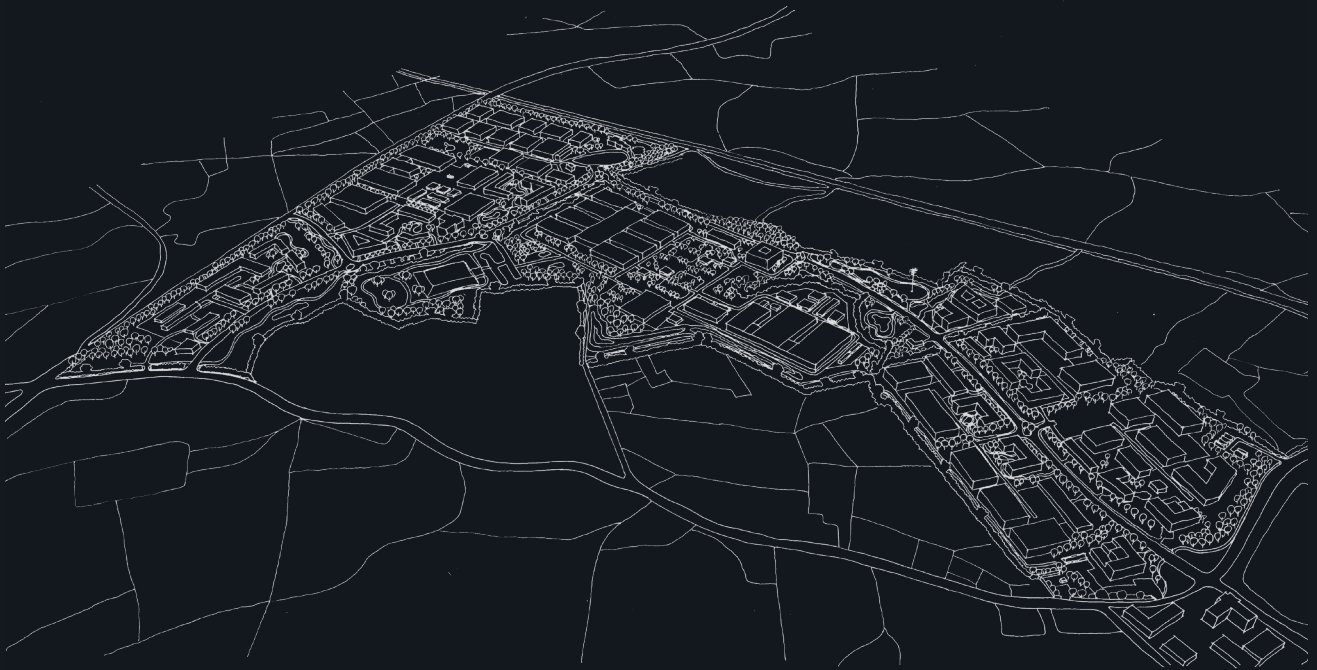


Grange Castle

A creative ecosystem
where business, people
and ideas can flourish



Architecture & Masterplanning Report

grangecastle.ie



Grange Castle West Masterplan

Executive Summary

This document has been prepared by RKD Architects on behalf of South Dublin County Council (SDCC) to outline the architectural concepts behind the Masterplan for Grange Castle West Business Park. It expands upon the designs for the recently completed Phase 1 development which provided a new park entrance, access road and landscaping. The plan sets out a vision for the development of the extended enterprise and employment zone that builds on the *Grange Castle - Corkagh Masterplan & Framework Study* from the year 2000 and subsequent *Grange Castle Masterplan* from the year 2005. It incorporates the policies of the SDCC Development Plan 2022-2028 with contemporary sustainable development principles and business park design-thinking.

The design concepts illustrate an overall strategy for the lands and their integration with the surrounding context, including the existing Grange Castle and Grange Castle South Business Parks, and the proposed 12th Lock Masterplan. Indicative layouts illustrate the potential types of development, massing and scale deemed appropriate for the Masterplan lands. The Masterplan for Grange Castle West has been prepared working with SDCC, Clifton Scannell Emerson Associates, Hughes Planning & Development Consultants, Image Now, Austen Associates, Innovision Media & Doherty Environmental. Its aim is to create an innovative business park model that provides a mixture of new employment opportunities in a people-friendly setting that encourages industries of different scale and sector to learn from and leverage off one another.

Team



- Client



South Dublin County Council

- Project Lead / Engineering



Clifton Scannell
Emerson Associates

- Architecture / Masterplanning



RKD Architects

- Planning & Development



Hughes Planning &
Development Consultants

- Design & Branding



Image Now

- Landscape Architecture



Austen Associates

- 3D Visual Consultants



Innovision Media

- Ecology Consultants



Doherty Environmental

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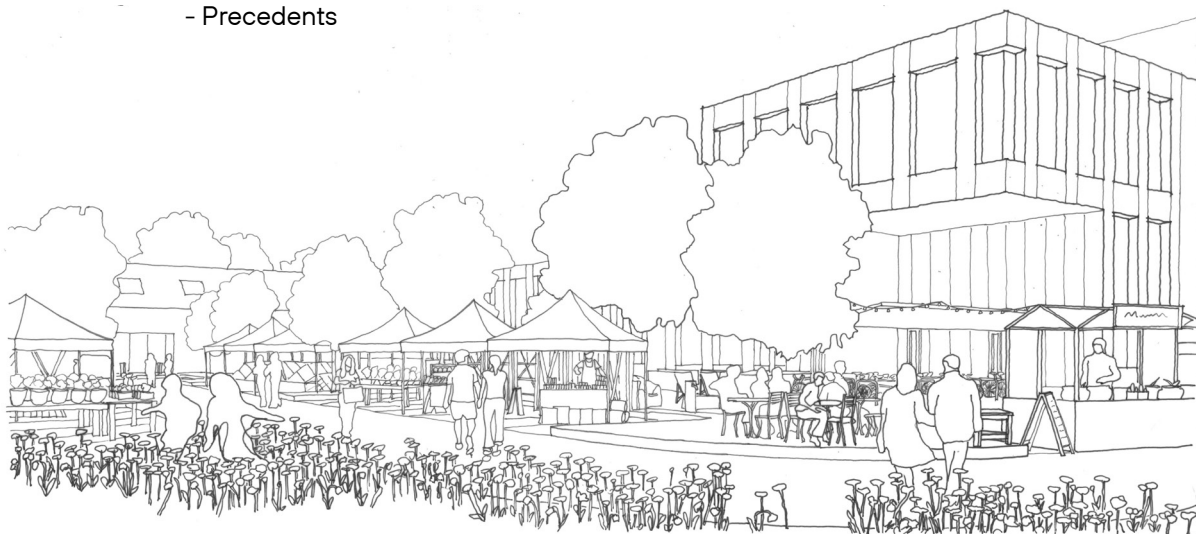
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03 | Masterplan

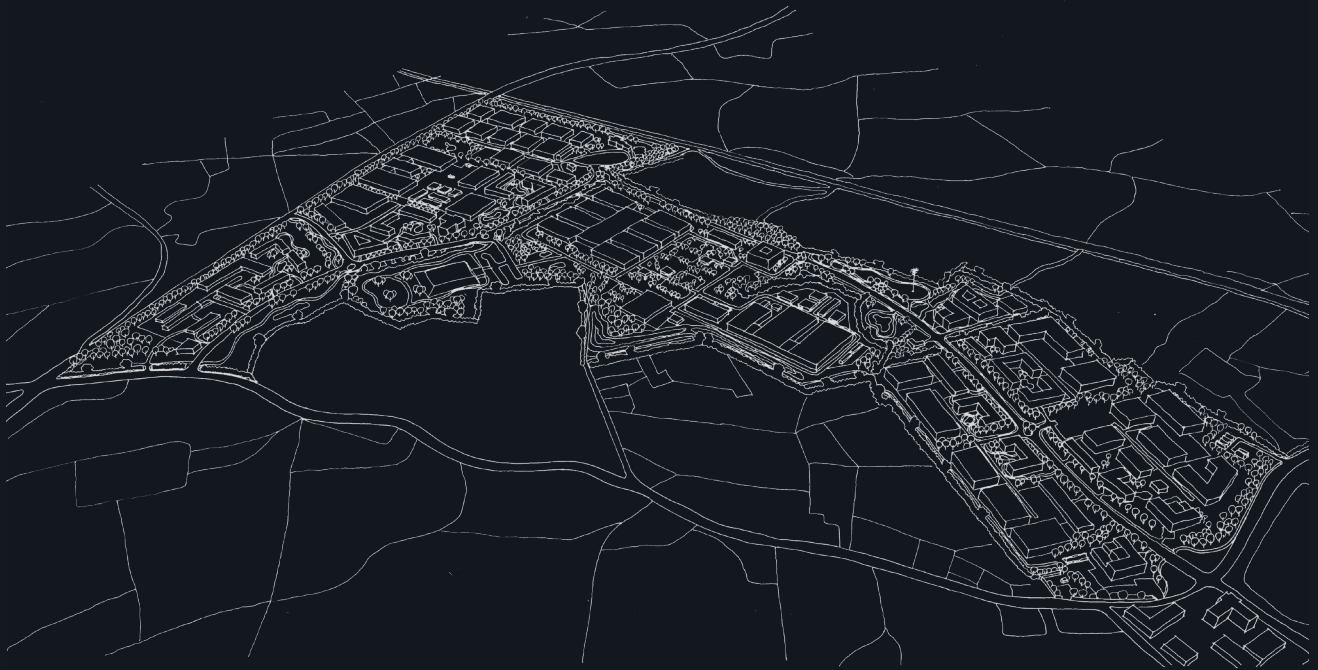
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Mobility Hub - Weekend Market Sketch



01 | Introduction & Vision

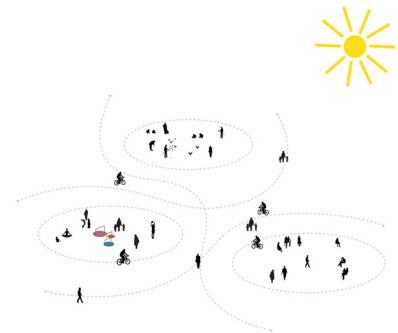
Introduction

Masterplan Approach

The process for this Masterplan began by defining the ambitions for the business park and developing a framework of strategies to achieve those ambitions. The site will be subdivided based on the requirements of individual tenants. As many of these tenants and requirements are unknown at the time of writing, the Masterplan will embed principles and goals into the overall framework. These will be retained regardless of the eventual subdivision of sites.

VISION

The starting point is the vision for how people will experience the business park. A clear vision allows for the right principles to be embedded in the framework that will define the development of Grange Castle West.



FRAMEWORK

This framework is created by overlaying strategies for access, infrastructure and landscape to maximise the potential of these lands. Core sustainability and placemaking principles will be embedded within these strategies. The proposed sites will be flexible in size and shape to facilitate various development scales and scenarios. This will allow for commercial responsiveness to changing markets.



OPPORTUNITY

This approach is intended to produce a modern and versatile Masterplan that can adapt to evolving needs. It will provide a structure to attract the industry types desired to achieve employment growth targets in the area. It will also provide opportunities for collaboration between these industries. The resulting buildings and public spaces will create a unique and identifiable place. This innovative model has the potential to create an internationally recognised business ecosystem at Grange Castle West.



Masterplan Approach



Grange Castle West - Birds-Eye Sketch

Introduction

Masterplan Vision

VISION STATEMENT

To create a sustainable employment hub in Grange Castle West that attracts new economic development opportunities to the area, while enhancing the climate resilience of the existing environment and providing a healthy and attractive place to work for a growing local population.

This will be achieved by:

- Making **efficient and sustainable use** of available land.
- Providing **versatile and flexible development plots**.
- Promoting **active & sustainable modes of transport**.
- Integrating with the local area by providing **social infrastructure**.
- Designing distinct and **recognisable character areas**.
- Mandating **energy efficient** building design and materials.
- Creating human-scaled **places for people**.



One Microsoft Place, Dublin



Café and Seating at Stockley Business Park, Uxbridge



Dublin Landings - LEED Platinum



Sports Day at Croxley Business Park, Watford



'Borrow-Bikes' at Stockley Park



Amenity Space at Chiswick Business Park, London

Introduction

Masterplan Vision

Business parks are traditionally characterised as pleasantly landscaped yet isolated places on the periphery of urban centres. They often consist of large single-use compounds on buffered land parcels with limited interaction between businesses. Their workforces are heavily reliant on single occupancy vehicles for transportation and large areas are given over to parking as a result.

Recent times have seen the emergence of a new business park typology that seeks to create a more integrated and well-connected business ecosystem. This type of park encourages collaboration between companies by providing spaces and opportunities for them to interact and trade with one another. Development of small and medium-sized enterprises (SMEs) and start-up companies is supported. Interaction with existing local businesses and communities is encouraged. The vision for Grange Castle West is to draw on this concept to create a collaborative business community that is well integrated with the surrounding local area.

EMPLOYMENT TYPES

Diversity of employment types will be an important ingredient in the success of the business park and will help to create a resilient local economy, foster innovation, and yield enhanced networking opportunities.

A mix of industries and business types will help provide economic stability in the event of a downturn in one sector. This diversity can also lead to increased innovation and creativity by allowing different ideas and approaches to be shared, leading to new and innovative solutions.

Collaborative spaces, networking events and forums can bring together businesses from different industries, creating new connections and opportunities for knowledge-sharing. By providing the above the park can encourage interaction between businesses of different scales and expertise, supporting the development of emerging start-ups and SMEs. This will stimulate growth and investment, creating a vibrant business ecosystem that will contribute to the development of the wider community.



Lab Space at MaRS Discovery District, Toronto



Co-Working Office at Station F, Paris

Introduction

Masterplan Vision

LANDSCAPING

The landscaping vision is centred around enhancing biodiversity on-site while providing welcoming public space that promotes pedestrian activity and social interaction.

Existing hedgerows are to be retained where possible and replaced where removed to aid the conservation and creation of habitats and wildlife corridors. Other sustainable design principles, such as the use of native plant species, permeable paving and SuDS, will also be incorporated.

Safe and accessible walkways, green spaces, and public seating will encourage park employees to stroll, relax, and engage with one another. Outdoor events and meeting spaces will help create a sense of place and community within the development.



Outdoor Seating at Chiswick Park, London



Meeting Booth at Stockley Park, Uxbridge



Employee Borrow-Bikes at Stockley Park, Uxbridge



Electric Shuttle Bus at Silicon Valley Business Centre, California

TRANSPORT

The transport strategy goal is to encourage sustainable and active modes of transport and reduce reliance on petrol-powered private vehicles.

Footpaths through the park will be safe and accessible to all. The park cycle paths will extend the existing cycle network, connecting to local train and LUAS stations, and to the Grand Canal Greenway.

A mobility hub is proposed close to the park entrance to facilitate innovative new transport solutions such as; a depot for EV shuttle buses to and from local rail stations, EV charging points and share cars, electric bikes and scooters for tenants to use on short journeys. Ride-sharing can be encouraged by providing a car-pooling platform for the park with guaranteed parking spaces for those who avail.

Introduction

Masterplan Vision

ENERGY

Energy use and the environmental and financial cost of that use is a critical aspect in the success of a business park. A new 220kV substation will provide power reliability and distribution for the park and help to integrate renewable energy sources into the power grid.

Way-leaves throughout the park allow for a district energy system to be incorporated in the future. A space allocation will also be made for an 'Energy Hub' to allow for the exploration of alternative clean energy sources. One potential avenue is a deep geothermal energy plant which would be among the first of its kind in Ireland.

For more details please refer to the CSEA report of this Masterplan.



