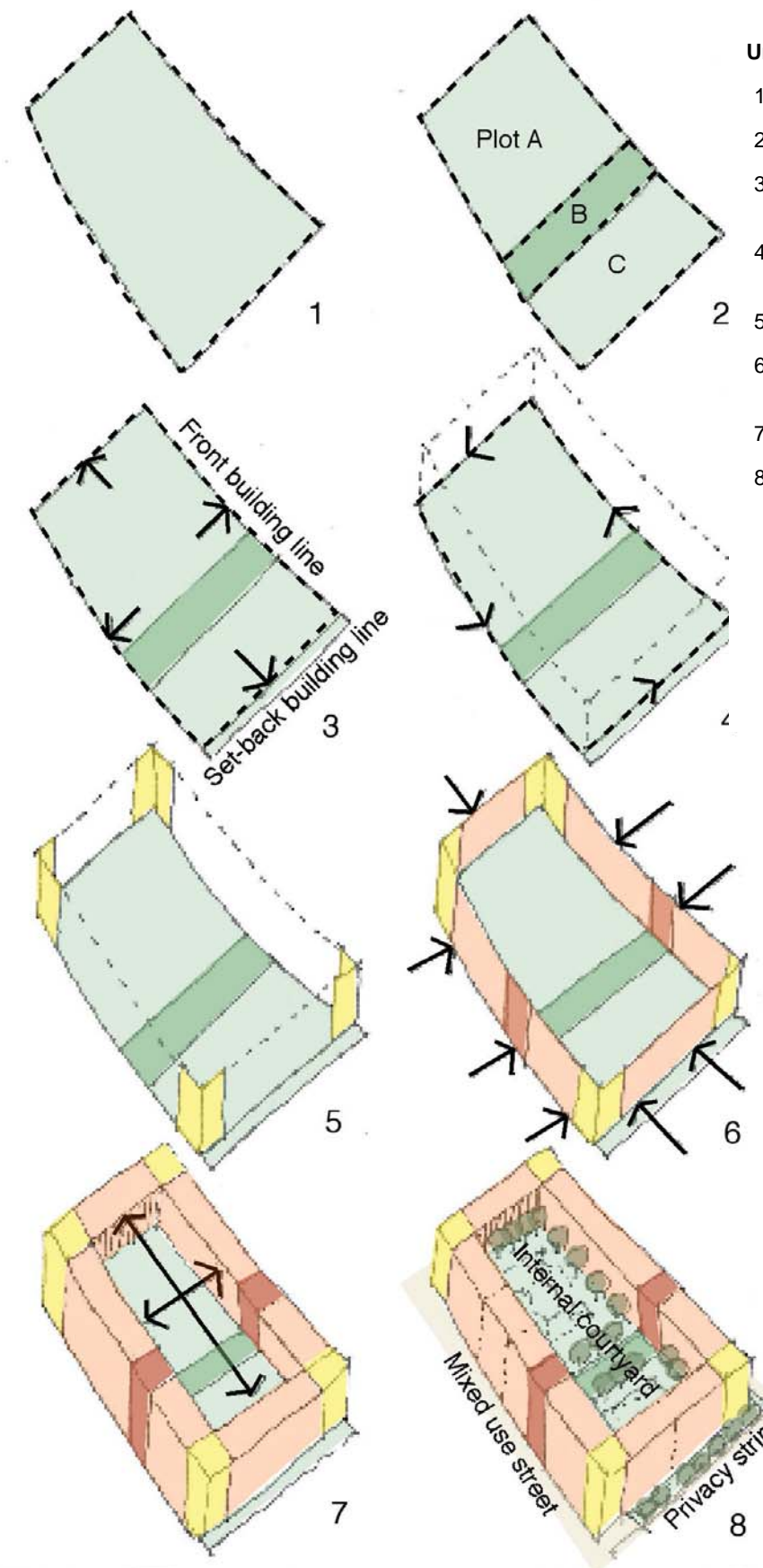- Adequate arrangements for access around, within or below the block.

MASTERPLAN BOUNDARY
EXISTING URBAN BLOCK
PROPOSED URBAN BLOCK
RIVER
BREWERY AREA
LATER DEVELOPMENT URBAN BLOCK

Figure 13: Block structure

Figure 14: Urban design principles for urban blocks

Urban design principles for the perimeter urban block

1. Define the urban block;
2. Sub-divide into plots as required;
3. Establish the front building lines, set-backs and general building massing;
4. Provide appropriate building continuity to all frontages;
5. Provide well-defined and well-designed corners;
6. Ensure that the main entrances are to the block frontages;
7. Ensure adequate space in the internal courtyards;
8. Proceed with detailed design of buildings, private and semi-private open spaces, and building interfaces with surrounding streets and spaces.

2.8.   Mixed Urban Grain

Urban grain is a way of describing the degree of mixing of different physical elements in an urban area. Urban grain most often relates to the pattern of the subdivision of plots within urban blocks (sometimes referred to as horizontal subdivision). Urban grain is a key factor in determining mix of uses and diversity, as greater mix of uses is associated with greater variety of blocks and plots.

Guiding the urban grain is an essential component of this Code. The Code seeks to deliver a built form that is diverse and adaptable to accommodate a mix of uses and activities over the longer term. As detailed in sections 2.4 and 2.6, it seeks to establish a relatively small number of larger uses, a greater number of primary or medium scale uses and a larger number of small scale uses in the area.

Mixed urban grain is where there is a mix of plot sizes and shapes in an area. Mixed urban grain is essential where a mix of uses of different scales is planned, as the plot size effectively determines the size and scale of buildings and the internal spaces available for different uses.

