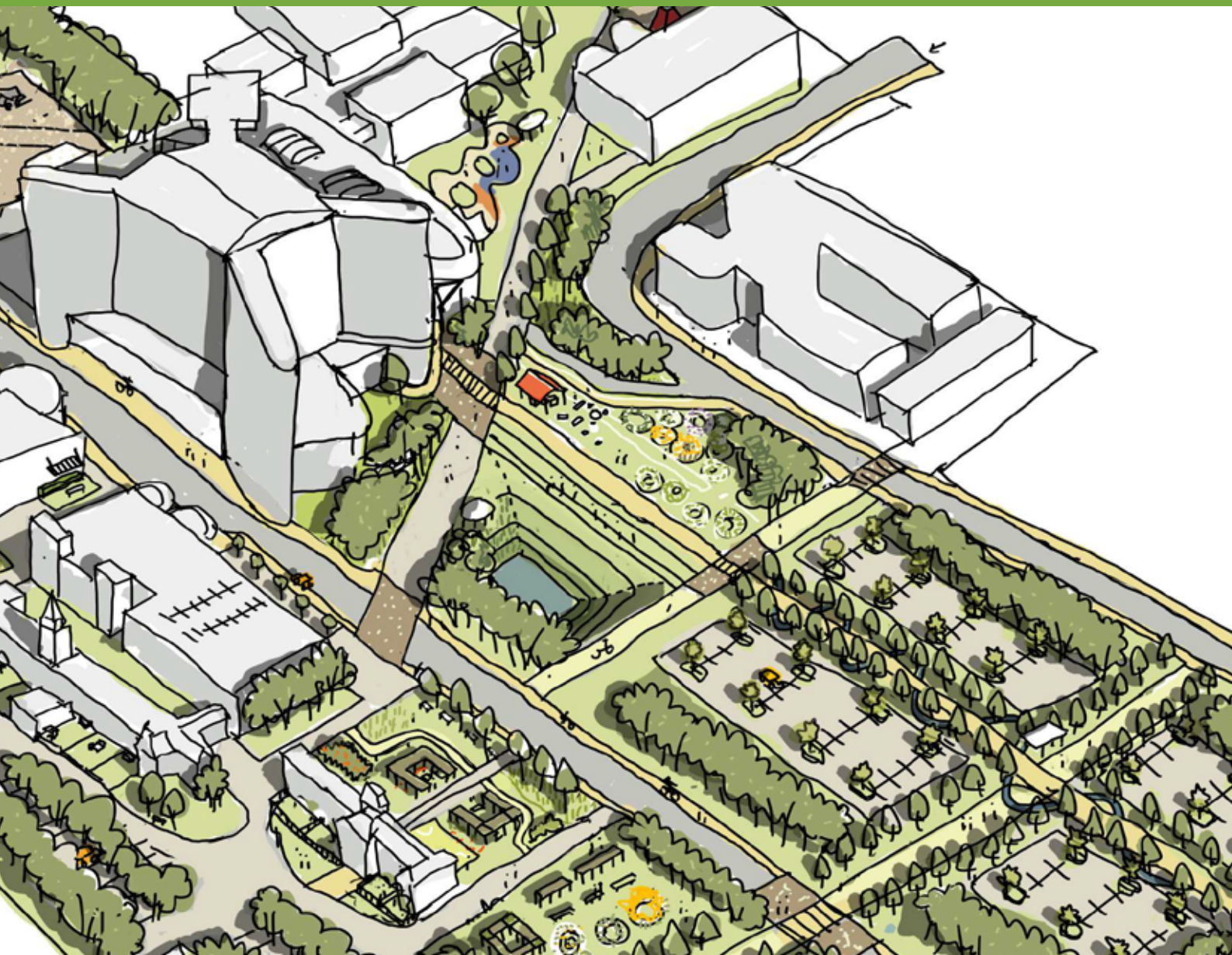
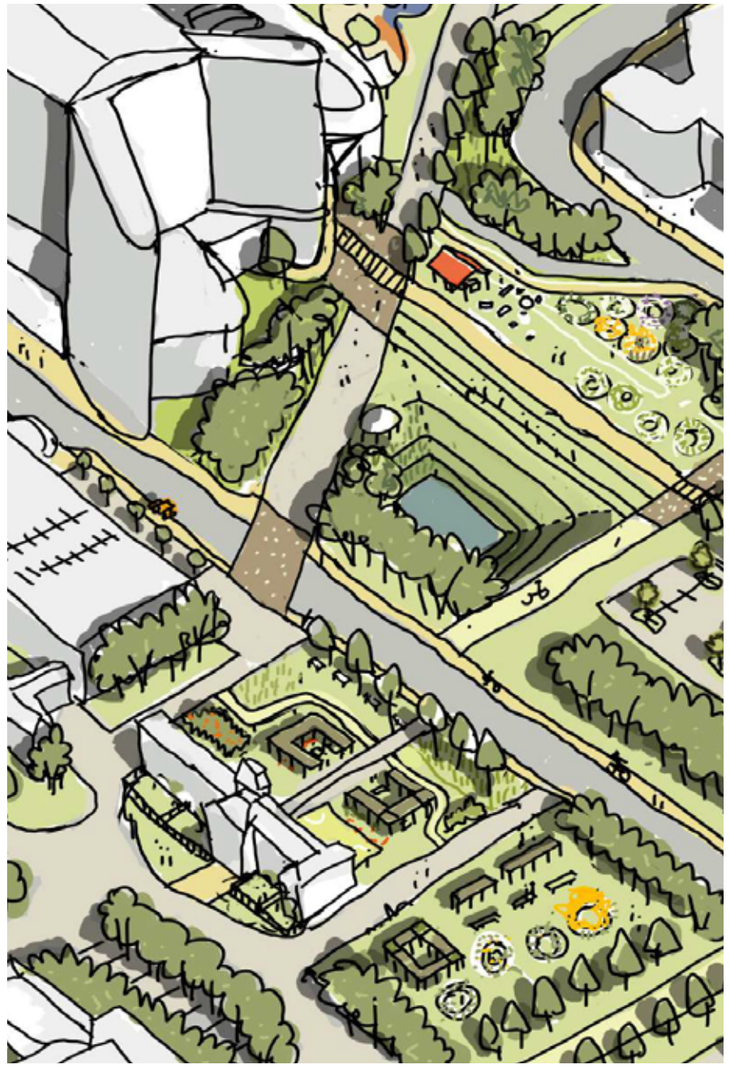
FEBRUARY 2021 ERZ NHS SCOTLAND GREEN EXERCISE PARTNERSHIP