Geothermal Plant at Eden, Cornwall



Geothermal Plant at United Downs Industrial Park, Cornwall



Public Space at Chiswick Park, London



Restaurant at JTC Launchpad in the One North Business Campus, Singapore

SOCIAL INFRASTRUCTURE

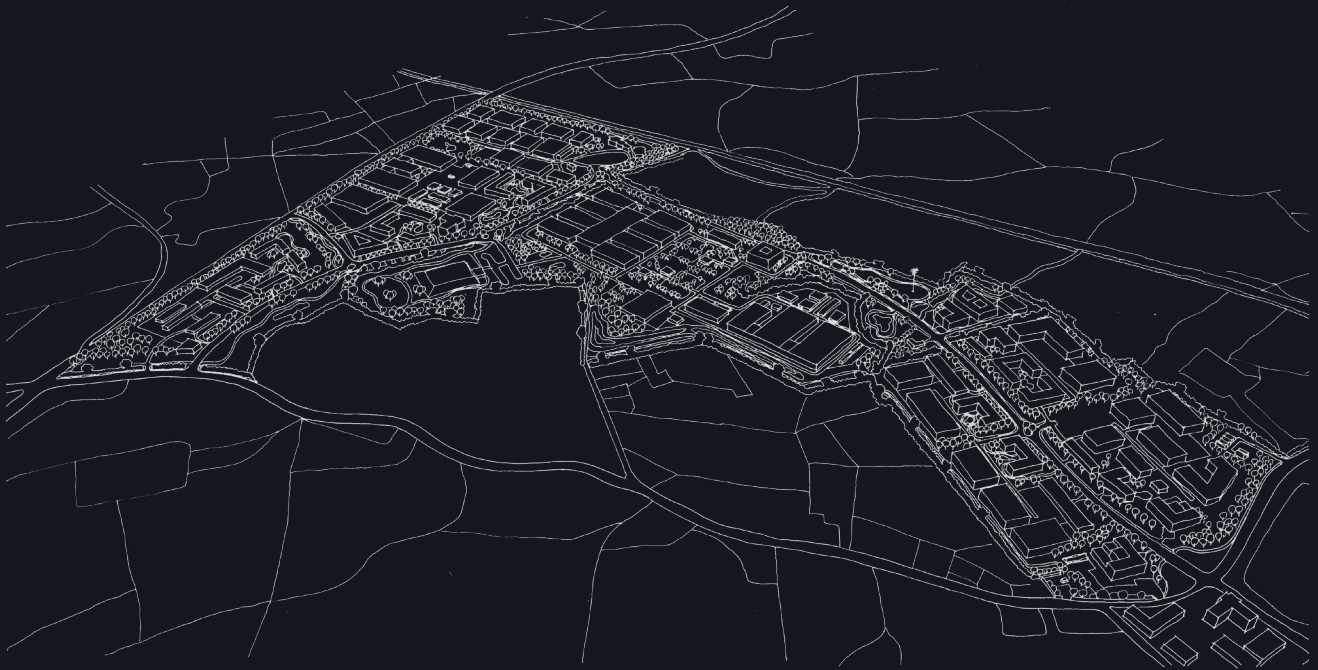
It is important that amenities and services are provided for the benefit of the workers and visitors of the park, as well as for the local community. This will be done in such a way that avoids competition with the more community-focused Masterplan at 12th Lock.

The paths and cycleways through the park will provide pleasant outdoor recreation spaces for public use. Facilities and services at the mobility hub will also be available to the general public.

A central restaurant / café and space for a lunchtime food truck market is proposed to serve both employees and visitors alike. In addition, an existing protected structure on the park perimeter can be redeveloped to house a crèche or other needed community facilities.



Park Entrance - Birds-Eye Sketch



02 | Site Context & Concept

Site Context

Site Photographs

Aerial images of the existing Grange Castle West site.



Site Road




Second Roundabout



Feature Lake



 Site Boundary

Site Entrance

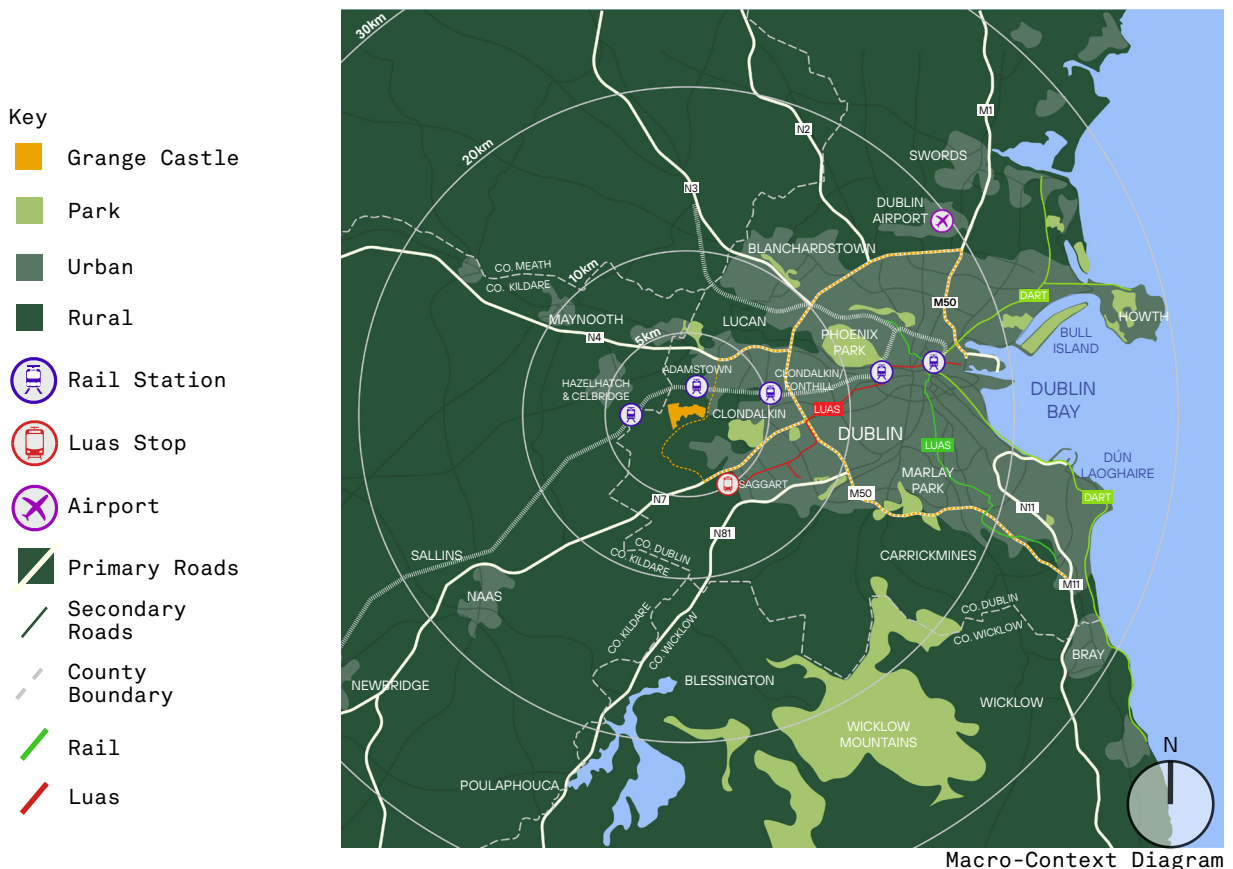
Site Context

Macro Context

The Grange Castle West business park is located in Dublin City approximately 3km west of the orbital M50 motorway which provides easy access to the City Centre and Dublin International Airport. It is well connected to the West, Southwest and South of Ireland through its proximity to the N4 & N7 national roads and mainline and commuter, rail connections.

The population of the Greater Dublin Region is over 1,500,000 and the site is close to several large town centres including Tallaght, Lucan, Clondalkin and Celbridge. Other major centres of activity near to the study area lands include Casement Aerodrome and Baldonnell to the southwest, the Liffey Valley Centre to the northeast, The Square Shopping Centre and Tallaght Hospital to the south.

The Grand Canal and Grand Canal Way cycle and pedestrian route run past the northern site boundary. This currently extends as far as 12th Lock, offering a greenway route free from traffic into Dublin City. In the wider context Dublin Bay lies to the east and the large towns of Naas and Maynooth are located to the west within 20km of the site. To the south are the Dublin-Wicklow Mountains and Poulaphouca Reservoir, the largest artificial reservoir in Ireland.



Site Context

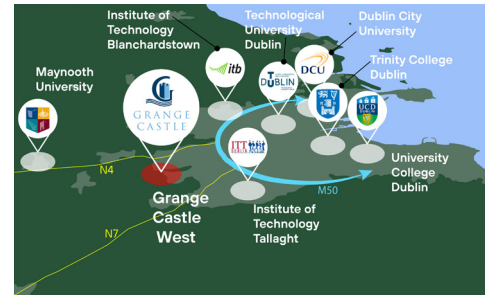
Development Drivers

Local Talent Pool - The park sits within reach of 7 Third Level Institutions which provide a steady supply of well-educated and talented individuals to the local workforce.

Accessible & Serviced Sites - The lands contain a new access road, integrated services, landscaped pedestrian and cycle paths, and a feature lake. A variety of fully serviced sites ranging in size are available.

Growing Residential Population - Locally there are two Strategic Development Zones seeking to provide homes for approximately 48,000 new residents. To help meet their needs there is also a Masterplan for the provision of community, hospitality and recreation facilities at 12th Lock.

Existing Enterprise - The Grange Castle Business Park is home to a number of the most innovative multi-national corporations across the food, technology and pharmaceutical sectors. This offers opportunities for synergies with emerging industries in Grange Castle West.



Local Third Level Institutions



Accessible & Serviced Sites



Local SDZs, Masterplans & Existing Enterprise

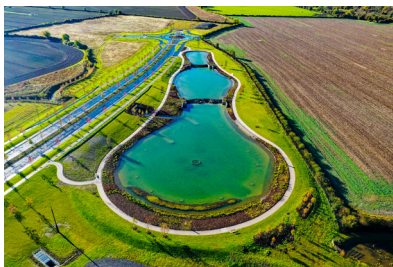
Site Context

History & Character

The site is located across the historical townlands of Grange, Ballymakaily, Clutterland, Milltown, Brownstown, Loughtown Upper and Peamount. The word 'grange' evokes a farm attached to a country house or monastery and the character of the existing lands is mainly farmland divided into fields by the historical townland boundaries and hedgerows.

A new fully serviced road extends from an expansive entrance plaza on the Peamount Road. It features planter beds and trees on either side and in the median that give it a green character. It passes a large feature lake, complete with landscaped berms and a fountain, which provides a focal amenity area for the people in the park. The boundaries of the site are defined by existing hedgerows or new planted berms to provide a green buffer to the surrounding areas.

Existing structures on site consist of a water tower and a derelict farmhouse on the Peamount Road that is listed on the Record of Protected Structures.



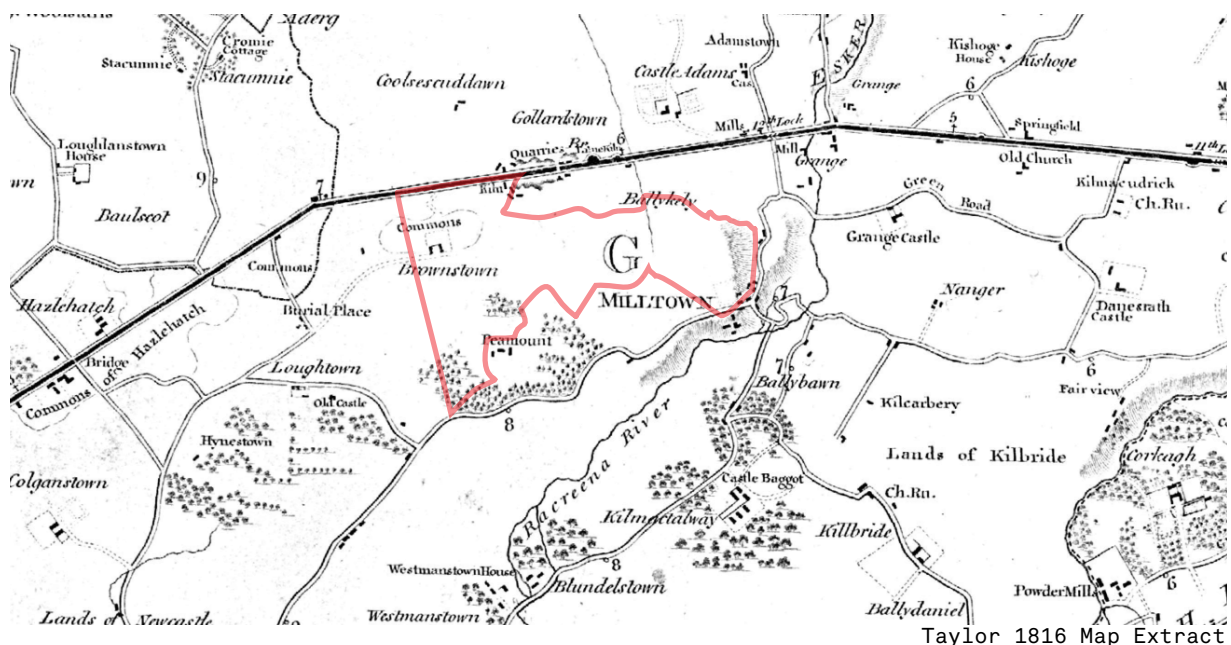
Feature Lake



Boundary Hedgerows & Berms



Protected Farmhouse



Taylor 1816 Map Extract

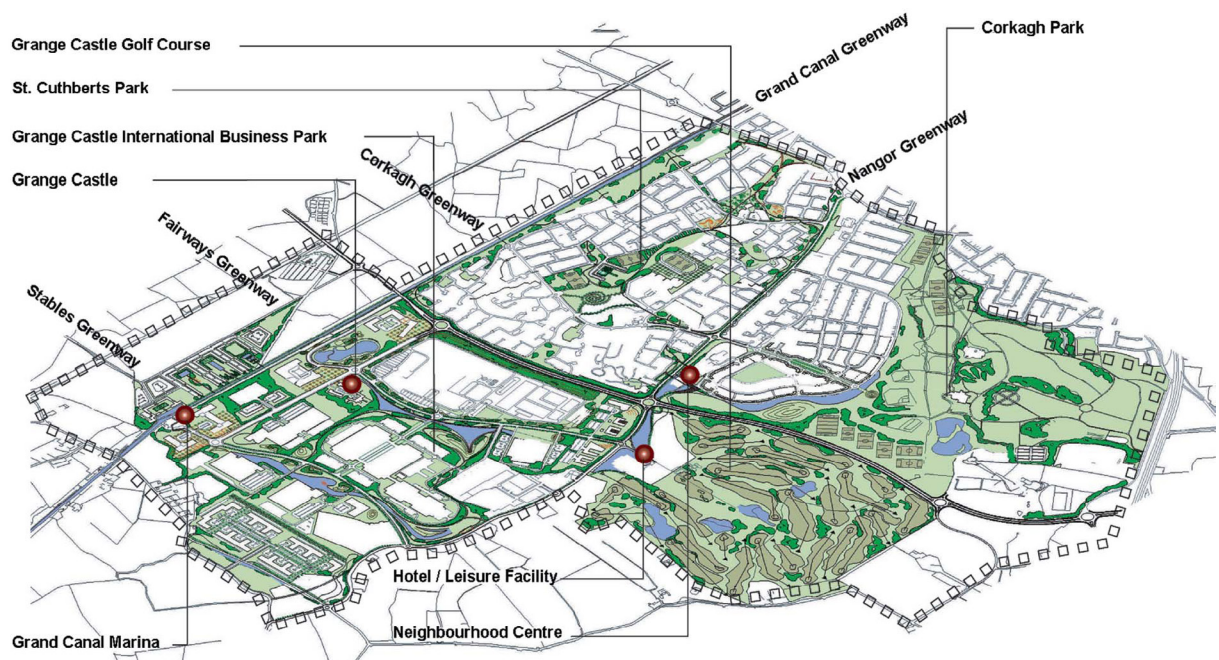
Introduction

Previous Masterplans

A previous Masterplan was undertaken in 2000 on behalf of South Dublin County Council for the 445 hectare land bank to the east of Grange Castle West known as the Grange Castle / Corkagh area. Included in the plan were areas for business development, hotel and golf club amenities and residential incorporating small scale commercial and retail. The future development of Corkagh Regional Park and the Grand Canal were also considered in the overall framework.

