Section 4.9

Green Infrastructure, Bio-Diversity & Natural Heritage

4.9.1 Introduction

Green Infrastructure (GI) can be broadly defined as ‘‘a planned network of multifunctional green spaces and inter-connecting links which is designed, developed and managed to meet the environmental, social and economic needs of communities’’. It includes public parks, recreation areas, remnant vegetation, residential gardens, street trees as well as innovative and emerging new urban greening technologies such as green roofs and green walls.

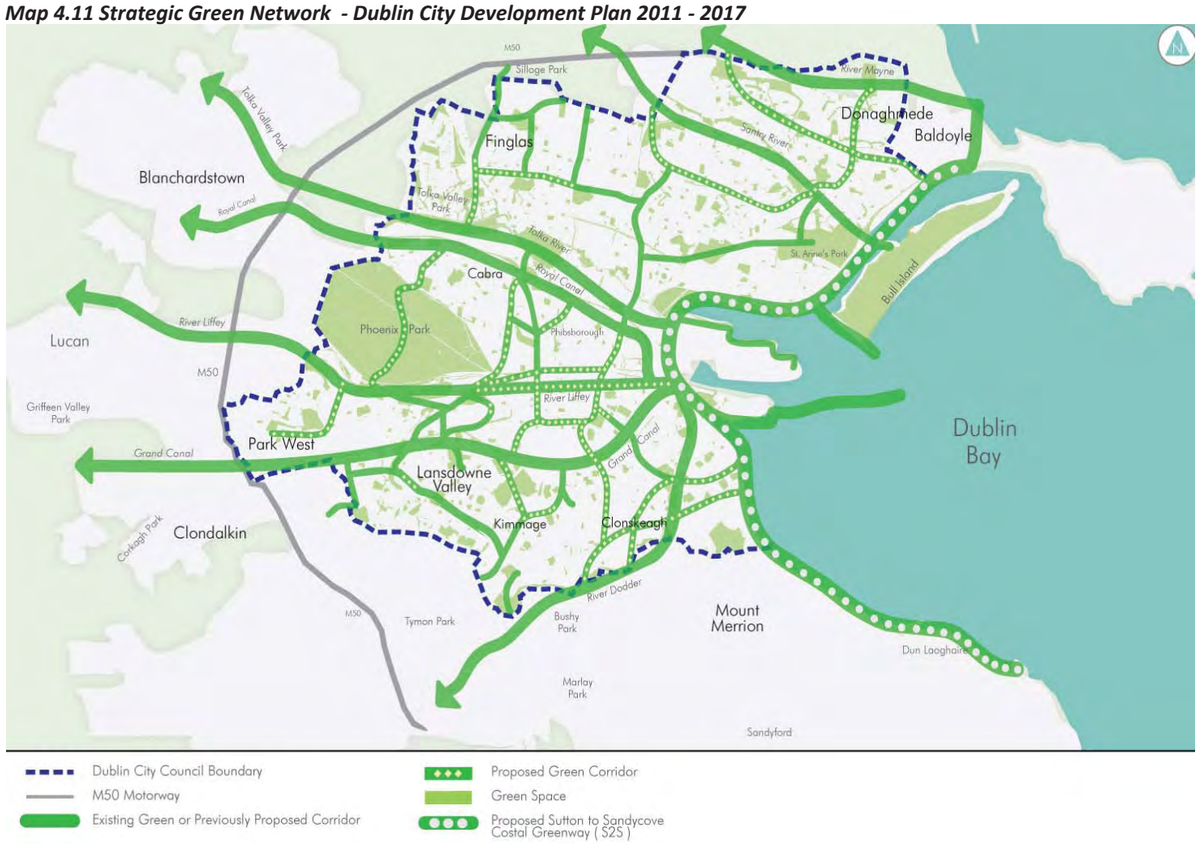
Green infrastructure aims to address legislative and policy requirements in an integrated way across a range of issues, including biodiversity, open space, flooding, surface water management (SuDS) and cultural heritage. Green infrastructure provides multiple social, environmental and economic benefits, which reinforce the character of a place. The adoption of a green infrastructure approach can contribute greatly to the effectiveness of a local area plan.

The Dublin City Development Plan 2011 – 2017 includes specific objectives relating to biodiversity, amenity, transport and water treatment, all of which underpin a Green Infrastructure approach. Chapter 6 of the City Development Plan, “*Greening the City*” sets out a detailed policy framework for the delivery of Green Infrastructure through a spatial strategy, which promotes an increase in public amenity space in tandem with improvements in the quality of biodiversity of the city. This builds on previous work including Dublin City Heritage Plan 2002–2006 (under review).

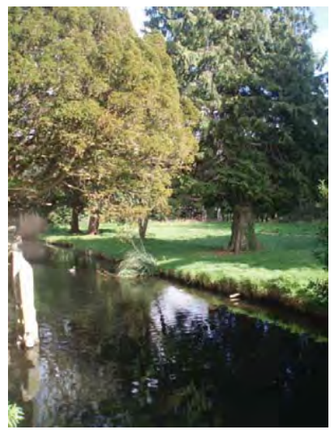
The Naas Road plan area is rich in biodiversity and contains a number of water courses. The Camac River, Walkinstown Stream, Robinhood Stream and Bluebell Stream all transverse the study plan area. These watercourses support a broad range of biodiversity including fish invertebrates and plant life.

The plan area contains a broad range of terrestrial biodiversity ranging from formal parks, a cemetery, and walking and cycling routes. There are a number of derelict sites which also act as a biodiversity resource and Drimnagh Castle supports a wide range of biodiversity in terms of a wetland area, tall grasses, a formal garden and trees. Lansdowne Valley Park also is rich is grasslands, woodland, river, scrub & hedgerows, while Walkinstown Park and Bluebell cemetery are also important for their biodiversity.

Map 4.11 Strategic Green Network - Dublin City Development Plan 2011 - 2017



The key green infrastructure challenge for the Naas Road LAP is to provide a spatial strategy that provides for greater connectivity between the substantial amounts of green space that exists in the area in order to capitalise on existing assets. This can be achieved through the development of a number of strategically located brown field sites which enable the reclamation of spaces from car storage and industrial land uses to create walking and cycle linkages for pedestrians and cyclists through existing parks. It is also the goal of the LAP to de-culvert the River Camac and to place the river within a green setting. The opening up of the River Camac provides a great opportunity to rediscover the former landscape and celebrate its industrial heritage. This ambitious intervention also has the potential to contribute to SuDS, Flood Risk Management and improvement of water quality in the area.



4.9.2 Sustainable Urban Drainage Systems

The redevelopment of sites presents opportunities to improve the quality of water discharges by implementing SuDS measures. Sustainable Urban Drainage Systems (SuDS) are a series of management practices and control structures that aim to mimic natural drainage, reduce flood risk, improve water quality and provide amenity through the use of permeable paving, swales, green roofs, rain water harvesting detention basins, ponds and wetlands. SuDS can achieve multiple objectives such as removing pollutants from urban run-off at source, controlling surface run–off from developments and ensuring flood risk does not increase further downstream. Furthermore SuDS can offer the opportunity to combine water management with green space, which can increase amenity and biodiversity.

The redevelopment of the LAP lands provides the opportunity to incorporate a number of SuDS features into the sites. Applications for developments on large sites (0.2Ha or over) should be accompanied by a package of proposed measures addressing the following:

- Infiltration – for water soakage into ground through use of trenches, basins, and permeable paving
- Filtration – in order to capture pollutants by devices such as swales and bio retention systems.
- Constructed Wetlands - To reduce run-off and enhance bio-diversity by using stormwater wetlands.
- Retention –To retain pollutants through the use of retention ponds.
- Detention – To reduce run-off through devices such as detention basins, filter drains.

Boulevard example incorporating Porous Pavement with Storm Water Attenuation

4.9.3 Green Infrastructure Strategy

The main aim of the Green Infrastructure Strategy is to create a linked network of strategic open spaces. This will focus on:

- **Biodiversity** - by focussing on the existing Green Infrastructure potential of the existing parks/ amenities, (such as, Drimnagh Castle, Lansdowne Valley Park, Walkinstown Avenue Park, Bluebell Cemetery), developing the Green Infrastructure potential of derelict sites, tree lines and private gardens and developing and exploiting potential linkages with areas of food production (e.g small gardens, Drimnagh Primary School, Drimnagh Castle)
- **Amenity**- by exploiting the Green Infrastructure potential of areas of high environmental quality and amenity within and adjoining the study area (e.g. Lansdowne Valley Park, Drimnagh Castle, Walkinstown Park, Bluebell Cemetery and the Grand Canal);
- **Movement -** By improving existing pedestrian environment, in particular, its accessibility and connectivity between Lansdowne Valley Park and Drimnagh Castle and adjoining residential areas, exploiting the existing public transport network (Luas Red line and Dublin Bus routes, inter-urban bus services) and addressing the isolation of Naas Road/ Kylemore Road from major green spaces .(Lansdowne Valley Park, Drimnagh Castle, Walkinstown Park, and Grand Canal),
- **Water Resources -** By exploiting the Green Infrastructure potential of existing watercourses of the Camac, Walkinstown Stream, Robinhood Stream and Bluebell Stream, in terms of fish and plant life, and acknowledging the influence of the Camac River on settlement pattern and character of the area.
- ***New Connected Routes -***Included in the LAP strategy are a series of new connected routes , particularly (i) boulevards & (ii) new pedestrian/cycle green links. These connective routes are a vital part of the green infrastructure network as both will be required to provide attractive planted paths and avenues. These tree lined routes will implement SuDS techniques and through selective planting provide strong biodiversity value to the new developing areas. The rehabilitation of existing streets will also be expected as part of site redevelopment to provide a new attractive street frontage, incorporating tree planting, high quality paving and integrated SuDS. The proposed location of these 'green routes' are shown in Green Infrastructure Strategy Map.

Map 4.12 Proposed Green Infrastructure Strategy

- Local Area Plan Boundary
- Green Spaces
- Playing Fields
- Waterway
- Proposed uncovering of Camac River
- Proposed New City Wide Green Route
- Proposed Local Green Links
- Proposed Cycle Route
- Greening and Improvement of Urban Thoroughfare
- Protected Structure
- Green Ways into South Dublin County Council
- LUAS Red Line
- Possible Locations For Playgrounds
- New MUGA Pitches

Key Sites

1. Royal Liver Business Park
2. Motor Distributors Ltd
3. Nissan Site / Site Fronting onto Long Mile Road
4. Muirfield Drive / Naas Road

See details in Chapter 5

Green Infrastructure, Bio-Diversity & Natural Heritage Policies

GI1. To seek opportunities to increase the provision of tree planting on streets within the LAP and to improve amenity, increase opportunities for wildlife and contribute to improvements in air and water quality and water attenuation

GI2. To ensure that in new residential developments, public open space is provided which is sufficient in quantity and distribution to meet the requirements of the projected population including play facilities for children.

GI3. To support the provision of community gardens, allotments ,local markets, pocket parks, where feasible and in particular as temporary uses on vacant under utilised or derelict sites in the LAP lands.

GI4. To promote the development of soft landscaping in public open spaces, where feasible, in accordance with the principles of Sustainable Urban Drainage Systems.

GI5. To provide for publicly accessible open spaces and green infrastructure which contribute to the amenities of the area and the green network.

GI6. Encourage the development of podium and courtyard gardens as part of the provision of semi-private and private open space within the LAP to increase opportunities biodiversity and the enhancement of the local environment.

GI7. To support and liaise with South Dublin County Council in relation to their open space strategy proposed in the 'Naas Road Development Framework Plan (2010), and to support continuity of linkages across the administrative boundary.

GI8. To recognise the importance of Drimnagh Castle and protect views and vistas, and to improve linkages to the Landsdowne Valley park.

GI9. To support and promote Biodiversity and to support the National Biodiversity Plan 2011 – 2016 and the current Dublin Biodiversity Action Plan 2008-2012. (under review)

GI10. Any plan or project with the potential to give rise to significant direct, indirect or secondary impacts on a Natura 2000 site(s) shall be subject to an appropriate assessment in accordance with Article 6(3) of the Habitats Directive.

GI11. 'To conserve priority species, habitats and natural heritage features identified in the Dublin City Biodiversity Action Plan 2008 – 2012 for priority conservation measures (This plan is currently under review).'

GI12 To protect areas of particular flora, fauna and habitat value that have no specific designation but nonetheless contribute to the environmental and ecological diversity of the area and require recognition as such and for all development to be in accordance with policies GC26, GC28 and GC30 of the Dublin City Development Plan 2011-2017.

Green Infrastructure, Bio-Diversity & Natural Heritage Objectives

GIO1. To continue to implement biodiversity enhancement plans for Lansdowne Valley Park, Walkinstown Park and Bluebell Cemetery.

GIO2. To implement restoration works in Lansdowne Valley Park which could include removal of concrete channel from the river, reinstatement of natural riverbank vegetation or perhaps an area of wetland, and continue the control of invasive species including the removal of Japanese knotweed as a priority.

GIO3. To look into (see note at base) the feasibility of relocating the existing pitch and putt course at Lansdowne Valley Park and provide a high quality pedestrian and cycle route, linking the Grand Canal (pNHA) along Davitt Road, through Lansdowne Valley Park, and linking up with the Long Mile Road. This combined cycle/pedestrian route should address security, public lighting and securing of back gardens. 'An ecological survey including a study of rare/protected species shall inform these works'.

GIO4. All proposals should incorporate the principles of Sustainable Urban Drainage Systems (SuDS) in accordance with the requirements and standards of the City Council's Environment and Engineering Department – Drainage and Wastewater Services Division.

GIO5. To designate Lansdowne Valley Park as an outdoor resource centre in light of its varied habitats and potential to learning in a number of disciplines. To this end the Council will engage the interests and energy of the local communities, schools and in particular the educational expertise of the City of Dublin VEC.