LANDSCAPE OPPORTUNITIES STUDY

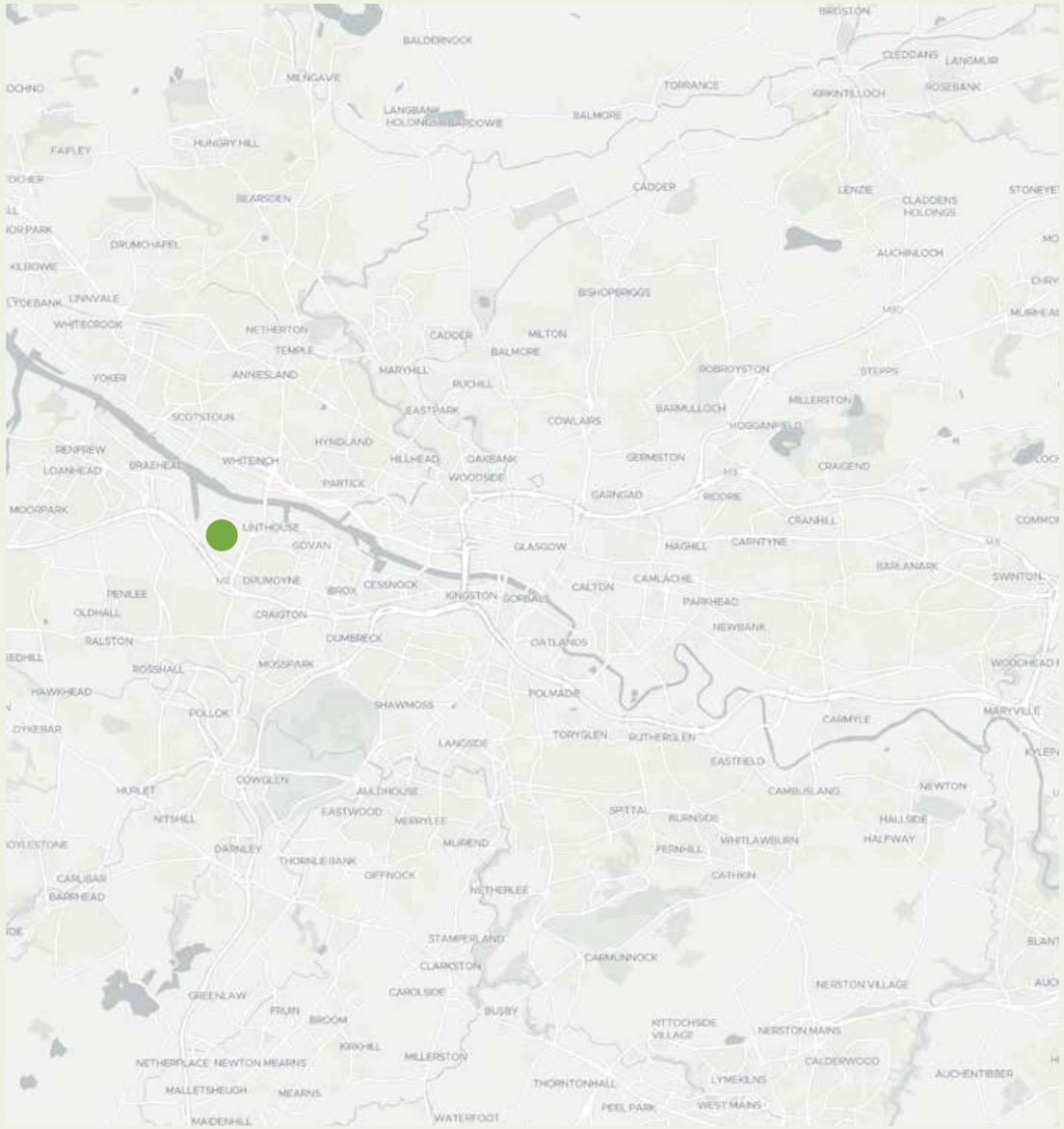
Queen Elizabeth University Hospital



CONTENTS



Extract of concept drawing



Above: Glasgow map showing QEUH location

INTRODUCTION

Aims

This study aims to explore and identify the potential of the Queen Elizabeth University Hospital (QEUH) campus landscape for the social, environmental and economical benefit of the hospital, its staff, patients and visitors and those who live in its vicinity.

The study sets out the opportunities presented at a strategic level looking at green networks and active travel opportunities in the wider area. It then focuses on the campus itself and seeks to find opportunities for active travel, biodiversity, wayfinding and navigability, arts and environmental improvements.

Process

The study began with two briefing meetings attended by erz and the wider NHS team and led by Martin Johnson.

This has been followed by desk-based and on-site analysis of the current site conditions. Dialogue with the wider project team and findings from this analysis then informed the development of a set of sketch proposals for possible improvements to the landscape of the hospital.

These initial proposals were presented at an interim team meeting in early December, following which the study has been refined and completed.

The thoughts and opinions of all parties were captured and where possible, these have been incorporated into the final designs presented here and the format of this report.

It is anticipated that should funding become available for a first phases of suggested works, further consultation, in particular with clinical hospital staff, would inform the detail of several elements within the design.

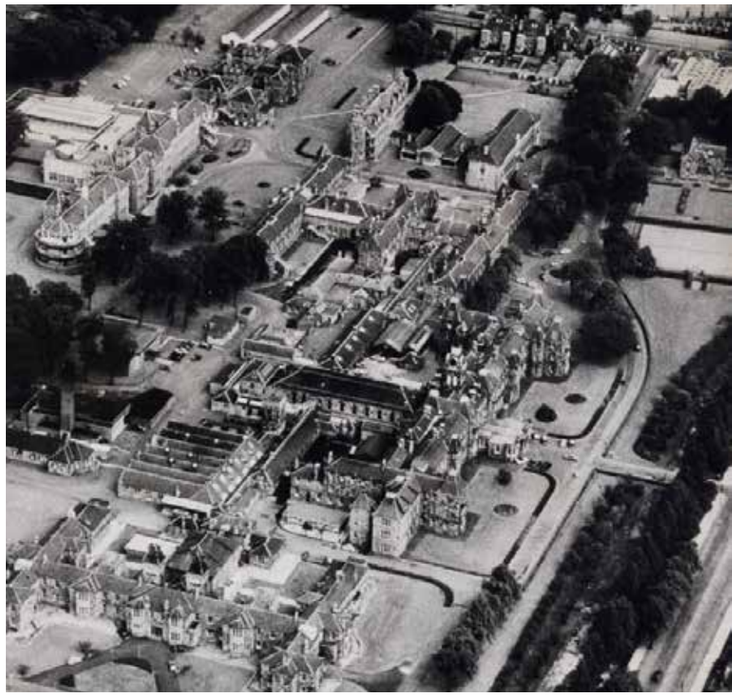
Collaborators

This study has been initiated by Martin Johnston, Sustainability Manager for NHS Greater Glasgow & Clyde. It has been produced by erz in conversation with Anne Lumb of the Green Exercise Partnership; Jackie Sands, Strategic Arts & Health Coordinator; and Heather Griffin in Capital Planning, for NHS Greater Glasgow & Clyde. The study has also been informed by conversation with Will Cowper, arts curator for QEUH.

Above: The front of the original Southern General Hospital building, c 1975. The former poorhouse block with its clock tower is in the centre, flanked by hospital wings.

