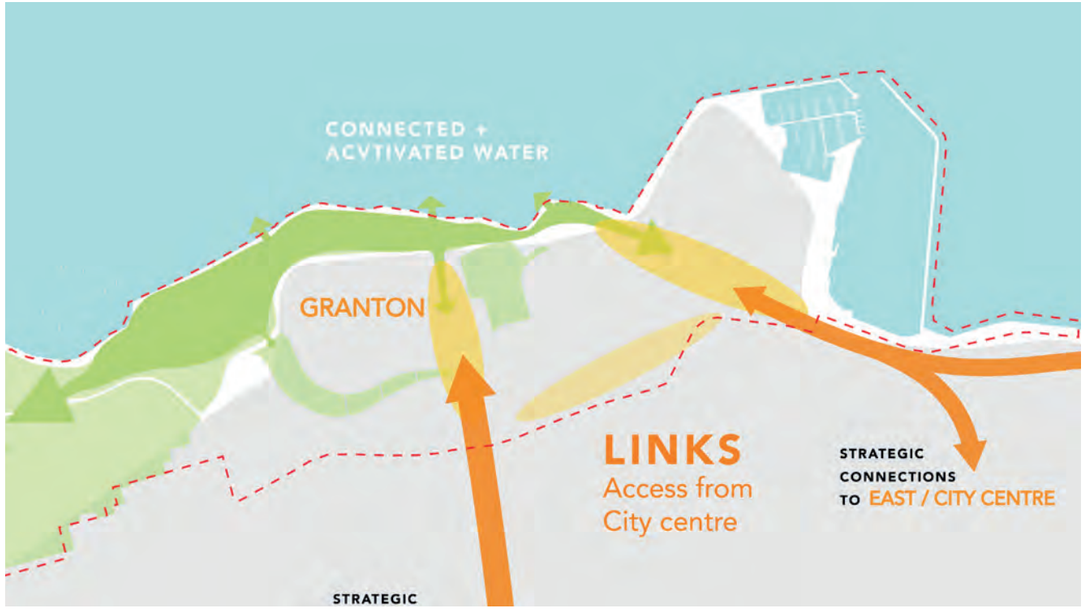
Fig. 3.0: Wardie Bay Swimmers, images courtesy of Anna Deacon Photography

3. DEVELOPMENT FRAMEWORK - HIGH LEVEL STRATEGIES

This Chapter outlines the various high level strategies that make up the Development Framework.

3.1 Development Framework

1. Setting back development from shore line to create coastal park, (Fig. 3.1)



2. Strengthening key streets / anchor uses, (Fig. 3.2)

3. Establishing internal green spaces and green network, (Fig. 3.3)

4. Working with heritage assets, views and existing routes, (Fig. 3.4)

5. Integrating public transport routes, (Fig. 3.5)

6. Establishing an urban block structure and promoting connectivity, (Fig. 3.6)

This Chapter outlines the various elements that make up the Development Framework.

A series of key elements are incorporated within the Development Framework. These reflect the vision and principles outlined within Chapter 2.

The diagrams opposite (Fig. 3.1-3.6) identify these as follows:

1. Setting development back from the shoreline to create a flood resilient coastal park.
2. Strengthening key arteries to and from the site and building on existing anchor uses.
3. Establishing landscape and public spaces and integrating with the wider green network.
4. Working with heritage assets, views and existing routes.
5. Integrating public transport and active travel.
6. Establishing an urban block structure and promoting connectivity.

These set the parameters and priorities for Granton Waterfront and establish a clearly identifiable and developable block structure that is robust and flexible. This allows the neighbourhood to evolve in a holistic and phased way within a clear and coordinated structure.

3.1 Development Framework

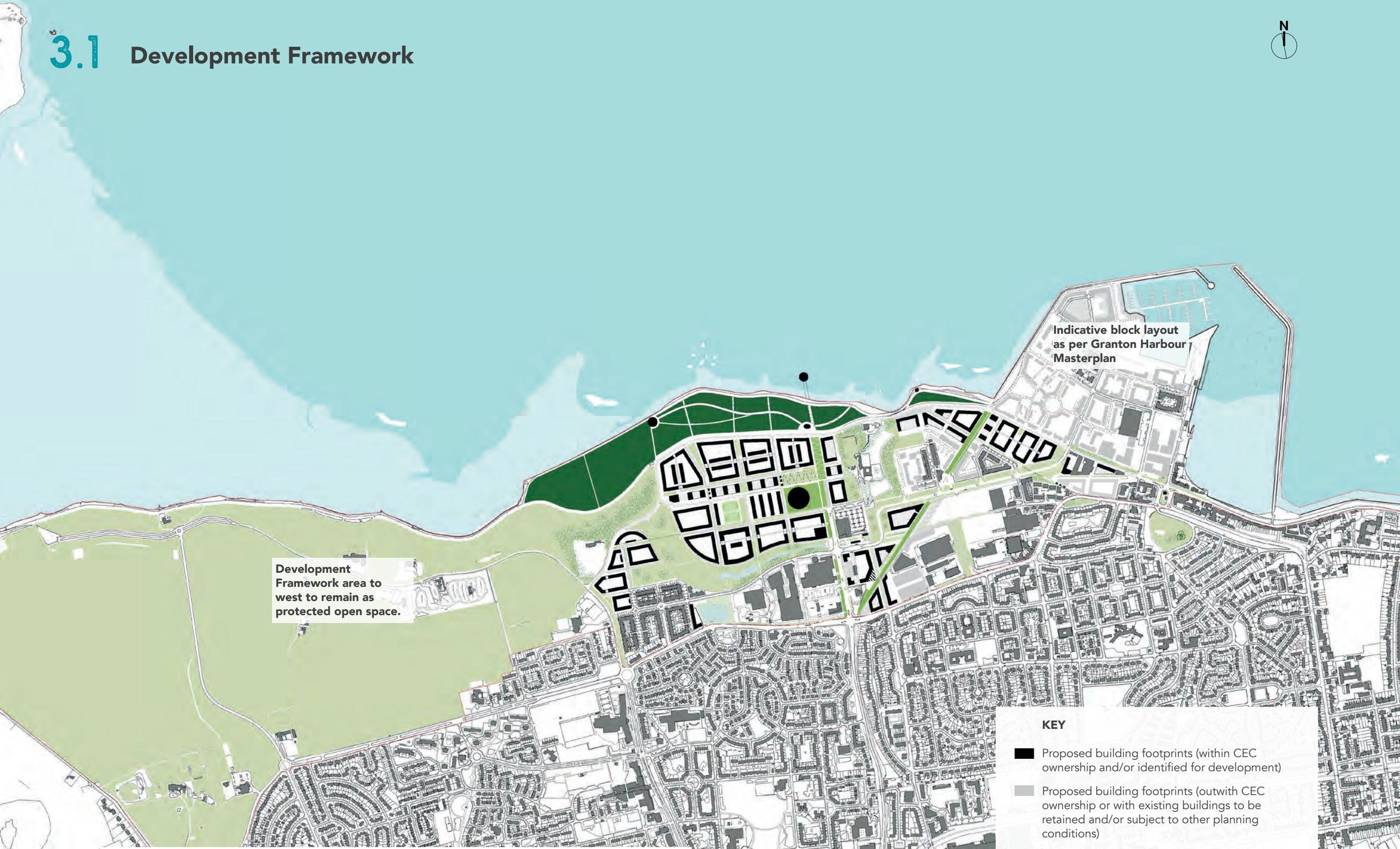


Fig. 3.7: The key elements of the Development Framework are illustrated above in an indicative building block footprint plan. This diagram is indicative of the approach that could be taken. However, building footprints will be the subject of detailed applications.

Development Framework

KEY

Urban block structure (within CEC ownership and/ or identified for development)

Urban block structure (outwith CEC ownership or with existing buildings to be retained and/or subject to other planning conditions)

New coastal park and east - west route.

Green space network.

Key arteries connecting Development Framework area to city centre.

Urban anchors: focal areas for non-residential development along W. Granton Road, W. Harbour Road and Waterfront Broadway. Retaining and re-connecting key historic buildings within these areas where possible.

Fig. 3.8: Diagram illustrating the key elements to structure future development

The diagram, left (Fig. 3.8) illustrates how the elements highlighted on the previous spread combine to provide the structure for future development.

1. The coastal park (shown in pink) should be extended along the waterfront from the east to form a new resilient and dynamic coastline. This connects into the existing open space to the west of the Framework, which should be retained and enhanced.

2a. Key arteries (shown in orange) linking from south of the city centre into Waterfront Broadway and from Leith/city centre to the east should be reinforced with road improvements to better connect new and existing communities to one another and the wider city.

2b. Urban anchors (shown in yellow) should be formed at two key locations along these routes. Waterfront Broadway/gas holder down to the waterfront and along West Harbour Road. These should be focal areas for non-residential uses positioned at ground floor.

3. Landscape and public spaces
A range of green spaces should be established and development should connect to and enhance the existing green network where possible.

4. Heritage assets, views and new / existing routes
Development should take advantage of views to the sea, city, park, gas holder and other heritage assets, which should be retained where possible. The street layout should enhance views and connect to existing routes.

5. Public transport and active travel should be integrated along key arteries and key streets.

6. The urban block structure sets out build zones and a street layout which future development should adhere to.

The following pages expand upon the key principles to establish high level strategies for the Development Framework area. Future proposals should generally accord with the guidance in the subsequent sections.

3.2 Landscape and Public Spaces

The design principles of key spaces are described in more detail in Chapter 5.

Fig. 3.9: Diagram indicating location and distribution of public spaces and landscapes

City Scale

Existing Firth of Forth is a varied and biodiverse waterfront (with various protected areas) linking coastal communities on a regional scale, (Fig. 3.10)

New Coastal Park to be created to provide recreation and amenity for Edinburgh's residents and visitors and to provide integrated flood defences, (Fig. 3.11)

Neighbourhood Scale

Existing Forthquarter Park is an already established neighbourhood scale landscape, (Fig. 3.12)

New Cultural Plaza to be formed along the existing Diagonal path/cycleway at key junction between proposed new NGS and NMS facilities, (Fig. 3.13)

Local Scale

Existing Quarry pond is currently inaccessible. It should be retained and activated, (Fig. 3.14)

New Community pitches associated with school to be provided. Final site to be determined but it should be in proximity to new school and be accessible to community outwith school use / hours, (Fig. 3.15)

A range of public spaces are to be established with differing characters which integrate with the green network.