GIO6. To facilitate the use of Lansdowne Valley in accordance with the provisions set out in the Drimnagh Integrated Area Plan (June 2009), including (i) to create a safe and accessible heritage park connecting the canal to Drimnagh Castle (ii) To improve security and passive surveillance of the park and integration with adjacent development areas (iii) to protect and enhance the setting of Drimnagh Castle (iv) to protect the bio-diversity of the park and Camac River, and (V) To open up existing or blocked off connections through Landsdowne Valley Park to improve connections to Drimnagh Village, and the recently upgraded cycleway along the Canal and the Luas Stop at Blackhorse Avenue

GIO7. To pilot and test new green infrastructure installations in the public realm to boost biodiversity and improve surface water management on a number of streets within the LAP area; including the use of permeable materials for surfaces, planted roofs and provision of storm water tree trenches.

GIO8. To look into the feasibility of de-culverting sections of the Camac River, when and if sites come up for redevelopment.

GIO9. To carry out a study on the feasibility of placing appropriate flood management structures in the River Camac in the Lansdowne Valley Park and the creation of a new wetland area/flood alleviation scheme. Consultation will be carried out with the National Parks and Wildlife Services, Inlands Fisheries Ireland and other bodies as appropriate.

GIO10. To continue to develop Walkinstown Park in accordance with objective GC040 of the Development Plan, including (i) remove the derelict tarmacadam surface, (ii) provide for two MUGA pitches,(iii) provide a large diverse playground to meet the recreational needs of the local community, subject to available funding, (iv) increase the biodiversity landscaping particularly along the river and (v) seek funding to development a skate park.

GIO11. To support the Drimnagh Sli na Slainte route from the Grand Canal through the Landsdowne Valley Park as park of the Drimnagh Smarter Travel Plan , and to encourage this route as a new Sports Spine, & Heritage Trail through the Park, linking up with the Grand Canal and wider city green routes, and Drimnagh Castle

GIO12. During construction/redevelopment of any sites, developer(s) shall ascertain the extent, if any, of invasive species, and shall demonstrate measures for their control/removal.

GIO13. To replace all trees removed with an appropriate species, where the removal of street or roadside trees is necessary.

Note:

Park and Landscape Services are developing Long Meadows Pitch & Putt course, (located about 2 Km away) as a regional high quality course for the South Central Area including Ballyfermot, Inchicore, Chapelizod and Drimnagh

4.10 Civic Infrastructure

4.10.1 Introduction

One of the Six Themes of the City Development Plan (2011 – 2017) is the Social Theme : *to develop Dublin city as a compact city with a network of sustainable neighbourhoods which have a range of facilities and a choice of tenure and house types, promoting social inclusion and integration of all ethnic communities*.

As detailed in Section 2 of this plan, the area itself contains little in the way of physical, social and educational infrastructure with the main infrastructure consisting mainly of a primary and secondary school adjacent to Drimnagh castle, crèches in Lansdowne Gate and in Lansdowne Valley, a mobile library service, a pitch and putt facility within Lansdowne Valley Park and sports pitches within Walkinstown Valley Park. Outside of the plan area community facilities are more numerous given its established residential nature. Immediately adjoining the plan area are a number of schools along Long Mile Road, a small primary school along Robinhood Lane to the west of the plan area and a recently developed community centre, Bluebell Community Centre, off Bluebell Road. (see section 2 for more detail).

4.10.2 Social Infrastructure

'Social Infrastructure' refers to the physical infrastructure necessary for a successful neighbourhood and includes cultural, sports & leisure, educational, childcare and play facilities. The provision of social infrastructure necessitates an inter-agency approach to ensure the swift delivery of same.

Given the shortfall of social infrastructure identified in this plan area, it is imperative that a high level of infrastructure is provided in a timely manner to cater for the increase in population proposed under this plan. The facilities should also be accessible by existing residential communities in the wider area, including Bluebell, Walkinstown and Drimnagh, as well as those future residents that will be attracted to live in the LAP area.
See table below for quantum of social infrastructure proposed under this plan

Core Strategy	Lifetime of the LAP	15 - 20 yr+ Timeframe
n/a	2,500 sq.m.	10,000 sq.m.

Planned Community Floor Areas

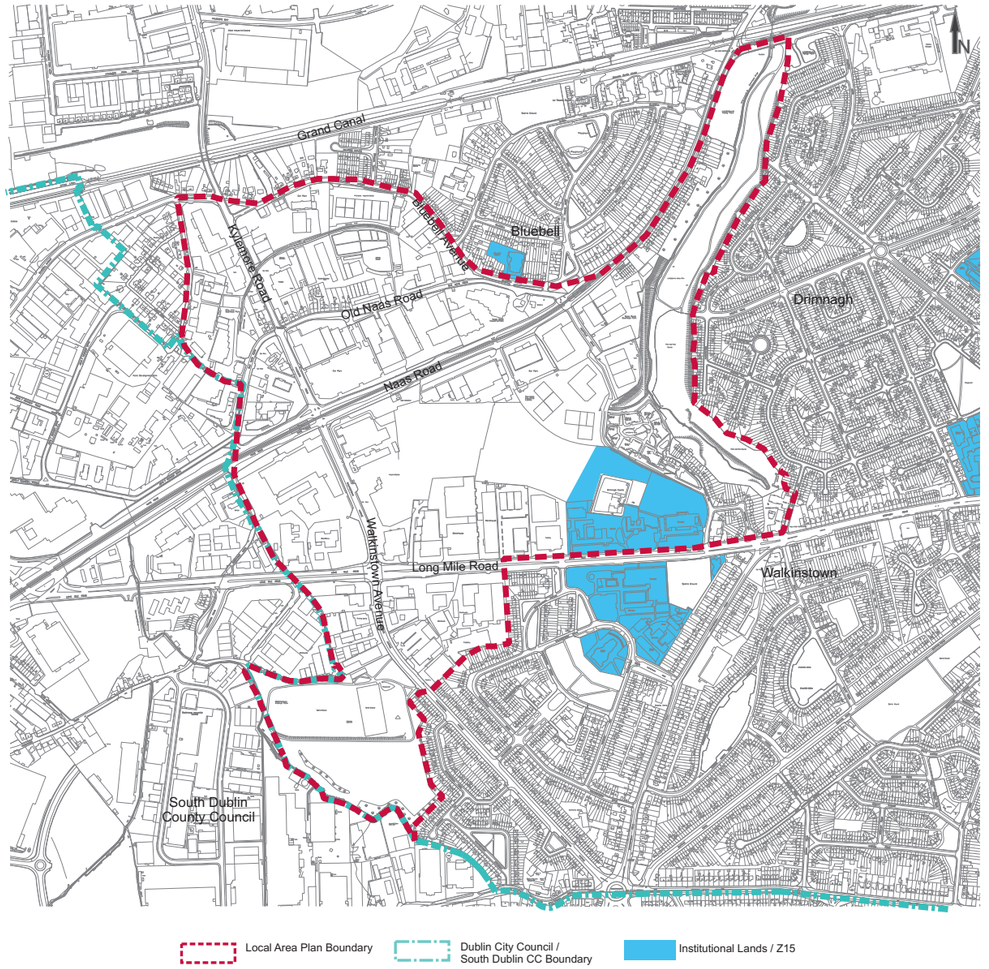
Under this LAP, provision of social infrastructure will be primarily by way of planning gain as part of the redevelopment of privately-owned sites, and in particular those identified key sites, in the area and through the development levy scheme. Facilities such as a library, community centre, cinema, theatre, crèches and play spaces, health and sports facilities and facilities for the elderly could be provided through the redevelopment of key sites to address the current shortfall in the area and meet the needs of the future population planned for. The city development plan places emphasis on institutional lands as an important community resource.

This plan area contains some 5 hectares of institutional lands (zoned Z15) located north of the Long Mile Road accommodating Drimnagh Castle Christian Brothers School (CBS). In limited circumstances, development may be permitted on these Z15 lands on a once-off basis where it has been demonstrated some lands have become surplus to requirements and that some development is necessary to secure, protect and consolidate the educational/community uses on site. In addition, in the event that it is demonstrated that the Z15 lands are no longer required for current or future educational or community uses and that the lands are proposed to be comprehensively redeveloped, a detailed masterplan to accord with development plan standards will be required.

The city development plan also contains specific objectives for Lansdowne Valley Park i.e. (i) to promote the use of Lansdowne Valley as an outdoor resource centre and (ii) to facilitate the use of Lansdowne Valley from Inchicore to Drimnagh Castle – in accordance with the provisions set out in the Drimnagh Integrated Area Plan (June 2009). This LAP will promote the implementation of this objectives.

The plan area is also recognised as an area that is capable of accommodating those leisure uses that require large footprints and above average car parking levels, such as ice-rinks, roller skating discos, children's activity gyms and playspaces etc. Such uses will be encouraged, particularly on an interim / temporary basis pending the redevelopment of key sites.

Map 4.13 Institutional Lands



4.10.2.1 Childcare Facilities

The Dublin City Childcare Committee Audit and Needs Analysis (2006) found that this LAP area (EDs of Walkinstown A and Inchicore B) and its surrounds are poorly served by childcare facilities.

This LAP seeks to facilitate the provision of quality, easily accessible childcare facilities throughout the LAP area in those areas zoned for social, economic and physical rejuvenation and for community uses (Z14 and Z15), and in particular in proposals for residential, employment and educational developments. These facilities should be sustainable, fit-for-purpose and easily accessed by users of all ages. For all new residential schemes in excess of 75 units, one childcare 20-space facility will be required (and a pro-rata increase for developments in excess of 75 units). Regard will be had to the Dublin City Childcare Committee and their identification of areas that are under-provided or over-provided in terms of childcare provision.

4.10.2.2 Play Spaces

The City Council recognises the benefit of play in meeting the developmental needs of children young people and to this end has a dedicated play policy and a Dublin City Play Plan 2012- 2017 devised with the Dublin City Development Board. This LAP will aid towards the realisation of a child friendly city made up of safe, attractive neighbourhoods where children and young people can play, socialise and move from place to place. Both indoor and outdoor facilities including multi-use games areas (MUGAs), teenage shelters, skateboard parks, youth cafes etc will be promoted. New play spaces will be facilitated and encouraged in the plan area, particularly on the key sites, in line with development plan standards i.e. proposed schemes in excess of 75 residential units will be required to provide for accessible play facilities for children and young people.

The standards of the city development plan in relation to social, education and community infrastructure as set out in sections 6.4.7, 17.9.1 (section 'c') and 17.17 of the development plan shall apply. These set various quantum requirements for different scales of development.

4.10.3 Educational Facilities

The Provision of Schools and the Planning System – A Code of Practice for Planning Authorities, the Department of Education and Science and the Department of the Environment, Heritage and Local Government (2008), sets out a methodology for forecasting demand for primary school spaces. With approximately 2,100 new residential units planned, the demand for school spaces may well increase. The possible need for additional spaces will be determined based on the capacity of the existing schools in the wider area.

Verbally the Department of Education and Science has indicated that there are no capacity issues in the area. Furthermore from a desktop study carried out by the planning department it would appear that numbers of pupils in the schools in the plan area and surrounds is falling, indicating increased capacity. In implementing the LAP, DCC will ensure the implementation of, The Provision of Schools and The Planning System – A Code of Practice for Planning Authorities, 2008. As required by The Code of Practice, the Forward Planning Unit of the DES and local school providers will be consulted.

Schools also have a potentially significant role in providing for play spaces. Greater access to the school grounds after school opening hours could provide a low cost solution to tackling deprivation of play space. In this regard, greater access after school teaching hours, at weekends and during school holidays will be promoted. In addition, in order to promote and facilitate lifelong learning the optimum uses of school buildings in the evenings and during school holidays will be encouraged.

4.10.4 Culture

One of the Six Themes of the city development plan (2011 – 2017) is the Cultural Theme – to value the city's cultural heritage and provide for cultural facilities. The enhancement and promotion of Dublin as a 'City of Character and Culture' and promoting an active artistic and cultural community at both city-wide and neighbourhood levels is central to making areas attractive destinations for tourism and creative industries. A good choice of quality cultural facilities is critical for attracting people to live and work in an area. It is recognised that cultural and tourism facilities act as regeneration drivers for an area, making areas more attractive as a place to live, work and invest in.

The policies of the City Council extend the focus beyond simply the residential unit with an equal emphasis on the surrounding area, defining the essence what makes a good urban neighbourhood. Many factors are involved in fostering a high quality of life, including culture and heritage. Development standards have been set out in the development plan for social facilities, which includes cultural facilities, as well as policies and objectives that aim to support cultural initiatives founded and managed within a community context. Furthermore, the plan recognises that promoting an active artistic and cultural community at city-wide and neighbourhood levels is central to making a vibrant city that is an attractive destination for tourism and the cultural industries and underpin a good quality of life.

Providing for, and supporting cultural initiatives at the local level of the community is a key element in developing a sustainable neighbourhood. To this end policies has been included in the development plan, including the following:

"To ensure that culture plays a significant role in urban regeneration and reflects the identity of Dublin's neighbourhoods", "*to support and promote opportunities for everyone to participate in the city's cultural life by facilitating the provision of effectively-managed, self-sustaining cultural infrastructure suitable for all ages at the neighbourhood level, including regeneration areas, that is accessible to all in the locality*", and "*to support a sustainable form of cultural provision founded and managed within a community context dedicated to inclusion, innovation and excellence"*. These policies are underpinned by supporting objectives "*to support the implementation of neighbourhood-based cultural plans / initiatives (e.g. the draft Rialto Arts Plan / proposed Community Arts Academy)*".

The importance of culture at the community level is further supported by the city's Cultural Strategy 2009 – 2017, which seeks to ensure that culture plays a significant role in urban regeneration and reflects the identity of Dublin's neighbourhoods.

As detailed in Section 2 of this plan, given the predominately industrial land use of this LAP area, there are no facilities specifically dedicated to culture. Any cultural attributes that do exist within the plan area are those of an architectural and archaeological nature (dealt with in more detail in Section 4.6 – Heritage), such as Drimnagh castle and Bluebell cemetery, have been heavily affected by large-scale industrial structures.