Below: The Merryflats Estate campus seen from the air from the south east circa 1914

A BRIEF HISTORY



The hospital started life as the Govan Combination Poorhouse (erected by the parishes of Govan and Gorbals "in combination") which was built on the Merryflats Estate in Shieldhall in 1872 and contained a poorhouse, asylum and hospital to serve the needs of the two parishes. The scheme, designed by James Thomson, cost around £100,000 and was described as "the finest asylum for the poor in Scotland".

It is worth noting that the early layouts for the campus demonstrated the early Victorian approach to mental health design - architecture that was agrarian in its setting and which made use of green landscapes for exercise, food and therapeutic purposes.

In 1896 the asylum patients were transferred to the new Hawkhead Asylum (later renamed Leverndale Hospital), and the poorhouse was subsequently closed before major extensions were made to the hospital in 1902-1905, providing an additional 700 beds. The Southern General Hospital, as it was then known, expanded organically into a wide range of campus buildings during the twentieth century.

In 2008, NHS Greater Glasgow and Clyde submitted a business case to the Scottish Government for a new acute hospital to replace facilities at the Western Infirmary and Victoria Infirmary, and to relocate the Royal Hospital for Sick Children, Glasgow, to a new building adjoining a new adult hospital on the site of the Southern General. Designs were unveiled for the hospital campus in November 2009 with public funding being approved. The adult hospital, children's hospital and laboratory buildings were designed by Nightingale Associates. The Queen Elizabeth University Hospital (QEUH) is a 1,677-bed acute hospital. The hospital opened at the end of April 2015 and comprises a 1,109-bed adult hospital, a 256-bed children's hospital and two major Emergency Departments; one for adults and one for children. There is also an Immediate Assessment Unit for local GPs and out-of-hours services, to send patients directly, without having to be processed through the Emergency Department. The hospital has a dedicated Minor Injuries Unit.

The retained buildings from the Southern General campus include the two original A listed poorhouse buildings, the Maternity Unit, the Institute of Neurological Sciences, the Langlands Unit for medicine of the elderly and the laboratories. There whole facility is operated by NHS Greater Glasgow and Clyde.

The Queen Elizabeth University Hospital is one of the largest hospital campuses in Europe and employs over 10,000 staff, serving communities throughout Scotland.

The maps on the following pages show the development of the site and surrounding neighbourhoods over the last 250 years.

The campus becomes increasingly landlocked by converging roads, rail lines and industry. It loses its riverside setting and its gardenesque design qualities as shipbuilding grows and recedes on the Clyde.

There has been considerable renewed research and growth in using landscape to promote and sustain public health in the last ten years in particular.

This study explores how the QEUH campus might return to its agrarian roots and restore its relationship to its outside spaces and surrounding neighbourhood.

1866

Estate landscape and policies with encroaching rail lines and industry spreading along the River Clyde corridor

1900

The new poorhouse and hospital is now built, surrounded by green fields to south and east, but Govan is gradually spreading towards the site and industry is expanding on both sides of the Clyde.

1925

Expanding roads, housing and rail lines combined with further industrial spread start to land lock the site of the hospital. Note the Clyde ferry crossings and increased shipyards and docks on the riverside.
The bucolic setting for the hospital is already a thing of the past.

1957

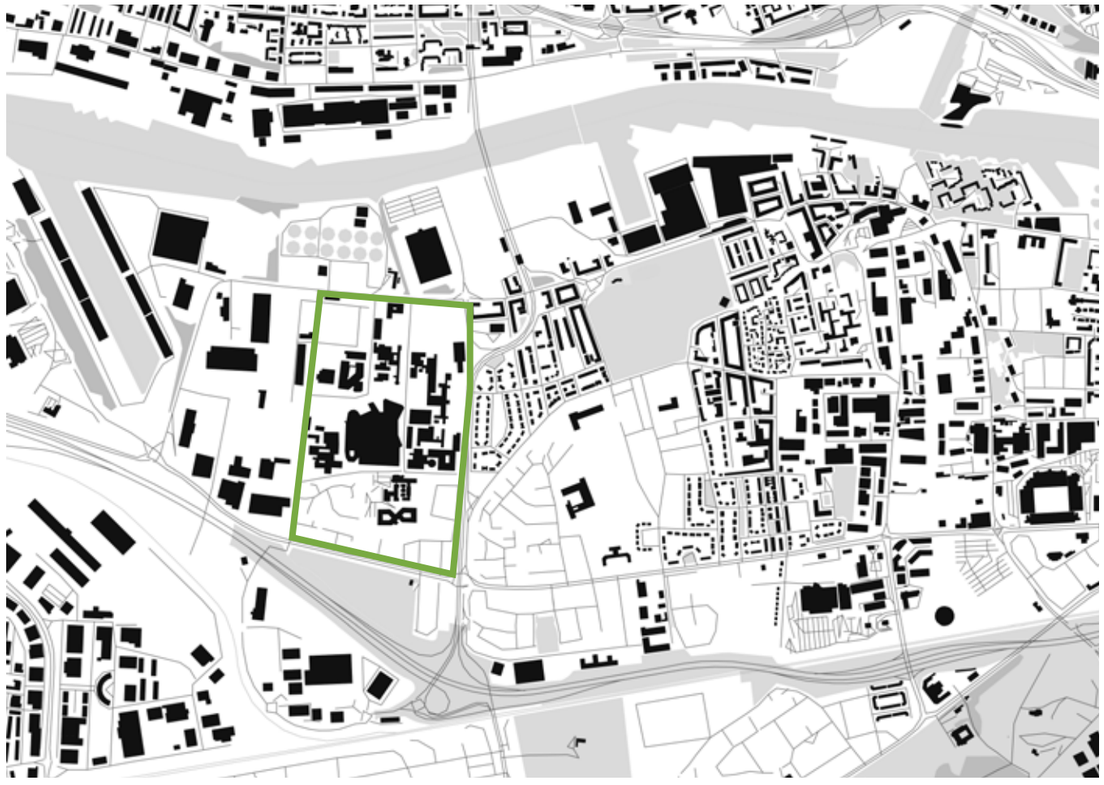
Rail lines now separate the site from the river banks. East-west road and rail corridors create barriers to south and north and the surrounding areas are increasingly built up.
The Clyde Tunnel was built shortly after this map was drawn, in 1963, and creates a vehicular link to the north, but a further pedestrian barrier to the east.

QUEEN ELIZABETH UNIVERSITY HOSPITAL NOW

At the time of construction the hospital was Scotland's largest ever publicly funded NHS construction project, costing £842 million to build. The hospital was granted the right to use the name "Queen Elizabeth University hospital" by Queen Elizabeth II. It was fully operational by summer 2016.

A physical above-ground link for patients and staff from the main building into the Maternity and Neurosciences Institute buildings was constructed, allowing most of the campus to be traversed without going outside. The main hospital facilities are also linked to the laboratory buildings via a tunnel and pneumatic tube system.

The retained buildings from the former hospital, notably the Institute of Neurological Sciences, also started to receive external and internal refurbishment, with a cosmetic panel cladding being applied to the outside of the building in order to bring its appearance in-line with the new hospital.