The concept was to create a network of two east-west greenways, along the Nangor Road and Grand Canal, and three north-south greenways comprising the Corkagh Greenway, the Fairways Greenway and the Stables Greenway. The core area of 190 hectares was named the Grange Castle International Business Park, which has since been developed to a world-class standard and attracted international investment in the high technology / biotechnology sectors.

In 2005 this Masterplan was updated to address development in the intervening period with a focus on Grange Castle Business Park and the Grange Castle Golf course lands.



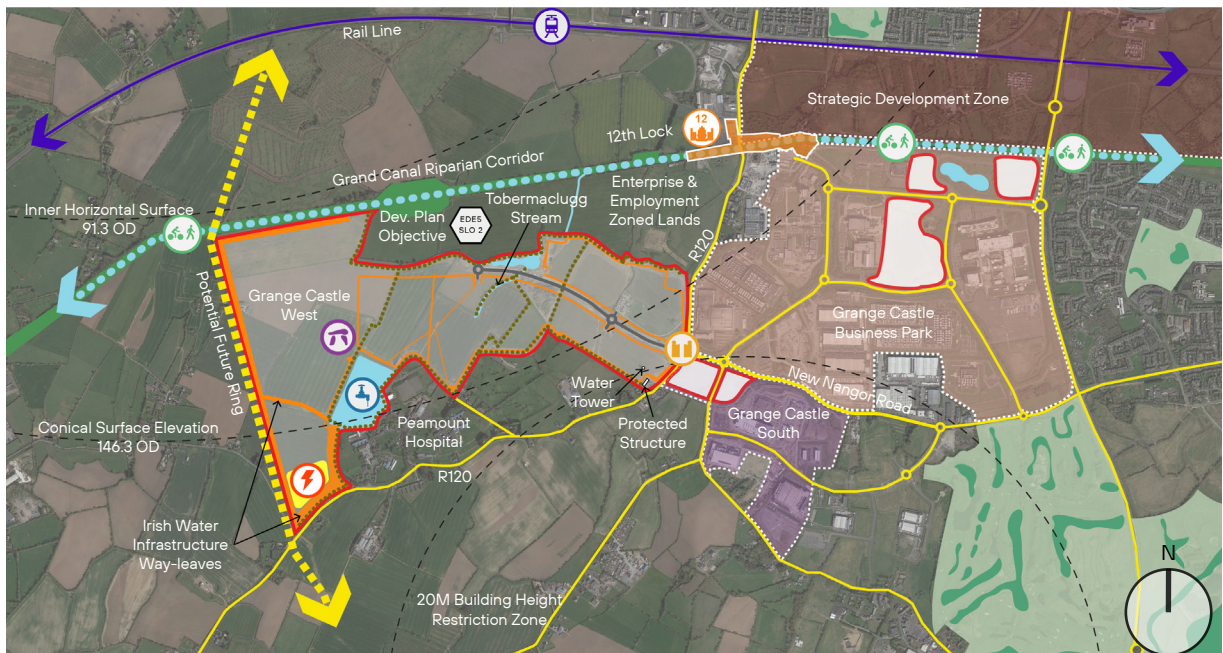
Grange Castle / Corkagh Masterplan, 2000

Site Context

Considerations

The site is zoned Enterprise and Employment and its use will reflect this. It carries a specific South Dublin County Development Plan Objective EDE5 SLO 2; "To provide for an attractive campus style setting to encourage the investment of hi-tech, hi-tech manufacturing, and research and development enterprise at Grange Castle Business Park, the expansion of which will be subject to a Masterplan incorporating a local transport plan in consultation with the NTA and TII". The lands directly to the north are also zoned Enterprise and Employment.

In close proximity are the Strategic Development Zones (SDZs) at Clonburris and Adamstown which will see a large increase in local population. The use of the site will target high employment densities to bring a corresponding increase in local job opportunities. Development should also complement the existing business park lands at Grange Castle and Grange Castle South and this plan will include existing vacant sites in both. Their proximity offers the opportunity to tie the three parks together to form a coherent economic neighbourhood. The ongoing Masterplan for 12th Lock can provide supportive public amenities such as retail, hospitality and recreation. 12th Lock is ideally positioned to serve both the residential SDZs and the business parks by providing amenities for the local population and acting as an attractor for the area.



Key

- | | | | | | |
|--|--|---|---|--|--|
|  Reservoir |  Train Line |  Entrance |  12th Lock |  Dev. Plan Objective EDE5 SLO 2 |  Potential Future Ring Road |
|  ESB Substation |  Grand Canal Greenway |  Heritage Site |  Key Hedgerows |  Grand Canal |  Way-leaves |

Existing Site Conditions

Site Context Considerations

Connectivity to the surrounding area is key and the Masterplan will link in with the existing cyclist and pedestrian infrastructure to forge links with the existing business parks, 12th Lock and the SDZs. The rail station at Adamstown also offers an opportunity to bring people to the site by means other than road. It is currently 3km from the site entrance however there is the potential for alternative more direct routes from the site across the Grand Canal. The proximity of the site to the Grand Canal Greenway is an advantage as it offers a safe traffic-free cyclist route as far as Suir Road in Dublin 8. Connection to this corridor should be prioritised to encourage active transport and reduce reliance on car travel to the site.

Directly bounding the site are several existing mature hedgerows and, in the Northwest corner, the Grand Canal Riparian corridor. These ecological features have been identified in the Biodiversity Management plan supplied by Doherty Environmental and it is vital that they be respected with appropriate setbacks to protect the natural infrastructure and biodiversity of the site. The Biodiversity Management Plan also identifies several key hedgerows within the site. These form important wildlife habitats and routes and should be preserved or re-routed to retain wildlife corridors across the site. Several contain small streams and ditches that are important to the drainage of the lands, including the Tobermaclugg Stream in the centre of the site.

The South Dublin County Development plan identifies a potential future ring road along the western boundary of the site and vehicular and cyclist / pedestrian connections to this and across into the lands beyond will be considered.

Other constraints on the lands include way-leaves for existing underground services and future site services. Existing services in the central area of the site can be re-routed however way-leave zones will be included along site roads to accommodate district heating infrastructure in the future. Larger way-leaves have also been identified in the southwest for Irish Water infrastructure related to the Dublin-Shannon pipeline and Saggart Reservoir. These link with an area identified for a covered reservoir with additional space for future expansion. A site in the southwest corner is also reserved for an ESB substation and potential geothermal energy production facility. For more information please refer to the CSEA report.

The archaeological and heritage considerations are the protected farmhouse on the Peamount Road, the existing water tower, and an archaeological site in the west of the lands which is identified on the Sites and Monuments Record.

The entrance has been built as part of Phase 1 and its scale and prominence would benefit from landmark buildings in the adjacent sites. The site sits outside of the Department of Defence 20m height restriction zone around Casement Aerodrome and within the Inner Surface of Casement and partially within the Conical Surface Zone of Weston Airport. Building heights should take these restrictions into account.

The existing access road and the attenuation lake have been designed with a green, landscaped character that will be extended through the park for consistency.

Site Concept

Opportunities

The goal of the Masterplan is to build upon the existing access, services and landscaping strategies to create a sustainable and vibrant extension to the business park at Grange Castle. The strategy for this will be based on the 'anchor plus' model where development is stimulated by large 'anchor' tenants and smaller businesses and start-ups are supported to encourage collaboration and growth.

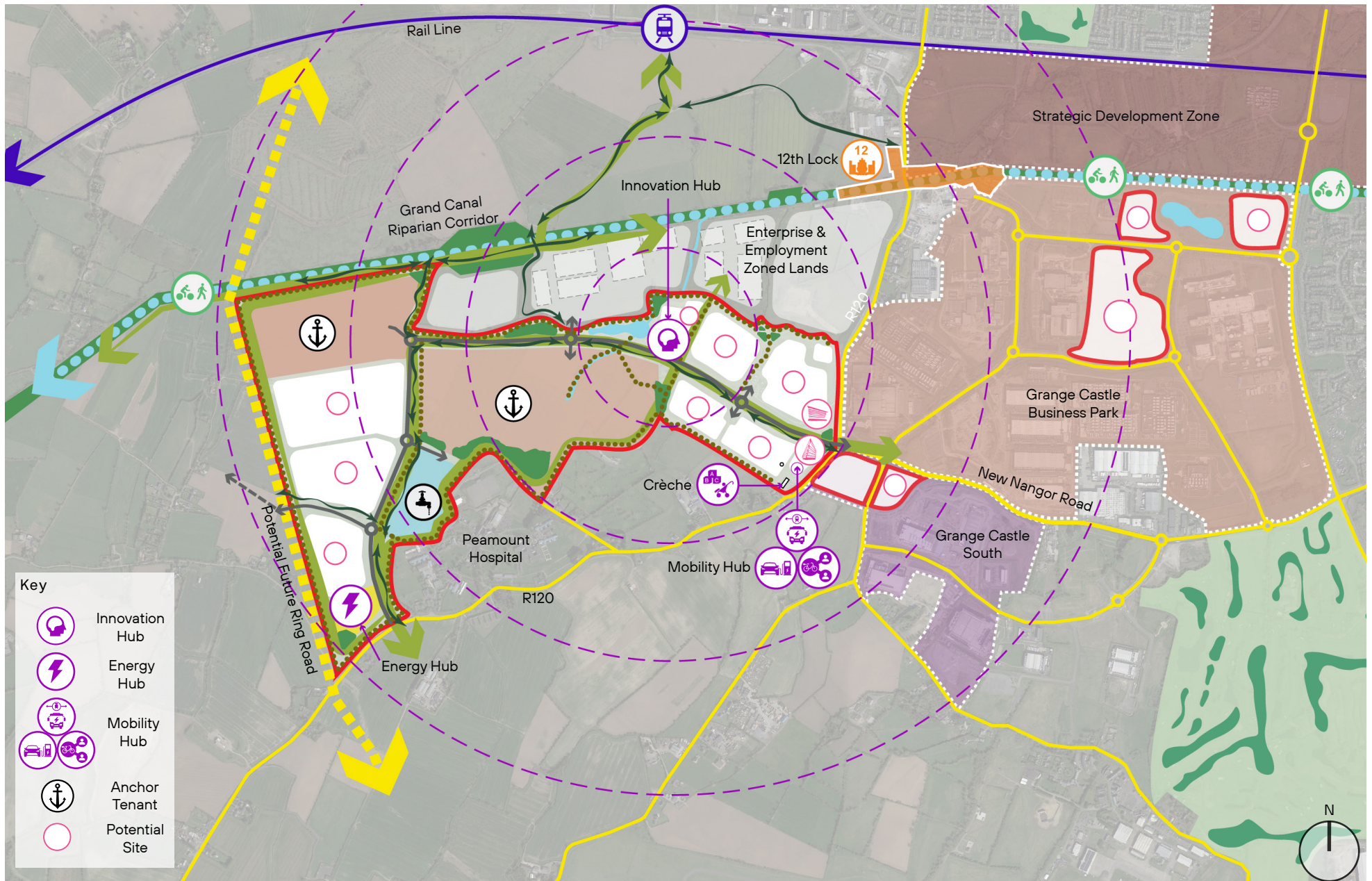
The existing site road will be extended along an efficient route that minimises road surface area. A second and potentially a third entrance to the park will be identified to improve accessibility and integration with the surrounding area. A 'Mobility Hub' is envisioned close to the main entrance of the park. This will encourage sustainable transport strategies by incorporating facilities such as EV charging facilities and share bike / share scooter stations. The aim of the hub is to reduce reliance on single occupancy vehicle travel to the park by facilitating alternatives.

The landscaping strategy will seek to enhance the climate resilience of the site by integrating and enhancing the natural ecology of the lands. Natural habitats and routes for wildlife will be preserved by the creation of eco-corridors through the site. Pedestrian and cyclist routes will feed through the park and connect with the surrounding infrastructure. This strategy will create an attractive, permeable and universally accessible network of routes. Walking, cycling and the use of public transport will be encouraged through this increased permeability.

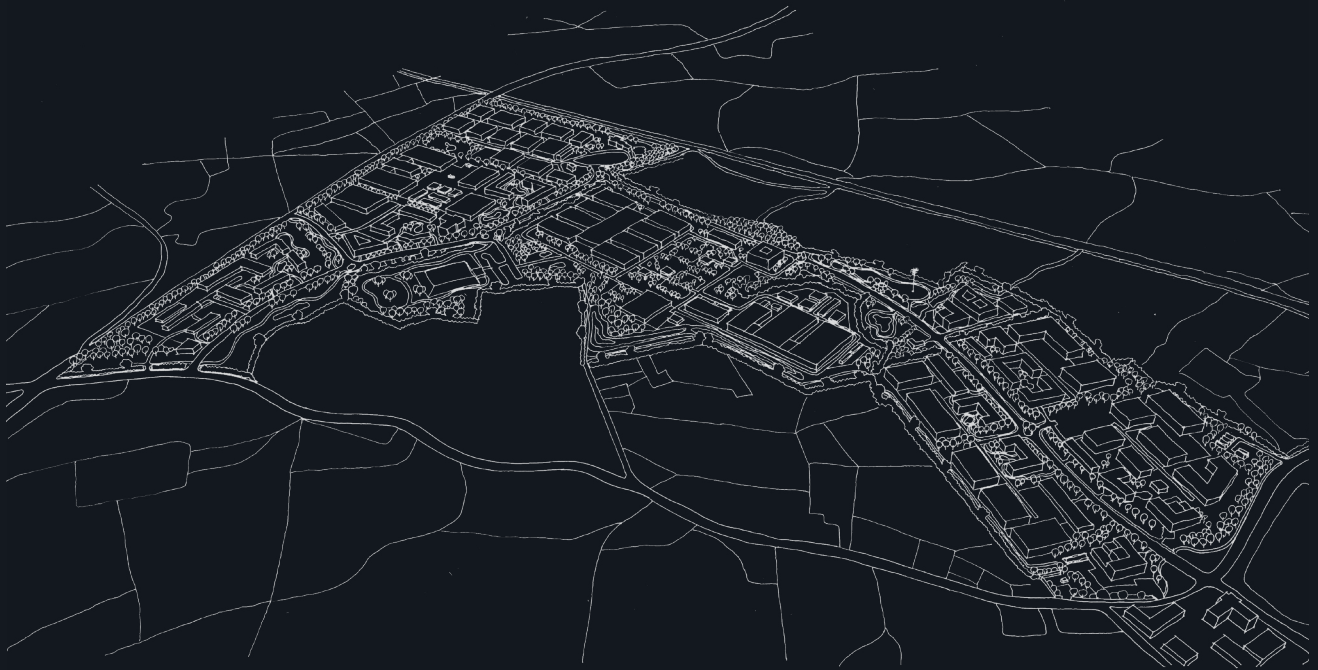
Developable land will be maximised and plot sizes will be flexible to accommodate a variety of clients. Regular shaped plots will provide the versatility to adapt to evolving needs. The park will target high employment-generating uses and provide opportunities for links between foreign direct investment and small and medium sized enterprises. Large plots aim to attract large-scale multinational corporations that will function as 'anchor tenants' for the park. They will kick-start job creation and offer long term stability for the business ecosystem. They will act as catalysts for the creation of a business community within the park.

At the other end of the scale, the establishment of an Innovation Centre would provide spaces and resources to attract start-ups and SMEs, adding diversity and creativity to the ecosystem. A landmark building with co-working spaces, meeting places, and accelerator and mentorship programs can offer opportunities for networking, knowledge-sharing and collaboration between the large tenants and emerging SMEs. Central café and restaurant facilities at this location can serve the whole park with the outdoor space around the lake providing a focal point for park events and activities.

The proposed location of the new substation in the southwest corner can be expanded to form an 'Energy Hub'. In addition to the substation, feasibility for the provision of a deep geothermal energy station can be explored at this location. If successful, this would provide a local renewable energy source and act as a model for geothermal energy elsewhere in Ireland. The addition of a visitor centre at a successful energy station would provide opportunities for local residents and visitors to learn about sustainable energy, enhancing awareness, education and community engagement. The Grange Castle West site represents an opportunity to expand on the capacity of the existing business park to provide employment for a growing population and drive regional and national growth and investment.