The Naas Road lands plan area, as a developing area, must make good provision for culture and enable easy access to cultural development at the local level by facilitating the provision of quality, multi-purpose cultural spaces and facilities that are accessible by all, both in the existing and in the new communities. The plan will promote active and varied uses of outdoor spaces, including the hosting of cultural events and markets. Artists' live-work units, cultural spaces and public art pieces will also be promoted as part of larger developments.

The major development sites provide opportunities for cultural provision as part of mixed-use schemes having regard to the social infrastructure gap analysis in Section 2.

Sustainable, fit-for-purpose cultural infrastructure that is inclusive of persons at all stages of their lifecycle, including young persons and the elderly will be promoted in the plan area. Such infrastructure could include artists' studios, exhibition spaces, storage spaces, public art and rehearsal spaces. The use of outdoor public spaces for cultural events will be promoted.

As set out in the city development plan, a Cultural Impact Assessment must accompany all major planning applications which assesses the contribution(s) that the proposed development will generate in the cultural life of the Naas Road lands plan area and environs.

The form and detail of any cultural provision shall be the subject of consultation with Dublin City Council's Arts Office at the early stage of design and all proposals for high buildings must make provision for cultural facilities / cultural venues and provide for public art.

Civic Infrastructure Policies

SE1. To encourage the Naas Road KDC to become a focal point for the integrated delivery of accessible and multi-functional social infrastructure and community services

SE2. To seek to ensure the provision of a range of environmentally sustainable social infrastructure and social services in the Naas Road KDC that are accessible, cater for all age groups and serve the existing and proposed communities.

SE3. To establish new and appropriate landuses that assist in creating relationships between one another and support a growing mixed-use community

SE4. To facilitate the provision of educational facilities in the plan area by way of an integrated approach between the Department of Education and Skills (DES), school authorities and the City Council

SE5. To seek to foster a new culturally vibrant neighbourhood in the Naas Road lands plan area, linking in with residential areas adjoining, based on a sustainable form of cultural provision founded and managed within the local community

SE6. To encourage the development of cafes/restaurants/retail facilities along key routes linking cultural facilities

Civic Infrastructure Objectives

SEO1. To link the plan area, by way of green routes and sharing of social infrastructure, with the surrounding neighbourhoods

SEO2. To facilitate improved connectivity to existing schools within and adjoining the plan area through the opening up of new routes, including proposals in site-specific development briefs.

SEO3. To promote innovative proposals that create a landmark destination within the city for combined facilities of a recreational, leisure and sports nature

SEO4. To encourage vibrancy and activity in this KDA by facilitating temporary / interim and permanent leisure uses whilst also ensuring the protection of residential amenities. Such leisure uses could include a cinema, theatre, indoor sports facilities and gyms, play spaces, skateboard parks, dance studios, roller discos/ice rinks, etc.

SEO5. To promote and facilitate the use, including temporary use, of vacant commercial spaces and sites, for a wide range of uses, including cultural uses

4.11 Environmental Sustainability and Sustainable Design

4.11.1 Introduction

The LAP aims to reduce reliance on unsustainable energy by promoting greener alternatives and ensuring sustainable principles and sustainable design are integral to the regenerative process. Implementing best practice through innovative design will meet the aims contained in the Council documents 'Climate Change Strategy 2008-2013' and 'Towards a Sustainable Dublin'. The plan area is currently characterized by extensive plots conducive to redevelopment and comprehensive implementation of 'green' design and engineering.

This sustainable future approach is promoted in this LAP through four policy approaches below:

1. Promoting a mix of use types in the area, to support the development of sustainable communities.
2. Modern green building and block form design, with high BER ratings, maximising opportunities for both reducing energy consumption, exploiting sustainable energy options and conserving water.
3. Encouraging high levels of use of sustainable modes of transport by promoting walking, cycling and public transport within the LAP area.
4. Promoting and supporting improvements in the public realm which reduce energy consumption, support SuDS, increased carbon sequestering, and support CHP (combined heat and power) district schemes.

By promoting a sustainable diversity of land uses, new development should have an inherently low carbon footprint and the proximity of local, well established amenities should lessen the transport needs in the area. This mix also focuses people's need on using sustainable forms of transport, given their proximity to a well-established network infrastructure.

Within this mixed approach is also the issue of type of housing units provided. New residential units should be designed with flexibility in mind, and taking into account the life patterns of people using them. Sustainable communities should include delivery of a housing mix with inbuilt adaptability to changing circumstances within a family's life-cycle. The inclusion of elements such as community gardens, both public and private open space (such as roof gardens and courtyards) and integrated amenities, would increase the quality of life for residents in the area.

4.11.2 Sustainable Design

Sustainable design is promoted in this LAP by focusing on four elements (i) built fabric; (ii) design and layout of buildings; (iii) energy and (iv) carbon impact of construction.

The LAP seeks to achieve development which utilities state of the art energy efficiency policies and best practice technologies to reduce resource consumption and promote environmental sustainability. New developments within the LAP area should, where possible, seek to maximise energy efficiency through their location, design and/or make appropriate use of energy conservation techniques, and go beyond the current minimum building regulations requirements. Building design should maximise natural daylight and ventilation opportunities, incorporate grey water re-use and green roofs and/or walls where possible.

In combination with the materials chosen and physical attributes of building design, sustainability should also inform key urban design elements such as creating attractive micro climates in key public or private spaces, maximising passive solar gain, reducing overshadowing and addressing wind tunnel impacts.

A key part of sustainable building and reduced carbon footprint is the energy consumption of heat, light and power of a building. Opportunities to source these forms of energy from sustainable sources should be exploited. Solar panels, geo thermal and CHP are some of a number of options which provide renewable energy sources, and can also bring economic benefits. CHP on (or near) site production of heating, lighting and cooling has been shown to be very sustainable in terms of efficiency and is most efficient when there is a suitable mix of uses for energy centres. This and other renewable energy system options should be considered for larger sites and also longer term proofing of design to facilitate connection to district scale schemes. In terms of sustained energy demand, the use of compatible uses such as day and night-time loads and cooling and heating – i.e. commercial and residential use respectively, lends itself to the use of energy centres of CHP.

The final area of significant impact is energy and carbon consumed in the built environment arising from construction. The carbon imbedded in buildings, through the materials, processing, delivery and construction impacts is significant. For this reason, existing buildings should, where possible, be re-used and/or refurbished as the first option, with demolition and replacement permitted only where re-use of the existing built form is not practical. New buildings should be designed so that other types of uses can be accommodated in the future ensuring that the building and the carbon invested in it will be fully used and be sustainable in the long term. In compliance with the Dublin City Development Plan, developers are required to provide a sustainability statement to illustrate measures proposed to increase energy efficiency, reduce resource consumption and minimise waste generation.

Whilst this section focuses mainly on building design as one part of the overall sustainability agenda, the LAP does however address environmental sustainability across a range of areas – for example addressing green infrastructure and sustainable transport.

Environmental Sustainability & Sustainable Design Policies

ES1. Promote and support the Naas Road lands area plan as a mixed use area with new development adding new housing, commercial and other uses into the area and to foster a balanced approach to integrating a wide variety of uses on each street and block.

ES2. Seek that new developments utilise state of the art energy efficiency techniques and best practice technologies to reduce resource consumption of the earth's resources and promote environmental sustainability.

ES3. Through design to enable opportunities within the form, use mix and orientation of the buildings to maximise solar gain and minimise heat loss.

ES4. Promote the use of environmentally sustainable technologies and facilities within any development in the LAP area such as the inclusion of CHP (Combined Heat and Power) units on site, community recycling facilities, grey water collection facilities, green roofs and green walls.

ES5. Given the prevalence of large sites, seek opportunities within larger block developments to create efficiency in energy consumption both in buildings, blocks and in use of public transport, with future proofing of systems to facilitate district wide schemes in the future.

ES6. Building design will give careful consideration to the design and arrangement of buildings on a site in relation to the development of a microclimate. New developments should be future proofed to aid in the conservation of energy and to maximize solar gain and renewable technologies.

ES7. All buildings, including housing units, should incorporate flexibility in form and internal design available in the area in terms of size and tenure. Building design and technology used should be flexible and allow for adaptation and for change of use in the long term. A building should not become obsolete on cessation of an activity, but should be capable of facilitating new activities without onerous renovation in order to conserve "embedded energy".

ES8. Promote the use of environmentally sustainable materials in the construction of any development in the LAP area.

Chapter 5 – Key Site Framework Strategies

5.1 Introduction

The Naas Road Lands plan area is dominated by large scale underutilised sites which are located along public transport routes leading to the city centre. The area is easily accessible to the city centre, being 6km from the city and adjoining the newly developing Canal Cycle Way along the Grand Canal, providing an attractive segregated cycle route along the old towpath. The area has great potential to provide a sustainable location for new development for the city and the region of Dublin, and due to the scale of the area, will, over a long time period, be able to accommodate a significant level of new development.

In preparing this LAP, four significant site areas were identified which it was considered would benefit from a detailed site focused policy approach due to their scale and importance. This focused approach should ensure full integration of the various strategies and objectives contained in the LAP into the future development of these sites.

For each site a detailed masterplan will also be required at application stage which will be the subject of prior discussion and agreement with Dublin City Council. The commencement of the phased development of these sites will not be considered until the masterplan is in place.

This chapter focuses on four key sites within the LAP area, all of which are critical to ensuring the successful implementation of the LAP. It seeks to focus on the form of future development for each site, the land use mix, connectivity and green infrastructure requirements and also sets out the issues, aims and objectives for each key site. The redevelopment of these key land holdings within the LAP will deliver key policies of Dublin City Development Plan in relation to the core strategy, sustainable development, economic policy, connectivity, retail provision and green infrastructure.

Key Sites

Key Sites:

1: Royal Liver Retail Park

2: Motor Distributors Ltd

3: Nissan Site / Site Fronting onto Long Mile Road

4: Muirfield Drive / Naas Road

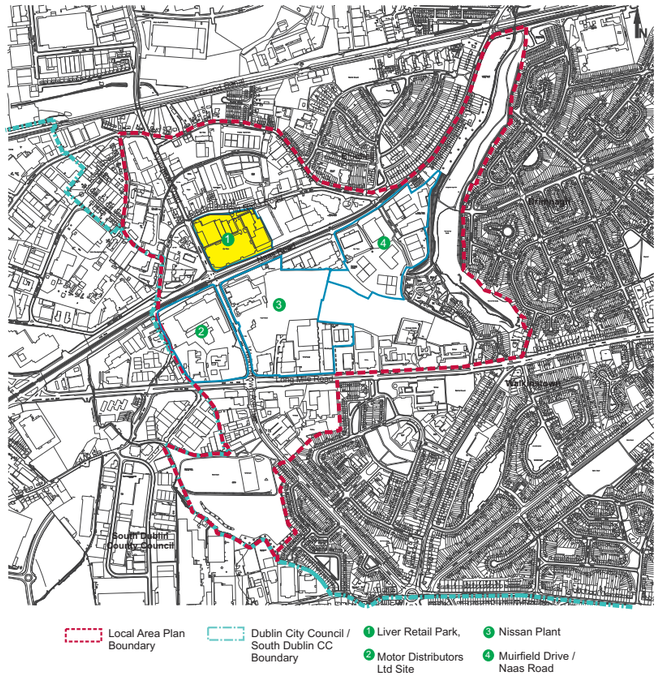
5.2 Royal Liver Business Park

5.2.1 Context

This site is regular in shape extending for 3.55 Ha and currently occupied by a retail park incorporating 7 no. units in two blocks (11,997 sqm) containing DIY outlets, generally aligned along the northern and eastern boundaries. The shared surface car park contains approximately 550 no. parking spaces, inclusive of spaces dedicated for 'Park & Ride' purposes. The site is accessed at two points from the Old Naas Road on the northern boundary.

The site has frontage of approximately 200 metres along the Naas Road, which is defined by high fencing behind which is a strip of shrub and tree planting. The Kylemore Road frontage runs for some 170 metres approximately, and is similarly defined by high fencing and a narrow strip of planting. The site has frontage of approximately 210 metres on the Old Naas Road, which is defined by a 3 metre high wall, with limited tree planting on the public footpath side of the wall. At present, the site is impermeable save for the aforementioned entrances, and inhospitable to pedestrians and cyclists.

The general area surrounding the site comprises a mix of uses including low intensity uses such as warehouses and also light industrial, some housing to the north and also office type employment and services including motor garages, restaurants and a hotel.



Map 5.1 Key Site - Royal Liver Business Park

The proximity of the area to the city centre and the provision of bus routes and a Luas line has resulted development pressure for intensification with an application in 2008 for a 100,000 sqm mixed use development with a 26 storey tower element. This application was refused by An Bord Pleanala for reasons of overdevelopment, congestion and quality of urban design.

The site is zoned Z14 – 'to seek the social, economic, and physical development and/or rejuvenation of an area with mixed use of which residential and 'Z6' would be the predominant uses'. It is also part of the KDA (key developing area), KDC (key district centre) & strategic development regeneration area (SDRA)

5.2.2 Future Land Use

This site will have a significant role in the redevelopment of the area and is suitable for a mix of uses that make more sustainable use of the site.

The land use mix for this site is a mix of enterprise/commercial (including office) uses and residential, with provision of some local services (such as a crèche) and local retail. Local retail and/or local services can be provided within any of the individual commercial blocks, depending on design, accessibility and uses proposed. Due to the high profile location of the site at the junction of the Naas Road and Kylemore Road, the corner will be expected to be shaped by a building (or buildings) of significance and high quality urban design. The height element shall address the corner of the site, and not dominate the entire building. The form of the building(s) in this part of the site, shown as a quadrant in Map 5.2 and Map 5.3, can be reconfigured to reflect the type of uses that will be occupying the building(s), such as subdivision of the quadrant into a smaller blocks, or relocating the courtyard space. Any redesign should ensure that it will deliver a quality urban environment, minimise overshadowing of open spaces and fully and appropriately address the frontage to the Naas Road and junction through high quality architecture and finishes.