POLICY CONTEXT

Health care facilities in Scotland are generally very well designed and recent award winning examples are included in this study. Innovative architecture and building technologies reflect the excellent high level briefing and consultation that is invested in the architectural design process. The buildings are supported by arts strategies that bring creativity into the health-care setting and these are embedded into UK Government policy.

The recent inquiry from the All-Party Parliamentary Group on Arts, Health and Wellbeing resulted in the publication of Creative Health: The Arts for Health and Wellbeing which has an entire chapter on Health, Community and Environment in which the need for colour, beauty, greenspace and great design is explored in the context of creativity and health.

Policy and research are filtering through to great design through careful briefing and interdisciplinary dialogue and this is reflected in the architecture being produced.

Organisations such as NHS Forest, the Green Exercise Partnership and Central Scotland Green Network Trust are working to ensure that greenspace is embedded in policy, briefing and delivery of new healthcare facilities.

However, even within this positive context there is still room for improvement especially in the design of outdoor space.

Recent policy initiatives include:

- Building with Nature Standards for design
- Transport Scotland's Active Travel Framework
- NPP Framework for Biodiversity Net Gain
- The NHS Sustainable Design Guide (due soon)

At the moment, the campus at QEUH would not meet the standards set out in the guidance for any of these policies. Poor-quality built environments have a damaging effect upon health and wellbeing.

There are considerable opportunities to improve the QEUH campus for the long term benefits of staff and patients and there are clear economic wins in doing so:

- maximises value of NHS Estate
- maximises Natural Capital
- encourages healthier lifestyles for staff and patients
- improves local community health with long term economic gain
- reduces recovery times, saving money in short to mid term
- enables NHS statutory biodiversity duties to be met, saving cost of non compliance as guidance becomes more stringent

This study explores some of these reasons and will look specifically at biodiversity, active travel, places for people and integrated green infrastructure.

Further background information can be found in several documents produced by the Green Exercise Partnership, notably:

Unlocking The Potential Of NHS Greenspace For Health And Wellbeing

The NHS Greenspace Demonstration Project (April 2020)

https://www.nature.scot/sites/default/files/2020-04/NHS%20Greenspace%20Demonstration%20Project%20-%20full%20report%202020.pdf

This study draws on the substantial evidence base for the role of therapeutic design, high quality landscape design and public art indoors and outside to reduce stress through:

- enhanced way finding;
- deinstitutionalisation of spaces to enhance staff and patient dignity;
- positive impact on recovery times;
- reducing requirements for pain relief medication;
- increasing staff retention rates - all of which save money for the NHS and improve its service and delivery of employer responsibilities.

PHOTOGRAPHIC SURVEY

This survey was undertaken in November 2020 during the COVID pandemic lockdown and there are less people than usual on the campus.

Views to main hospital building with ward stacks in the high towers. The SUDS Pond and its obstructive safety fence sit right in front of the main hospital and the safety fencing blocks both views and access, greatly impeding clear navigation of the central areas for pedestrians.

The bright and cheerful exterior of the Children's Hospital and the adjacent play spaces - which are currently the only major pedestrian/civic space on the campus.

The fire path around the Children's Hospital has been designed to fit the space and is known as "Lollipop Lane". It links to the Maternity Hospital, although at that end it culminates disappointingly in a turning head and car park.

The “landing dock” is a long paved strip that links the two main hospitals and the multi storey car parks - like an external concourse.

Unfortunately it is bisected by the SUDS pond, as it its otherwise a highly effective navigation tool.

Sculptural shelters create landmarks on this strip housing seats and bike racks.

There are drainage and soil related problems along this space creating flooding, puddling and plant failures.

Sculptural shelters create landmarks on in five key spots including the “landing dock” - they house seats and bike racks and are a key feature and landmark on the campus.

There are a few areas outside designed with SUDS including this swale next to the P2 Multi-storey car park and there are green roofs on several of the newer buildings.

There are localised land drainage issues across most the largely flat campus and the SUDS strategy needs to be reviewed.

The surface car parks do not appear to have a SUDS strategy and do not drain well. They are a harsh, tree-less and poorly navigated environment.

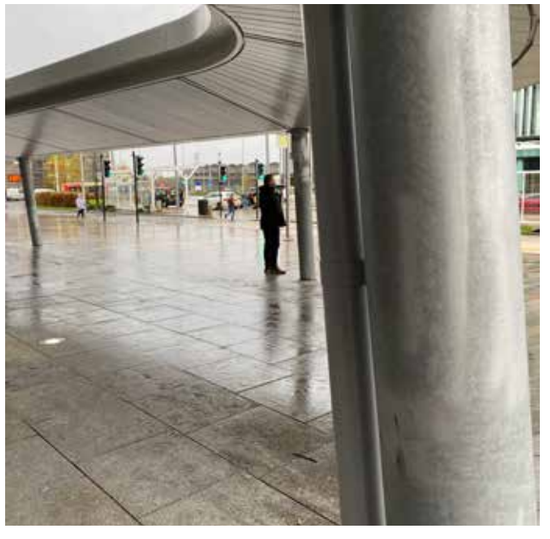
Featureless “central park” with poor drainage and little to attract activity. There is limited biodiversity and there are many failed trees, probably due to poor soil drainage.

This could offer so much more in terms of conviviality, clinical practice and practical outdoor space for meetings and waiting areas.

Windswept main entry which feels more like an airport than a community facility.

This area faces north and is open to prevailing winds. It needs trees to reduce wind sweep and bring scale down to human level.

Entrance canopies to main and children’s hospitals shown on right. Neither canopy provides much rain shelter as can be seen by the wet floors underneath.



Above: Original poorhouse buildings which are now A-listed and which once fronted the campus onto the community of Govan (they now face onto the busy A739 Clyde Tunnel access road)

Below: the drop off area for buses and taxis in front of the landing dock and main entries is again windswept and lacking human scale.

This is a stressful environment.

Parking areas are hostile and hard with little biodiversity or human comfort. They are difficult to navigate and lack signage and wayfinding.





Views of the busy A739 Clyde Tunnel access road which bounds the campus to the east edge. The photos show some of the existing gateways along this edge - this is a hostile environment with fast noisy traffic separating the hospital from the adjacent community.






Spaces between buildings are complex and varied, interspersed by the network of linking corridors overhead. This can often create quite a “space age” kind of character, which is dynamic and attractive, but which is not at all reflected in the character of the spaces on the ground below.

Active travel is not well served in the campus - bike racks are under used and the roads are heavily trafficked and engineered mainly for cars.