Mixed urban grain cannot be achieved without providing for smaller plots in key locations in the area. Smaller plots are important as they provide for smaller, independent buildings, which are more adaptable and flexible for changes of use and occupancy over time. Buildings on smaller plots have also been shown to provide greater levels of mixed use.   Other benefits include greater variety and richness in the streetscape.

Small plots and smaller buildings and internal spaces are crucial to the success of creative and cultural quarter and essential for the development of the evening and night-time economy.

The subdivision of larger buildings, at ground floor level, will also be important to achieve mix of use at ground floor level. It will not, however, provide the flexibility or independence required by many small businesses, particularly evening economy uses.

The benefits of a mixed urban grain are significant, as:

- It provides a range of development parcels for a range of potential uses;
- It is attractive to a wider range of potential developers;
- It results in a range of designers and range of approaches to building;
- It produces a greater diversity of building type and expression;
- It results in a greater diversity of use;
- It produces spatially, independent buildings with greater adaptability and flexibility for changes and modification in many cases; and
- It gives flexibility for the phasing and incremental development of blocks.
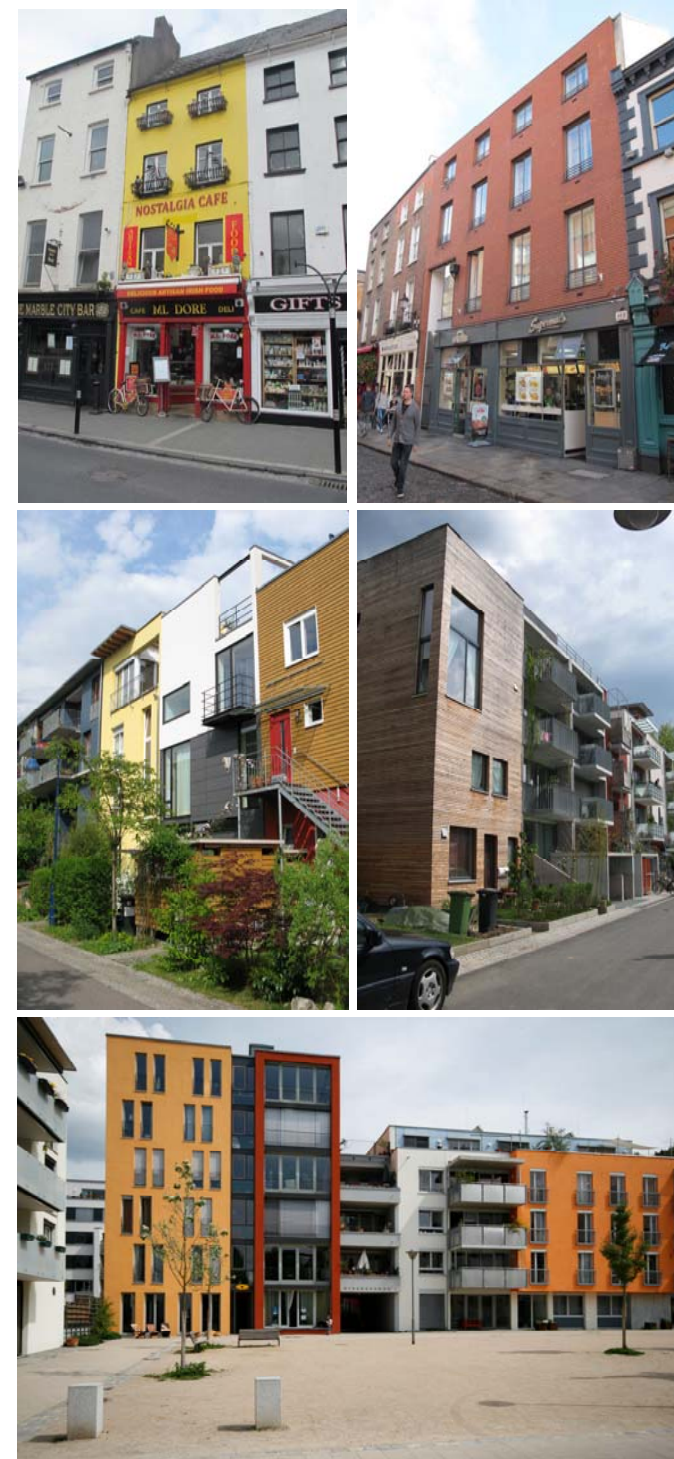
Large plots

Large plots (typically greater than 1,000sqm in area) accommodate larger buildings, which are suitable for large-scale uses and users. They are important in satisfying the land use mix set out in the Code. However, large plots should not dominate the sector as the fundamental character of the city centre is defined by small and medium urban grain. The Brewhouse and Mayfair Building through their planning consents provide for larger scale uses in the area and additional larger plots may be required to accommodate other potential uses such as hotel, education, retail or other suitable uses subject to the provision of section 2.4 relating to the mix of scale of uses.

Medium plots

Medium plots (typically between 400 and 1,000sqm, with varying main street frontage lengths) accommodate buildings, which are suitable for medium-scale uses and users. They are also important in satisfying the land use mix set out in the Code. Medium plots should support and complement larger and smaller plots as part of a mix of grain in the area. It is desirable that medium grain would be provided within all urban blocks in the area to complement large and small plots. Depending on the uptake of uses, this may not be possible in all blocks (e,g. a boutique hotel could require the full footprint of a small block).