This presence can be achieved through the use of height element (up to 10 storeys, 40m) and the design will be required to meet the requirements of the Development Plan for mid and high rise buildings. (See 17.6.3 of the Development Plan).

The land use approach sought will complement those uses proposed on the key sites on the opposite side of the Naas Road (Nissan and Volkswagen site). Together these sites have the development potential to create a significant node at the junction of Naas Road/Kylemore Road and Walkinstown Avenue, marking the location as a gateway to the city.

A Masterplan for the site will be required as part of the first phase of development of this site prepared by the applicants. This masterplan will articulate these objectives through design statements regarding the approach adopted, indicative layouts of future phases, public space provision, green infrastructure and detail of how connections will be achieved. Of equal importance will be the achievement of a good mix of development.

5.2.3 Pedestrian/Green Infrastructure Route

The area is presently impenetrable save for a few vehicular accesses. Changing this will require the creation of new routes and strengthening of existing links. This will connect with new public open spaces and the green infrastructure network for the LAP and beyond. The site shall facilitate the movement of pedestrians and cyclists through the site in a direct and easily orientated manner.

5.2.4 Pocket Park

A pocket park will be situated at the centre of the development, accessed and framed on three sides by tree-lined boulevards and will act as the central focus of the area and provide an attractive amenity for residents and workers in the surrounding area. The park will provide an attractive setting for the residential blocks adjacent which will frame the space.

The employment/service uses will also provide activity through the day for the park, with an emphasis on active uses to those frontages bordering the park.

5.2.5 SuDS

The design brief for the site shall incorporate principles of Sustainable Urban Drainage Systems in accordance with the requirements and standards of the City Councils Environment and Engineering Department.

Sustainable Urban Drainage Systems (SuDS) measures will be required on all sites to be redeveloped. There will be a preference for SuDS features with biodiversity and amenity benefits over inert / hard SuDS features e.g. grass/planted swales, detention basins, infiltration basins, wetlands and storm water trenches in preference to attenuating in tanks, paving sub-base or cellular attenuation systems.

5.2.6 Design/Architectural Characteristics

The proposed layout includes perimeter blocks and allows for a strong edge, particularly along the Naas Road which is lacking a regular continuity. Footpaths will be wide enough to ensure safety. The perimeter block style will also allow for the creation of compact and definitive areas of development framing areas of public and private open space.

There will be an emphasis on ensuring the use of quality design and materials, proven for their weathering potential, particularly for the corner element which may be up to 10 storeys in height.

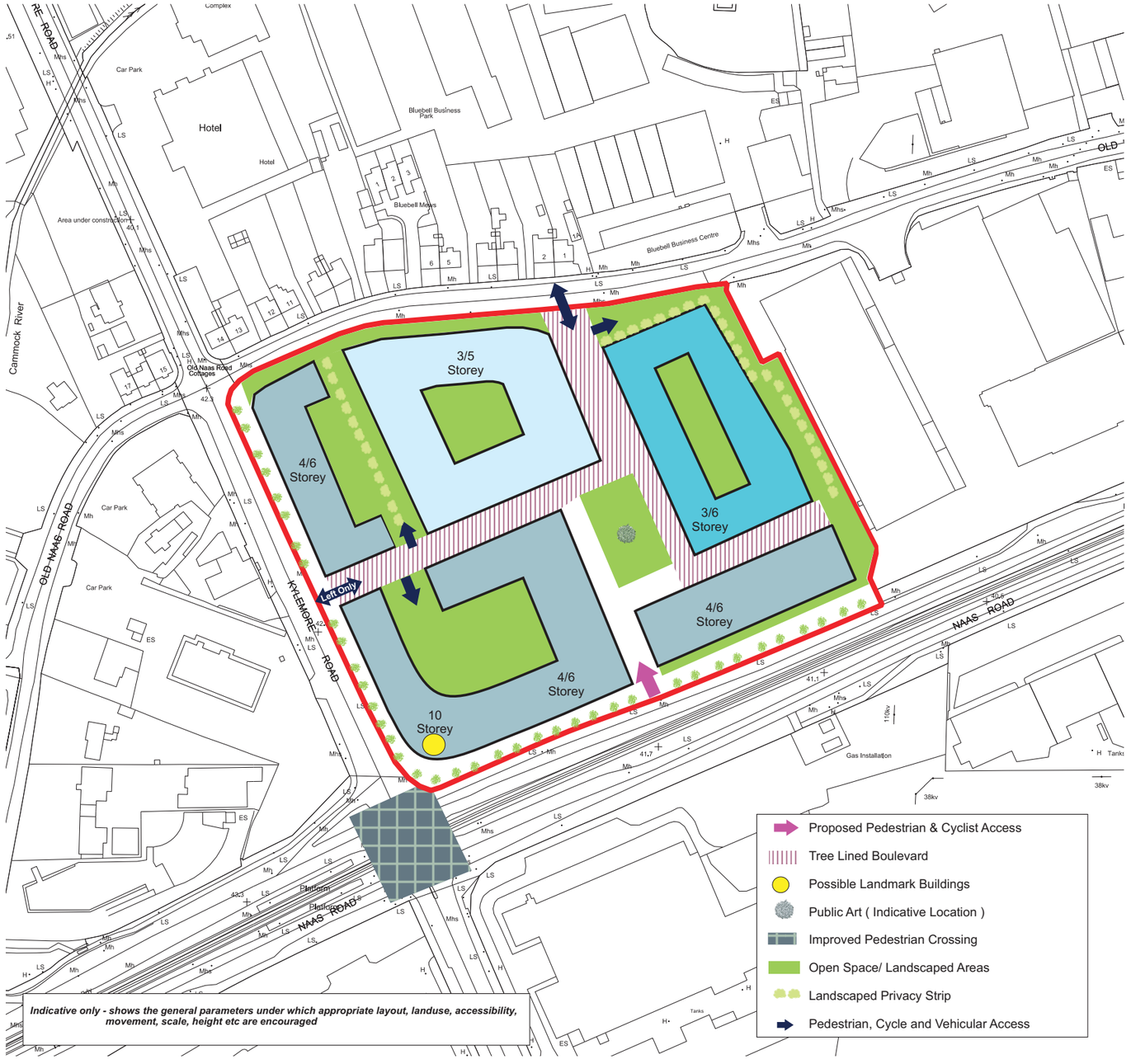
5.2.7 Height

Given it is at the centre of the KDC area and at the Kylemore Road/Naas Road junction, there is an opportunity for development ranging from 3 to 6 storeys throughout the site. Along the northern boundary with the Old Naas Road there would be a range of heights from 3 to 5 storeys reflecting the proximity of residential development to the north. Along the western, southern and eastern boundaries there is opportunity for slightly higher development of up to 6 storeys, given that it is bordering main thoroughfares. Provision is made for a landmark building on the south west corner of the site, for a height up to 10 storeys (40m).
(See Map)

5.2.8 Road Alignment (Setbacks) For Pedestrian, Cycle and Bus Routes

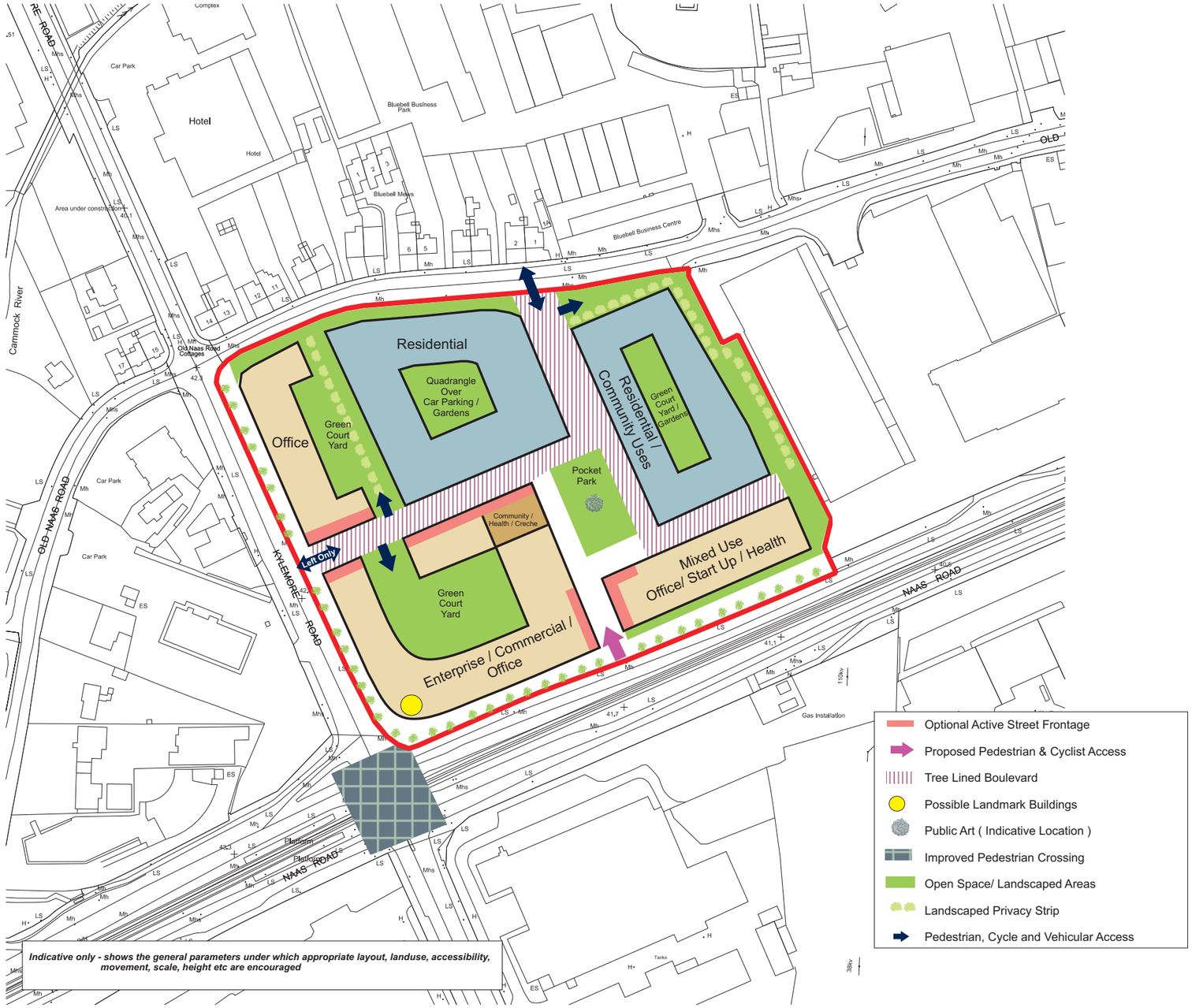
Setbacks shall be required on the Kylemore Road and Naas Road frontages, to accommodate the provision of new cycleways, dedicated bus routes and set-down points, pedestrian footpaths, and green planting strips. These setbacks shall be agreed with the Planning Authority as part of the overall masterplan for the site.

Map 5.2 Proposed Heights - Royal Liver Site



Indicative only - shows the general parameters under which appropriate layout, landuse, accessibility, movement, scale, height etc are encouraged

Map 5.3 Proposed Uses - Royal Liver Site



Royal Liver Business Park Objectives

RLO1. To encourage the sustainable redevelopment of this key site as part of the mixed-use core of the Key District Centre containing mainly office and residential uses with local scale retail and service uses.

RLO2. To provide for a boulevard leading to a pocket park and pedestrian and cycling connections through the site to increase connectivity and deliver the green infrastructure network of the LAP.

RLO3. To provide for a sustainable approach to height within the site, with buildings addressing the Naas Road and Kylemore Road providing a strong building line with appropriate heights, marked at the corner with a landmark building of up to 10 storeys. Within the site heights will be at sustainable level, appropriate to the uses proposed.

RLO4. Require setbacks to be agreed with Dublin City Council along the main road frontages at Naas Road, along the east side of Kylemore Road to facilitate upgrading of the road to provide for a bus lane, segregated cycleway, greening of the route and footpaths allowing for an attractive and vibrant street environment and to encourage pedestrian and cyclist activity.

RLO5. To pilot new green infrastructure installations in the public realm to boost biodiversity and improve surface water management.

RLO6. Materials used for construction shall have provenance for their durability and weathering qualities and prior examples of their use shall be furnished to the Planning Authority at Masterplan stage. This is of particular relevance to the landmark building.

RLO7. In consultation with the HSA, ensure that any new development proposal is compliance with the requirements of Seveso regulations.

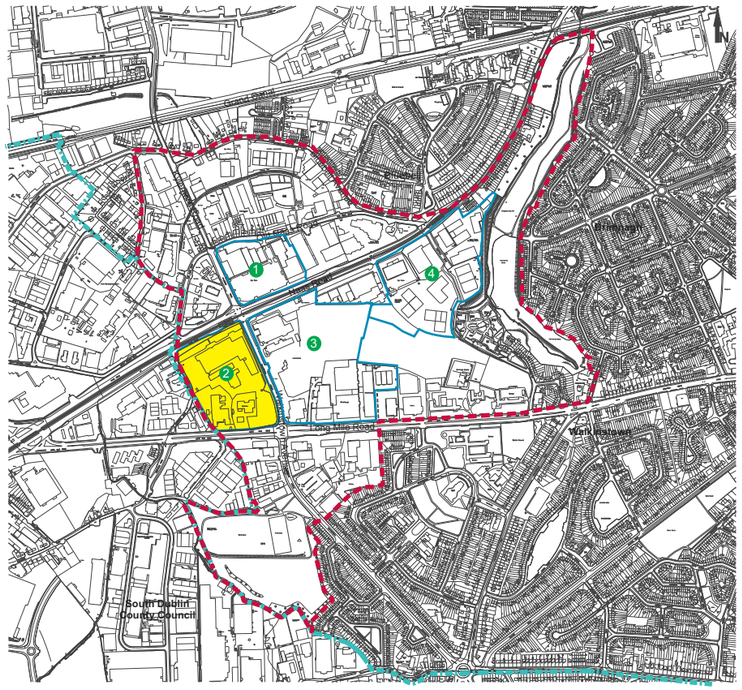
RLO8. To ensure that all applications address the following issues regarding water management:

a. Prepare a site specific flood risk assessment of the site as part of the first application;
b. Fully incorporate SuDS in the design of the overall scheme and accompanying masterplan;
c. Put in place measures to protect water quality, addressing particularly the issue of discharges and runoff; and
d. Manage water usage within the site to conserve consumption of treated water and make use of grey water and/or rainwater where suitable.