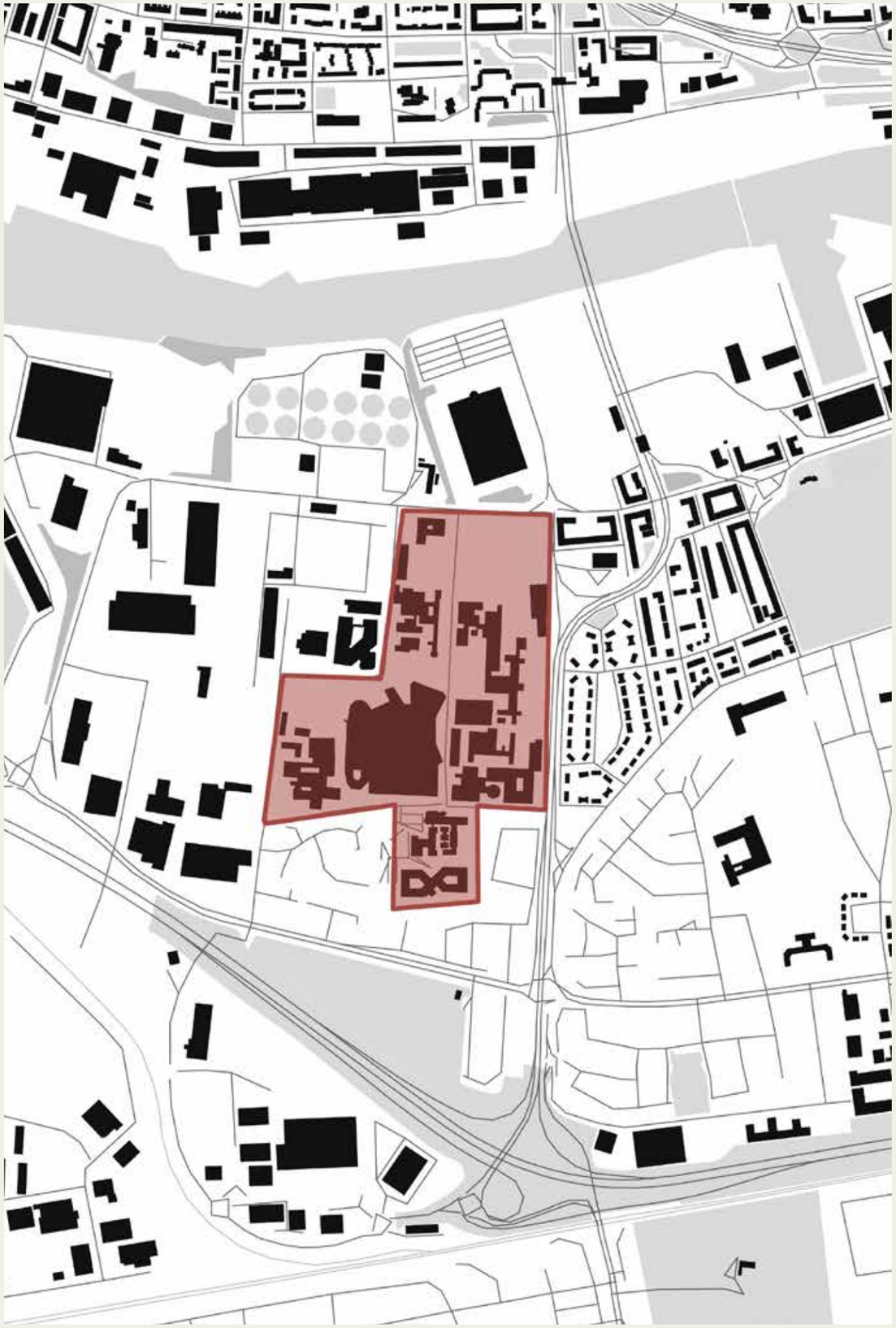
Expansive on ground parking areas add to the domination of the vehicle.

Note the remnant mature trees along some road edges which are all under a tree preservation order.

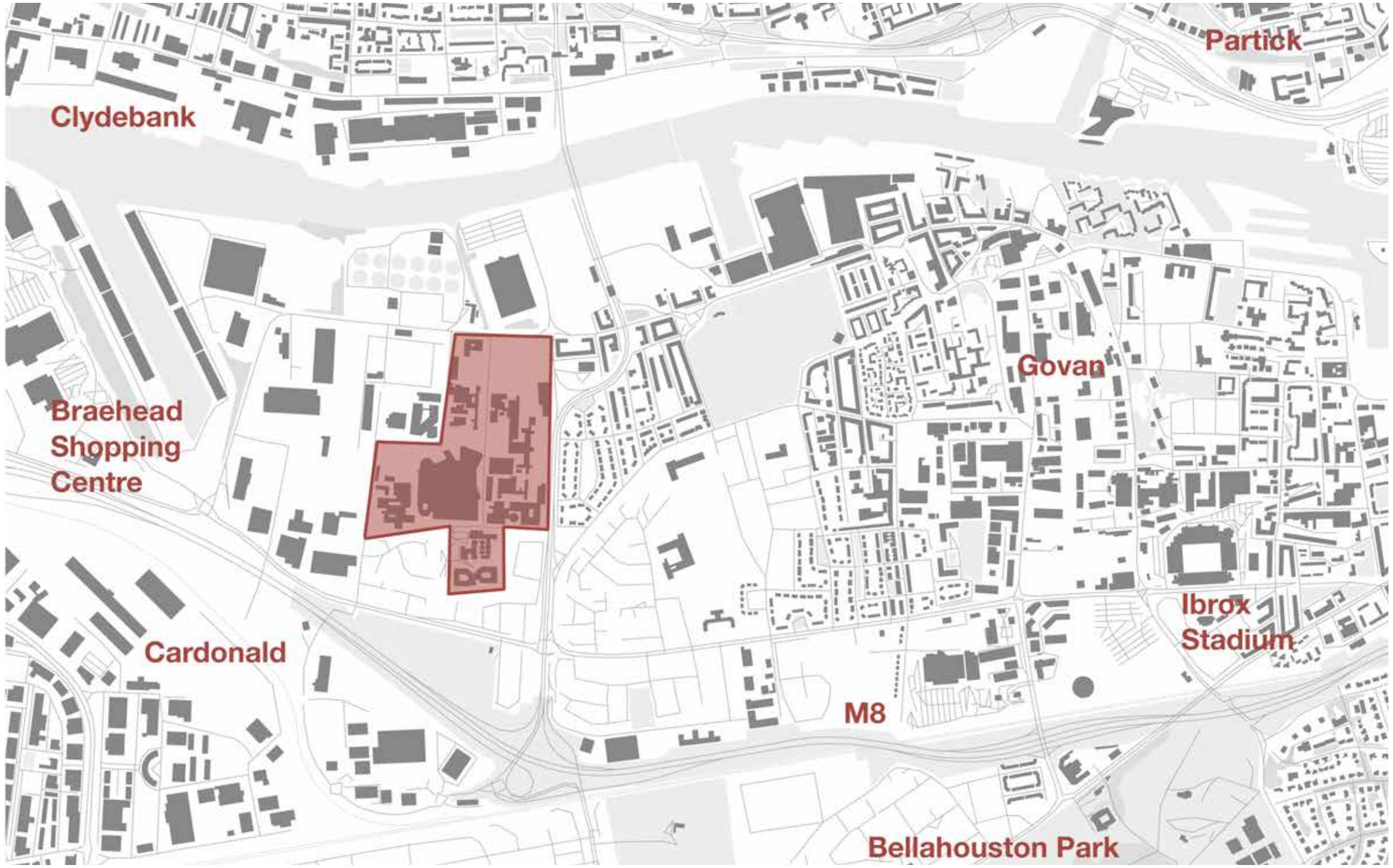
QUEEN ELIZABETH UNIVERSITY HOSPITAL:

Wider Area Survey And Analysis

The following section explores the hospital campus in the context of Govan and the south west of Glasgow, seeking to find opportunities for active travel connections, green networks, habitat corridors and other ways to embed the campus into its surrounding community.