Small plots

Small plots (typically between 200 and 400sqm, with main street frontages not exceeding 9m) accommodate buildings, which are suitable for smaller-scale uses and users. These plots are essential in achieving land use mix and richness and variety in the streetscape. Small plots will provide for smaller commercial footprints, which are attractive to smaller, independent businesses, which are themselves vital to the development maintenance of a mixed, local economy. Small plots are included in most urban blocks in the area. They should support and complement other plots as part of the mix of grain of the area.

Small plots must be capable of development independently of other buildings/plots within the block. For this Code, small plots will be provided as 'throughplots'. A throughplot is a single plot which stretches between two main block frontages. It provides a larger and more developable plot, while providing building variety to two frontages.

Vertical subdivision of buildings

Vertical subdivision of buildings allows for a vertical mix of uses in individual buildings. This can be important in providing use mix in medium and larger scale buildings. In the mixed use street vertical subdivision of buildings will be an important consideration, given the active retail and services uses of ground floors and the need for residential and commercial uses in the upper floors. Figure 16 shows how vertical and horizontal subdivision can be achieved in a mixed use block.
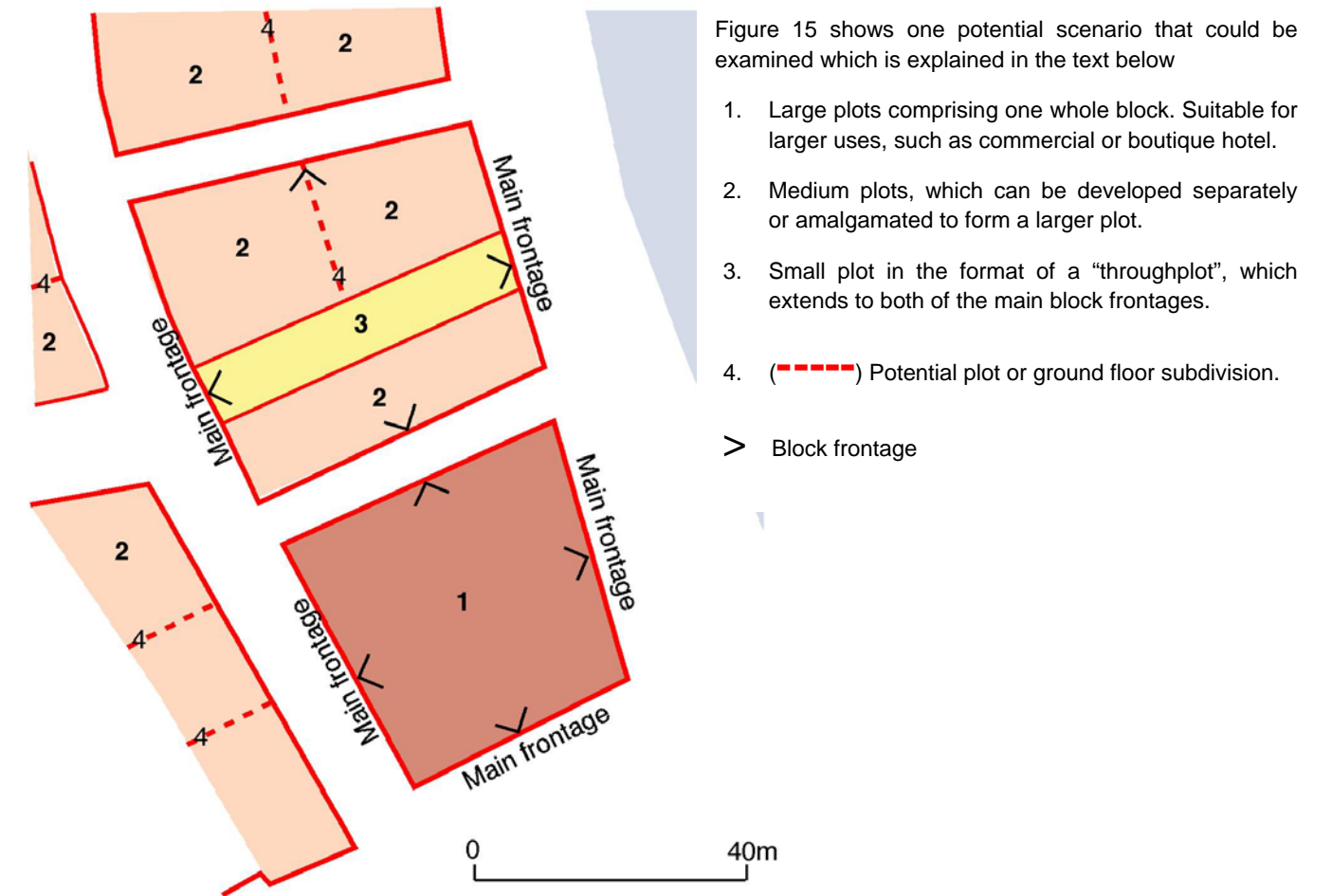