5.3 Motor Distributors Limited Site

5.3.1 Introduction

The Motor Distributors site is located along the western boundary of the LAP area directly adjoining the administrative area of South Dublin County Council. While physically subdivided, the site appears to be in single-ownership. It is a vast, largely rectangular, 6.5-hectare site occupying almost one entire land block and is wholly enclosed by the Naas Road, Long Mile Road, Walkinstown Avenue and Robin Hood Road with extensive frontage onto all four roads (210m x 190m x 320m x 270m). Robinhood Road is a minor roadway, accessed directly by vehicles off the Naas Road and terminating in a cul-de-sac, while allowing pedestrians and cyclists through access.



Map 5.4 Key Site - Motors Distributors Ltd

The site is directly adjacent to the 'Kylemore Luas' stop on the Naas Road and 'Dublin Bus' stops along the Naas and Long Mile Roads and Walkinstown Avenue. Pedestrian and vehicular accesses to the site are off Walkinstown Avenue, Longmile Road and Robin Hood Road with the principal entrances off Walkinstown Avenue and Long Mile Road. Some accesses have been gated, are locked and not in current use. Permeability through the land block is currently non-existent. The existing uses on the site are low-intensity. The majority of the site is occupied by Mercedes Motor Distributors, trading in the importation and distribution of commercial motor vehicles currently, and accommodates a number of single-storey buildings, including a Protected Structure, offices, vehicle display areas and training facilities. The majority of the site is used for hardstanding for the storage of commercial vehicles. A smaller portion of this key site, serviced off Long Mile Road, accommodates a sofa retail outlet and car parking. This is a low grade frontage with a 'big box' type structure set back from the footpath edge forming a weak and poorly defined urban space.

The brick building to the front / north of the site is protected – described in the Record of Protected Structures as 'Volkswagen Premises, front range of buildings only'[1]. A prominent feature in the wider area is the digital clock tower on top of this building, standing at a height of 20 metres from ground level.

The Mercedes Benz signature rotating insignia, set on top of the tower, is a later addition and adds another approximately 5 metres height. The building has been described as "*a fine example of an early (1950's industrialisation) factory. This little known handsome brick building merits further research … arguably the finest building on the Naas Road today*". [2] This northern site frontage is heavily planted allowing for only brief, interspersed views of the protected structure from the Naas Road.

The core of the plan area is not close to any major green spaces. The closest area of amenity to this key site is Walkinstown park, an urban park of amenity grassland and tree planting hosting a range of sports and recreational activities.

1 Protected Structure Ref 5792 - Record of Protected Structures 2011 - 2017

2 20th Century Architecture Survey, Dublin City Council and The Heritage Council, 2012

5.3.2 Future Direction

This key site has a significant role to play in the rejuvenation of the area and is considered to be suitable for mixed-use redevelopment and intensification having regard to development plan designations, its strategic location, proximity to public transport and national road routes, large size and the current low intensity development on the site. The site is also in single ownership.

5.3.2.1 Plot Ratio and Site Coverage

Indicative plot ratio and site coverage for Z14 sites are set out in the city development plan at 1.0 – 3.0 and 50% respectively.

5.3.2.2 Landuse

A rich array of land uses will be promoted on the site in order to support the plan area's designation as a KDC, KDA and SDRA and the local area plan's strategic objective to create a growing, mixed use community in and around the area. Landuses will be encouraged that interact positively with those uses proposed on the key sites on the opposite side of Walkinstown Avenue (i.e. Nissan site) and those key sites fronting onto the Naas Road. Together these sites have the development potential to create a significant node at the junction of Naas Road, Walkinstown Avenue and Kylemore Road, marking the location as a gateway to the city.

Uses on site will include retail, commercial/office & enterprise, residential, community, health and associated uses. Active uses will be required at ground floor fronting onto public spaces and along key routes in order to enliven these streets and contribute to a greater perception of safety. The building blocks should be so arranged to exploit the benefits of solar gain from the southern aspect of the site.

In order to enliven the key arteries and create a sense of community and economic activity in the wider area it is appropriate that retail outlets and other active uses, are encouraged at ground floor level along Walkinstown Avenue and Long Mile Road. Such uses could include larger retail forms such as convenience retail, showrooms for furniture etc and leisure/ recreational uses. The upper levels of these buildings are suitable for commercial/office, including enterprise uses. Commercial uses could be facilitated at ground floor level provided a dead frontage is avoided. Retail provision of between 10,000 to 12,000 sq.m of net retail floor space (at both ground and first floor levels) is provided for this site, to address both short and medium term retail need.

That part of the site closest to Robinhood Road, and set back from Long Mile Road, would ideally suit residential use in order to take advantage of higher privacy and lower noise levels from vehicular traffic and benefit from the proposed new public spaces and green links. Residential uses should be designed and constructed in such a way as to minimise noise disturbances (for example bedrooms located to the rear of the units away from the main roads, and sound proofing of all windows on those façades most exposed to noise from traffic). Commercial/enterprise uses would be suitable close to the protected structure, building on the role of the Naas Road as an economic corridor. A crèche facility could be provided here also, close to the proposed pocket park.

The development of the office structure to the rear of the protected structure will need to be carefully designed to avoid detracting from the building. The height and form of the new development close to the protected structure will need to demonstrate that the height(s) used across the building and form of the development respect and complement the horizontal form of this attractive feature of this key site. The heights indicated of 4/5 storey for this building are relevant only to the southern elevation, and may not be suitable or appropriate for the entire extent of the building, particularly at it's interface with the protected structure

The protected building is currently in commercial / office use. Other uses will be considered provided they are compatible with, and protect, the character of the structure. This prominent building, with the clock tower, and its location at the entry point to the plan areas at the city boundary is advantageous and can mark a formal entry point into the city. Its setting and overall visibility will be improved in order to enhance its character and add to the creation of a sense of place and history in the plan area.

5.3.2.3 Social / Community Facilities

Traversing the centre of the site in an east-west direction, a new boulevard of at least 20 metres in width is proposed with high quality retail alongside community and café/restaurant uses fronting onto it. The boulevard will form the nexus of north-south and east-west pedestrian, cyclist and vehicular routes through the site. Whilst allowing vehicular movement along it, the boulevard shall be so designed to ensure that ease and safety of pedestrian movement is prioritised. Active frontages will be required here. It is desirable that the retail here be of the 'daily shopping' form with a fine grain. This could encompass convenience, speciality and retail services such as chemist, florist, news agency, hairdresser etc. The boulevard will continue eastwards into the key site (Nissan) on the opposite side of Walkinstown Avenue.

Development on this site will include proposals for social and community infrastructure and public art. This key site is ideally placed to accommodate a new community centre capable of serving the future population as well as the existing residential populations, particularly those in Walkinstown and Drimnagh. The facility should be provided at the centre of the development fronting onto the boulevard, in close proximity to existing and proposed residential development to ensure maximum usage. The space should be multi-purpose, suitable for all ages and accessible in terms of physical design, location, cost of use and opening hours.

A relatively sizeable pocket park will also be provided for at the core of the site, bounded by the boulevard to the north and residential and mixed uses on remaining boundaries. This space will be capable of hosting community-scale outdoor performances.

5.3.2.4 Utilities

There is a large trunk 750mm watermain which runs diagonally through a number of the large development sites. There is a connection off this watermain where it crosses the Long Mile Road and the area is generally fed from this connection via a network of smaller pipes. Given the circumstances of this watermain and the fact that it passes through a number of large potential development sites, consideration will be given to the possibility of diverting it. Such a diversion shall be at the expense of the developer(s). New development and/or works and landscaping will need to demonstrate that the existing network and associated wayleaves are protected from impacts which could put the network at risk of damage. Developers shall protect the existing infrastructure on site, which includes all main water/drainage pipes, and any other overhead/underground services.

5.3.2.5 Setbacks

New buildings will be required to be set back from the boundaries of the site to allow for a bus lane and bus set down/interchange point along Walkinstown Avenue and generous space for pedestrians, cyclists and additional tree lines. In the redevelopment of this key site, setbacks should be introduced along Walkinstown Avenue and Long Mile Road to allow for more generous footpaths, additional tree lines and off-road cycle lanes. Where space and gradients allow, swales are to be incorporated to hold and filter stormwater.

Along with these desirable setbacks, the maintenance and improvement of existing greening initiatives along the major thoroughfares surrounding the site is also to be promoted i.e. along Naas Road, Long Mile Road, Robin Hood Road and Walkinstown Avenue. The visual amenity and microclimate of these thoroughfares could be enhanced with a cohesive scheme of semi-mature tree planting.

Indicative urban form proposed along Walkinstown Avenue and Long Mile Road

There is significant greenery existing along the Naas Road frontage of the site and also some street trees along Walkinstown Avenue. Where this greenery exists it should be retained where feasible and enhanced for the benefits of amenity and local biodiversity.

Any new buildings close to the protected structure should be set back significantly from the northern boundary of the site so as to enhance the character and setting of the protected structure.

To protect the amenity of future residents in the residential area closest to the retail building, a protective screen wall, with a high quality landscaping strip facing the residents will be required between the retail building and the residential area. This landscaped screen will frame a pedestrian connection from the pocket park to the Long Mile Road and also any vehicular access for the housing units on the eastern elevation.

5.3.2.6 Height

The protected structure to the front/northern section of the site will influence the height of new build in this section of the overall site. A maximum of 4 storeys is recommended adjacent to the protected structure. Around the perimeter of the site, generally a height of between 4 to 6 metres is considered acceptable facing onto the main roads i.e. Walkinstown Avenue and Long Mile Road. It is considered that a taller landmark structure of up to 8 storeys can be accommodated on the corner of Walkinstown Avenue and Long Mile Road. A building height of no more than 4 storeys is appropriate along Robinhood Road as this road is significantly narrower and a cavernous effect should be avoided. Internally on site, facing onto the main boulevard, a maximum of 4-5 storeys is desirable

5.3.2.7 Permeability

As individual sites are redeveloped, opportunities will present themselves to provide additional green linkages to green spaces and to dramatically improve permeability for pedestrians and cyclists throughout the area. While this key site is currently disconnected from the area around it, it is strategically placed to dramatically improve pedestrian permeability by integrating the site into the wider area and linking the site into a permeable pedestrian network. This can be achieved by the creation of boulevard / green link traversing the site in an east – west direction and linking into an improved pedestrian crossing eastwards over Walkinstown Avenue and linking in with the boulevard to be incorporated into the Nissan site to the east.

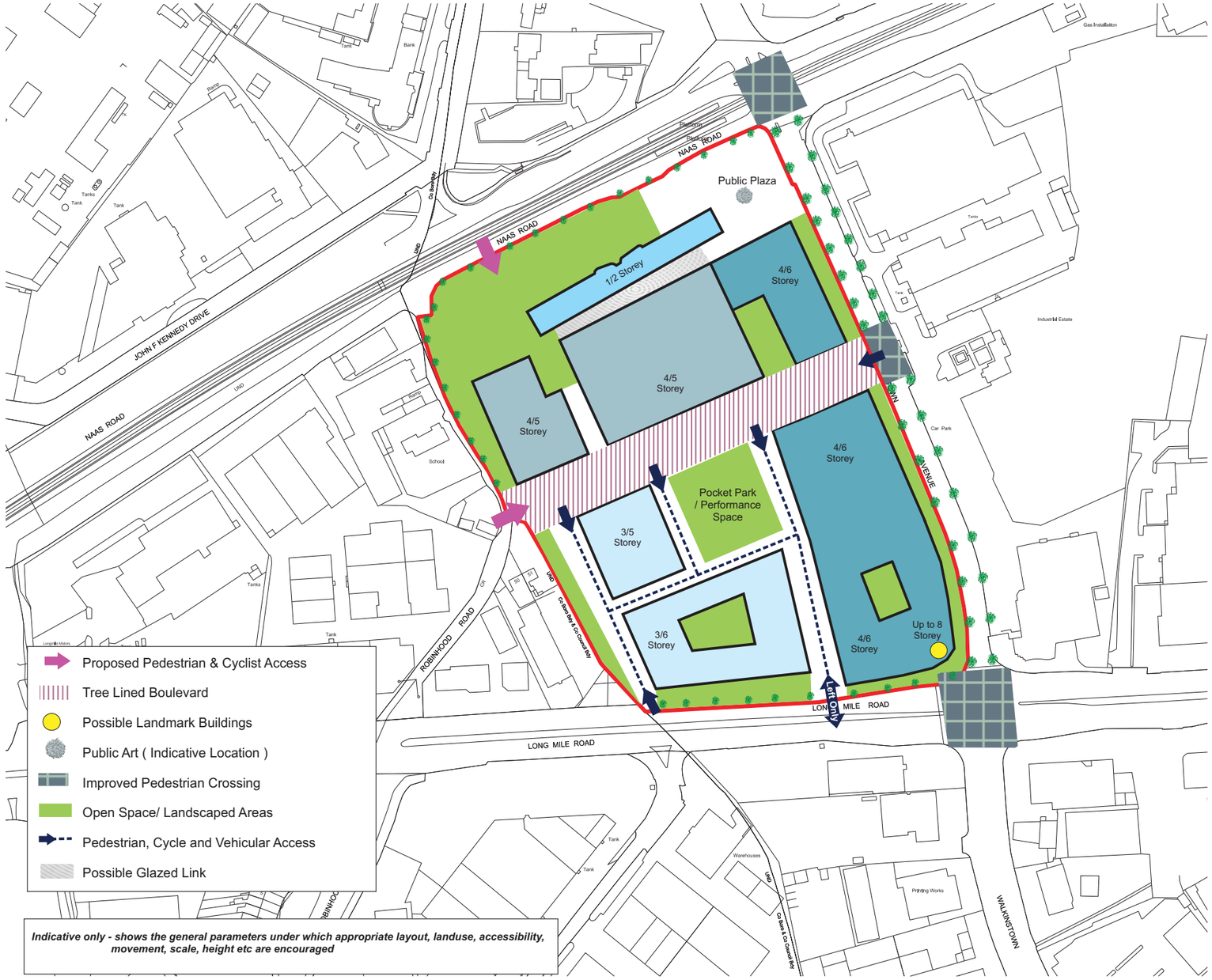
Pedestrian movement through the key site will be further enhanced by the creation of north-south priority pedestrian routes running from the south of the site from Long Mile Road northwards to the Naas Road. This route will allow for easier access to the school along Robinhood Road and Luas and bus stops along the Naas Road. Pedestrian access will be incorporated into the northern boundary of the site.