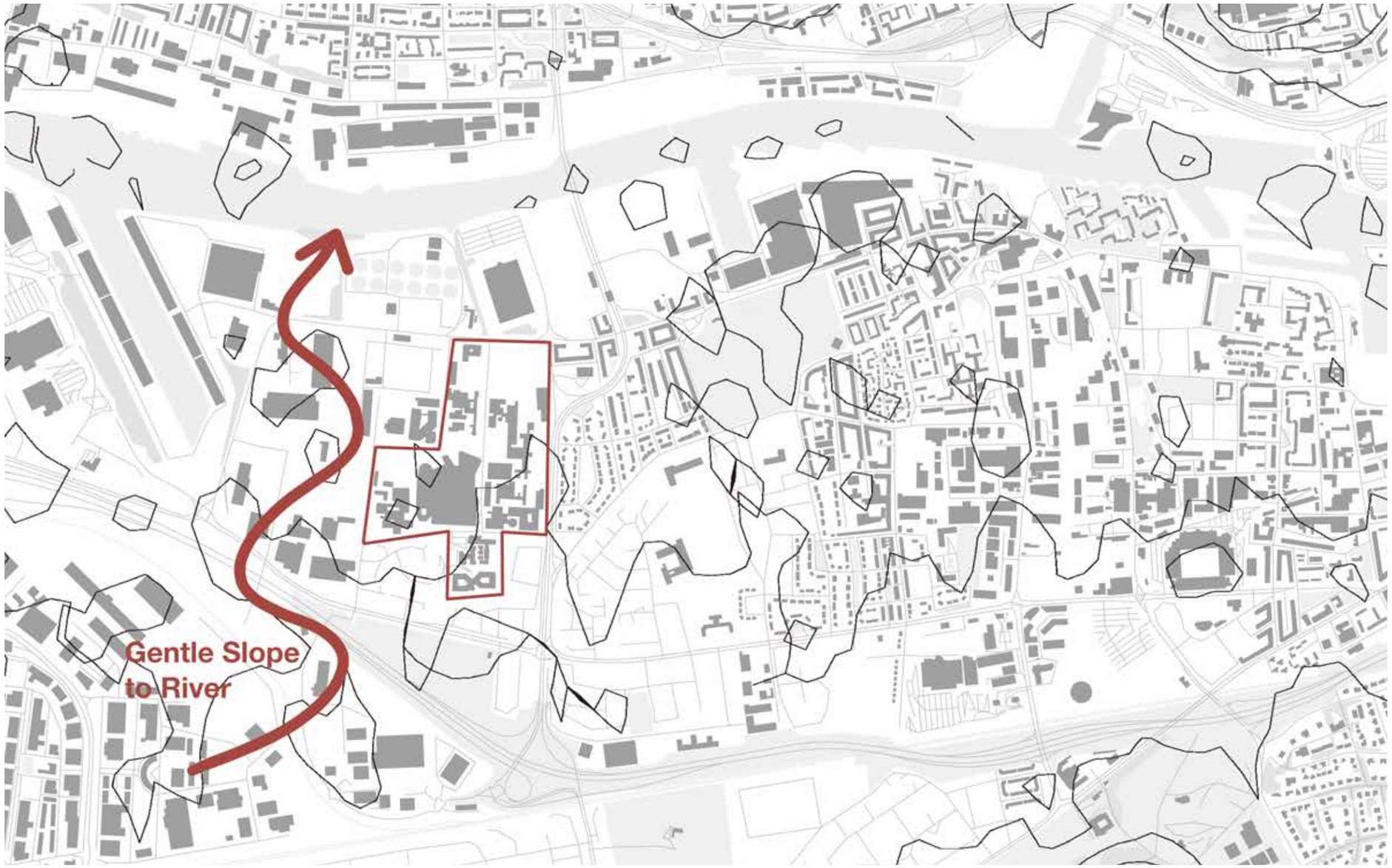
Right: Site location



The hospital sits between the town centre of Govan and the large out of town retail centre of Braehead. It is bounded to the north by the River Clyde and by the M8 motorway to the south. It is both well-connected by road, and very poorly connected by active travel routes.

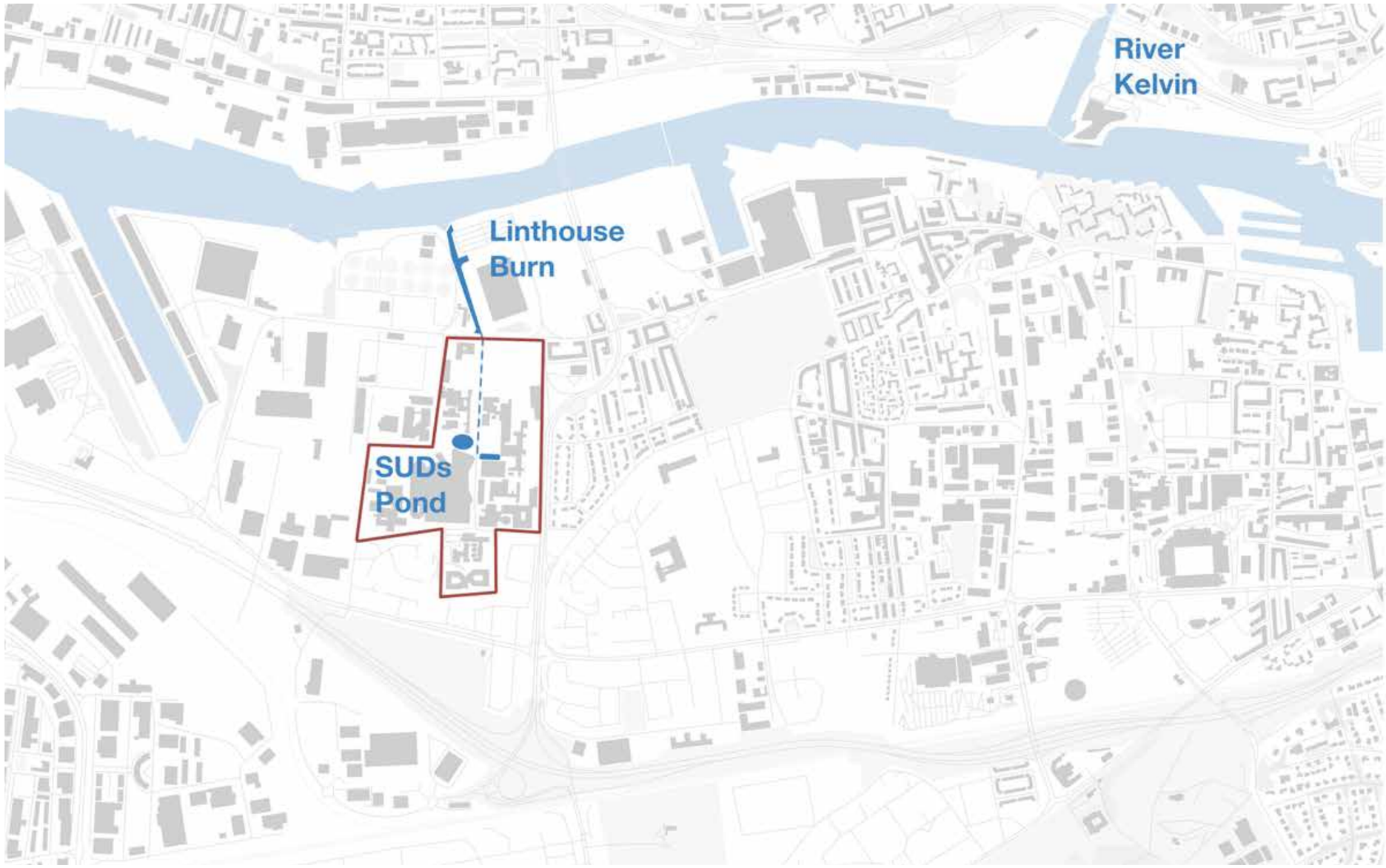
It is approximately five miles from the city centre and less than one mile from the centre of Govan