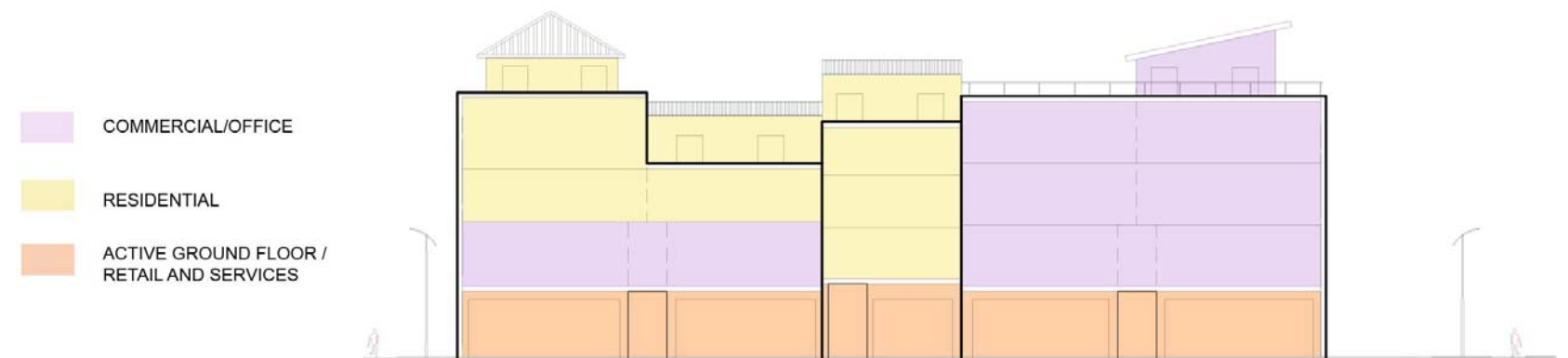
Figure 15: Indicative urban grain and plots

Urban grain and plots

Figure 15 shows one potential scenario that could be examined which is explained in the text below

1. Large plots comprising one whole block. Suitable for larger uses, such as commercial or boutique hotel.

2. Medium plots, which can be developed separately or amalgamated to form a larger plot.

3. Small plot in the format of a "throughplot", which extends to both of the main block frontages.

4. (- - - - -) Potential plot or ground floor subdivision.

> Block frontage

COMMERCIAL/OFFICE

RESIDENTIAL

ACTIVE GROUND FLOOR / RETAIL AND SERVICES

Figure 16: Example of vertical and horizontal subdivision of an urban block

2.9. Urban Scale

Urban scale is defined by the relationship between building height and the size and scale of streets and spaces. Appropriate building scale is a critical feature of any successful place. In managing building scale it is important to set out a clear set of controls and guidelines, within a clear rationale. There are many considerations around building scale in the area including local character and heritage, existing and surrounding buildings and landmarks, the nature, intensity and importance of the planned uses, the need to adequately enclose streets and spaces and the need to present attractive and overlooking frontages to local and strategic open spaces. An increase in scale in carefully considered locations, for example, can help to reinforce legibility by strengthening the civic qualities of urban spaces. It can also assist with legibility, by providing greater enclosure to important routes such as avenues and orientation points, such as corners.

Building height

The building height concept (Figure 17) provides spatial guidance for building height. Along with the sections (Figure 18), it shows the importance of the relationship between building height and the overall width of streets and spaces.

The building height concept in the area comprises three bands as follows:

- Between 1 and 2 storeys - the refurbished Mayfair;
- Between 3 and 4 storeys – general context building height for all new blocks and the existing Brewhouse; and
- 5 storeys – at prominent frontages to expansive urban spaces at the Market Yard and the Abbey Square or at important corner locations.

Different floor-to-floor dimensions for residential and commercial uses will mean that absolute building height will vary within the building height bands. This will allow for flexibility and variety in design and outcomes.

An additional storey may be considered in the 3 to 4 storey building height band so long as it does not impact negatively on the height to width ratio of the new streets or on access to daylight and sunlight to the internal courtyard. In all cases the additional storey will be recessed sufficiently from the front wall of the building to protect street scale and proportions.

Street Proportions

Street proportion is a determining factor in urban scale. It is normally defined by comparing street width with the height of buildings fronting the street. Section 3.1.12 of the Masterplan requires that new streets reflect the street pattern and scale of the Medieval City. The Masterplan indicates that general relationship of between 07:1 and 1:1 (street width to building height) is common in the Medieval City. Bearing in mind the scale of buildings proposed in the area (3-5 storeys), streets width should range between 8m and 12m. Provision is currently made in the Masterplan for a width of 12m (building to building) on the mixed use street. This dimension may be reduced to reflect a more intimate scale. Figure 18 shows typical street sections for the area.

Sunlight and daylight

The Masterplan provides the broad framework where daylight and sunlight requirements can be met through appropriate block layout and building design. However, it will be the responsibility of the designer to meet acceptable daylight and sunlight requirements on a building-by-building basis within each block. This will be important when considering building depth, typology, back-to-back distances and the internal courtyards.