Site Opportunities




03 | Masterplan Proposal


Masterplan

Placemaking Principles

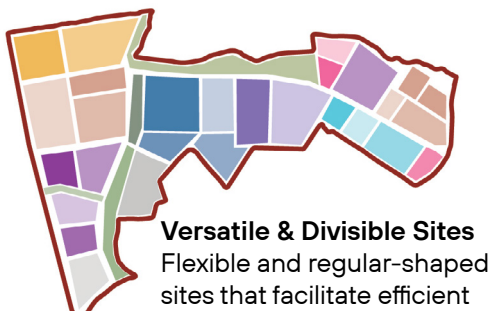
The following principles are embedded within the Masterplan to ensure the ambitions for the park are realised . These will be retained as park evolves to accommodate the needs of specific tenants.



Resilient & Bio-diverse Landscape
 A landscape strategy that protects and enhances biodiversity on the site.



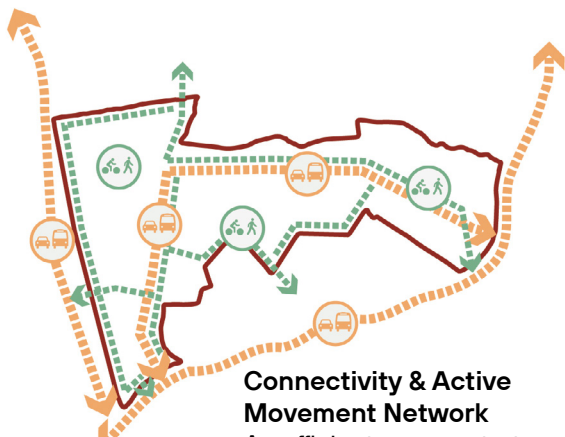
Vibrant & Healthy Places for People
 Pleasant, comfortable and accessible public spaces to sit and meet, walk and run.



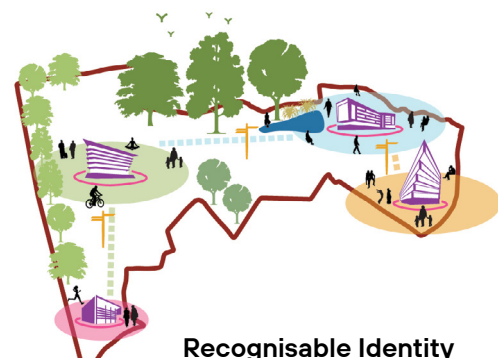
Versatile & Divisible Sites
 Flexible and regular-shaped sites that facilitate efficient patterns of development.



Connected Business Ecosystem
 Promote opportunities for integration, support and trade between different clients.



Connectivity & Active Movement Network
 An efficient access strategy that promotes safe and active movement.



Recognisable Identity
 Provided by landmark buildings, a diverse landscape and coherent branding.

Masterplan

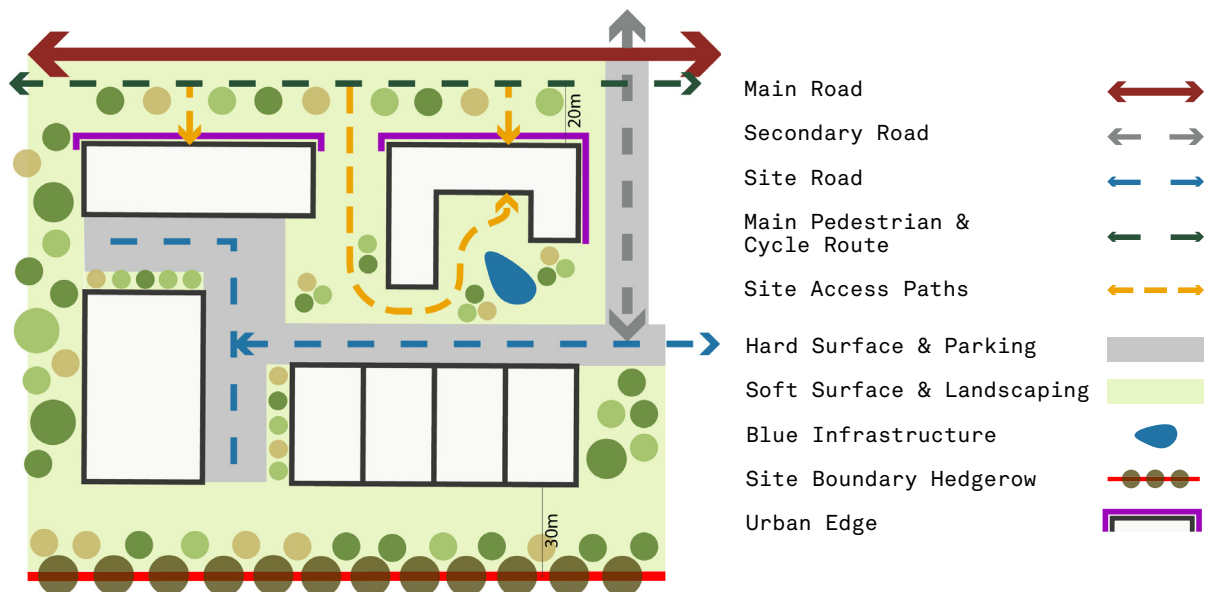
Proposed Layout

The existing road and associated paths, service way-leaves, and landscaping will be extended through the site. The road follows a route that maximizes the size of development plots to one side to optimize flexibility. It terminates at the Peamount Road creating a second vehicular entrance to the park. The fourth roundabout provides access to the reservoir and a second entrance to the large central site. The fifth roundabout allows for a connection to a potential future ring road outside the western boundary via the Irish Water infrastructure way-leave. This efficient road network maximises land utilization for business and amenity functions.

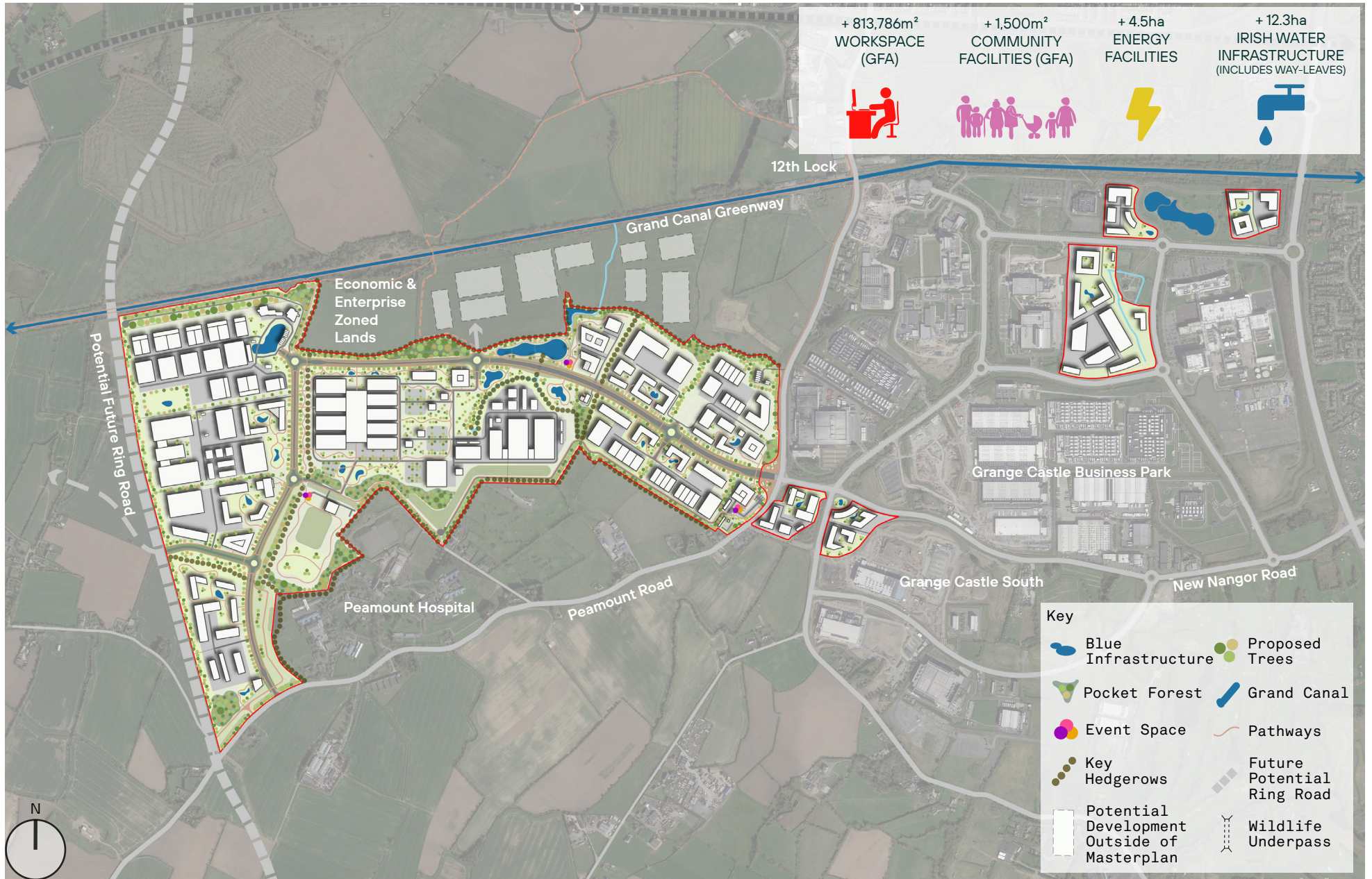
The landscape strategy retains or re-orientates the key hedgerows identified by the Biodiversity Management Plan and introduces new areas of planting and tree coverage around the perimeter and in the more awkward corners of the site. Wildlife underpasses are provided where hedgerows are broken by the main site road.





The overlaying of these strategies divides the site into plots ranging from 2-106 acres. These are sub-divisible into regular shapes and capable of accommodating a range of different industries and functions. The conceptual building layouts are representative of a mix of high-technology, hi-tech manufacturing, and research and development (R&D) industries. Indicative building sizes range from 20m wide office blocks up to large form facilities.

Buildings address the public realm, made up of the main site routes and amenity areas, to provide frontage, activation and supervision. The goal is to encourage more interaction between private sites and the public realm. Building entrances are accessible from public paths and cars are kept out of the spaces between path and building. Vehicular access is provided by secondary roads located between sites and parking is located within sites, behind the urban edge created by the public-facing buildings. The intention is to create a more vibrant and people-friendly park.





Concept Site Layout



<p>+ 813,786m² WORKSPACE (GFA)</p> 	<p>+ 1,500m² COMMUNITY FACILITIES (GFA)</p> 	<p>+ 4.5ha ENERGY FACILITIES</p> 	<p>+ 12.3ha IRISH WATER INFRASTRUCTURE (INCLUDES WAY-LEAVES)</p> 
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Key

 Blue Infrastructure	 Proposed Trees
 Pocket Forest	 Grand Canal
 Event Space	 Pathways
 Key Hedgerows	 Future Potential Ring Road
 Potential Development Outside of Masterplan	 Wildlife Underpass

Proposed Masterplan

Masterplan

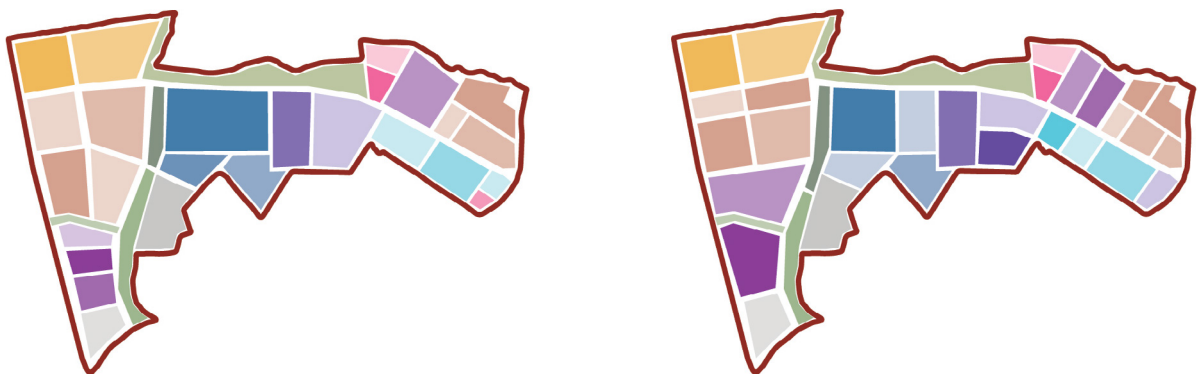
Layout Flexibility

Flexibility is built into the Masterplan layout. The route of the main road and services from the second roundabout is designed to allow for the largest sites possible while accommodating the reservoir and Irish Water way-leaves. In maximising the size of potential sites this layout also maximises the ways in the which sites could be divided to suit a range of tenants. This flexibility is crucial in creating an adaptable business park that meets the needs of its tenants now and in the future.

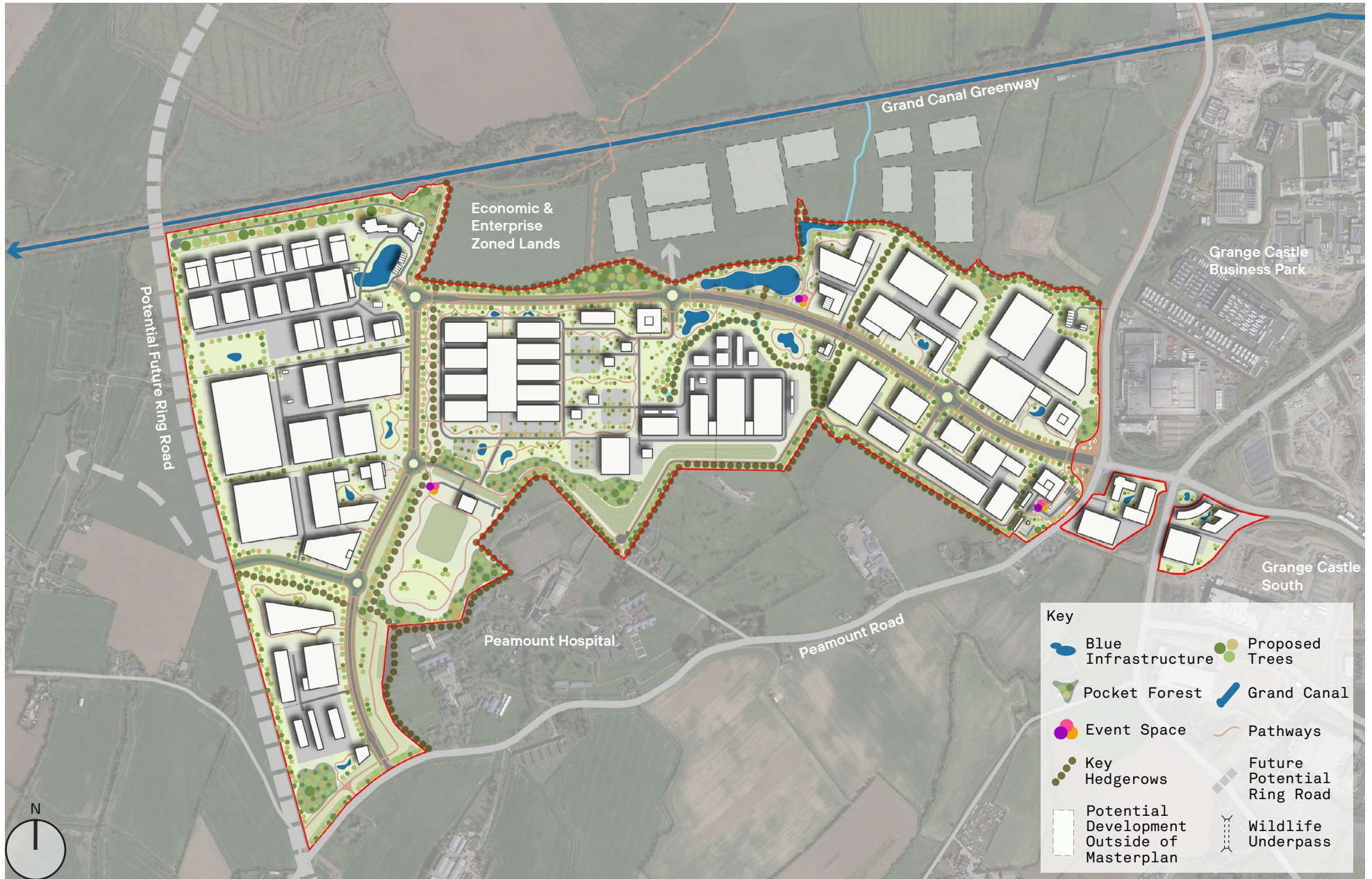
A flexible layout can attract a diverse range of tenants with different requirements, such as those needing large or small facilities, high-tech spaces, or mixed-use spaces. This can help increase the occupancy rate and revenue potential of the park. It will also allow tenants to adapt to changing business needs. As economic conditions, market demands, and technology trends evolve, businesses can adjust their operations and facilities to remain competitive.