5.3.2.8 SuDS

The design brief for the site shall incorporate principles of Sustainable Urban Drainage Systems in accordance with the requirements and standards of the City Councils Environment and Engineering Department.

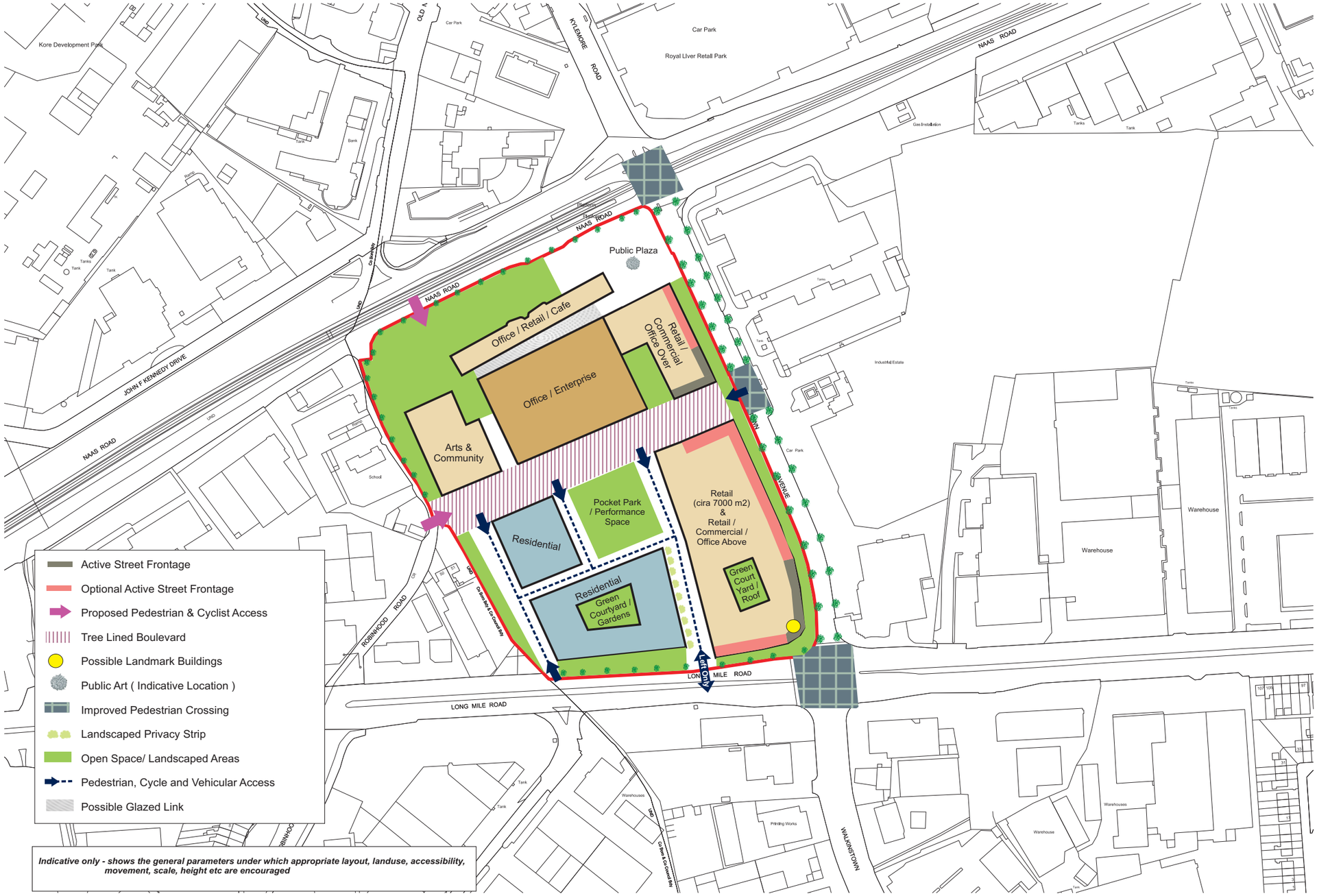
Sustainable Urban Drainage Systems (SuDS) measures will be required on all sites to be redeveloped. There will be a preference for SuDS features with biodiversity and amenity benefits over inert / hard SuDS features e.g. grass/planted swales, detention basins, infiltration basins, wetlands and storm water trenches in preference to attenuating in tanks, paving sub-base or cellular attenuation systems.

Map 5.5 Proposed Building Height - Motor Distributors Site



Indicative only - shows the general parameters under which appropriate layout, landuse, accessibility, movement, scale, height etc are encouraged

Map 5.6 Proposed Uses - Motor Distributors Site



Motor Distributors Ltd Site Objectives

MDO1. Facilitate the sustainable redevelopment of this key site with a fine urban grain and a mix of uses as part of the mixed-use core of the Key District Centre all at sustainable densities within a vibrant and interesting environment and integrating with the wider plan area and the administrative area of South Dublin County Council directly adjoining.

MDO2. Require a general height of between 4 and 6 storeys fronting onto Walkinstown Avenue and Longmile Road, a landmark building of up to 10 storeys at the junction of Walkinstown Avenue and Long Mile Road, 3 to 5 storeys within the core of the site and 5 storeys adjacent to Robinhood Road. The height of new development along Naas Road, directly adjacent to the protected structure, should protect the special character of the protected structure and should be no more than 4 storeys in height.

MDO3. Require setbacks along the west side of Walkinstown Avenue and north side of Long Mile Road to facilitate widening of the road to provide for a bus lane, segregated cycleway and footpath allowing for an attractive and vibrant street environment and to encourage pedestrian and cyclist activity.

MDO4. Facilitate landuses that introduce active frontages and enliven the streets along Walkinstown Avenue, Long Mile Road and along priority pedestrian routes running through the site. Such uses may include local services such as retail, cafes, restaurants, leisure, cultural and community uses, reception areas to commercial areas above and other complementary active uses. Design of all units at street level should have a strong urban edge, convey openness and contribute to vibrancy in the public realm.

MDO5. Require the provision of a flexible and publicly accessible facility for community and cultural uses. Dublin City Council will, in consultation with local stakeholders, identify suitable uses for the facility. The form, size and other details of this space shall be designed in consultation with Dublin City Council and will become part of the resources of Dublin City Council to support community and cultural activities in the city.

MDO6. Require the provision of a pocket park/performances space.

MDO7. Retain the Volkswagen premises (protected structure ref. 5792) as a landmark and formal entry point to the city and ensure the enhancement and protection of the special interest and character of the structure in any refurbishment, adaption or reuse; regard to be had to Dublin City Council's upcoming guidelines on protection and refurbishment of buildings of the late twentieth century once published.

MDO8. Improve views of the Volkswagen Premises (protected structure ref. 5792) from the Naas Road by incorporating a strategically placed pedestrian access point into the northern boundary treatment of the site, incorporating a redesign of landscaping and an appropriate lighting scheme. This pedestrian point should allow for easy access to nearby bus stops and the Kylemore Luas stop.

MDO9. Provide for a predominantly pedestrian and cyclist-orientated environment at street level. The majority of car parking shall be provided at basement or at under-croft levels provided such under-croft parking does not undermine the objective to provide for active street frontages. A limited amount of well-designed car parking shall be facilitated at surface level subject to good design, integration with the street and broken up with landscaping and/or street furniture.

MDO10. Provide for a clearly defined arrangement of public spaces which integrate into the emerging pedestrian / green routes and cycle network for the plan area and beyond and that increases permeability throughout the site by incorporating clearly defined east-west and north-south pedestrian and cyclist-friendly routes through the site framed by buildings on both sides and containing active street level uses along these pedestrian routes allowing for passive supervision.

MDO11. Provide for a boulevard traversing the core of the site in an east-west direction integrating with the boulevard to be provided on that key site to the east of Walkinstown Avenue (the Nissan site). This space shall accommodate pedestrian, cyclist and vehicular movement but will be so designed so as to prioritise pedestrian and cyclist movement. This boulevard shall incorporate street art, furniture and planting, SuDS and shall be an attractive space for relaxation. The boulevard shall be overlooked by residential units on some upper levels and fine grain neighbourhood-level retail units, cafes, cultural uses and other complementary uses at ground floor levels.

MDO12. Assist in promoting modal shift to sustainable modes of transport by enhancing connections between the site and the Kylemore Luas and Dublin Bus stops by reserving road space for a setdown for buses on Walkinstown Avenue, by incorporating new pedestrian access points in boundaries of the site and provide for enhanced pedestrian crossings over the Naas Road, Walkinstown Avenue and Long Mile Road.

MDO13. As part of the redevelopment of this site the 750mm watermain may need to be diverted. Such a diversion would be at the expense of the developer(s).

MDO14. To ensure that all applications address the following issues regarding water management:

a. Prepare a site specific flood risk assessment of the site as part of the first application;
b. Fully incorporate SuDS in the design of the overall scheme and accompanying masterplan;
c. Put in place measures to protect water quality, addressing particularly the issue of discharges and runoff; and
d. Manage water usage within the site to conserve consumption of treated water and make use of grey water and/or rainwater where suitable.

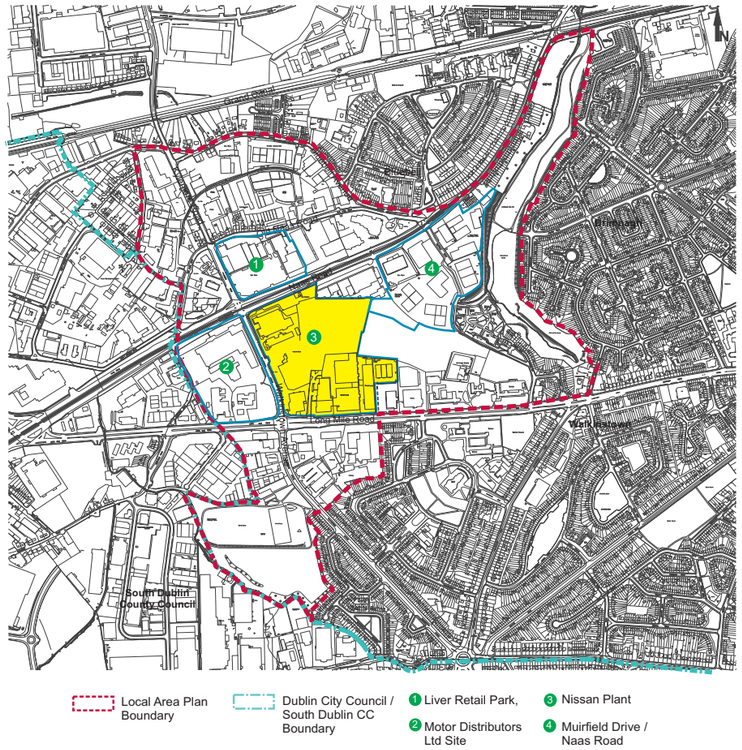
MDO15. To retain existing mature trees and planting on this key site, in particular those trees along the site's northern boundary and that tree line located in the southern section of the site, where feasible and appropriate.

5.4 Former Nissan Plant & Site fronting Long Mile Road

5.4.1 Context

This large irregular shaped key site measures approximately 12 hectares and is located in the heart of the new key district centre at two important crossroads (Longmile Road/Walkinstown Avenue, and Naas Road/ Kylemore Road). The site is located to the west of the Motor Distributors Site, and to the south of the Royal Liver Site which are also identified as key sites. The site is approximately 6km west of Dublin city centre, and well serviced by public transport.

Map 5.7 Key Site - Nissan Plant / Site Fronting onto Long Mile Road



Whilst most of the site (which includes the former Nissan Site) is currently underutilised, there are still some active mixed uses fronting onto the Long Mile Road to the south east of the site which are in separate ownerships. The site has three road frontages, the Naas Road and Longmile Road and Walkinstown Avenue. The main access into the former Nissan site is from Walkinstown Avenue and there are also a number of access points from the Long Mile Road, serving the individual premises. There are three detached industrial premises on the former Nissan site, which comprise of showroom, office and warehouse accommodation.

The shared surface car park to the rear of the Nissan site contains approximately 1500 - 2000 parking spaces and occupies approximately three quarters of the overall site. The site is impacted by two major infrastructure networks- a 750mm watermain which runs diagonally through the site as well as two overhead electric cables- a 110kV and a 38KV line and associated pylons.

The immediate environs of the site is predominantly industrial except along the eastern boundary where there is a common boundary with playing fields belonging to the school and Drimnagh Castle.

The general surrounding area comprises a mix of uses including low intensity uses such as warehouses and also light industrial and office type employment and services including motor garages, restaurants, showrooms and some retail uses.

5.4.2 Future Direction

Given the plan area's designation as a KDA, KDC and an SDRA, a key objective of the LAP is to facilitate the area to act as a strong spatial hub, to provide a significant quantum of development and a rich mix of uses, to aid in the delivery of the residential and employment needs of the city and to provide a comprehensive range of community and cultural services and facilities for the plan area and its surrounding suburban communities. This key site has a significant role to play in the rejuvenation of the area and is considered to be suitable for mixed-use redevelopment and intensification having regard to its strategic location, proximity to public transport and national road routes, large size and the current low intensity development on the site.