Landmark buildings

Landmark buildings are distinctive, individual buildings, which signify an important function and/or play an important role in legibility and sense of place. The buildings fronting the Market Yard and the Abbey Square occupy a special and prominent position in the area. As such, the quality of their design, materials and finishes must be exemplary and highly responsive to context. In both cases building must respond to the riverside location and built heritage (including the Abbey and the Tea Rooms). If a building is for public use such as a school, the design should be a significant exemplar; In these circumstances, the option of designing buildings through design competitions should be explored to encourage greater participation in the design of the area and ensure innovative and responsive design approaches.
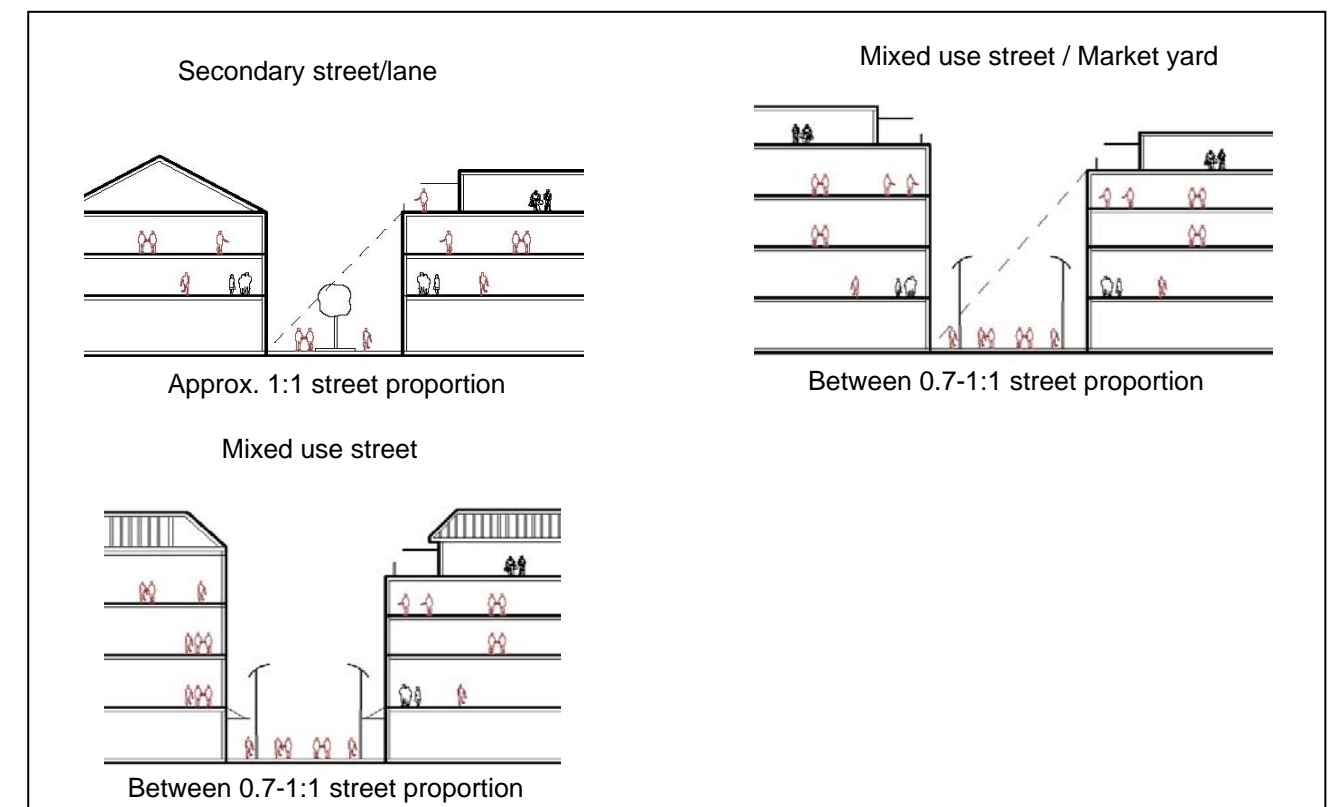

Figure 17: Building height

Figure 18: Indicative street proportions

2.10. Building Design

The development management process covers many building-related matters. The framework and the standards for development management are set out in the KCEDP. These standards are informed by national planning guidelines and best practice. This Code does not in any way alter these development management standards, as it focuses on aspects of building quality and urban design matters that are specific to the area. The code is a more detailed layer to be considered in the development management process.

Building quality

Building quality will be a key determinant in the success of the area and includes:

- Quality of design;
- Quality of materials;
- Quality of construction; and
- Quality of finishes.

It is important, in decisions affecting each of these qualities that the Council insists on an appropriate standard to deliver a high quality environment.

Building typologies

A range of typologies will be needed to accommodate different land uses and to ensure a diversity and variety in the built fabric of the area. Buildings should be designed to reflect their uses. Mixed-use buildings, in particular, should be designed to accommodate future changes of use. This will require a 'loose-fit, long-life' approach, where additional internal or external space or dimensions may be provided. The mixed urban grain approach of varying plot sizes in individual blocks in this code will facilitate a variety of building typologies. Smaller mixed-use building typologies will require appropriate and bespoke design consideration and solutions.

Architectural diversity

The area will express a diversity of architecture and architectural style. There are many different contexts (e.g. riverfront, mixed use street, Abbey frontage etc.). The area, and the architecture should respond to this. The smaller plot buildings will be required to be spatially-independent of adjoining buildings, with separate entrances and private courtyard/storage spaces. Individual architectural design approaches by different design practices will be required. Variety and innovation of design, construction, materials and colours will be promoted to enhance architectural diversity. These buildings should be mixed use in nature, and should include some element of residential use. The overall maximum building height will be in accordance with the building height concept.

Where coarser urban grain and larger buildings are proposed, a careful approach to the design of facades will be required. Individual buildings on the medium and large plots within blocks should express distinctive building design. Designers will be required to clearly express the ground floor, the main façade, a strong parapet and the roof form. A vertical emphasis to the facades should be achieved, by design and the use of different materials and colours.

Building entrances should be designed as a key element of the facade, which may also be expressed vertically in the main façade. Balconies may be incorporated in multi-storey, residential development to improve the expression of the facade and the interface with the street and riverfront. The treatment of ground floor corners must be carefully considered in terms of design and interface. Corners provide an opportunity for architectural diversity, with the inclusion of features, such as raised parapets and additional building height. Distinctive corner buildings can also aid legibility, signifying a significant route or gateway.

Building and space interface

The interface of the building and space is critical to the success of streets and spaces. The design of the ground and lower floors of buildings fronting streets and spaces are critical in determining this relationship. The purpose of the street or space and the nature of the land use will determine the approach to the design of the interface. In all instances, interfaces should be carefully designed and attractive, and provide appropriate levels of interaction and safety. General rules can be established for new mixed use and residential frontages to streets and spaces in the area.

Generally, for new mixed-use frontage to streets and spaces there should be no building set back from the back of the street or space. Frequent entrances to ground floor uses and upper floor uses, generous windows and display areas, varied and richly detailed and designed shopfronts, generous floor-to-floor heights (at least 4m) and design for potential for uses to spill out onto the street or space.