Flexibility can future-proof the development by accommodating future growth and expansion of the businesses within the park, helping tenant retention and preventing the need for costly and disruptive redevelopment or relocation in the future. It also enhances the sustainable potential of the park by allowing for the integration of green technologies and sustainable practices. This can include features such as energy-efficient buildings, green spaces, and alternative transportation options.

The diagram on the next page demonstrates how the Masterplan layout could accommodate industries and businesses requiring larger scale facilities throughout the park. Although much larger buildings are shown it is important to note that the layout still features key hedgerows and wildlife corridors, underpasses, minimized road surfaces, landscaped paths, abundant green spaces, pocket forests, amenity and event spaces, attenuation lakes and rain gardens. Potential sites can be subdivided in a variety of different ways to suit the needs of prospective tenants, as shown by the examples in the below diagrams. However, in pursuing flexibility of layout it is vital that the underlying Masterplan principles are retained.



Layout Flexibility - Example Alternative Site Divisions

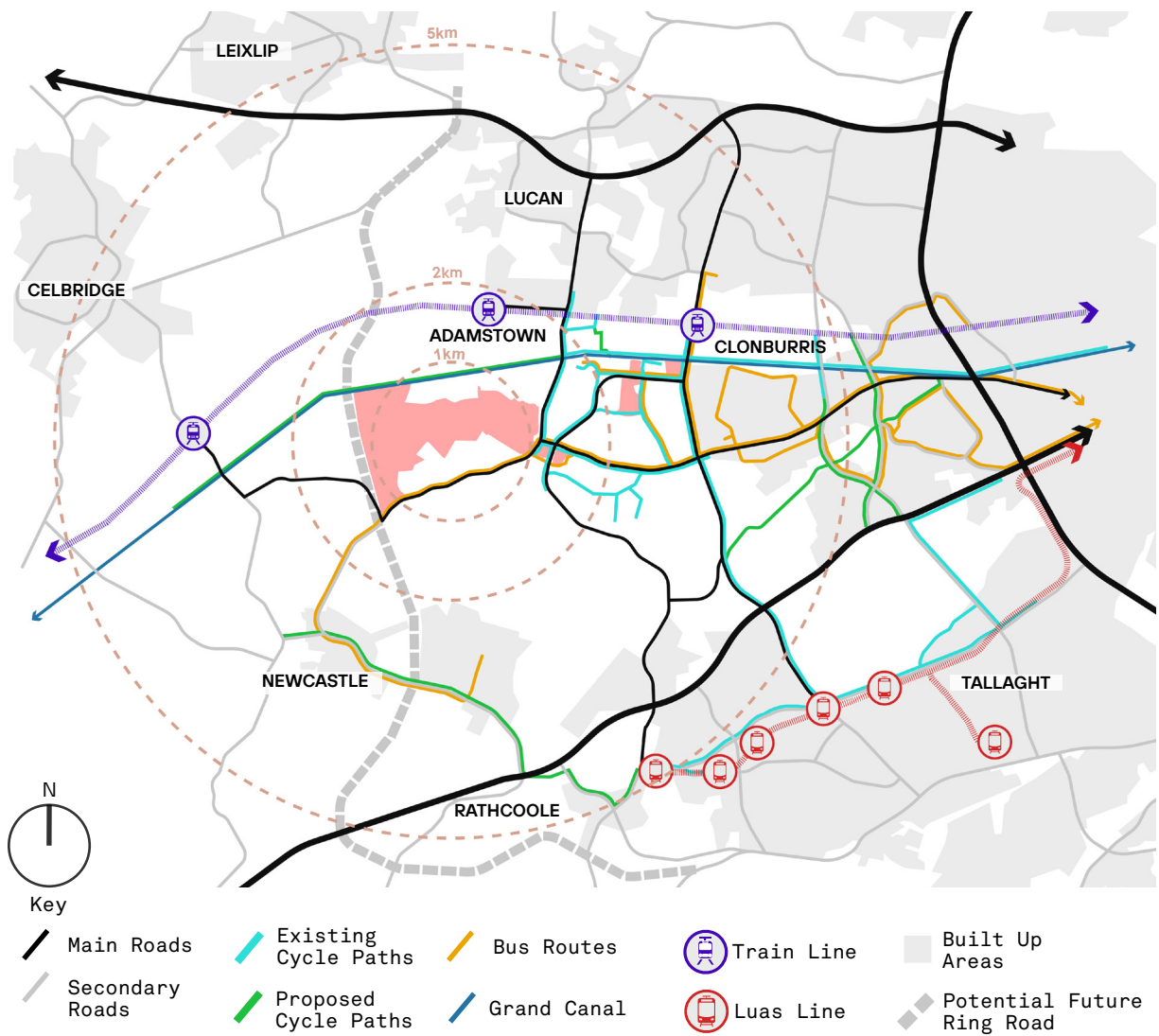


Proposed Masterplan - Large Facility Alternative

Masterplan

Connectivity & Movement

An important objective of the SDCC Development Plan is to reduce the mode share of journeys taken by car which currently stands at 62%. The movement strategy is aimed at achieving this Development Plan goal. Multiple bus routes run past the site and a bus stop will be incorporated at the lake to accommodate a route through the park. A mobility hub with parking, shuttle bus and EV charging facilities is proposed adjacent to the main road. This can act as a jumping off point for employees and visitors to continue through the park by foot or share bike or e-scooter.

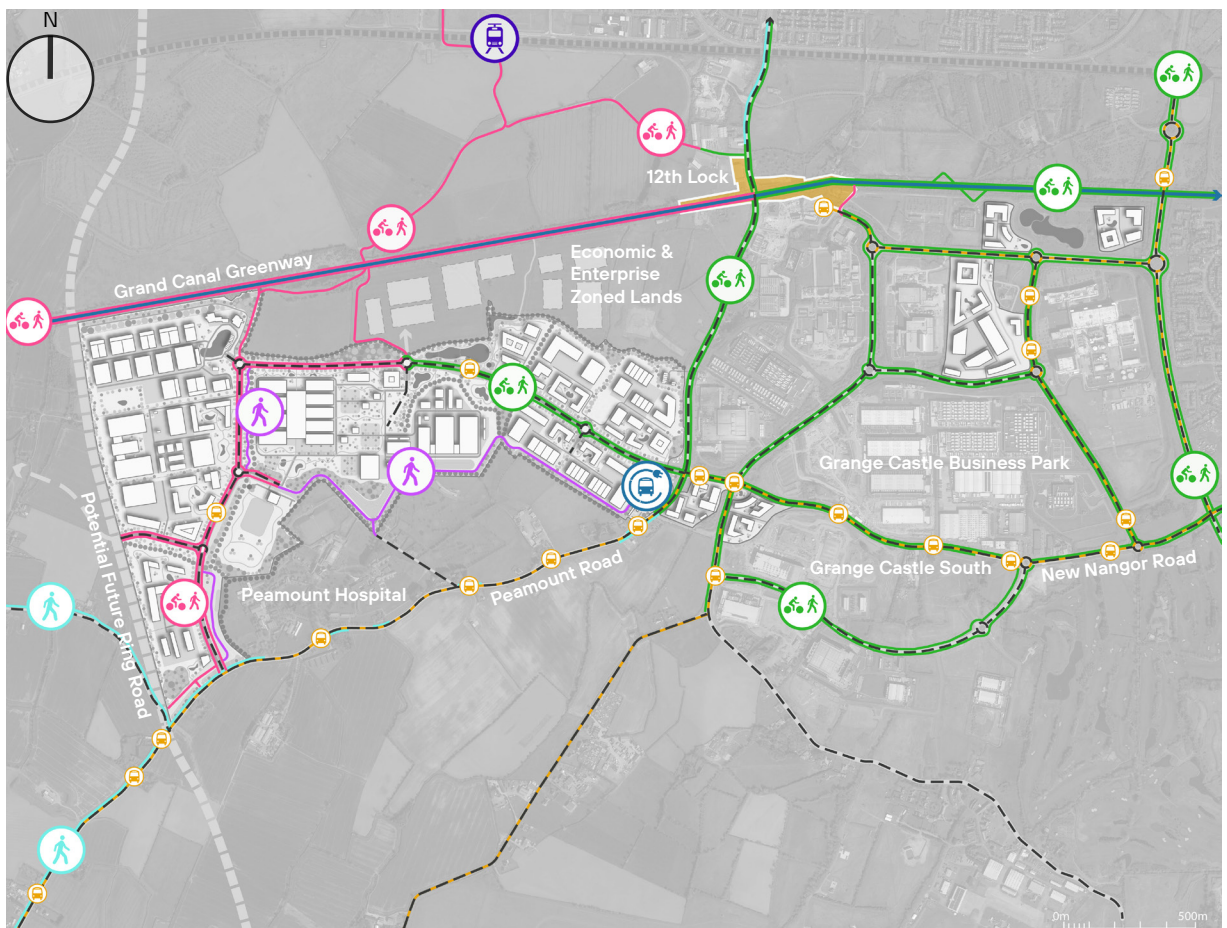


Connectivity & Movement - Wider Context

Masterplan

Connectivity & Movement

There is extensive existing cycle and pedestrian infrastructure that links the site entrance to the train station at Adamstown, the LUAS Red Line, the adjacent SDZs, and the Grange Castle business parks to the east. The movement strategy will extend this infrastructure through the park which will provide a route that avoids a dangerous stretch of the Peamount Road with no footpaths or cycle lanes. A link will also be made to the Grand Canal Greenway and there is the potential for future connections to the Adamstown train station.



Key

Roads	Footpath & Cycle Path - Existing	Footpath Only - Existing	Grand Canal Greenway	Bus Stop
Bus Routes	Footpath & Cycle Path - Proposed	Footpath Only - Proposed	Train Station	Mobility Hub
Grand Canal	Potential Future Ring Road	Connectivity & Movement Strategy - Grange Castle Area		

Masterplan

Landscape Strategy

The site will support the Grand Canal Green Infrastructure (GI) Corridor and the creation of an integrated GI network across South Dublin County Council. To achieve this the landscape strategy incorporates the following principles;



Landscaped areas will buffer paths and buildings from vehicular traffic creating safe and pleasant routes for people. This will encourage active movement and exposure to vegetation and water features, boosting health and well-being.



Buffered Landscape Spaces - Croxley Park



Retained Hedgerows - Grange Castle West



Miyawaki Forest - Danehy Park, Massachusetts



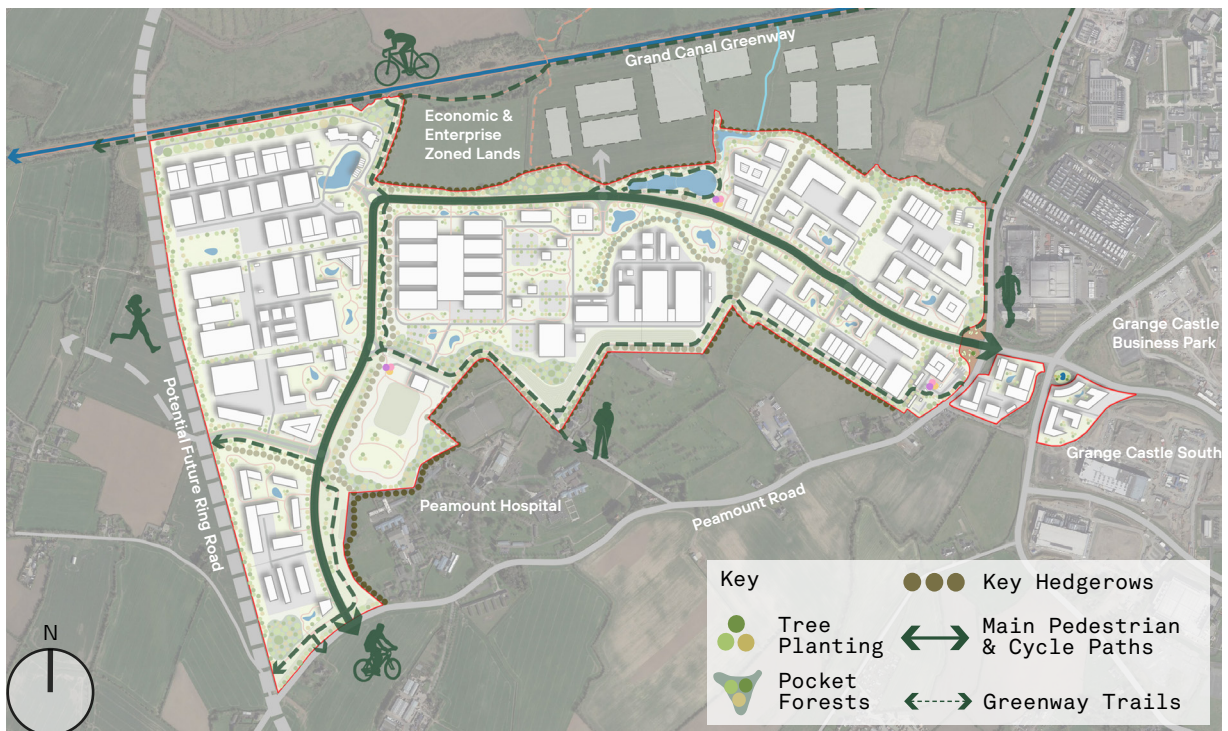
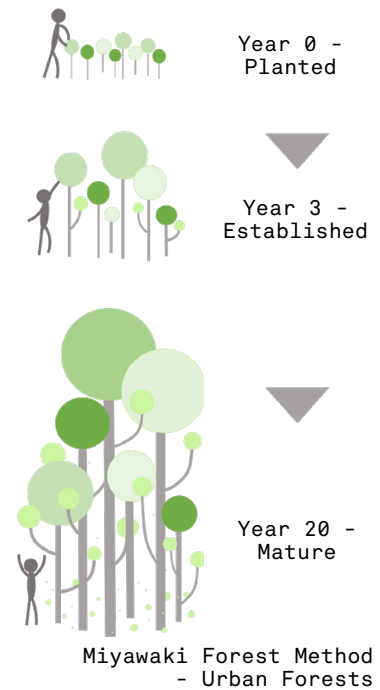
Walking & Running Trails - Stockley Park

Masterplan

Landscape Strategy

Individual sites will be required to achieve sufficient Green Space Factor scores, as described in the County Development Plan. The use of sustainable drainage systems (SuDS) featuring swales and rain gardens will be encouraged to address run-off and attenuation. Key hedgerows will be maintained as habitats and routes for local wildlife.

Tree and planting coverage will be increased by filling in awkward corners of the site with dense and diverse pocket forests following the Miyawaki method to encourage fast growth. This involves planting native species seedlings extremely densely (3 trees per sqm) and randomly. Competition for light and natural selection produces quick development in the most well adapted seedlings with the result that growth occurs at a rate of up to 1 metre per year. A stable multi-layered forest is achieved in 20-30 years instead of over 100. This will help address the low canopy coverage in the area, improving air quality, reducing stormwater runoff and absorbing CO2. For more information on the landscape strategy please refer to the Landscape Report by Austen Associates.