The aim of the landscape strategy is to create a hierarchy of linked public spaces and routes. These are broken down into: city, neighbourhood, local and street scale spaces. The diagram opposite (Fig. 3.9) illustrates where new city and neighbourhood public spaces should be created and where existing spaces should be retained and enhanced. It also provides an indication of the distribution and location of local and street spaces.

City Scale: spaces should offer leisure, recreational opportunities and amenity for all of the community and visitors. They should be connected to the wider city through public transport and active travel routes. Biodiversity should be protected and enhanced and ecological corridors connecting to wider green networks established. The new coastal park should provide areas of high-quality landscaped amenity space alongside more natural spaces. Flood defences should be integrated into the landscape design.

Neighbourhood Scale: spaces should connect into the city scale spaces and provide green and active travel links to surrounding areas. Key civic uses such as the school, health centre and cultural facilities should front onto and be connected by neighbourhood spaces. Active ground floor uses should be focused around these spaces to promote use, activity and opportunities for resource sharing between institutions.

Local Scale: At a local scale, a network of publicly accessible routes and 'pocket parks' are to be positioned throughout the site. These should connect new developments into the surrounding neighbourhoods and the waterfront. They should provide additional green space, variety and local amenity spaces for both new and existing residents. These should be overlooked by surrounding development and provide opportunities for recreation, relaxation, outdoor play and learning.

Street: the design of streets and gardens should also promote and enhance the overall green infrastructure of the development and provide shared or private garden spaces for all residents.

Note: A Habitats Regulation Appraisal (HRA) and Strategic Environmental Assessment (SEA) will be required to further inform impact, scope and relevant mitigation of proposals within tis Development Framework.

3.3 Blue-Green Infrastructure

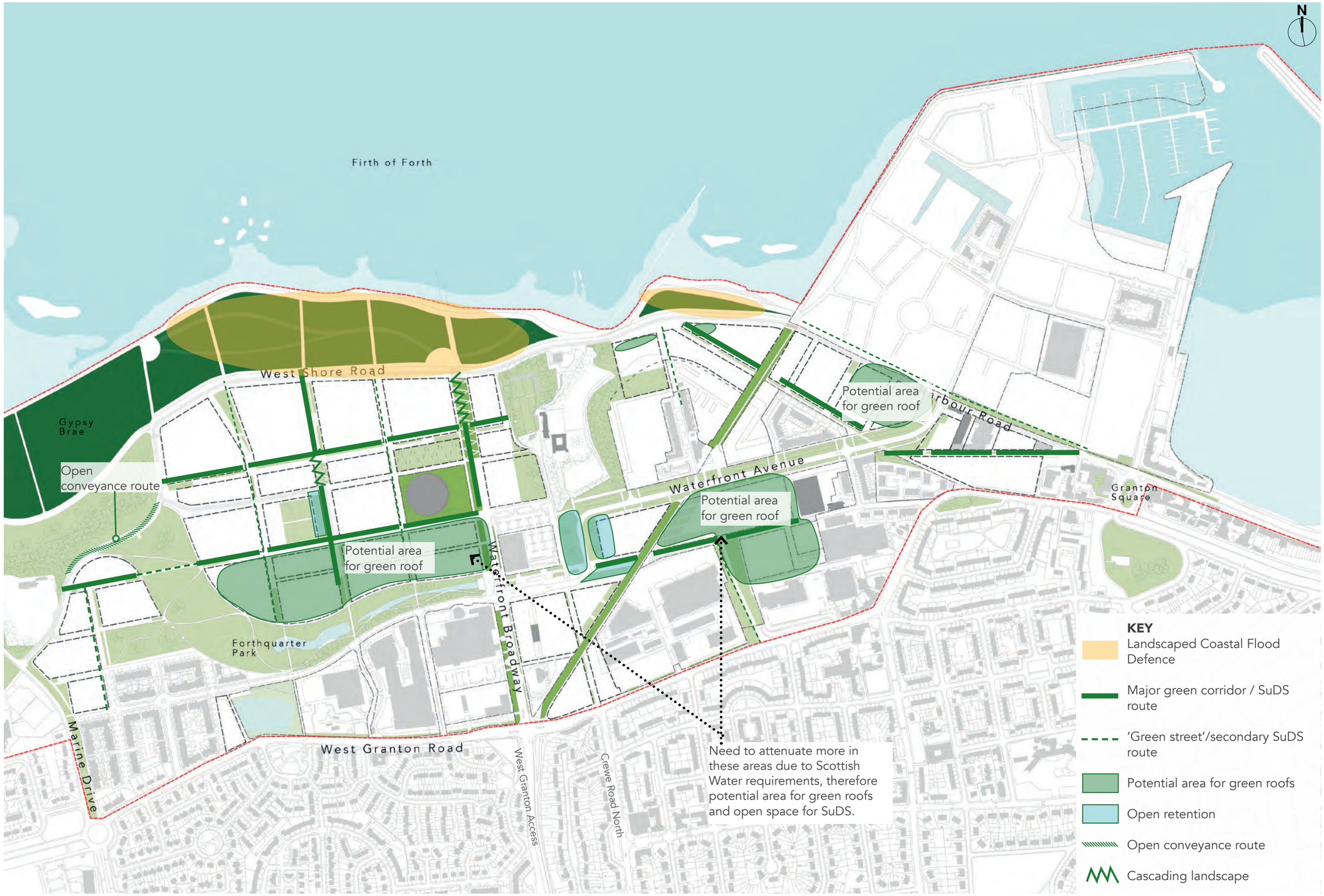


Fig. 3.16: Diagram indicating blue-green infrastructural priority areas and locations

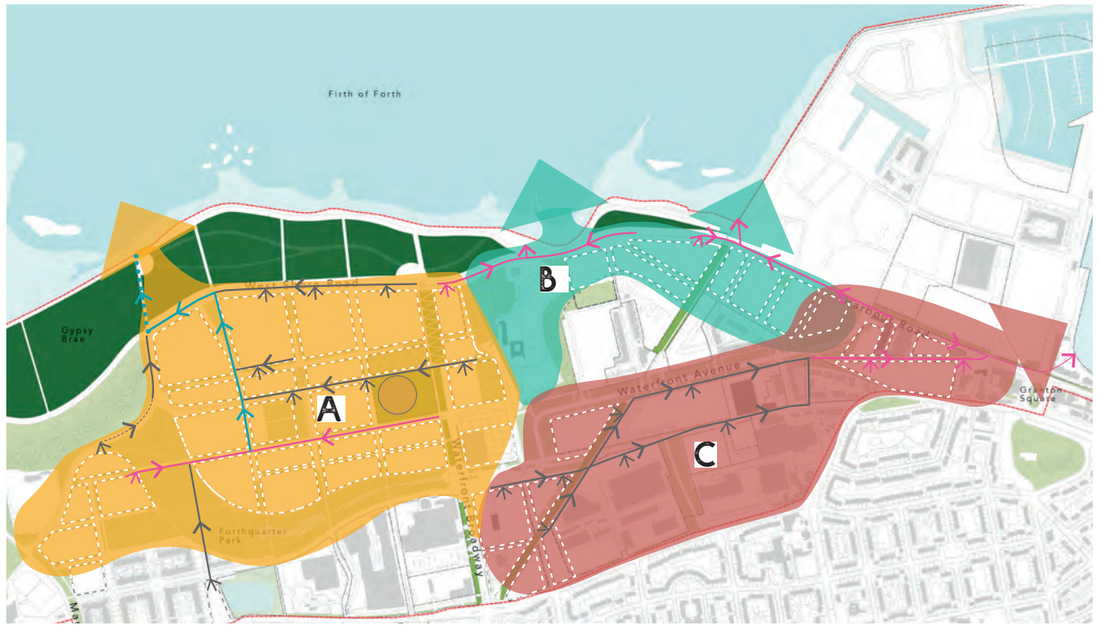


Fig. 3.17: Catchment areas, outfalls and conveyance routes

KEY

Proposed pen conveyance

Proposed pipe

Existing pipe

Pipe status to be confirmed

Sub-catchment A
Draining to western outfall (assume that this is not yet constructed)

Sub-catchment B
Draining to northern outfall

Sub-catchment C
Draining to eastern outfall

Fig. 3.18: Examples of blue-green infrastructure swales

Fig. 3.19: Examples of blue-green infrastructure green walls

An integrated landscape and drainage strategy is to be put in place that provides climate resilience, place-making, space for ecology and well-being.

Blue-Green Infrastructure (BGI) integrates hydrological functions with nature, landscape and planning. It makes use of blue (water) and green (nature, plazas and parks) to future proof drainage infrastructure capacity, protecting against flooding and the effects of climate change. BGI principles should be applied throughout the framework area.

As part of this, development should be set back from the shoreline to create a flood resilient coastal park which manages coastal flood risk through landscape features.

Surface water across the Framework area should be managed and drained via SuDS (Sustainable urban Drainage Systems) to receiving water-bodies or sewers. The SuDS strategy should first focus on maximising prevention and source control measures followed by site control through landscape features. Large engineered regional controls should be avoided where possible. Where these are needed to meet attenuation and treatment requirements they should be used as a placemaking opportunity. SuDS features should be integrated into streets, open-spaces and within building plots and should contribute to a distinctive sense of place and habitat connectivity within the framework area. BGI should work with the existing topography, proposed street and block structure and provide a holistic approach to landscape and drainage. SuDS source control on a plot and site wide basis may include: swales, rain gardens, permeable paving, rainwater harvesting and green roofs in key areas. The diagram opposite, (Fig. 3.16) indicates where key surface water conveyance routes and source control areas should be located relative to an integrated approach to BGI across the site.

A skeleton drainage network and associated sub-catchment areas are shown in the diagram left, (Fig. 3.17). Potential discharge points and acceptable run-off rates have been assessed based on high level topographical information and existing desk top studies. Development within each sub-catchment area should accord with these, with agreement sought from CEC and Scottish Water early in the design stage. Maintenance and adoption regimes and responsibility should also be agreed as early as possible.