In the redevelopment of this large key site, applicants for permission shall be required to produce a detailed site master plan accompanied by a clearly articulated design statement which will address all the key issues such as building height, uses, quantum of floorspace, accessibility, public realm, SuDS, infrastructure, and Green Infrastructure. (See also Chapter 6).

5.4.3 Landuse

The site is zoned Z14 in the Dublin City Development Plan 2011 – 2017 'to seek the social, economic and physical development and /or rejuvenation of an area with mixed use, of which residential and 'Z6' would be the predominant uses'.

A mix of land uses in accordance with the zoning for the site will be promoted to achieve mixed use community and employment opportunities and a range of local services in and around the area. Landuses will be encouraged that interact positively with those uses proposed on the key sites on the opposite side of Walkinstown Avenue and the Long Mile Road (i.e. Motor Distributors site) and those key sites fronting onto the Naas Road. Together these sites have the development potential to create a significant enterprise and employment node at the junction of Naas Road, Walkinstown Avenue and Kylemore Road, marking the location as a gateway to the city.

Uses on site will include retail, commercial/office & enterprise, residential, community uses, leisure and associated uses. Active finer grain uses (such as restaurants, local shops, small scale retail units etc) will be encouraged at ground floor fronting onto public space/boulevards, and along key routes in order to enliven these streets and contribute to a greater level of safety.

The distribution of land uses across the site reflect the need to achieve a coherence to the new KDC, provide attractive locations for new residential, and to provide economic uses that integrate with the Naas Road Economic Corridor. It is proposed that commercial and economic activity addresses the key route corridors serving the area- the Naas Road and the Long Mile Road- providing high quality modern buildings and enterprise space that fully addresses these large roads, and benefits from the public transport services. The retail and associated uses are focused along Walkinstown Avenue, with a node proposed mid-way along the avenue, where a new boulevard serving the site meets the road and where the employment activities, retail and café/restaurant and other services can interact. The aim is to achieve a pedestrian friendly hub of activity along the boulevard which provides strong connectivity through the site, and focussing retail options within walking distance of each other and of both bus and Luas services. The eastern part of the site, close to schools and to the park will be more residential in character; providing a mixed typology of housing and apartments/duplex. This area will be an attractive residential community, well served by local community services, retail and public transport. The design of all development within the site should be so arranged to exploit the benefits of solar gain from the southern aspect of the site.

5.4.4 Retail

The LAP seeks to address the need for increased convenience and local comparison retail within this part of the city by encouraging the provision of a large convenience retail facility within this site, while also seeking to promote competition within the KDC and facilitating other convenience stores within the KDC core area. A large area within this site is earmarked for retail, providing the opportunity for the development of a high quality retail, services and leisure uses hub at ground (and upper) floors. It is anticipated that the total volume of retail on this site provided over the short and medium term would be in the order of 10-15,000 sq. m, (net floor area) plus limited additional floor space for local services such as community offices, post offices and health facilities. In achieving a quality urban environment the design of this retail area must deliver key urban design objectives. These include strong urban edges to the public road with active road frontage; attractive finishes and landmark design addressing the corner of the Long Mile and Walkinstown Avenue junction; avoidance of single storey uses with height provided to frame the roads, give presence and ensure sustainable use of land; provision of parking and service deliveries at undercroft or underground levels; use of upper floors for either commercial, retail, local services, employment or (subject to design) residential uses ; and to achieve a vibrant mixed use development. The Design Guide published to accompany the Retail Planning Guidelines, April 2012, issued the Department of Environment, Heritage & Local Government provides key design principles for retail development, and any application should have regard to these.

This area of development does not require to be built as one single block, but can form a series of phases/related blocks to allow the KDC develop over time. The detail of how future phases would be accommodated will be required to be shown in the first application as part of the masterplan for the site.

5.4.5 Public Spaces

All public spaces shall be designed so that they are high quality, attractive and robust and can easily be navigated. All proposals shall demonstrate how they connect to the surrounding streets and spaces. The planning of new public routes/boulevards should promote permeability and walk-ability, promote biodiversity and provide passive surveillance to discourage anti social behaviour. Buildings should properly address public streets and spaces, and active frontages should be used where possible, avoiding the use of blank walls onto the public realm. Building frontages should also provide appropriate enclosures to streets.

5.4.6 Height

Around the perimeter of the site fronting onto the Naas Road, Long Mile Road and Walkinstown Road, generally a height of between 5 to 6 storeys is considered acceptable, whilst for buildings fronting onto the new boulevards a height of between 4-6 would be desirable. For the residential blocks to the east of the site a height of between 3-5 storeys is desirable. Two landmark buildings will be considered on this site with heights of up to 10 storeys. See Map 5.8

5.4.7 Permeability

As individual sites are redeveloped, opportunities will present themselves to provide additional green linkages to green spaces and to dramatically improve permeability for pedestrians and cyclists throughout the area. There are a number of opportunities on this site to dramatically improve pedestrian permeability by integrating the site into the wider area and linking the site into a permeable pedestrian network. This can be achieved by the creation of boulevard / green links traversing the site in an east – west and also north-south direction linking into an improved pedestrian crossing on Walkinstown Avenue, which crosses into the Motor Distributors site to the west. Also achievable are linkages exist to the east of the site to the school grounds into Drimnagh. Pedestrian movement through the key site will be further enhanced by the creation of north-south priority pedestrian routes running from the south of the site from Long Mile Road northwards to the Naas Road. This will provide improved access to public transport.

5.4.8 Landmark Buildings

In terms of the two landmark buildings on the site, the role of these buildings is to act as marker buildings into the city from the west. Design proposals for the landmark buildings shall be of a high quality with the design approach taken detailed in any planning application. The geometry of the building should be carefully considered to strike a balance between its urban design role and its internal function and building materials should be appropriate to the scale and importance of the building. Frequent changes in material should be avoided.

5.4.9 Landscaping/Ecology

For large sites applicants should consult with Dublin City Council's Parks and Landscape Division to ascertain the significance of any ecologically sensitive areas. Landscape design and infrastructure proposals shall form part of the masterplan for each site.

5.4.10 Sustainability

All building design and layout should take account of solar gain and microclimatic impacts, and all proposals shall include sustainable waste management and water conservation measures and connectivity to the green networks.

5.4.11 SuDS

The design brief shall incorporate principles of Sustainable Urban Drainage Systems in accordance with the requirements and standards of the Dublin City Councils Environment and Engineering Department.

Sustainable urban drainage systems (SuDS) measures will be required on all sites to be redeveloped. There will be a preference for SuDS features with biodiversity and amenity benefits over inert / hard SuDS features e.g. grass/planted swales, detention basins, infiltration basins, wetlands and storm water trenches in preference to attenuating in tanks, paving sub-base or cellular attenuation systems.

5.4.12 Services/Utilities

As part of the redevelopment of this site, the plan will look for the undergrounding of the ESB pylons on the site, the route of the cables to be agreed with ESB networks. All costs to be borne by the developers and the ESB. The masterplan for this site should allow for the provision of a new HV substation; the location and size to be agreed with ESB networks.

There is a large trunk 750mm watermain which runs diagonally through a number of the large development sites. There is a connection off this watermain where it crosses the Long Mile Road and the area is generally fed from this connection via a network of smaller pipes. Given the circumstances of this watermain and the fact that is passes through a number of large potential development sites, consideration could be given to the possible diversion of this watermain. The cost of such a diversion shall be agreed with Dublin City Council with proportionate costs borne by the site owner.

Where it is not proposed to relocate the watermain, the masterplan submitted for the site shall address how the principles of this LAP shall be achieved whilst also providing appropriate wayleave protection to the watermain. New development and/or works and landscaping will need to demonstrate that the existing network and associated wayleaves are protected from impacts which could put the network at risk of damage.

Developers shall protect the existing infrastructure on site, which includes all main water/drainage pipes, and any other overhead/underground services.

If the decision is made by the developer, with the agreement of Dublin City Council, to retain the route of watermain, this will impact on the design of the masterplan for the site. Map 5.9 is an indicative layout, based on the relocation of the watermain. If it remains, some elements of the proposed layout can be revisited to accommodate the route, and also to ensure that the route preserved becomes a benefit to the site, and that the urban design possibilities presented by the reservation are maximised to create an attractive pedestrian and green infrastructure corridor through the site. To achieve this, the need for a level of flexibility on the layout is recognised, including (i) the building line on the southern edge of the boulevard which may need to widen into a plaza, (ii) repositioning the green link through the residential area and associated re-arrangement of the residential areas. If this option is taken, the green link and the connecting boulevard can form a high quality pedestrian and cycle route, which will connect into the Green infrastructure network for the area

5.4.13 Setbacks

Setbacks shall be required on all road frontages (Long Mile Road, Walkinstown Avenue, and Naas Road), to accommodate the provision of new cycleways, dedicated bus routes, pedestrian footpaths, and green planting strips. These setbacks shall be agreed with the planning authority as part of the overall masterplan for the site.

Map 5.8 Proposed Building Height - Nissan Site

Map 5.9 Proposed Uses - Nissan Site

Former Nissan Site Objectives

NSO1. To facilitate the sustainable redevelopment of this key site with a fine urban grain and a mix of uses as part of the mixed-use core of the key district centre, all at sustainable densities within a vibrant and interesting environment and integrating with the wider plan area.

NSO2. Require a general height of between 5 and 6 storeys fronting onto Walkinstown Avenue, Longmile Road and Naas Road. Two landmark buildings of up to 10 storeys, one at the junction of Walkinstown Avenue and Long Mile Road, and one at the junction of Walkinstown Avenue and Naas Road. Heights ranging from 3 – 6 storeys within the core of the site

NSO3. Require setbacks (to be agreed with the planning department) along the main road frontages at Naas Road, along the east side of Walkinstown Avenue and north side of Long Mile Road to facilitate widening of the road to provide for a bus lane, segregated cycleway and footpath allowing for an attractive and vibrant street environment and to encourage pedestrian and cyclist activity.

NSO4. Facilitate landuses that introduce active frontages along the Naas Road, Walkinstown Avenue and Long Mile Road, and priority pedestrian routes running through the site. Such uses may include local services such as retail, cafes, restaurants, leisure, cultural and community uses, reception areas to commercial areas above and other complementary active uses. Design of all units at street level should have a strong urban edge, convey openness and contribute to vibrancy in the public realm.

NSO5. Require the provision of a flexible and publicly accessible facility for community and/or health uses and a crèche in any redevelopment of this site to serve the needs of the residents in the area.

NSO6. Provide for a pedestrian and cyclist focused environment at street level. The majority of car parking serving commercial schemes shall be provided at basement or at undercroft levels provided such undercroft parking does not undermine the objective to provide active street frontages. A limited amount of well-designed car parking shall be facilitated at surface level (particularly within residential areas) subject to good design, integration with the street and with landscaping and/or street furniture.

NSO7. Provide for a clearly defined arrangement of public spaces which integrate into the emerging pedestrian/green routes and cycle network for the plan area and beyond and that increases permeability throughout the site by incorporating clearly defined east-west and north-south pedestrian and cyclist friendly routes through the site framed by buildings on both sides and containing active street level uses along these pedestrian routes allowing for passive supervision.

NSO8. Provide for boulevards traversing the large site in an east-west and north-south direction integrating with the local green links running through the site and integrating with the boulevard to be provided on the key site to the west of Walkinstown Avenue (the Motor Distributors site). This space shall incorporate street art, furniture and planting and SuDS, and shall be attractive space for relaxation. The boulevard shall be overlooked by residential and commercial on upper levels with ground levels dominated by retail units, cafes, cultural and/or community uses and other complementary uses.

NSO9. Assist in promoting modal shift to sustainable modes of transport by enhancing connections between the site and the Kylemore Luas and Dublin Bus stops by providing for new pedestrian access points in all three boundaries of the site and providing for enhanced pedestrian crossings over the Naas Road and Walkinstown Avenue.

NSO10. To green and improve the major road arteries surrounding this key site i.e. Naas Road, Walkinstown Avenue, and Long Mile Road, to include wider footpaths, additional tree lines (incorporating native species), soft landscape zones, additional pedestrian crossing points, and off road cycle routes.

NSO11. To pilot and test new green infrastructure installations in the public realm to boost biodiversity and improve surface water management within the site, such as the provision of storm water tree trenches and permeable paving for parking areas.

NSO12. To seek the undergrounding of the 110 KV and 38KV high voltage overhead cabling traversing the LAP area. The route for undergrounding the cables will be assessed by ESB Networks with the applicants/developers, and in that event the cost of the undergrounding of the lines including associated civil works would be borne by the developers and ESB.

NSO13. To provide a new HV substation within the site, integrated with the undergrounding of cabling to meet the level of demand.

NSO14. As part of the redevelopment of this site the 750mm watermain may need to be diverted. Such a diversion would be at the expense of the developer(s).

NSO15. Local recycling facilities must be provided for on this key site. For large retail stores, a glass recycling facility shall be provided.

NSO16. To ensure that all applications address the following issues regarding water management:

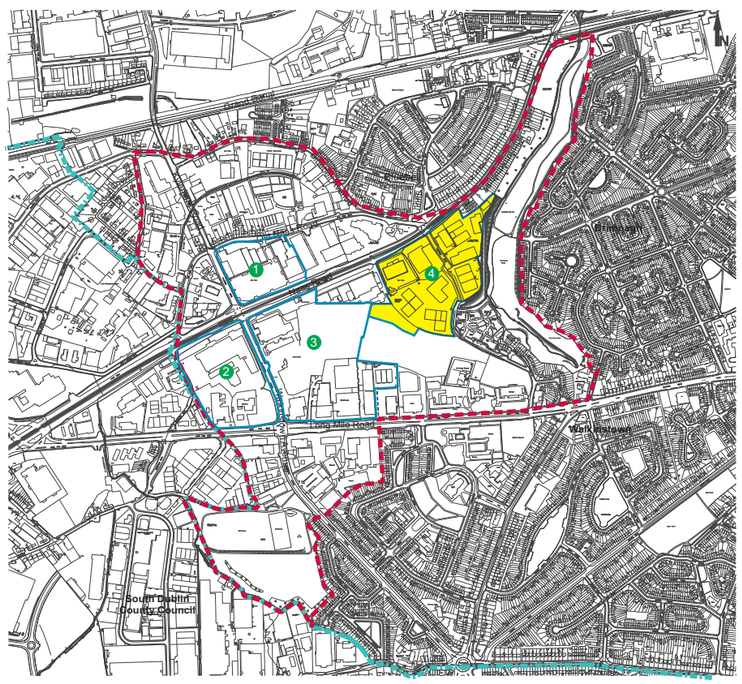
a. Prepare a site specific flood risk assessment of the site as part of the first application;
b. Fully incorporate SuDS in the design of the overall scheme and accompanying masterplan;
c. Put in place measures to protect water quality, addressing particularly the issue of discharges and runoff; and
d. Manage water usage within the site to conserve consumption of treated water and make use of grey water and/or rainwater where suitable.