For new residential frontage to streets and spaces, there should be building set-back or a small privacy strip (not greater than 1.0m deep) depending on context. Less private rooms such as kitchen, living and dining rooms to the main frontages, direct access to ground floor units from the street or space, carefully designed access to upper floors, and balconies at upper floors.

Roofscape

Variety of roofscape will contribute to the architectural and visual diversity of the sector. Roof form should be an important aspect of building design. Roofscape should be varied to reflect the mixed urban grain of the area. Ridged or sloping roofs of reasonable pitch will be preferred. Large expanses of roof should be avoided on medium and large buildings and should be broken by changes in ridge and/or pitch. Inclusion of additional floorspace in the roofspace may also provide variety of roof scape. An additional set-back floor above the maximum storey height will be considered for 3-4 storey buildings. Natural stone/slate roof finishes will be normally be preferred. Alternative durable materials will be considered where it contributes to quality building design.

Variety in roofscape

1. Stepped papapet to corner.
2. Set-back residential unit.
3. Gable front to 'throughplot'.
4. Set-back top floor.
5. Sloped set-back top floor.
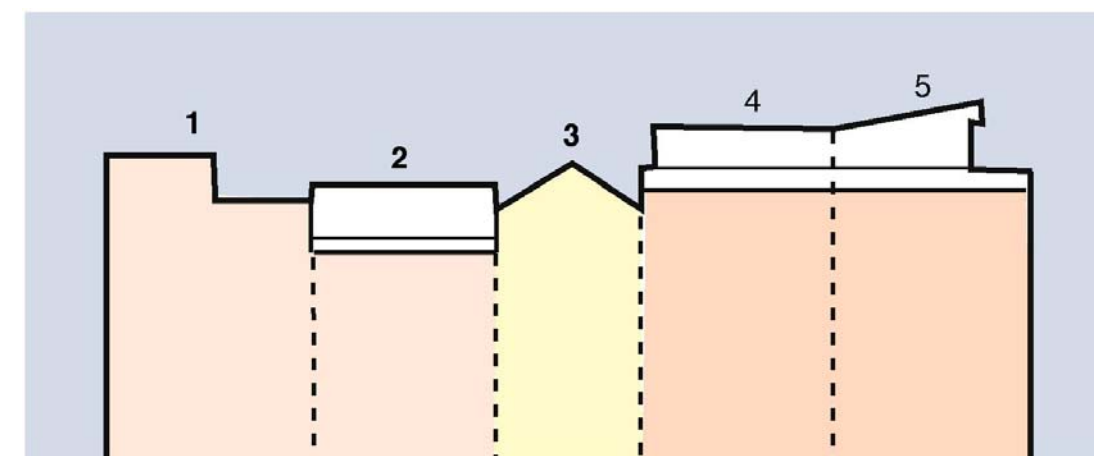
⋮ Division of the facade reflected in roof-form.

Figure 19: Different ways of varying the roofscape

Ground floor levels and gradients

Buildings will need to respond closely to level differences at ground floor level due to localised land raising. Building entrances must be level with the adjoining footpath or public space. On sloping streets and spaces, buildings will be required to step closely with the changing gradient. Fine urban grain will be an ideal typology in these locations. Excessive level differences will not be permitted between the ground floor of buildings and the footpath. Building designers will be required to work closely with the designers of the streets and spaces in this respect.

Materials

High quality and durable materials are essential in creating successful places. Natural and 'tried and tested' building materials that are common in the Kilkenny will be preferred. These include stone, brick, render, timber, and steel and glass. Insofar as possible, materials should be environmentally-friendly in terms of production and composition. The planning Authority will encourage the use of recycled material. Above all, it will be important that materials are durable and weather well, so as to avoid long-term maintenance problems. This will be important when considering, for example, the use of render in larger buildings.

Green building

Green building is a philosophy and a code for sustainable building. It relates to all types of building and its key components are:

- Energy management – including energy supply, energy efficiency and energy use;
- Water management – including water conservation, rainwater harvesting and grey water recycling;
- Waste management – including fewer and more durable materials, end of life recovery and reuse of materials and building user's reuse and recycling;
- Health and well-being – including achieving good indoor air quality, natural light, noise levels;
- Landscape - including integration of biodiversity, roof gardens, green roof, planting etc; and
- Resilience and adaptability – including resilience to flooding and climate change, flexible spaces for use changes.

For project proposals it will be a requirement to demonstrate that due consideration has been given to the technical, environmental and economic feasibility of installing alternative energy systems.

In terms of energy, measures can be taken for individual buildings or for the larger urban block. Building fabric energy efficiency will be the priority. At present this is regulated by the Building Regulations. However, Near Zero Energy Buildings (NZEB) will be introduced as the standard in Ireland by 2020 and the Council will work with developers in the interpretation and implementation of this standard in the sector.

2.11. Urban Space

The area will provide a major addition to the network of public spaces in the city centre, providing new amenities. The network of spaces and streets and the broad parameters for their design, have been set out in the Masterplan. A number of these spaces have been brought forward in the planning and design process. These are Horse Barrack Lane and the Riverside Garden (excluding the riverfront area at Abbey Square).

Heritage considerations

There are significant challenges in delivering urban space in the area. The development of the open spaces will need to protect and enhance the substantial above-ground built heritage of the area, and be responsive to known and undiscovered archaeology underground. The Abbey Quarter Masterplan Area Archaeological Strategy (2015) recommends development of an archaeological investigation strategy, within which above ground built heritage is protected and enhanced and below-ground archaeology is protected in situ with selected investigations (including specific project-related investigations) and the preservation of the current industrial apron/slab. The report also recommends that the ground level in and around the Abbey precinct be lowered to match levels in and around current levels at the Abbey in order to place the Abbey within it historic topographical setting. This requirement must be considered having regard to flood risk management in the area.