3.4 Historic Assets

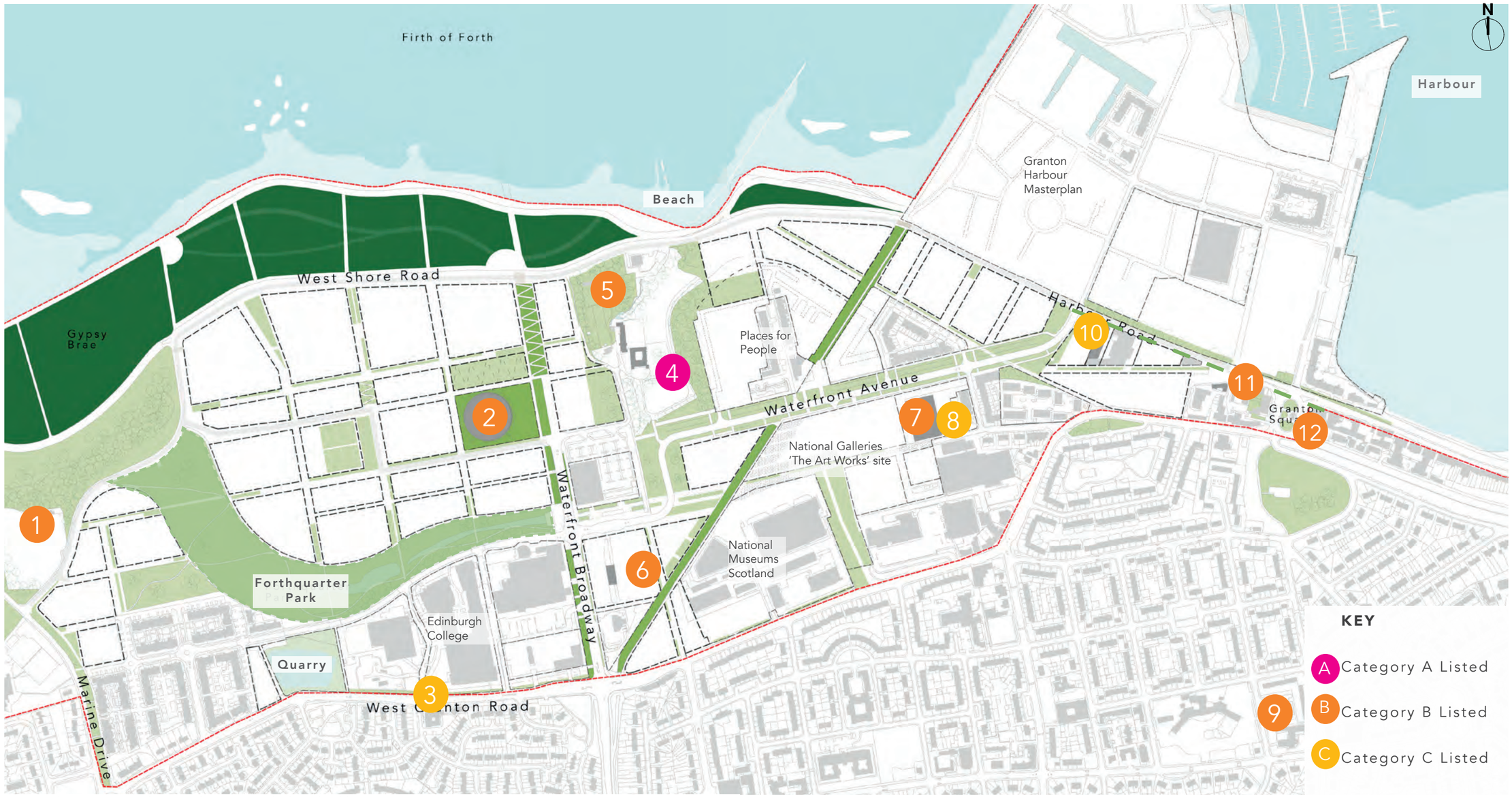


Fig. 3.20: Diagram indicating locations of identified heritage assets

Fig. 3.21:
Craigroyston House

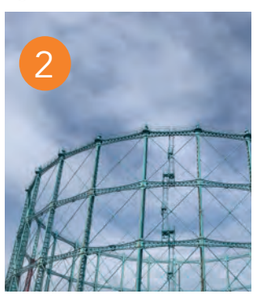


Fig. 3.22:
Granton Gas Holder

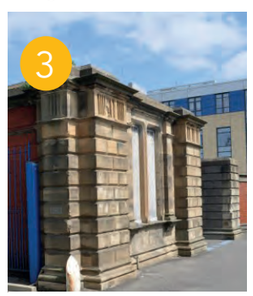


Fig. 3.23:
Gasworks Gatehouse

Fig. 3.24:
Caroline Park House

Fig. 3.25:
Walled Garden

Fig. 3.26:
Station Building

Fig. 3.27:
Madelvic Car Factory

Fig. 3.28:
Madelvic House

Fig. 3.29: Granton Castle, no longer in existence, around since 1479, photo: pre-demolition in 1928

Fig. 3.30:
Granton Parish Church

Fig. 3.31:
Granton Lighthouse

Fig. 3.32:
Former Custom House

Fig. 3.33:
Granton Square

Granton is home to a number of valuable heritage assets and historic buildings. These should be preserved and enhanced by new development.

Heritage assets, including those identified in the opposite diagram and pictures (Figs. 3.20 - 3.33) should, where possible, provide key anchor points for new routes and development. New development should ensure that existing heritage features are linked and integrated into the wider network of open spaces and new routes. The streetscape should establish views to and protect the setting of existing assets. Notably, the historic setting of Caroline Park House as a private home of historic significance should be maintained.

Many of the existing vacant buildings such as The Granton Gas Holder, Station Building and Madelvic Car Factory should be subject to creative and adaptive re-use. Opportunities to develop and enhance Granton Castle Walled Garden as a community based garden should also be explored. Proposals for these important buildings and landscapes should consider short, medium and long term potential and opportunities - including creative meanwhile uses whilst development opportunities evolve.

The policies developed for the heritage assets within Granton should be based primarily on the approach and processes set out in BS 7913: The Conservation of Historic Buildings. This approach uses significance as a framework for managing, revealing and enhancing the historic environment. It is also a practical strategy that takes into account drivers for change, whether they be economic, social, environmental or building condition.

3.5 Connections, Access and Views

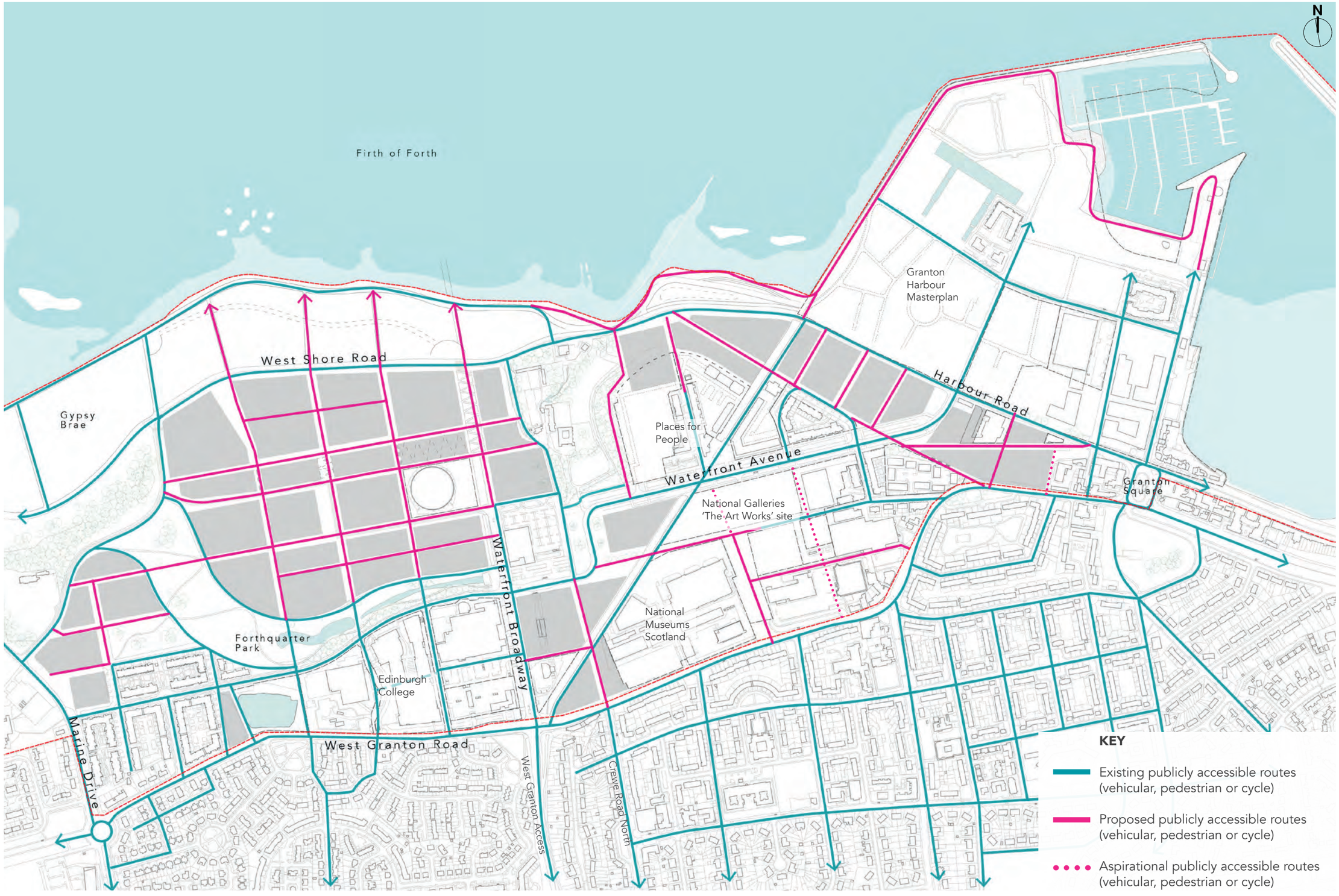


Fig. 3.34: Diagram indicating existing (blue) and proposed (Pink) routes through and around site

Fig. 3.35: Existing site diagram highlighting the extent impermeable areas (indicated in orange)

Fig. 3.36: Existing coastline and views to the Firth of Forth

Fig. 3.37: Provide views to coastline and park along shared green routes

Fig. 3.38: Streets and sloped topography in Edinburgh city centre

A network of safe and well-connected routes should provide access and views for all to the waterfront, parks and key buildings. These should connect new development with existing routes.

The existing site currently lacks permeability and safe routes or access to the waterfront. The diagram to the left (Fig. 3.35) indicates the extent of the challenge with no access through some large swathes of land for up to 500-700m in some areas.