Landscape Strategy

Masterplan

Employment & Density

According to the National Planning Framework it is anticipated that South Dublin County will need to cater for an additional 36,678 jobs up to 2040. Grange Castle has been identified as a strategic employment area and with approximately 186 hectares of prime development land available the Masterplan aims to maximise the potential for job creation in the park. This Masterplan layout maximises the supply of serviced lands and achieves approximately 160 hectares of developable site area once the public roads, footpaths and landscaped amenity spaces are discounted.

The objective is to attract high-technology, hi-tech manufacturing, life sciences, and R&D industries. The indicative building layout provided by this plan is representative of these industries and achieves a total a building footprint area of approximately 426,000 sqm. To estimate the floor area capacity of the Masterplan, 1-6 storey buildings have been assumed across the site (see 'Building Storeys' Diagram on the next page). This layout and storey distribution achieves an estimated Gross Floor Area of approximately 808,000 sqm.

Based on the 'Employment Densities Guidelines, 3rd Edition 2015' published by the UK Government, this figure translates into potential job numbers of between 11,000-58,000 depending on the mix of Use Class, as shown by the schedule below. These Use Classes are defined by the same guidelines and cover the desired high-technology, hi-tech manufacturing, life sciences, and R&D industries. Employment numbers will likely be weighted towards the lower density Use Classes in the schedule.



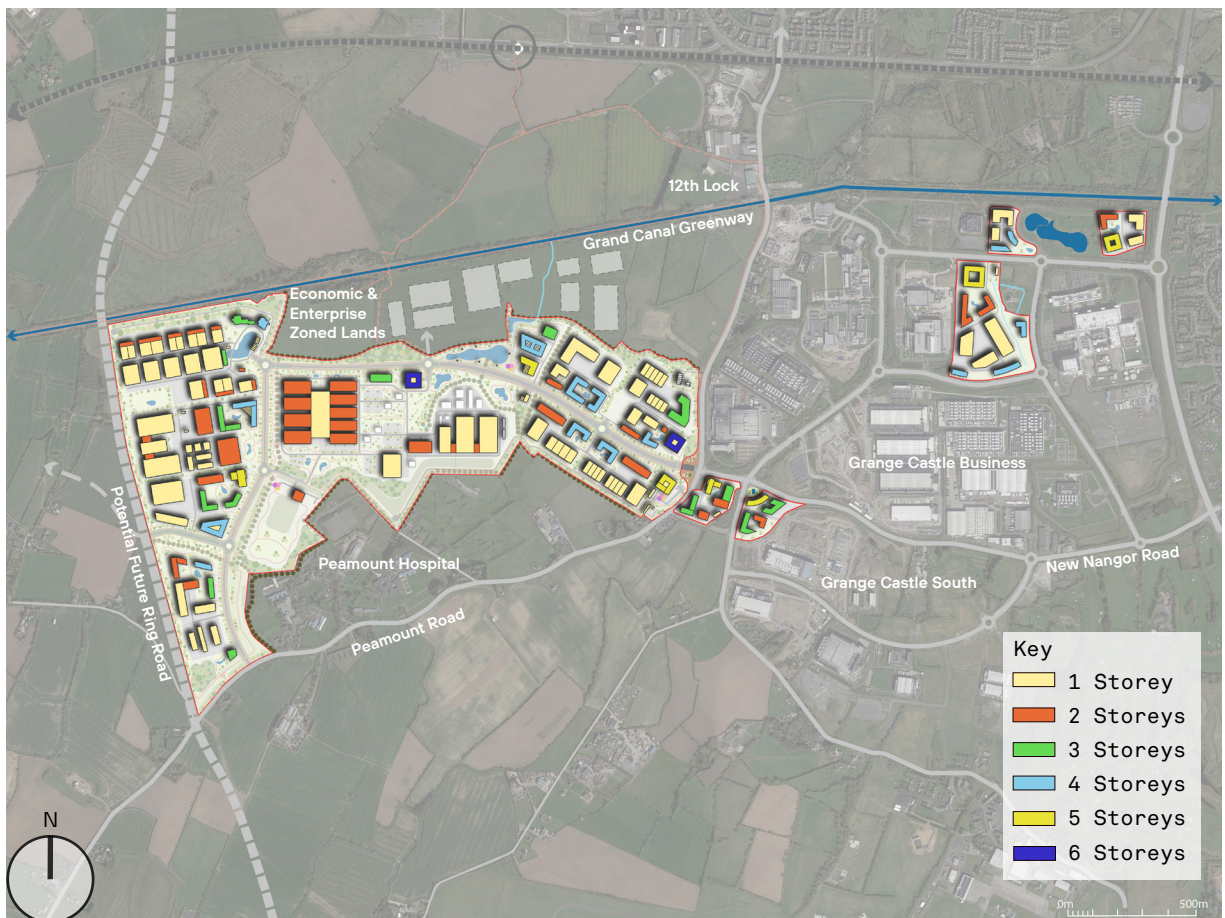
Item	ha	sqm	
Red Line Boundary Area - Total	186.68	1,866,842	-
Red Line Boundary Area - Grange Castle West	165.44	1,654,383	-
Red Line Boundary Area - Other	21.25	212,458	-
Gross Floor Areas			
	Footprint	GFA	
1-Storey	229,093	229,093	-
2-Storey	101,856	203,712	-
3-Storey	32,787	98,361	-
4-Storey	36,100	144,400	-
5-Storey	26,564	100,820	-
6-Storey	6,400	38,400	-
Total	426,400	814,786	
Use Class	Area per FTE (sqm)*	Floor Area Basis**	Potential Employees
R&D Space	50	NIA	11733
Light Industrial	47	NIA	12482
Industrial & Manufacturing	36	GIA	20370
Office (Professional Services)	12	NIA	48887
Office (Co-Working)	10	NIA	58665
Office (Technology, Media, & Telecoms)	11	NIA	53331
*Classifications and figures based on UK Gov. publication 'Employment Densities Guide 3rd Edition 2015'.			
**GIA assumed as 90% of GFA. NIA assumed as 80% of GIA.			

Masterplan

Employment & Density

To estimate the potential floor area produced by this Masterplan a range of building types and heights have been envisioned. It is important to note that the number of storeys is not necessarily indicative of overall building heights due to the different functions envisioned. For example, a single storey manufacturing building could reach the same height as a 3-storey office block. Overall building heights should be cognisant of the local airport Conical Surface Zones.

Buildings with 3-4 levels are concentrated along the main site road to create an urban edge and enable a relationship between private sites and public spaces. These are representative of administration blocks which would have higher densities of employees and may serve visitor functions. Larger footprint buildings with 1-2 floors are focused to the rear of sites. These are representative of processing facilities with little potential for interaction with the public realm. 5-6 storey landmark buildings are sited at key points throughout the park such as campus entrances, feature lake and major junctions.



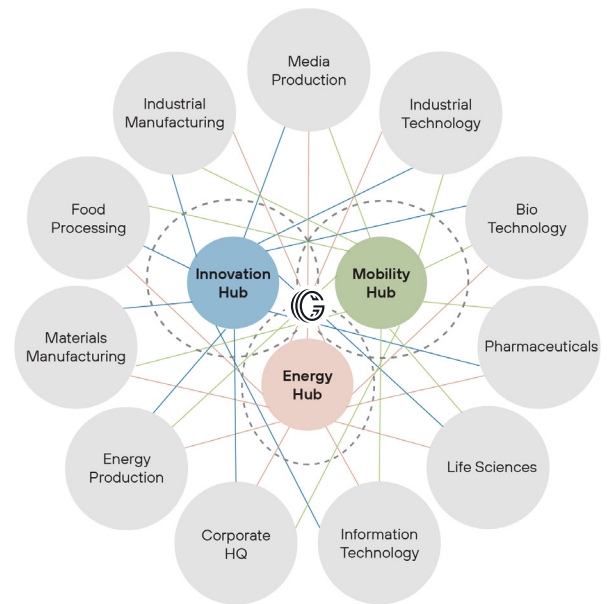
Building Storeys Diagram

Masterplan

Development Ecosystem

A diverse business ecosystem that builds on the established Business and Technology cluster at Grange Castle is a key goal of this Masterplan. In addition to the variety of site sizes available to tenants, three 'hubs' have been identified on sites ranging from 2-11 hectares as the locations for functions that will support the park community.

To the east is the 'Mobility Hub' at the main access point to the park. The aim of this hub is reduce reliance on single occupancy petrol vehicles by facilitating travel by more sustainable means to and within the park. Facilities for electric shuttle buses, electric cars, share bikes and scooters at the Mobility Hub could all help to increase the proportion of journeys made by public or active transport methods. This is in line with the SDCC Development Plan objective to reduce the mode share of journeys taken by car.



Business Ecosystem

In the centre of the park adjacent to the lake an 'Innovation Hub' is envisioned. This would take the form of a multi-functional building that includes lettable labs, co-working offices, conference spaces, and support facilities for start-ups and SMEs. Its location makes it an ideal place for café / restaurant facilities at ground level to serve the wider park.

This hub is intended to be a meeting place for all occupants of the park to provide opportunities for collaboration between different industries. The proposed building and meeting place would have quality indoor and outdoor space that is accessible to all.

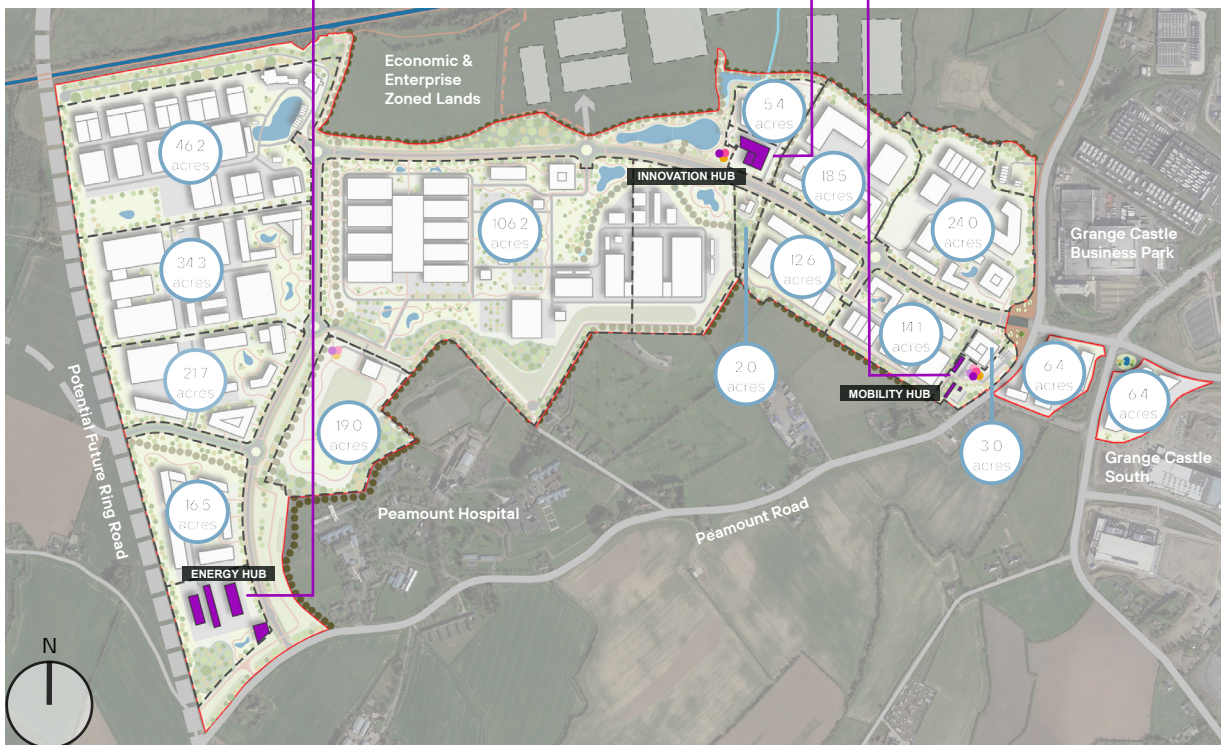
To the southwest is the 'Energy Hub', an area reserved for the new 220kV substation. Additional space is made available here for district heating facilities and to explore the potential for a deep geothermal energy station to serve the area.



Station F Business Incubator, Paris

Masterplan

Development Ecosystem



Site Areas & Hubs Concept

Masterplan

Innovation Hub

The 'Innovation Hub' is located at the heart of the park where the quality outdoor space around the lake can offer opportunities for meetings and interactions between different park tenants. This could be on a small-scale basis via lakeside meeting pods or through park-wide community events.

A landmark building provides office, lab and maker spaces for a SMEs to work and grow. Conference and collaboration spaces and café / restaurant facilities serve the park as a whole. The inclusion of a micro-industry pilot plant would allow for the testing of production methods by smaller businesses. Tenants in this centre can offer specialised services to larger park tenants to further the business ecosystem.



Chiswick Park, Lakeside Amenity Area



Innovation Hub Potential Layout



Innovation Hub - Lunch Market & Lakeside Amenity

Masterplan

Innovation Centre Precedents

MaRS Discovery District, Toronto, is a large innovation hub located in Toronto that is home to over 1,200 science and technology companies including start-ups, SMEs, and multinational corporations. The hub is run as a fund and focuses on 4 sectors - cleantech, health, fintech and enterprise software – which have been identified as having the greatest potential to produce high-impact companies that strengthen the economy. Facilities and services provided include; co-working offices, incubator programs, labs and prototyping facilities, funding (through the venture capital arm), community events and workshops, collaboration spaces.



MaRS Discovery District Atrium



MaRS Discovery District Lab

JTC Launchpad, Singapore, is an innovation and start-up ecosystem at the 'One-North' high technology and R&D cluster in Singapore. It is a community of over 600 start-ups and small and medium-sized enterprises (SMEs) surrounded by specialised industry clusters, industrial estates and tertiary education institutes catering to related fields. A range of resources and support services are offered for start-ups and entrepreneurs, including co-working spaces, mentorship programs, funding opportunities, and access to industry networks. It also hosts regular events and workshops to foster collaboration and knowledge-sharing among the start-up community.