New ground levels

Ground levels will be raised in the area, in accordance with the recommendation of the flood risk assessment carried out for the masterplan (see section 3.1.11 of masterplan document). This will manage the flood risk for a 1 in 1000 year flood event. This will allow for the preservation of the slab and any in situ, below-ground archaeology. The transition to this new ground level will need to be smooth and discrete with gentle slopes and it will need to avoid steps in level. The space between the existing slab and the new raised ground level will also provide a space for new services (such as water, waste electricity, gas, heating, telecoms etc.). There is also the potential to link with existing below ground drainage services on the site, which would also minimise the impact on the archaeology. A gently sloping surface should be designed across the entire Abbey Square to connect new raised ground levels and lower levels in and around the Abbey.

Variety of spaces

The Masterplan includes a network of spaces of different types, size and character, including informal social spaces, civic and destination spaces, recreational areas and commercial and mixed-use spaces. Figure 20 shows how these spaces can function to accommodate a wide range of activities. Within larger spaces it will be important to facilitate smaller scale activities. The proposals for new spaces prepared to date present a considered and high quality design approach, which should be replicated in the design of the remaining streets and spaces of the sector.

Figure 20: Activities and new urban spaces concept

Qualities of space

In achieving quality streets and spaces, key objectives will inform detailed space design:

- All spaces should be utilised. No space, no matter how small, should be left-over and all spaces should have a clear role and function.
- All public spaces should allow for the opportunity for civic and cultural events appropriate to their scale and include the necessary built-in services and infrastructure.
- All spaces should be designed to be safe and should be perceived to be safe. Uncluttered spaces with good sight-lines with adequate lighting that are well maintained will complement the essential passive supervision of streets and spaces by workers, visitors and residents. Vehicular traffic through the area will be strictly controlled within pedestrian priority areas.
- All spaces should be attractive to residents, workers and visitors alike. High quality design based on the essential local character or genius loci, and well-considered concepts and themes, including local culture and art, will play a key role in this.
- Spaces should be uncluttered to provide an understated setting for the built heritage and the riverside setting and to ensure that they are robust for a variety of uses and activities.
- All spaces should be designed for comfort. In this regard, consideration should be given to micro-climate, orientation and existing and proposed, surrounding buildings. Informal and formal seating should be provided in all spaces, with shelter provided where appropriate.
- All spaces should be designed to be accessible to all in society, including those with disabilities children and older people. Gentle slope will be favoured in preference to abrupt and stepped level changes

- All spaces should allow for vibrant and active edges, where active ground floor uses can spill-out in to the space and where people can browse, linger and socialise.
- Opportunities for biodiversity (tree planting and landscaped areas and features) and sustainable urban water management should be included in space design proposals
- Ample opportunities should be provided for play – both formal and informal.

Materials and finishes

It is essential that a coherent range of materials is chosen for the public streets and spaces of the area. Natural stone, including limestone and granite similar to the already in the public realm in Kilkenny, are preferred surface materials which may be augmented by other high quality building products. Streets and spaces in the city centre have already been improved to a high quality and design proposals, should consider these scheme in future design proposals. A narrow palette of surfaces colours should be used. Again, improvements in public spaces in Kilkenny City Centre have already shown the benefits of using a limited range of natural materials with a restrained colour palette.
All materials should be appropriately specified to ensure that they are durable and easily maintained and replaced, if necessary.

Street furniture

Street furniture in the area should be provided to for the comfort and safety of users. Spaces should not be cluttered unnecessarily by furniture. A coherent, carefully selected and narrow range of furniture should be chosen for the area, which is compatible with the better examples of street furniture in the City Centre. Essential street furniture includes formal seating (seats and benches) and informal seating (e.g. low walls, plinths for art works, steps and grass), street and space lighting and bins. It will be important to consider the suite of furniture as part of the design and implementation of the initial spaces (Horse Barracks Lane and Riverside Garen). Elements of landscape and street furniture (e.g. lamps and benches) can often be combined to improve comfort and reduce clutter

Public art

An approach for public art in the area should be devised as part of the implementation of the masterplan and Code. Ideally, local artists should be involved in the design of the remaining streets and spaces in the area. Just as important will be an artistic input into the design of the floorplane and the boundaries of the streets and spaces and unique elements of street furniture.
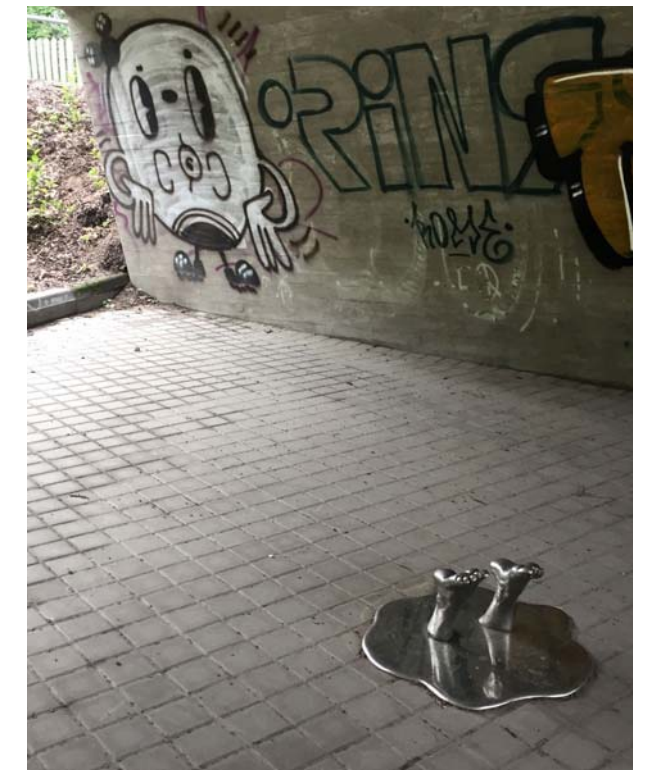
2.12. Movement