The Development Framework creates a path and street network which provides a series of routes re-connecting new and existing areas. The proposed new routes and connections to existing routes are illustrated in the diagram opposite (Fig. 3.34). Aspirational routes are indicative of areas where increased permeability would be desirable.

The street layout should enhance views to the sea, city and historic assets and should connect to existing routes. These routes should work with the existing topography, street pattern and views and be pedestrian and cyclist friendly. Routes should be publicly accessible, overlooked by development and promote active travel. Street design should align with Edinburgh Design Guidance.

Further detail on the character and guidelines for key routes is provided within Chapter 5 and Chapter 6.

3.6 Integrating Public Transport

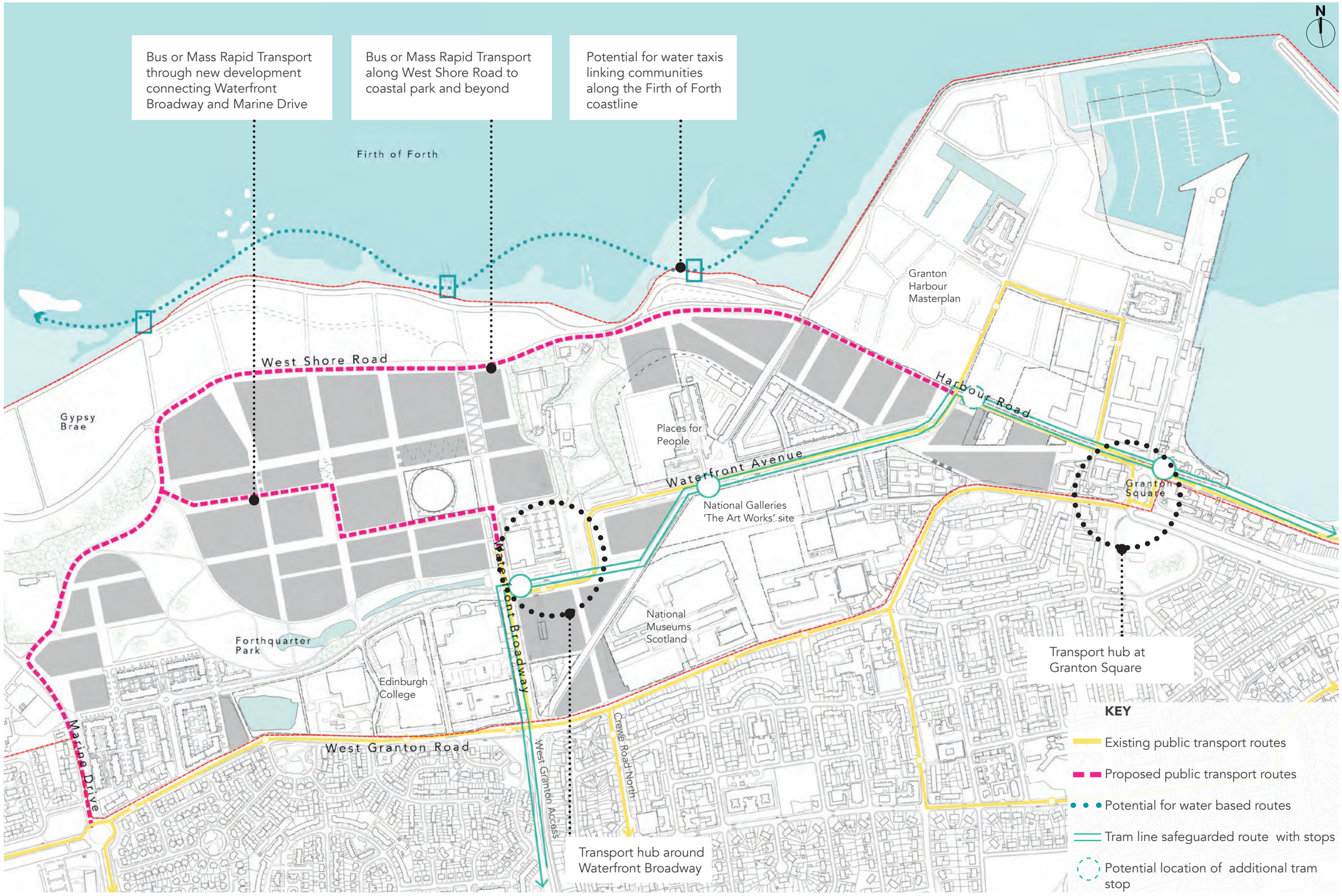


Fig. 3.39: Diagram indicating public and Mass Rapid Transport (MRT) routes, bus routes and transport hubs

Integrating Public Transport and Active Travel

3.6

Fig. 3.40: Water taxi, Rotterdam

Fig. 3.41: Transport hub and interchange, Copenhagen

Fig. 3.42: Car clubs and electric car charging points

Fig. 3.43: Cycle hire scheme

Planning Advice Note 75 (PAN 75) provides good practice guidance for planning authorities and developers. One of its main intentions is to ensure that new developments are more user focused and provide genuine travel choices in order that each mode of transport achieves its full potential and interchange between modes is also simplified.

In terms of accessibility one of the key aspects of PAN 75 is to stipulate recommended walking and cycling distances for access to key services and facilities. It recommends that new development should be located so as to allow access to bus services within a maximum distance of 400m (5 minute walk) and up to 800m (10 minute walk) for rail. Local services such as shops, post offices and GP offices should also be available within a 1,600m walk (20 minutes).

Granton Waterfront should lead the way in Scotland with a low carbon approach to transport that ensures the area is sustainable and well connected.

Current key policy and guidance rhetoric in Scotland is rapidly moving towards 'low-carbon placemaking' polices which provide for a broader, sustainable, low carbon travel ethos. A transport strategy for Granton Waterfront has been developed. This proposes a series of modal shifts in transport behaviour to ensure a move away from individual car ownership towards active travel, high speed public transport, electric car and car-club opportunities with cycle routes and two new transport hubs. Transport proposals for Granton should support current policy and strategy and also demonstrate flexibility and foresight to be able to adapt and evolve with the fast pace of innovative social and technological change. Future development proposals in Granton Waterfront should illustrate how they support this approach.

Further considerations include:

- Proposed transport routes, identified in diagram opposite (Fig 3.39), should provide the potential to extend the local bus network.
- Bus and mass rapid transport (MRT) stops to be located within distances stipulated in PAN 75 (extract provided to left) from new development.
- The tram line safeguarded route should be maintained to ensure that future MRT options remain possible.
- Provision for electrical car charging infrastructure should be integrated across the framework area, in line with the requirements set out in the Edinburgh Design Guidance.
- Car clubs should be provided at key locations across the site.
- Potential for transport hubs to be located at 2 key locations in the framework area to include: public transport interchange facilities; electric vehicle charge points; interactive way finding; car club spaces; bike rental; delivery collection points and cycle parking (see. Fig. 3.39).
- The coastline should provide potential for water based transportation stops.

3.6 Integrating Active Travel

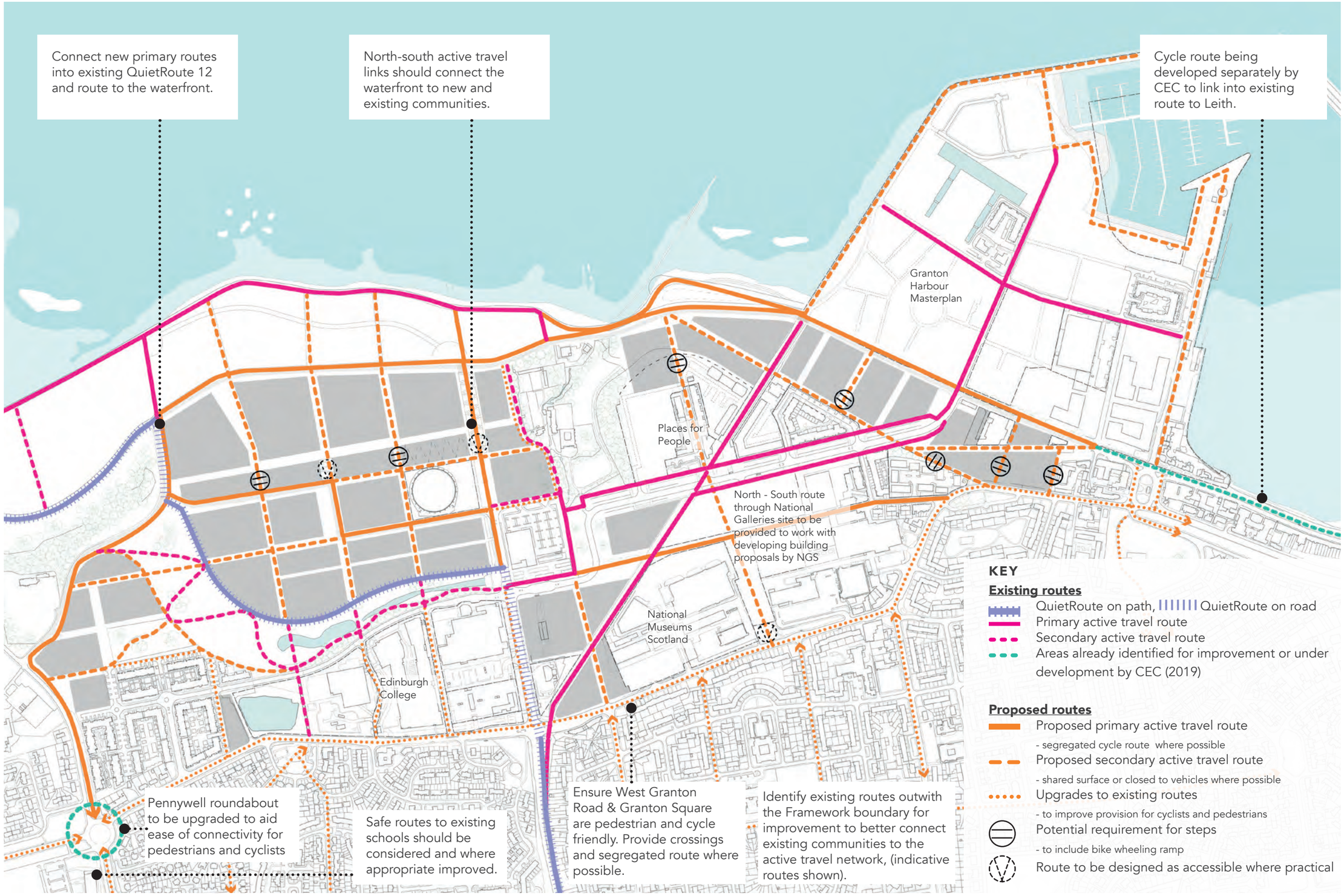


Fig. 3.44: Diagram indicating existing and proposed active travel routes

Integrating Public Transport and Active Travel

3.6

Fig. 3.45: Segregated active travel routes along key arteries

Fig. 3.46: Car free streets with sufficient daylighting which incorporate space for play and socialising

Active travel modes should be prioritised and where possible measures to encourage their use should be implemented.