CONTEXT



TOPOGRAPHY

The campus is generally flat being on the river flood plain. There is a natural low point on site where the SUDS pond lies and a very gentle slope north to the Clyde. Access is in theory very good with no severe gradients to navigate and clear views across the site.



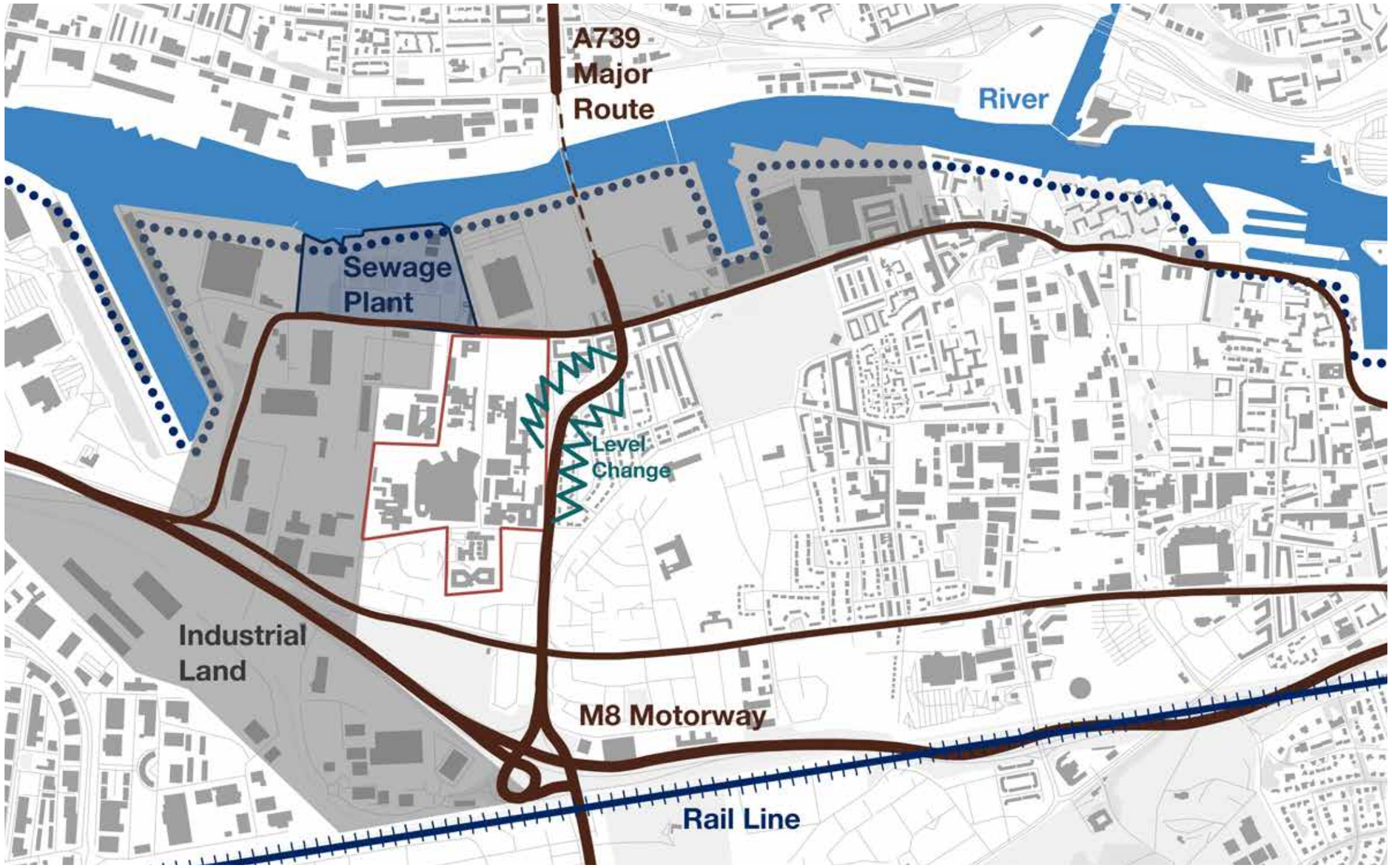
HYDROLOGY

The mail local hydrological feature is the River Clyde to the north. No major flooding issues are recorded by SEPA although there are patches of localised surface flooding which is reflected in our findings on site.

To the north the Linthouse Burn emerges from a culvert and flows overland to the Clyde in an inaccessible wooded channel. We have not been able to map the route of the culvert.

There is a central SUDS pond, which is engineered as a single use, steep sided attenuation tank, fed in part by a large swale to its east.

This tank is also an emergency overflow for other liquids stored on site.