The area will provide a major addition to the network of public streets and spaces in the city centre. This new network is highly permeable and will integrate with the existing network of streets in the city centre. Managing movement for all modes will be crucial to the success of the area.

Movement for high value places

In line with KCEDP and higher-level transport policy the Masterplan gives priority in the sector to pedestrians. In reference to the Design Manual for Urban Roads and Streets (2013), the area is in a higher value urban context and status where the streets and spaces in the area should categorised as places rather than links. This underpins the approach to the design and management of the streets and spaces in the area (The design aspects of the streets and spaces are largely described in the section 3.2).

Pedestrian priority

Overall, in accordance with the philosophy of the Masterplan, the area will be managed as a pedestrian priority zone. Pedestrians will have full permeability across all streets and spaces in the area. Management of movement in the sector will be as follows:

- Riverside Garden - this space will be pedestrianised with additional access only provided to cyclists.
- Mixed-use street, time-controlled, local vehicular access for loading and unloading will be permitted.
- Abbey Square will be largely pedestrianised, with time-controlled local vehicular access loading and unloading to connect the mixed-use street and St. Francis Bridge. This may be controlled by an automatic gate.
- Other streets and spaces will be managed as pedestrian priority.

The design of the streets and spaces should ensure that adequate space is provided for emergency and maintenance access.

Car parking

Options for car parking in the area are extremely limited given controls on vehicular access, the need to protect the below-ground archaeology and priority on the surface for pedestrians.

A car parking study is ongoing, and draft recommendations suggest that:

- Longer-term car parking solutions lie outside the central former brewery area covered by this code (Section 1.6);
- Existing car parking capacity in other car parking facilities in the city centre should be utilised;
- There is potential in the longer-term for multi-storey car parking facilities in adjoining areas such as Bateman's Quay, Sweeney's Orchard and The Mart; and
- In the short-term undeveloped blocks in the area can provide surface car parking to service development and build connectivity in accordance with the temporary use and phasing strategy outlined in sections 1.6 and 2.4.

Cycle facilities

Adequate cycle facilities will need to be provided in the area. These include a new shared pedestrian and cycle path along the Riverside Garden. Cycles should be allowed to use all other spaces in the sector on the basis of pedestrian priority without the provision of dedicated cycle paths or tracks. Cycle parking should be provided in the main streets and spaces. This should be discretely and conveniently located. Cycle parking within developments will be considered as part of development management process.
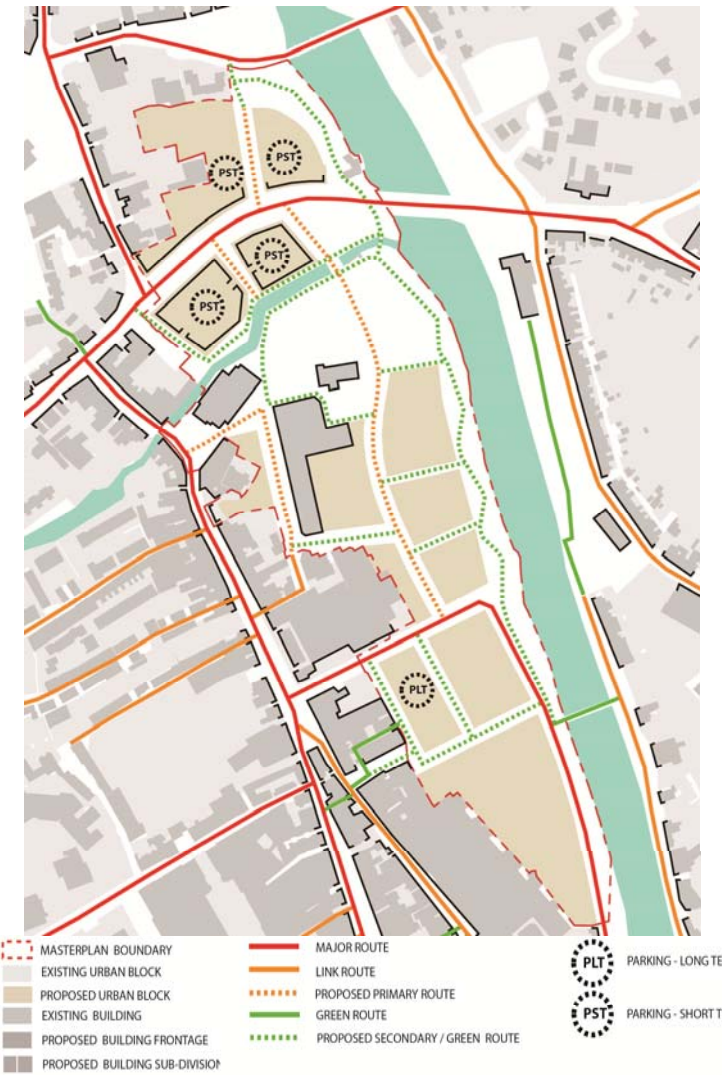

Figure 21: Movement concept