Walking and cycling are the most cost effective and environmentally friendly modes of travel and development should support the uptake of these modes. A distinct network of footpaths and cycleways should be provided all of which should be well lit and overlooked by development. Maximising and enhancing active travel connections out-with the Development Framework area to and from key destinations should also be considered.

Further considerations include:

- Residential streets should be designed to be pedestrian and cyclist priority.
- West Granton Road and Granton Square should be upgraded to be pedestrian and cycle friends and provide segregated cycle routes where possible.
- Local amenities should be provided across the site to minimise the need for outward travel.
- New walking and cycling routes should be provided to infill gaps in the current provision, (as indicated in Fig.3.44). Primary routes should be wider and connect into key routes to link the development framework site to the wider city. Segregated cycle routes should be provided along key vehicular arteries where possible.
- Streets design should incorporate on street cycle parking, especially in proximity to key public spaces and non-residential uses.
- Transport for Edinburgh's Bike Hire Scheme rental stations should be provided at transport hubs in Granton Waterfront. Other potential locations for the expansion of this network should be considered.
- Cycle and pedestrian routes should be designed in line with CEC guidance.
- Development should minimise the impacts of gradient changes within the site and provide accessible routes, where possible.
- New pedestrian and cycle crossing points should be incorporated at key points on north-south routes to West Shore Road, West Granton Road and Lower Granton Road.

See Chapter 5: Section 5.3, page.90-99 for indicative sections of key routes.

3.7 Vehicular Movement

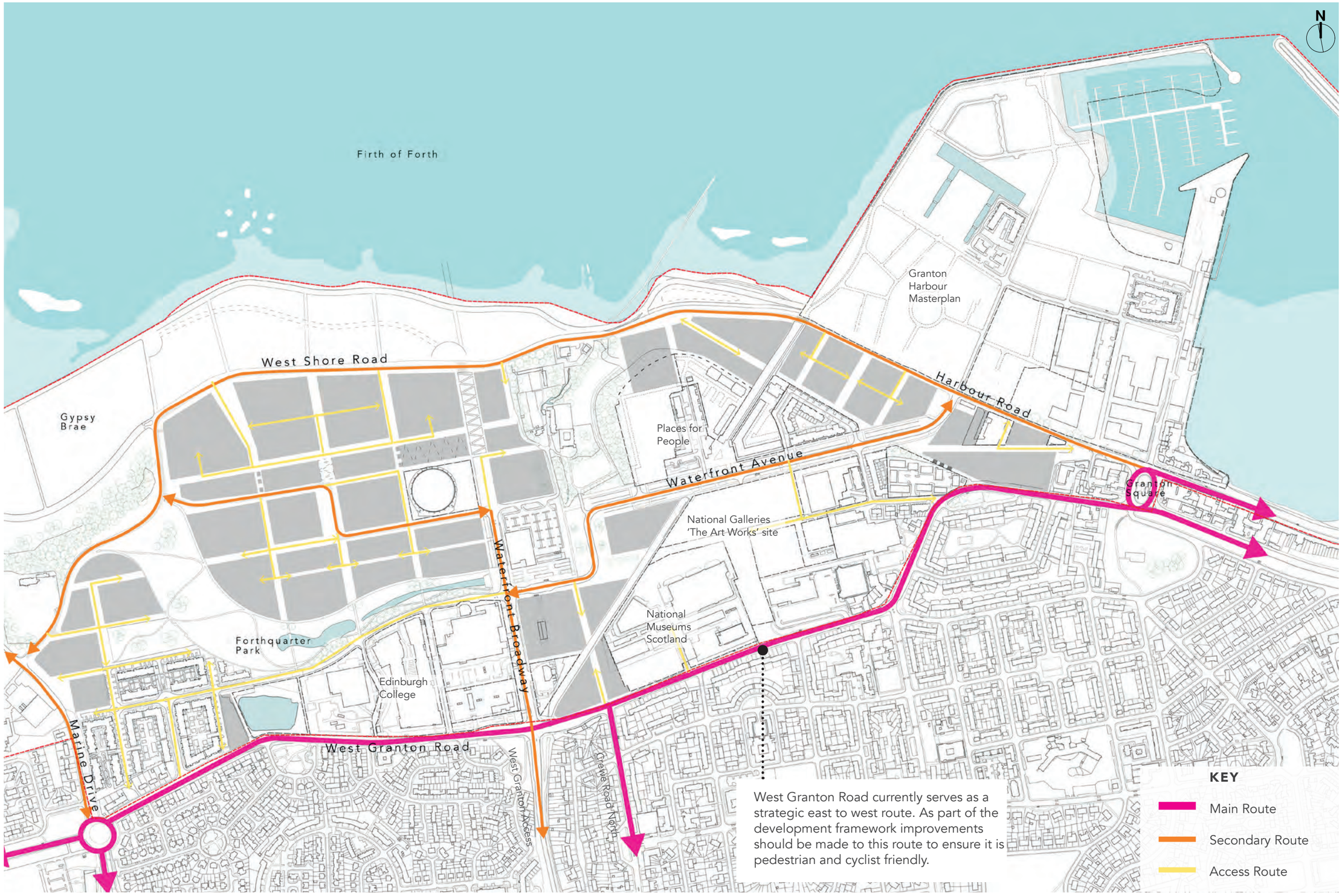


Fig. 3.47: Diagram indicating vehicular routes and road hierarchy

Fig. 3.48: Parking to back courts, Edinburgh

Fig. 3.49: Parking integrated into streets, Rotterdam

Residential areas are to have safe, pedestrian-centred streets.

The diagram opposite (Fig. 3.47) demonstrates the vehicular hierarchy across the site. This indicates primary, secondary and tertiary access routes.

Main routes should provide the main vehicular circulation routes to link Granton to the city centre and beyond. Upgrades to key junctions and roundabouts should be considered. These streets should be pedestrian and cycle friendly and provide crossing points at key locations.

Secondary routes should provide circulation and access for local traffic with segregated cycle lanes. Public transport and active travel should be prioritised with the potential to extend the local bus network along these streets.

Access routes should be shared space routes for local vehicle and service access only. Consideration should be given to some of these routes being designated pedestrian / cycle only. Other routes within the framework not highlighted here should be pedestrian / cycle only, with controlled service access.

Parking
Private car parking provision should be kept as low as possible across the site, with a maximun of 25% parking across the site. This should be supported by the promotion of the modal shifts in transportation methods and improved public transport links as outlined earlier.

The majority of resident parking is to be provided in-curtilage or to back courts. Only visitor, accessible, electric charging and car club parking spaces should be provided on the street. Where this is provided, it should be designed to be integrated with the streetscape and landscape features. A consistent approach to parking is preferred across the site. However, individual blocks may propose alternative parking solutions so long as they can be justified to provide similar benefits to access or amenity.

Secure cycle stores should be provided within blocks at key locations with direct and dedicated access to streets.

Fig. 3.50: Illustrative view of new residential street looking towards the Firth of Forth

3.8 Block Structure and Street Frontages

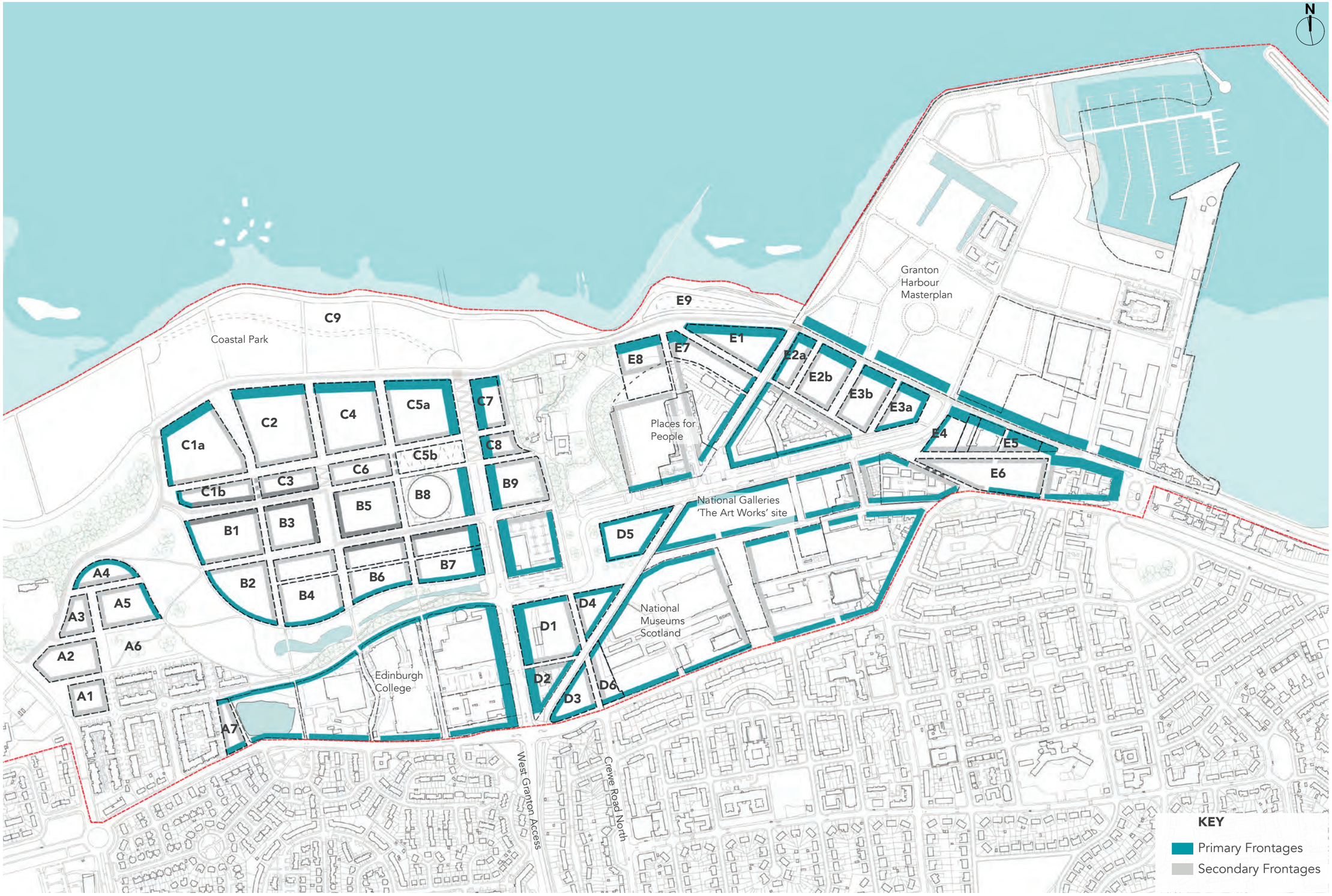


Fig. 3.51: Diagram indicating proposed block structure and primary and secondary frontages

Fig. 3.52: Primary frontage example

Fig. 3.53: Secondary frontage example

A clearly defined block structure is to set out street frontages which have clear urban delineation between public and private areas.