JTC Launchpad, Singapore



JTC Launchpad Container Restaurant

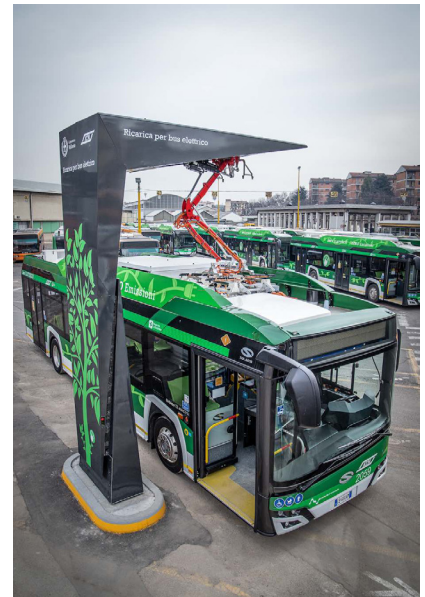
Masterplan

Mobility Hub

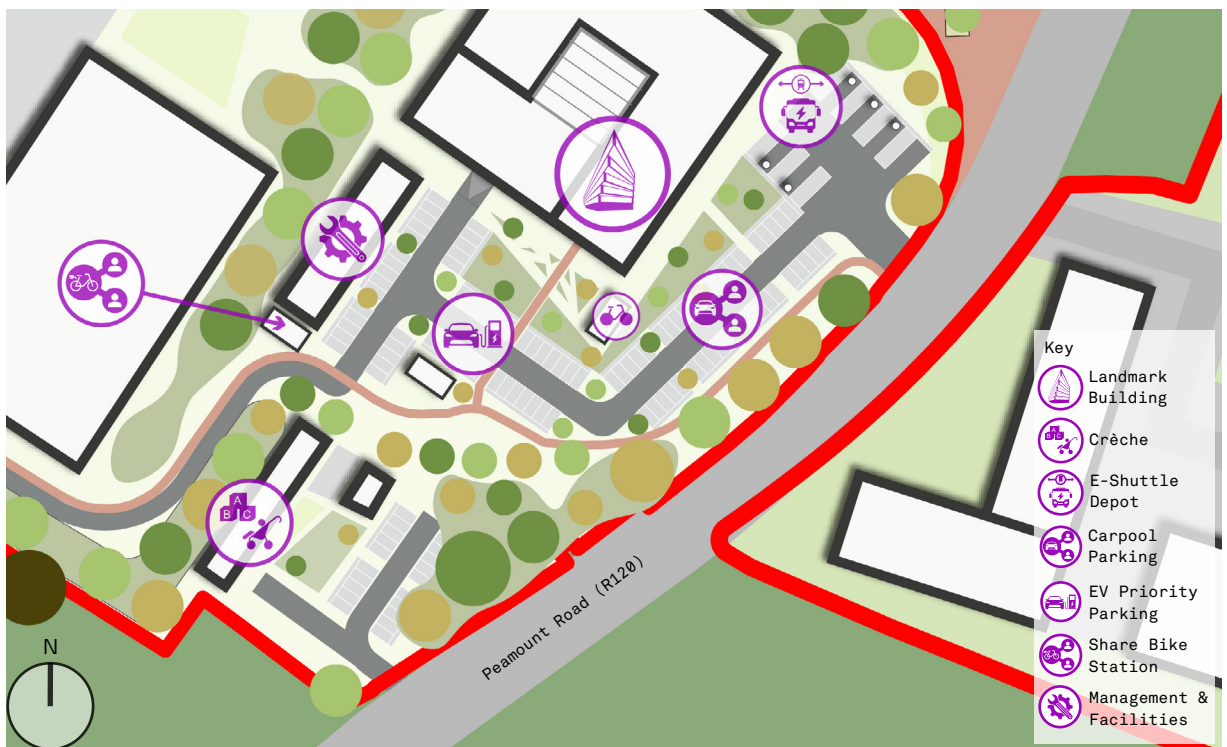
The 'Mobility Hub' can be accessed from the Peamount Road (R120) via its own entrance. An electric bus depot offers charging facilities and parking for shuttle buses to provide transport between the park, local train and LUAS stations and identified Dublin City locations as needed.

The parking lot provides communal capacity for the park, reducing the need for in-site parking. The designation of priority charging facilities for EVs and priority spaces for carpool vehicles would encourage travel by these more sustainable methods. Stations for share bikes or scooters can serve those who park here to allow them to continue through the park by active transport.

When empty at weekends the parking spaces can be re-purposed to host outdoor events such as farmers markets. An existing protected farmhouse building is proposed to be renovated to house a crèche, or other community facility as required.



Electric Bus Charging, Milan



Mobility Hub Potential Layout

Masterplan

Mobility Hub



Mobility Hub - Weekday Carpark Sketch



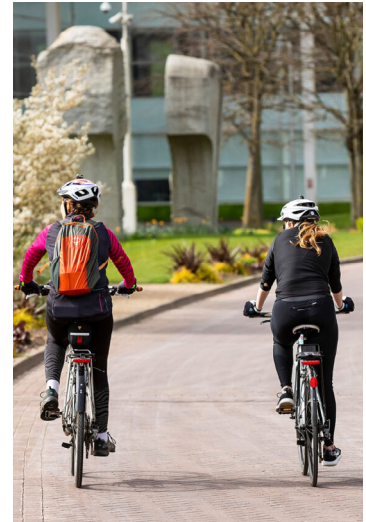
Mobility Hub - Weekend Market Sketch

Masterplan

Mobility Strategy Precedents

Stockley Park, London, provides a free 'borrow-bike' scheme operated by the park management office. Users apply for membership online and pay a small deposit. Bikes are available from automated stations located throughout the park. The first two hours of each ride is free. This incentivises short, frequent trips and encourages users to return bikes promptly.

A similar scheme at Grange Castle could extend to bike terminals at local train and LUAS stations to further encourage the use of sustainable transport.



Stockley Park, Borrow Bikes



Milton Park, Autonomous Electric Shuttle

Milton Park Science and Technology Park, Oxford, has its own integrated sustainable transportation program and online platform that aims to encourage less individual car use by making it easy to plan and undertake sustainable journeys.

Membership is free and businesses and their employees can register online. Once registered, the Mi-Link app provides real-time travel information that incorporates public transportation, cycling, walking, carpooling, and electric vehicle charging options.

A range of incentives are offered to encourage sustainable travel, such as discounted public transportation fares, free bike repairs, and a free bus service connecting the business park with nearby towns. The program facilitates carpooling among businesses and employees in the business park, connecting those who live in similar areas and encouraging them to share rides to work. An electric autonomous bus service was also launched in 2023.



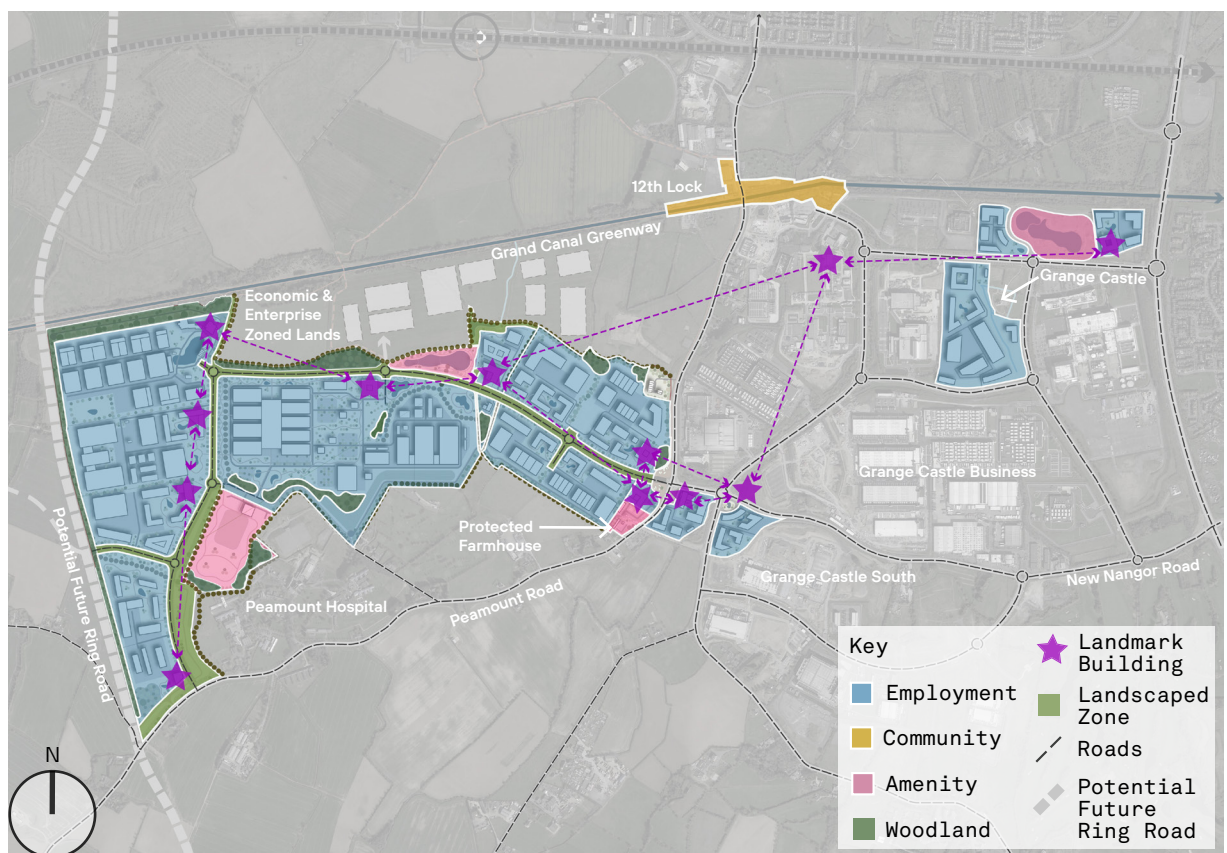
Milton Park, Cycle Hub

Masterplan

Character & Identity

The physical character of the park in public spaces will be driven by the landscaping with significant areas given over to woodland, hedgerows, roadside planting, parkland and wetland. The identity of the campus can be augmented by designating sites for potential landmark buildings. These signal the presence of campus entrances, lake amenity areas and the Grand Canal greenway connection route. They also aid with wayfinding and provide legibility to the campus by creating recognisable built elements.

Landmark buildings need not be tall but must have a distinctive architectural quality. Human-scale architecture is encouraged in these locations to create visual comfort and provide variety. The below diagram suggests sites for landmark buildings that are within view of one another. Creating a visual relationship between new landmark buildings, and with existing buildings such as the Takeda Tower, will help connect Grange Castle West with the existing Grange Castle Business Park. Public amenity areas will also add diversity to the character and identity of the site by offering spaces and facilities open to the public with a different scale and architectural language to that of the employment-focused sites.



Character & Identity Diagram

Masterplan

Character & Identity



Landmark Building - One Microsoft Place



Landscape Character - Chiswick Park



Workplace Character & Identity Sketch

Masterplan

Placemaking

The County Development Plan strategy for healthy placemaking is to “*improve both physical and social infrastructure to create places that are healthy and attractive places to live, work, visit and invest in*”. We spend a substantial portion of our day at work and our places of work have a key role to play in our sense of well-being. The working day can take place in a vibrant environment with a strong sense of community that has a positive effect on both the people who work there and the local area.

The Masterplan envisions an urban edge created by building frontage along the main spine road and amenity areas to promote interaction between individual sites and the public realm. Where it has not been possible to provide frontage this edge is broken by landscaped spaces and retained hedgerows that aid the strategies to increase biodiversity and exposure to blue and green infrastructure. The public realm includes amenity areas, event spaces, landscaped trails and ecological corridors which provide opportunities for recreation and access to nature. This should be buttressed by the provision of an events program for employees and visitors that helps to foster a sense of community within Grange Castle West.



Urban Edge & Public Realm Diagram

Masterplan

Placemaking

Both the physical infrastructure and the management of the park are vital in creating an environment that fosters a sense of community and collaboration among businesses, workers, and visitors. Public spaces, meeting booths and outdoor seating areas provide places for people to gather, relax, and socialize.

These spaces can be used for events and activities that bring the community together. Paths and trails for walking, running and biking provide important avenues to get out of the office and recharge. A regular programme of events and markets can offer entertainment and opportunities for people from different areas of the park to meet. Expanding this program to weekend and seasonal events can bring in the surrounding local community.



Lakeside Seating & Think-Tank Office Pod, Stockley Park



Summer Event Day, Chiswick Park



Weekend Farmers Market, Providence



5km Park Run, Stockley Park

Masterplan

Sustainability



The Masterplan proposal has been developed to enable the integration of 8 key principles for a holistic approach to sustainability and resilience. The principles align to the UN Sustainable Development Goals, as well as the ambitions of Ireland 2040 and the Climate Action Plan.

Key to the success of delivering these principles is flexibility within the framework plan to allow for further optimisation as the project develops. Included below are some of the key considerations under each principle.

Enhanced Ecosystems



- Preserve hedgerow habitats in line with Biodiversity Management plan.
- Increased tree coverage.
- Establish eco-corridors around site perimeter and through site.
- Use native landscaping species to reduce water use & provide habitats for local wildlife.

Sustainable Sites



- Orthogonal sites to promote efficient land use and allow flexibility of layout.
- Minimize hardscape and exceed soil green space factor requirements.
- Prevent light pollution.
- Develop sustainable site management plan.

Eco-Transport



- Efficient road network.
- Encourage active transport.
- Link with public transit.
- Facilitate electric vehicles by offering EV charging.

Water Cycle



- Increased tree coverage reduces stormwater runoff (2% for every 5% increase).
- Minimize impervious areas.
- Incorporate rainwater layout into site design e.g. planters that collect rainwater,
- Promote rainwater harvesting.

People & Places



- People-first approach to the design of public spaces and roads.
- Community amenities and event strategies.
- Aesthetically pleasing and green environments.

Health & Wellbeing



- Network of pedestrian and cycle trails to promote active movement.
- Increase vegetation to reduce noise pollution & increase air quality.
- Exposure to blue/green infrastructure has physical, mental and social benefits.

Masterplan

Sustainability

Whole-Life Carbon

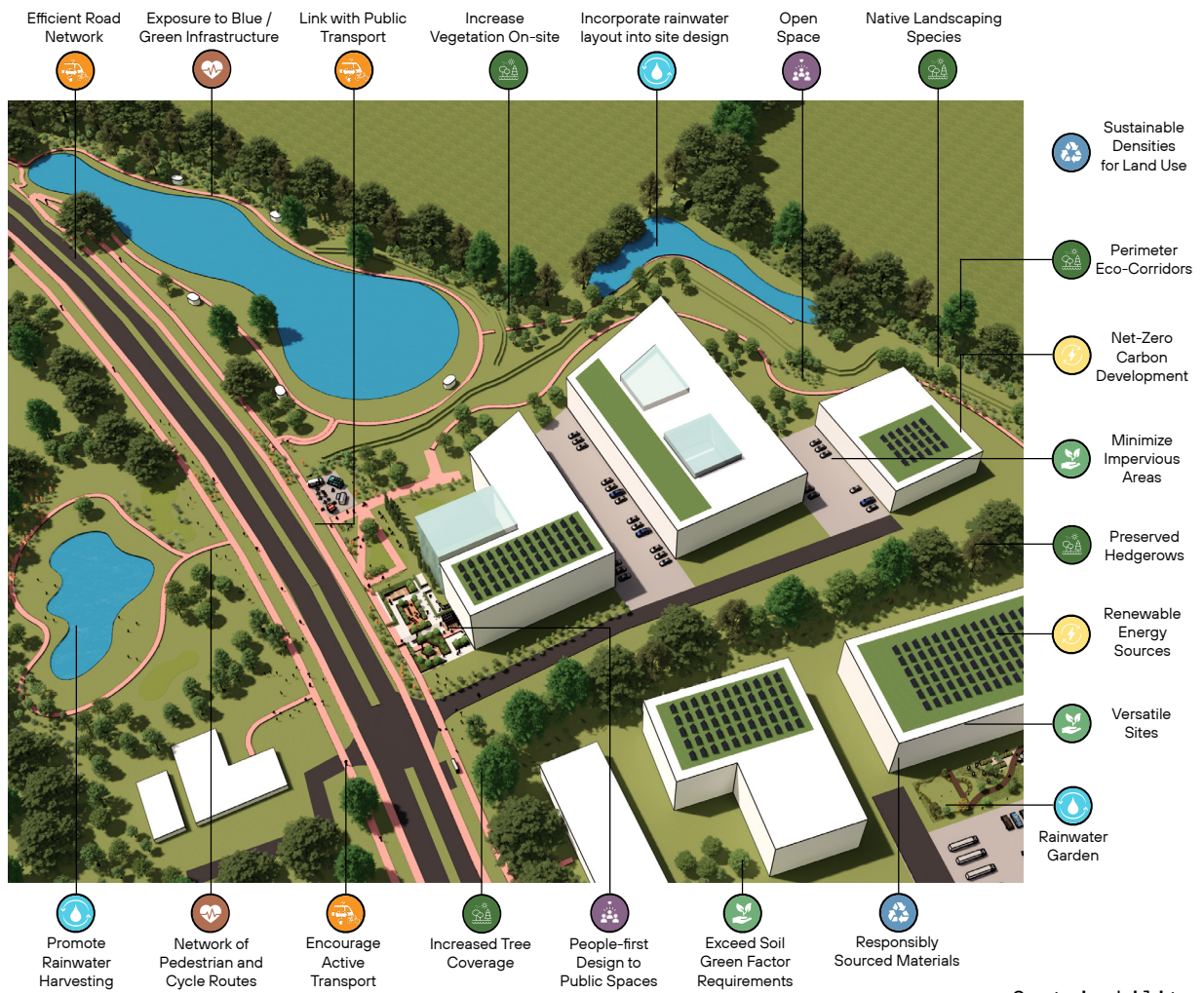


- Involve tenants in energy efficient strategies.
- Mandate that all development be designed to Net-Zero carbon.
- Integrate Whole-Life Carbon as a key consideration.
- Encourage on-site renewable energy production and district heating enabled development.