5.5 Muirfield Drive / Naas Road

5.5.1 Introduction

Whilst other site framework strategies provide guidance on a variety of planning parameters including block layouts, the purpose of this site strategy is to set a framework for land uses, access and other factors such as typologies and densities – but not to set any specific guidance in relation to layouts or blocks. This provides a degree of flexibility for the layout of future development whilst ensuring the desired land uses and other key planning parameters are delivered in any redevelopment of the area.

This site, positioned on the eastern side of the plan area, straddles the area between Bluebell and the River Camac, with Drimnagh Castle located further south and the former Nissan key site to the west. At present the area is characterised by industrial and office uses served by two roads accessed directly from the N7 (Naas Road). 'Carriglea Industrial Estate' is included in this area which appears to have been largely developed on an incremental basis over time. Whilst sites are generally large and in light or heavy industrial or warehouse use at present, a number of units incorporate office elements, particularly those units fronting the Naas Road, which are set back from the street by an attractive landscaped area.



Map 5.10 Key Site - Muirfield Drive / Naas Road

The majority of the units are of two-storey (or equivalent) height and are surrounded by sizeable hard surfaced areas. The vast majority of the area is zoned Z14 , i.e. ' to seek the social, economic and physical development or rejuvenation of an area with mixed use of which residential and 'Z6' would be the predominant uses.' A narrow strip of land connecting the area around the River Camac to Muirfield Drive is zoned Z9 – i.e. ' To preserve provide and improve recreational amenity and open space and green networks' and this recognises the existing landscaped strip which bounds the vehicular access route to the existing residential area at Lansdowne valley, positioned south of the River Camac.

The entire area has good connectivity to public transport – with ease of access to various bus routes operating on the Naas Road and also easy pedestrian access to Bluebell Luas stop (Red Line). There are established residential areas immediately to the northeast (i.e. at Grove Court) and to the south – with apartment blocks at Lansdowne Valley positioned immediately across the river. There is however poor connectivity and accessibility to the amenities in the immediate area - particularly Lansdowne Park and the River Camac – and this is because of boundary structures, the scale of existing sites, and also differences in level/topography. The original route of the River Camac has been modified in the past by culverting the river on the western side of the site – the original position being reflected in the position of current site boundaries.

5.5.2 Future Direction

For this site it is not proposed to provide detailed indicative layouts due to the scale of the lands in question and the uniformity of uses proposed. It will however be a requirement that a masterplan be submitted for the overall site showing the design approach to be adopted and how each phase/site within the area will integrate. Because of multiple land ownership in the area, landowners will be required to cooperate in the preparation and agreement of an overall integrated site masterplan that delivers the objectives for this site framework strategy to the satisfaction of the Planning Department.

Given the locational advantages of this site and the proximity to amenities, it is considered that the existing Z14 zoning provides scope to redevelop the area and revisit land-use opportunities in order to work with the areas potential. In this regard the area is at present restricted in connectivity and relates poorly to the natural amenity potential of the River Camac and associated Green Infrastrucure at Lansdowne Valley Park and Drimnagh Castle.

On this basis the City Council has developed a land-use strategy for the site which affords the opportunity to open up new open space along the river and secondly to establish a residential community which could avail of improved connectivity to the south and east – supplementing access out onto Naas Road. Mixed uses along the Naas Road can include neighbourhood retail uses in the illustrated areas - primarily to serve the new residential and working population.

It will be a requirement of future planning applications that a masterplan is submitted with the first phase of redevelopment of these lands, outlining the design approach to be adopted for developing the lands and how each phase can be integrated in future applications. Where possible, such a masterplan should be jointly prepared by all key landowners. If there is no consensus in this regard, planning applications will be assessed having regard to the proposed layout shown in Map 5.11, and addressing the importance of integration with adjoining sites. The detail of how this can be achieved should be agreed in advance with Dublin City Council.

5.5.3 Land-Uses

In regard to the indicated land uses on the accompanying map, -

- **Residential Uses** will occupy the majority of the site at sustainable densities. No housing shall be provided in areas in close proximity to the Naas Road due to noise and other disamenity associated with traffic, and also to allow the option of additional height to frame the expanse of the Naas Road. Hence mixed uses/retail have been designated for this area.

- **Retail uses** will be of neighbourhood 'local services' type – i.e to serve the immediate local residential and working population only. They should also be for the sale of convenience goods only. No individual retail use should exceed 200 sq metres (net) to ensure a local/neighbourhood scale and secondly to avoid any negative impact on the successful delivery of retailing associated with the KDC. Proposed retail uses would benefit from an attractive setting (existing landscaping to be retained) and from new green routes.

- **Mixed uses** – ie. commercial/ office/ enterprise uses. These should be of a scale and intensity that would not be a cause of any significant disamenity to future residents of the immediately adjoining residential areas.

- The chosen location for new **open spaces** shall take cognisance of existing open spaces and supplement these by the removal of existing barriers/boundaries to restore more natural vistas along the River Camac. The extent and area of open spaces shall be informed *inter alia* by flood risk assessment on individual sites and the desire to create new green connections between this area and surrounding existing and new communities. Gradients/slopes for any proposed development should receive due attention in any layout design having regard to the presence of existing steep topography adjoining the river.

5.5.4 Heights

In general, heights shall comply with current development plan standards. The only exceptions shall be ;

(a) Mixed-use units fronting the N7/Naas Road can develop up to 5 storeys in height so as to assert a strong visual presence onto the open space and adjoining N7 route.

(b) Street corner units/blocks within the residential element of the scheme may be permitted to extend up to 5 storeys where a coherent urban design strategy seeks these heights for legibility purposes. Such height may also be considered in areas immediately adjoining larger public open spaces.

5.5.5 SuDS

The design brief for the site shall incorporate principles of Sustainable Urban Drainage Systems in accordance with the requirements and standards of the City Councils Environment and Engineering Department.

Sustainable Urban Drainage Systems (SuDS) measures will be required on all sites to be redeveloped. There will be a preference for SuDS features with biodiversity and amenity benefits over inert / hard SuDS features e.g. grass/planted swales, detention basins, infiltration basins, wetlands and storm water trenches in preference to attenuating in tanks, paving sub-base or cellular attenuation systems.

5.5.6 Access

Pedestrian and cycle access through the site will be advanced over time through redevelopment of existing industrial areas and secondly through the implementation of new green routes in association with the Green Infrastructure Strategy. These Green Routes shall restore access along the banks of the River Camac (including along an area to be de-culverted and restored with a riparian strip to create a new linear park) and this link will provide a new through route from Mourne Road in Drimnagh, to the N7 in the vicinity of Bluebell Luas stop.

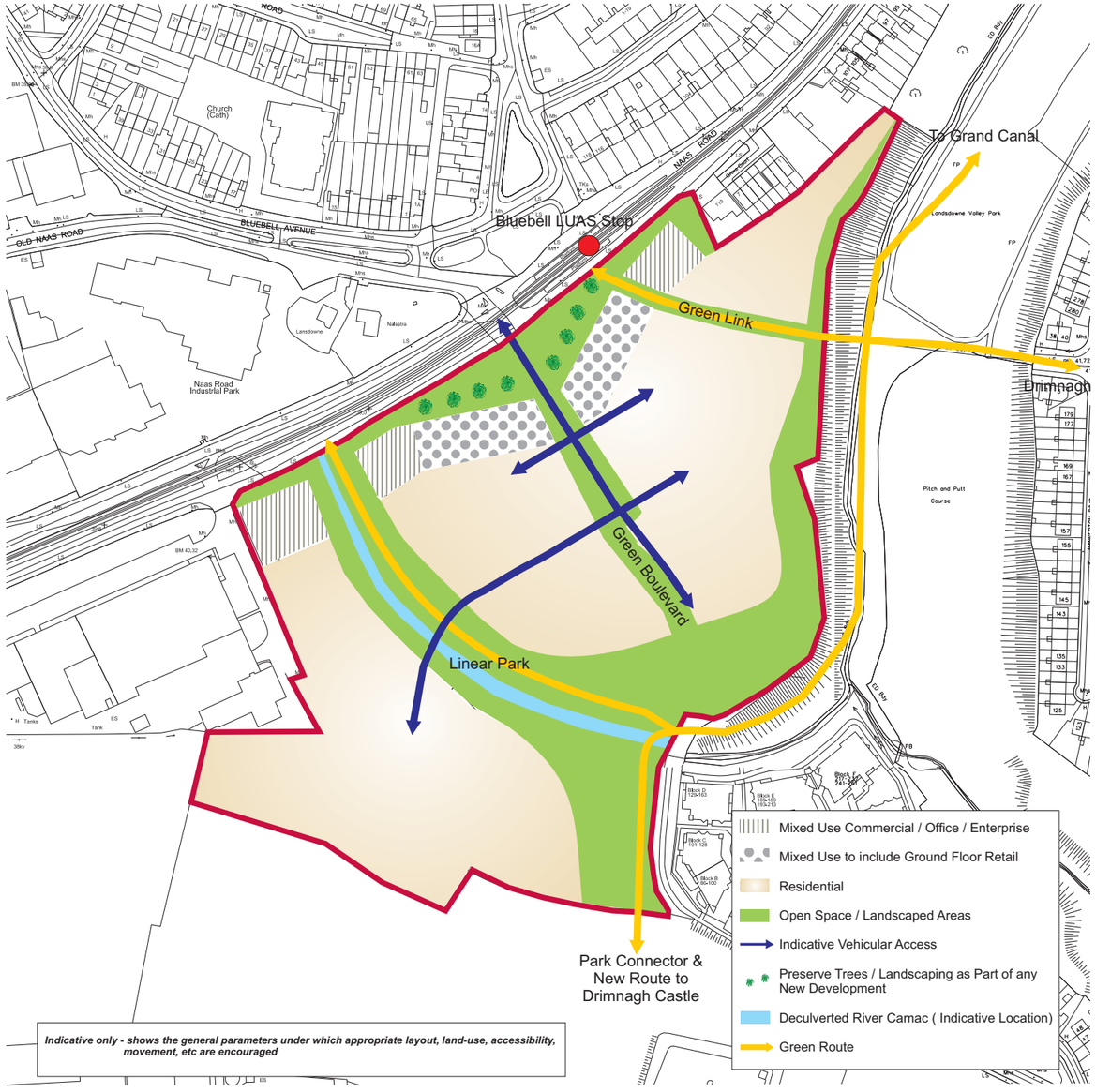
It is also envisaged that connectivity to Drimnagh Castle would be improved via this new green new link along the River Camac. Permeability through to the existing access route running through Lansdowne Valley would also be greatly enhanced - encouraging a greater level of pedestrian/cyclist use.

Connections provided by the Green Infrastructure Strategy for the wider area will deliver a continuous route through Lansdowne Valley to the Long Mile Road, boosting use of the route.

5.5.7 Housing density and typologies

Net residential density on this site should be at approx. 45-50 units per hectare (excluding main roads and public open spaces). In relation to building typologies, a range of unit types is desirable, with a mix of unit sizes and designs providing functional and visual variety.To assist in devising designs for residential schemes, the development plan provides direction in regard to residential layout/design and also sustainable building design and site design. This guidance and set of standards encourages best current practice.

Map 5.11 Proposed Layout for Muirfield Drive / Naas Road



Muirfield Drive / Naas Road Key Objectives

MDNR01. To develop land uses in accordance with the accompanying map – framing the Camac Valley and integrating with adjoining residential areas. Predominantly residential land uses are proposed in place of existing industrial lands, whilst mixed uses and some supporting retailing are sought on the northern side of the site fronting the N7 road route. New public open spaces will be provided along the River Camac to support biodiversity.

MDNR02. To deculvert that section of the River Camac on the western side of the site, thereby providing a new north-south green infrastructure link and linear park - integrating with other proposed routes connecting to the wider area.

MDNR03. To resolve key blockages in the existing Green Infrastructure by expanding Lansdowne Valley Park and establishing new green routes including ;

a) A new 'short-cut' east-west route from Mourne Road in Drimnagh, via Lansdowne Valley Park, to Naas Road and Bluebell Luas stop.

b) A link to the south towards Drimnagh Castle and Long Mile Road

MDNR04. To accommodate access for the majority of vehicular traffic for the new area via the existing entrance position at the Muirfield Drive/N7 junction.

MDNR05. That a masterplan is submitted with the first phase of development outlining the design approach to be adopted for developing the lands and how each phase can be integrated in future applications.

MDNR06. To ensure flood risk considerations are adequately considered in the design of the linear park and protect the Naas Road and adjoining properties from increased flood risk.

MDNR07. To retain and enhance existing planted areas and mature trees positioned along the Naas Road near the existing entrance to Muirfield Drive and to integrate them into any new development.

MDNR08. To ensure that all applications address the following issues regarding water management:

a. Prepare a site specific flood risk assessment of the site as part of the first application;

b. Fully incorporate SuDS in the design of the overall scheme and accompanying masterplan;

c. Put in place measures to protect water quality, addressing particularly the issue of discharges and runoff; and

d. Manage water usage within the site to conserve consumption of treated water and make use of grey water and/ or rainwater where suitable.