The Development Framework should set up an urban block structure based on the layout set out opposite (Fig.3.51). This block structure should be developed to avoid significant diversions to existing utility infrastructure - see Appendix A2.4. Indicative block numbers are provided here, which are referred to in subsequent pages of the report.

All development should aim to build to the block perimeter to define an urban character and to provide a hierarchy of frontages within the blocks with distinct approaches taken to primary and secondary frontages. Examples of primary and secondary frontages are illustrated opposite, (Fig. 3.52-53).

Primary frontages should respond to key urban anchors such as the coastal park, West Granton Road, Waterfront Broadway and Harbour Road. They should respond to their adjacent character area and address the primary streets appropriately. Active and non-residential uses should be concentrated along these primary frontages. Small privacy buffers or areas where activity can spill out on to street should be considered at ground floor.

Secondary frontages should address the local streets and be distinct from the primary frontages. They can incorporate a privacy buffer such as a small residents garden or planting. They should remain active through positioning of entrances and key living spaces facing onto these frontages.

All street frontages must provide clear delineation between public and private areas using a variety of low walls, fences and landscaping. Active ground floor uses and principle living areas should be clearly articulated on building façades so that they generate activity to the street, capture views and provide variety to elevation treatments.

Each block sits within a specific character area (outlined in detail in chapter 4) which further define the uses, typologies and identity of particular areas within the Framework. More detailed examples of street sections for key frontages are provided in chapter 5.

3.9 Housing Typologies and Tenure Mix

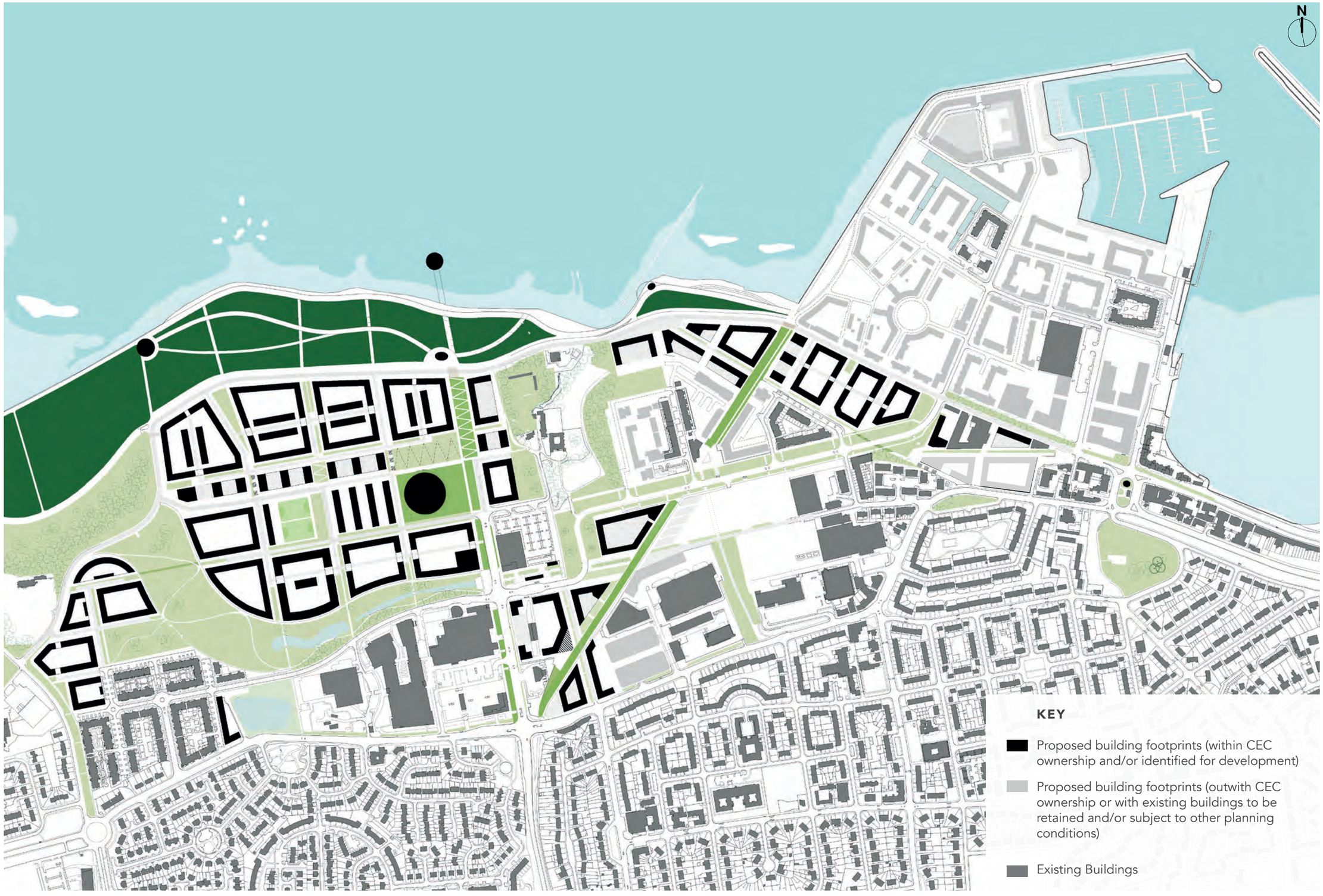


Fig. 3.54: Diagram showing indicative block footprint layout and mixture of typologies

Fig. 3.55: Self-Build Development, Portobello

Fig. 3.56: Marmalade Lane CoHousing, Cambridge

Fig. 3.57: Tenure Blind development in nearby Pennywell

Fig. 3.58: Safe Streets, with defined public and private spaces, Cambridge

Proposals should aim to deliver mixed size, typology and tenure blind development serving a wide range of households with homes for both sale and rent.

A variety of house types and approaches should be provided across the site which enable people to live in homes and streets that are fit for individual and changing needs. Housing should be a mixture of sizes and tenure blind where possible. The potential for alternative housing models such as CoHousing and self-build should be considered.

Typologies should avoid single-aspect homes and long-internal circulation lobbies. Instead they should maximise opportunities for natural ventilation, light and social interaction between neighbours. All housing should provide residents with private or shared amenity space and clearly defined boundaries between public and private spaces.

The diagram and examples opposite (Fig. 3.54-3.58) are indicative of the location and typology of blocks that could be taken. These relate to traditional Edinburgh typologies and include: perimeter blocks; mews housing; colonies; point blocks and 'Gusset' corner buildings. These typologies have been selected to align with the Development Framework principles and to provide family accommodation in accordance with Edinburgh Design Guidance.

Alternative footprints and typologies may be proposed but they should demonstrate how they respond to the site's unique topography, Character Areas, Principles and Vision. They must also demonstrate how they align with the requirements established by the Development Framework.

More detailed layouts of typologies are provided for reference in Appendix A2.5.

3.10 Heights and massing

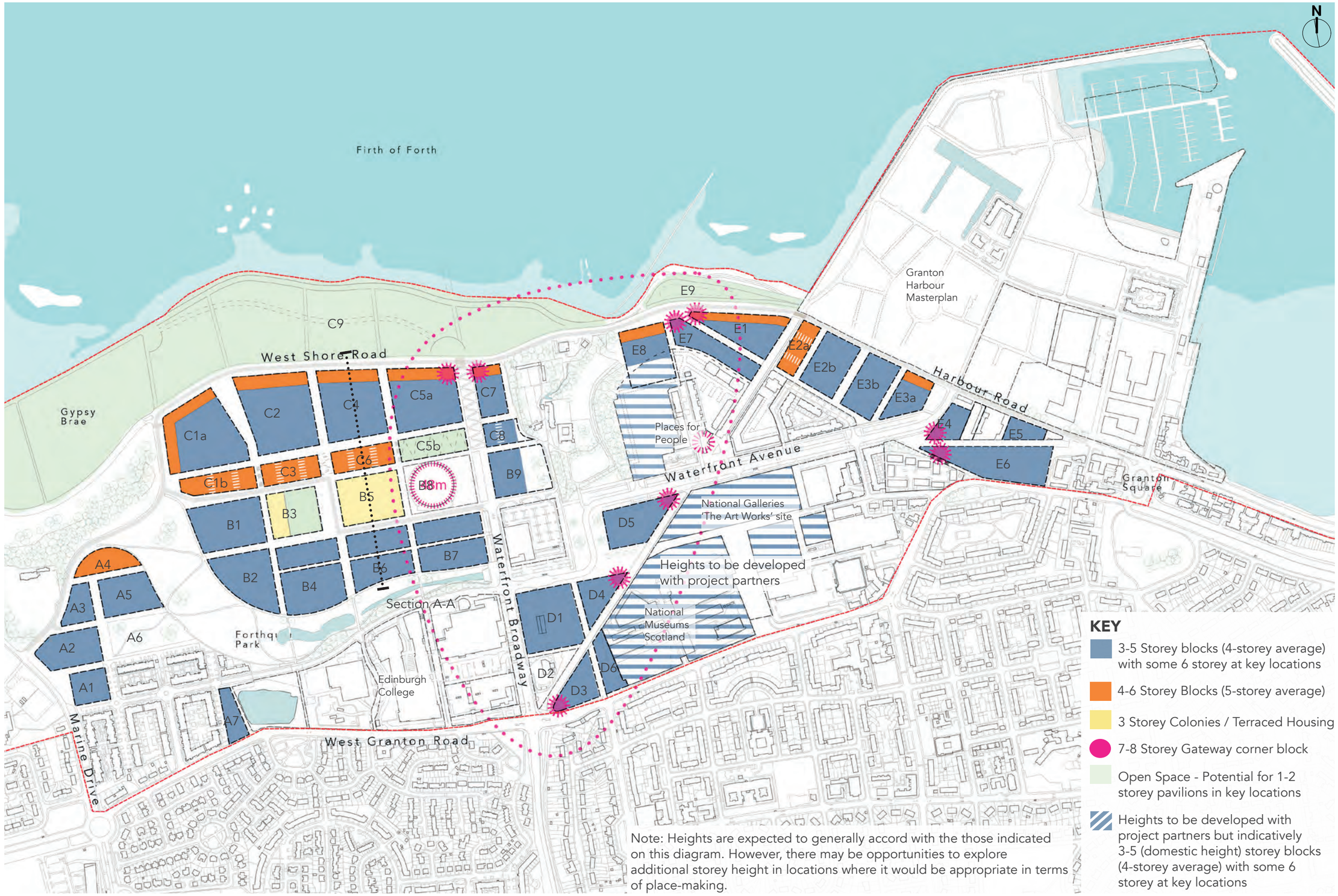


Fig. 3.59: Diagram indicating heights

Fig. 3.60: Point blocks at key corners mark entrance gateways.