Circular & Efficient Resources



- Sustainable densities for land use.
- Strategies for circular systems.
- Strategy to design out waste.
- Early discussion of responsibly sourced materials.



Sustainability

Masterplan

Phasing & Implementation

This Masterplan provides a framework of parameters to deliver the development of Grange Castle West business park. This will be achieved in accordance with the objectives and policies of the South Dublin County Council Development Plan. In addition, the following recommendations would aid the successful implementation of the Masterplan.

Statutory Approvals and Development Guidelines

Development of individual sites will follow the statutory planning process and further work is required to develop the technical detail and establish delivery mechanisms and processes. A set of specific Design Guidelines that adhere to the Masterplan Principles should be drawn up to set and control development standards within the park. High standards of design, sustainability and appearance will be required and maintained.

Stakeholder Engagement

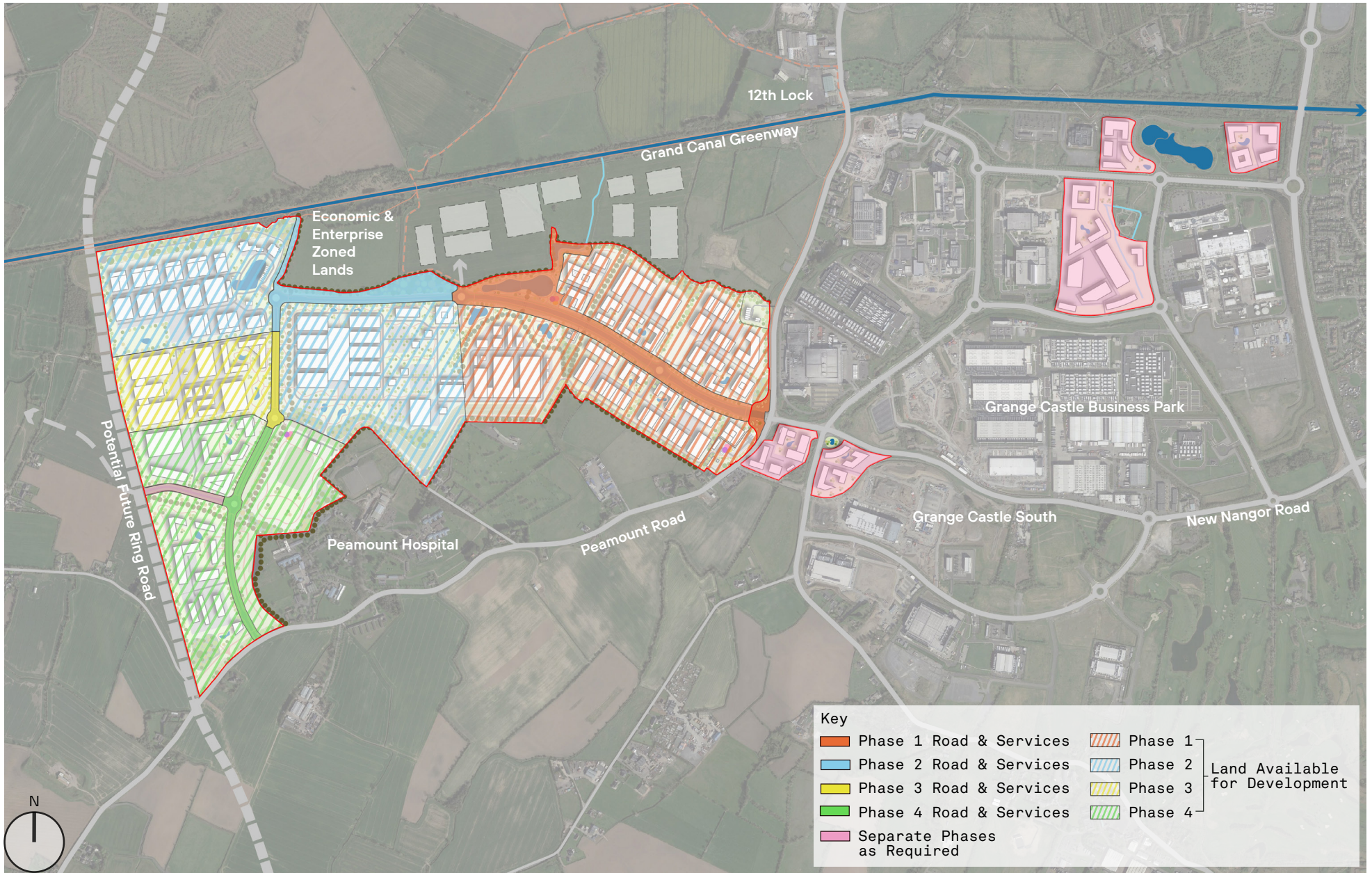
As part of the planning and development process it will be important to engage with all stakeholders and local community groups at each step to ensure that the vision for the Masterplan reflects their needs and address any concerns raised. This engagement will bring diverse perspectives and expertise to help decision-makers make informed choices, identify potential risks, and find innovative solutions. The collaborative approach will increase the likelihood of effective and sustainable outcomes.

Phasing Strategy (see diagram on following page)

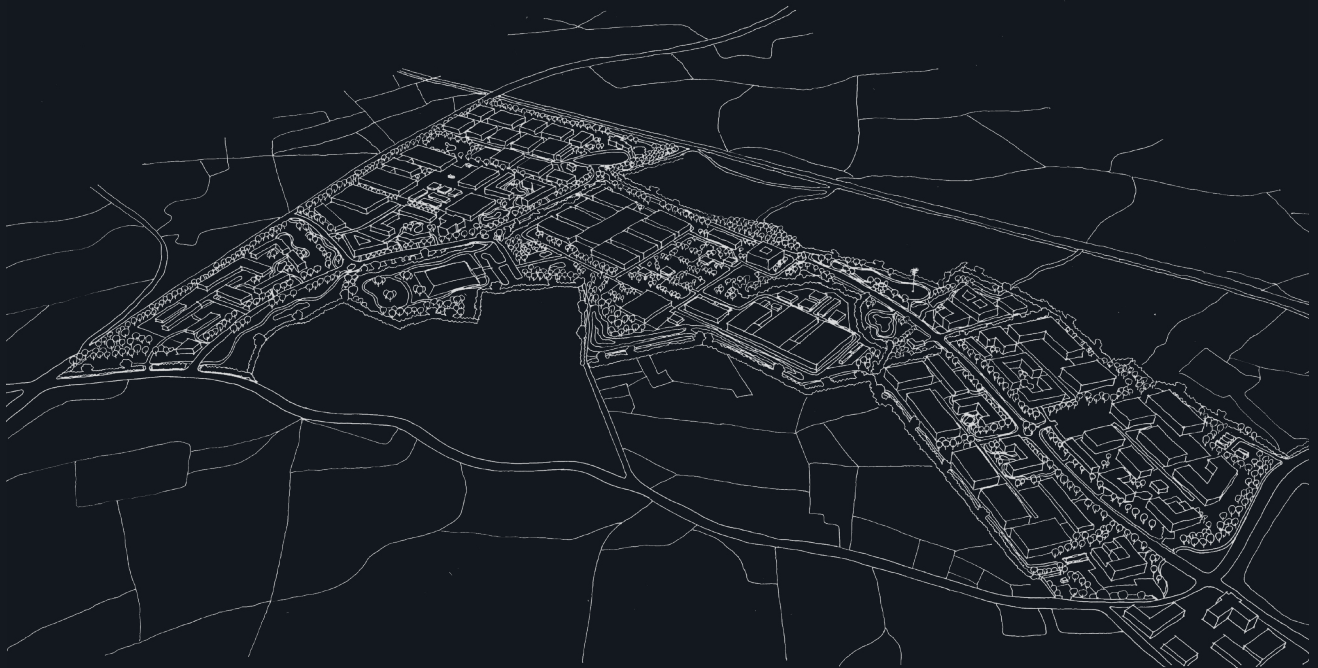
The first phase of development is complete and includes the construction of the entrance plaza, feature lake, road and associated services and landscaping as far as the second roundabout. The services and access provided by Phase 1 allows for the development of sites along the existing road. Phase 2 will see the road, services and adjacent landscaping extended to the third roundabout at the earliest opportunity. This will activate large areas in the northwest and centre of the site and allow for a connection to be made to the Grand Canal Greenway.

Phase 3 extends the road and services as far as the fourth roundabout with potential access to the reservoir. Phase 4 completes the internal park road at a junction with the Peamount Road and activates the remaining sites while allowing for a connection to a potential ring road to the west of the park. Future phases could see development on the lands to the north and west of the site and a route created to the Adamstown rail station. The sites in the existing business parks are not dependent on works within Grange Castle West and can be activated by separate phases as required.

Each phase provides road infrastructure and utilities to activate additional sites for potential job creation and this is a flexible strategy that can be adapted as required. Specific capital projects within the Masterplan are also flexible in the timing of their delivery. The reservoir and 220kV substation will be developed on an 'as needed' basis within timeframes dictated by the ESB and Irish Water. The Mobility and Innovation Hubs benefit from locations adjacent to existing roads and service routes. As a result these can be delivered at any time as required by South Dublin County Council.



Indicative Phasing Diagram



04 | Appendices

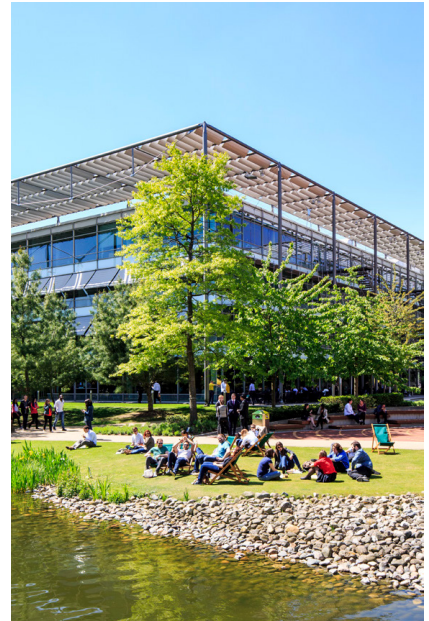
Precedents

Chiswick Park, London UK

Location	London, United Kingdom
Area	185,000 sq. m.
Architect	Stuart Forbes Associates

Chiswick Park is a vibrant business district offering a mix of modern workspaces, lush green spaces and exceptional amenities. Its location near major transportation links has attracted a diverse range of businesses, including multinational corporations and innovative start-ups. They benefit from a dynamic work environment featuring state-of-the-art facilities, on-site restaurants, and fitness centres.

Twelve office buildings all face the Park's inner garden centred around a feature lake which provides a focal point for the park and its events program. This layout helps to realise the park's aim to create a stimulating and refreshing place where people enjoy working.



Lakeside Amenity Area



Outer Ring Road



Outer Ring Road



Inner Public Route



Inner Public Route

Precedents

Croxley Park, Watford UK

Location	Watford, United Kingdom
Area	303,154 sq. m.
Architect	Blast Design

Croxley Business Park is a thriving commercial hub of more than 60 companies offering a range of modern office spaces for large businesses and start-ups. Its excellent transport links, best-in-class amenities and exciting events programme provide a supportive environment for businesses to thrive, fostering a dynamic and well-connected working community.

Well-Connected Hub

Croxley Park is accessible both by car and public transport. It is connected to regional transport links including the bus and tube. A free shuttle bus drives through the park every 12 minutes, connecting the various parts of the park.

Community

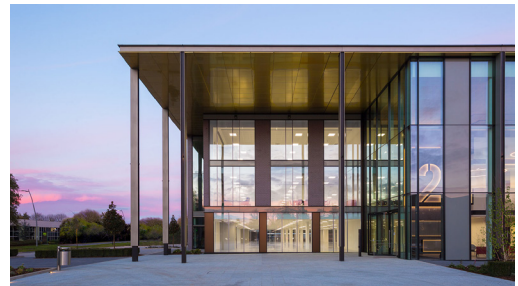
The Park provides a number of amenities to create a welcoming and inviting atmosphere. Events take place regularly, making the Park an attractive destination both during and outside of office hours.

Amenities include:

Gym, sport facilities, café, flexible event space, learning spaces, nursery, meeting pods, lockers, electric car charging points, 24/7 security.

Sustainability

The Park employs rainwater harvesting systems and 100% of the energy used on-site is from renewable energy sources. All waste is recycled, food is composted on-site, and cardboard bailing is provided. A car-sharing scheme is also in operation. Bee keeping takes place on-site with accompanying educational events about the process available to the public.



Office Building



Free Shuttle Bus



Park Facilities



Bee-Keeping Program

Precedents

Stockley Park, Uxbridge UK

Location	Uxbridge, United Kingdom
Area	356,123 sq. m.
Architect	Eric Parry Architects, ARUP

Stockley Park spans over 150 acres of beautifully landscaped grounds that are home to a diverse array of companies, ranging from global corporations to innovative start-ups.

The Park aims to provide a healthy work/ life balance by putting people at the forefront of the park’s design. Restaurants, cafés, fitness centres, open spaces, and regular events all combine to foster a sense of belonging and engagement among its occupants.

It is committed to sustainability , boasting green spaces, nature reserves, and environmental initiatives that promote biodiversity and well-being. The park was awarded the Wildlife Trusts Biodiversity Benchmark Award in 2021 for its dedication for biodiversity enhancement.



Landscaped Public Realm



Park Furniture



Lakeside Amenity Area

Precedents

Station F, Paris

Location	Paris, France
Area	34,00 sq. m.
Architect	Wilmutte & Associés

Station F is the world's largest startup campus located in a converted freight depot in Paris. It houses over 1,000 startups and a number of established companies, incubators, and accelerators over a floor area of 34,000 sqm.

The aim is to create a diverse community of entrepreneurs, investors, and corporate partners from various industries and backgrounds, and to provide them with the resources and support they need to develop their businesses.

Facilities include co-working spaces, event spaces, innovation labs, restaurants & cafés, legal, financial and HR services. A co-living residential hub has also been built 10 minutes away from the campus to offer an accommodation option for employees at Station F, in line with 15 Minute City thinking.



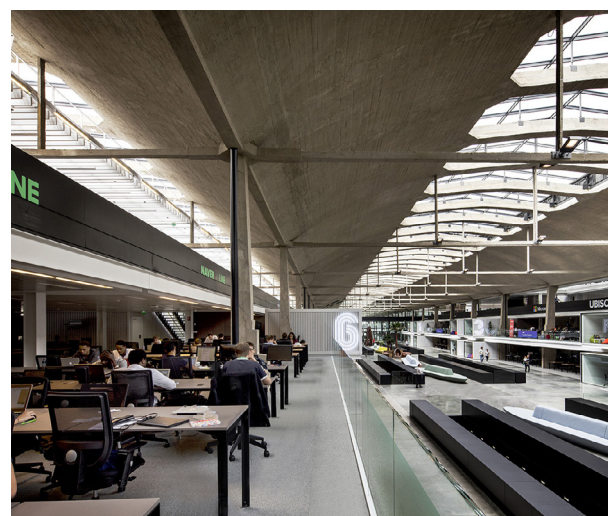
Station F, Paris



Station F, Presentation Area



Station F, Breakout Space



Station F, Office Space

Precedents

Other Projects Studied

1. Pier 70	San Francisco, USA	SITELAB Urban Studio
2. Cummings Research Park	Huntsville, Alabama	Perkins & Will
3. Beijing Business Park	Beijing, China	Blur Urban LLC
4. Caribbean Business Park	Scoresby, Victoria	Peter Ryan Architects
5. Thames Valley Park	Reading, UK	Argent
6. Paris Sustainable Business Park	Paris, France	RAU, SeARCH, karres+brands
7. Milton Park	Milton, Oxfordshire, UK	SRA (Masterplan Proposal)