Fig. 3.61: Medium rise, human-scale blocks to majority of site

Fig. 3.62: Low rise colonies and town houses in key locations and potentially within perimeter blocks

Fig. 3.63: Small pavilion buildings for refreshments and low impact coastal activities. e.g. Sauna in Helsinki

Development should respond to the site's sloped topography and provide a mix of building heights and forms.

The majority of development within Granton should be medium-rise. The proposed building heights should vary across each block to respond to particularly sloped situations, character areas/uses and key views and gateways. The development of the entire block to an entirely consistent height should be avoided. Heights should vary along individual frontages - within each block - to create a varied roofscape that optimises views and daylight, with an emphasis on higher buildings at key gateways and strategic routes. Equally, the site should consider opportunities for lanes and mews development, particularly within larger and stepped blocks. The proposed heights for each block (Fig. 3.59) and illustrative design approaches to buildings (Fig. 3.60-3.63) set out by the Development Framework are illustrated opposite. Heights are expected to generally accord with the those indicated on Fig. 3.59. However, there may be opportunities to explore additional storey height in locations where it would be appropriate in terms of place-making.

Regardless of height, all development should provide animated street frontages and respond directly to existing site assets and topography, as illustrated in the indicative section A-A below, (Fig. 3.64). All proposed heights will be required to demonstrate sufficient daylighting to habitable rooms and sunlight to amenity space in accordance with the Edinburgh Design Guidance. The proposed density and massing of development should also ensure Granton has an urban feel, pleasant

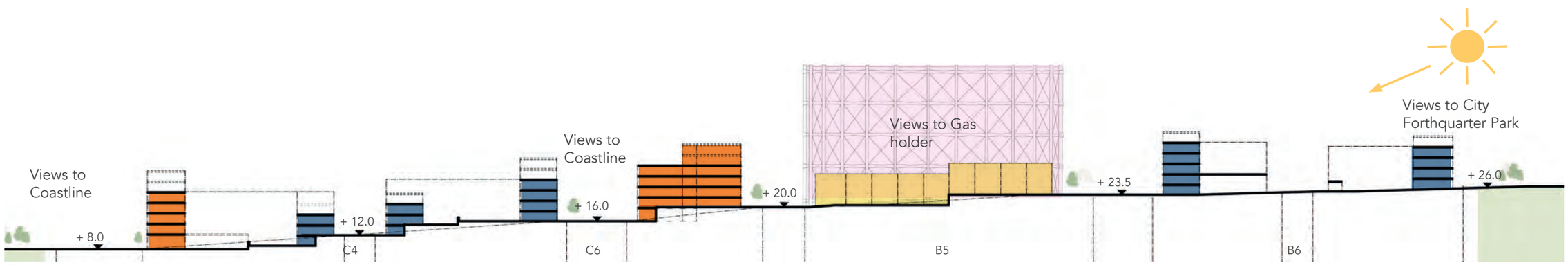
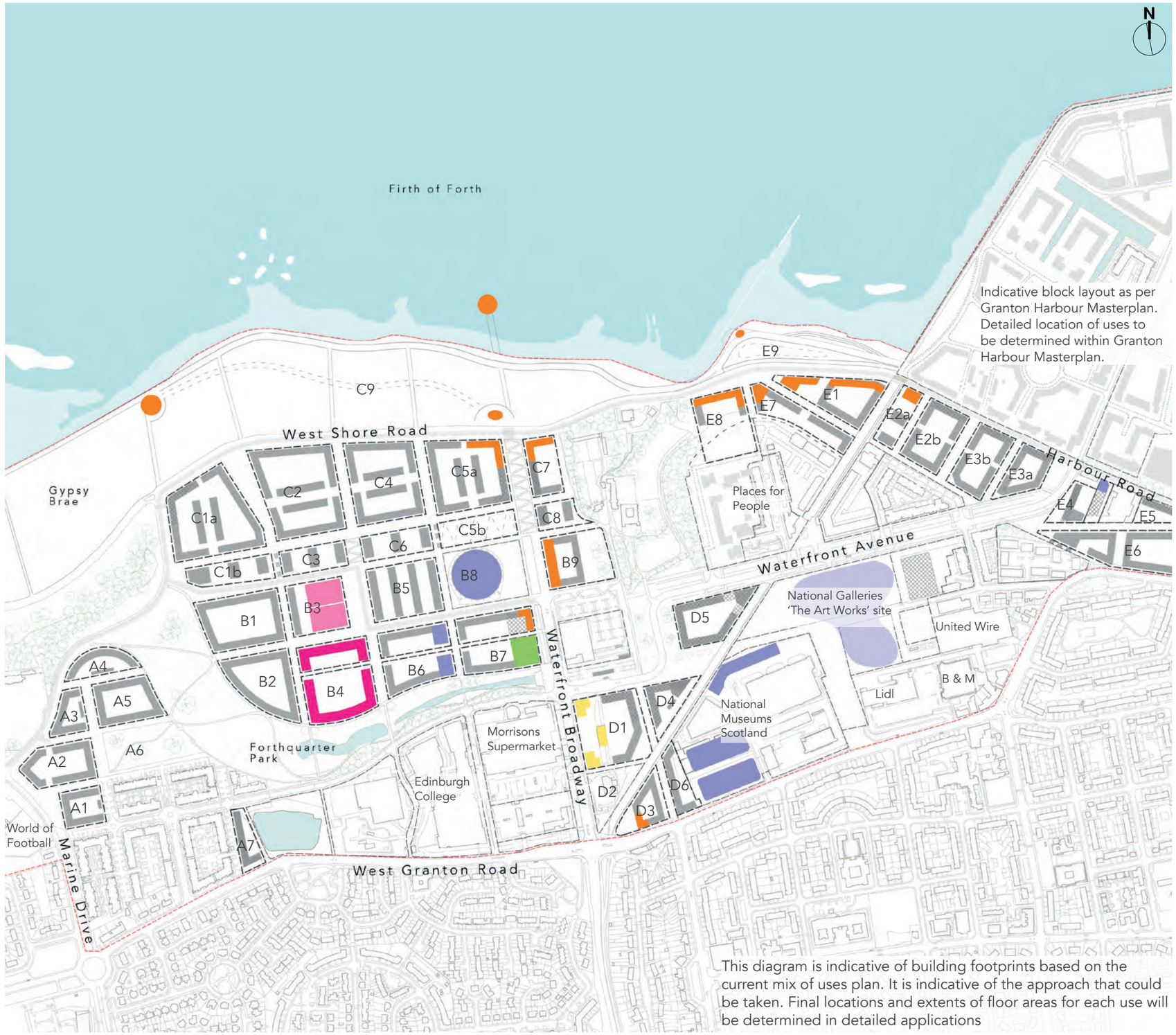


Fig. 3.64: Section A-A through site (indicative levels only)

3.11 Proposed New Uses



This diagram is indicative of building footprints based on the current mix of uses plan. It is indicative of the approach that could be taken. Final locations and extents of floor areas for each use will be determined in detailed applications

Fig. 3.65: Diagram showing indicative uses and locations

Residential
The Development Framework should consist mainly of perimeter residential blocks with mixed use ground floor spaces at key locations.

Class 1, 2, 3, 4 (1 = shops, 2 = financial, professional and other service, 3 = food and drink and class 4 = business)
Community spaces, shops and cafés should be provided at ground floor throughout the development Framework focused around key public spaces and routes. Housing should be provided to upper floors.

Additional Class 1, 2, 3, 4
Areas should be designed to allow for potential inclusion of non-residential ground floor uses if demand is there.

Healthcare
Provision has been made for a potential 1400 sqm health centre subject to NHS Lothian confirming their requirements. It is proposed that this be located to the prominent corner at Waterfront Broadway and Forthquarter Park as part of the key pedestrian link between a new transport hub and the pedestrian link to the Waterfront. There are opportunities to link this with elderly supported housing.

Education and Learning
Proposals for the integration of a new urban primary school are being developed by CEC. There is an opportunity for complementary facilities, such as a nursery, library and community pitches located overlooking Forthquarter Park (B4). These are to be considered within the context of the urban character of the area. Site for proposed new Edinburgh College Construction Skills Centre to be around Waterfront Broadway and to provide links to other learning and education facilities.

Arts and Culture (mixed use)
Proposals for a new National Galleries 'The Art Works' building, new use for gas holder, library and extensions/adaptations to the existing National Museums site.

Enterprise and Innovation
Area to be considered for start-up and new business, learning and community spaces. These should incorporate publicly accessible facilities.

Fig 3.62B
Proctor & Matthews Architects and photographer Tim Crocker

Proposed New Uses

Arts and Culture
Granton is home to The National Museums Collection Centre on West Granton Road and the proposed 'The Art Works' facility for National Galleries of Scotland (to Waterfront Avenue). Proposals should build on these key centres and nurture existing learning and cultural organisations such as the Walled Garden, North Edinburgh Arts and Granton Hub to support the community in Granton.

Existing groups/businesses
A wide range of businesses and local groups operate in and around Granton. Consideration should be given as to how to support, develop or relocate existing businesses and groups, where required, in line with the Granton Principles. Existing groups should be supported and new businesses nurtured and encouraged. Existing businesses to West Granton Road should link to Harbour Road and Waterfront Broadway.

Leisure, Retail and Commercial
The Waterfront and proposed Harbour Road link Edinburgh's Coastline with Cramond and Newhaven/ Leith. This area should foster both new and existing leisure opportunities and provide intense areas of small scale commercial activity to Harbour Road and key junctions. New uses to this area should reinforce the waterfront potential and encourage ready access for all.

Learning, Health and Education
The area around Forthquarter Park and Waterfront Broadway provides a focus for learning and health opportunities. This area should consider place-based learning and increased access to open space and skills development (in the widest sense). Any new school, health centre and new learning or skills development facilities should consider between new and existing facilities in the area.

Enterprise and Destination
Waterfront Broadway and the gas holder offer the potential to build on the existing businesses and uses within the area. The reuse of the Station Building has potential to become a thriving commercial/ creative hub bringing vibrancy and jobs to Granton. 'Meanwhile uses' should also be considered to key buildings and sites.

Fig. 3.66: Description of indicative clusters of uses and locations within the site

Granton Waterfront should be a mixed-use area which prioritises innovation, promotes sustainable urban living, invites entrepreneurship and makes space for nature.

The Development Framework should provide over 3000 new homes combined with other mixed uses clustered around key urban anchors.

The mixture of uses should provide the necessary amenity and functional space required to support a large new community whilst bringing a range of employment opportunities onto the site. New uses should complement existing retail and leisure facilities available locally and provide space to accommodate a range of convenience retailing, food and beverage outlets, support services and small scale offices.

The position of any non-residential ground floor space should focus on high footfall areas between the park and transport nodes. This should help to define 'urban anchors' within the development. Any uses should be considered in a three dimensional way with opportunities for mixed uses to be 'stacked' vertically to be explored.

Key clusters of complementary uses should be established, as described alongside the adjacent precedent images. The diagram opposite (Fig. 3.65) provides an indicative approach to locations of uses that should be proposed. Final locations and extents of floor areas for each specific use will be the subject of detailed applications.

Fig. 3.67: Illustrative view of Station Building looking towards the city centre


Sonny's
YARD

3.12 Sustainability and Energy Strategy

Ecosystems and Biodiversity

Energy and Materials

Economy, Society, Health and Well-being

Water

Mobility and Connectivity

The City of Edinburgh Council has developed a series of Sustainable Design Principles in association with Kraft.

These set out detailed guidance under a series of key themes outlined in the above images. Any new developments should refer to this document and adhere to these Principles.

Fig. 3.68: Images from energy and sustainability report, prepared by Kraft for CEC

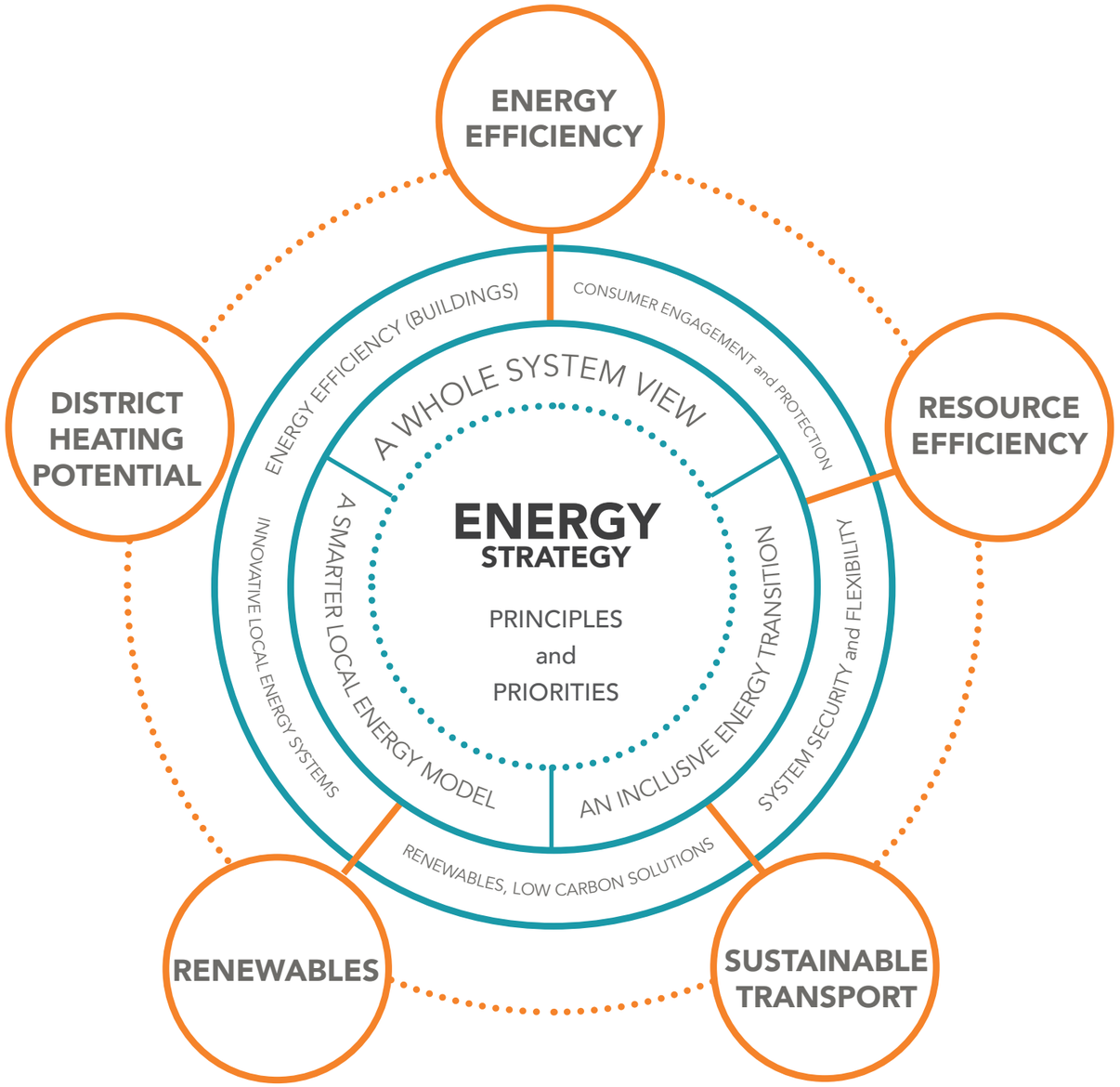


Fig. 3.69: Concept energy strategy, principles and priorities, diagram by Arup

Granton Waterfront should positively face the need for climate resilience by taking a holistic, low carbon approach to design, development, energy and behaviour.

The Development Framework sets out clear principles for a low carbon and climate resilient approach to all aspects of design. A concept energy strategy has been developed to support the Development Framework, summarised in the diagram opposite (Fig.3.69). This requires future development to take a 'joined up' and integrated approach towards ecology, energy, health and mobility. Proposals should illustrate how they support this energy strategy as outlined below:

A Fabric First approach to building design: All development must apply a 'fabric first' approach, where the new buildings are designed and constructed to be energy efficient. Development should target passive house standards or exceed the building regulations to reduce energy demand of new buildings.

De-carbonised Energy Systems: All development should support the transition to a de-carbonised energy system to heat and power new buildings, reflecting the national energy strategy.

Renewable Energy: Where possible opportunities to maximise inherent site opportunities for renewable energy generation – from water, solar, ground, sewage, air and wind should be considered.

Deliverable: sustainable solutions should be developed that are practical and deliverable, in line with the phased delivery of the site.

A transition to low carbon transport:
Development should support low carbon transport with integrated cycle use, 'charge at home' electric opportunities, ' fast charging points and car share being prioritised.

Flexibility: in the face of evolving and emerging technologies flexibility should be considered and where possible built into new buildings.

Fig. 3.70: The key elements of the Development Framework are illustrated here in an indicative 3D sketch of the area. This diagram is indicative of the approach that could be taken. However, building footprints will be the subject of detailed applications.

Refuse Strategy

3.13

Underground systems are now widely used across mainland Europe and parts of the UK. Edinburgh already has a number of underground systems within the City Centre. They free valuable above-ground space, reduce any potential disturbances/noise impact for residents and reduce odour as the waste is enclosed underground. Their use and integration requires a site/street-based strategy. The cost of any subterranean system is paid for by the developer and the ongoing maintenance by the Property Management Company / factor.

Fig. 3.71: Underground system in Barcelona

Integral communal refuse stores can be located at the base of each stairwell or within back courts. The stores should be sized to accommodate sufficient facilities to meet the Edinburgh Design Guidance and will contain a range of bins for waste and recycling.
Stores should be accessed directly from within the ground floor of the core for ease of use. Similarly, provision for direct access to the street from the store allows straightforward collection from the existing and proposed adopted roads.

Fig. 3.72: Integral communal refuse stores in London

Landscape Integrated storage areas can be designed as part of a wider street and landscape strategy. Well-positioned stores provide communal storage for street collection by the City of Edinburgh Council. The design and location of the storage areas are critical and should be agreed and developed in association with the City of Edinburgh Council Planning Department and Waste and Cleansing Teams. Between collections these areas are managed by the Property Management Company/factor.

Fig. 3.73: Landscape integrated storage in Glasgow

The refuse storage and collection strategy for Granton Waterfront should meet the requirements of the Edinburgh Design Guidance and be developed in consultation with the City of Edinburgh Council Waste and Cleansing Service.

The need to reduce waste and manage recycling has never been more acute. Addressing this requires urgent behavioural change (in line with Granton Principles) and a site-wide strategy for waste management that responds to its location and topography.

A range of options should be reviewed with City of Edinburgh Council's Waste and Cleansing team. There is a preference for below ground storage via an 'Infrastructure First' approach considered with other key issues such as active travel routes, energy and sustainable urban drainage systems.

The approaches illustrated opposite (Fig. 3.71-73) demonstrate the following options for residential waste:

- Underground system
- Integrated into block and back court
- Integrated into street and landscape

All options should consider management and maintenance issues within the design and development strategy.

Commercial waste should be stored within each unit, with location subject to design. Suitable collection will be the responsibility of the commercial tenants.

Alternative strategies may be proposed that, for example, increase storage or collection efficiency. The City of Edinburgh Council Waste and Cleansing teams should be engaged at the early stages of development.