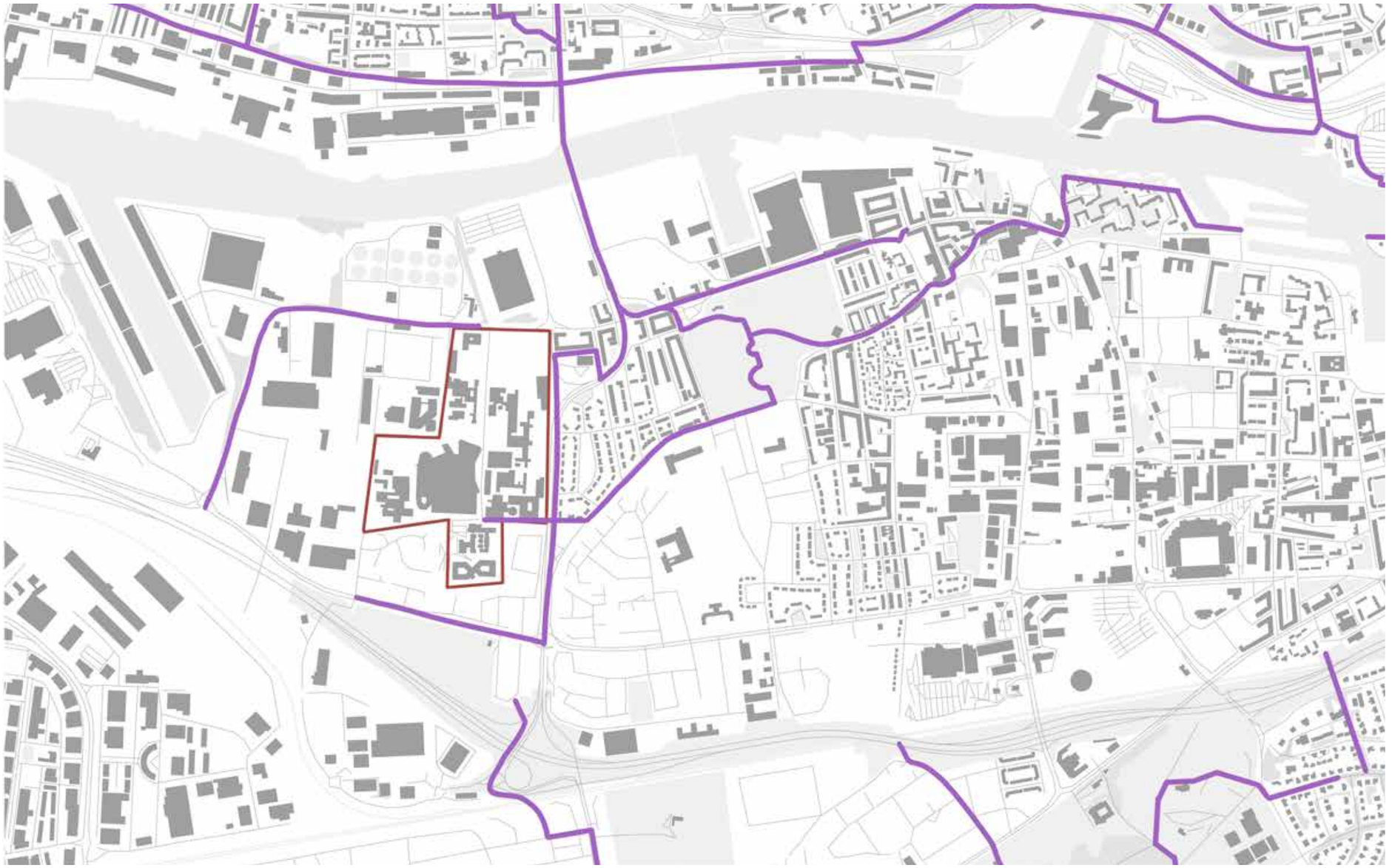


The campus is landlocked - it is extremely hard to access by foot or bike at the moment. Entry is blocked by:

- the M8
- the A739
- the Clyde tunnel entry
- the sewage works
- local industrial land
- Govan Road
- the rail line

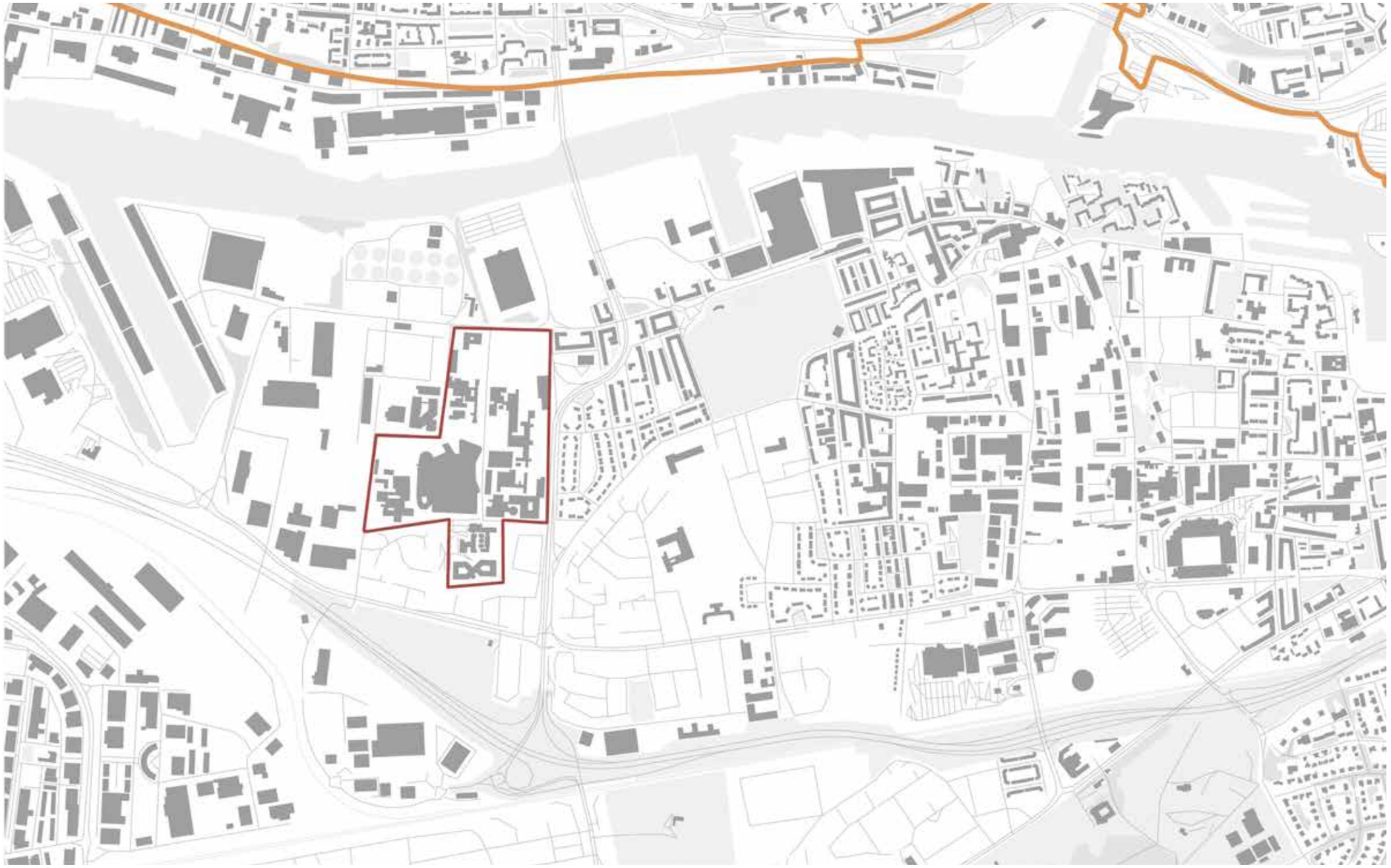
There is some access from Govan via underpasses and local footpaths.

TRAVEL BARRIERS



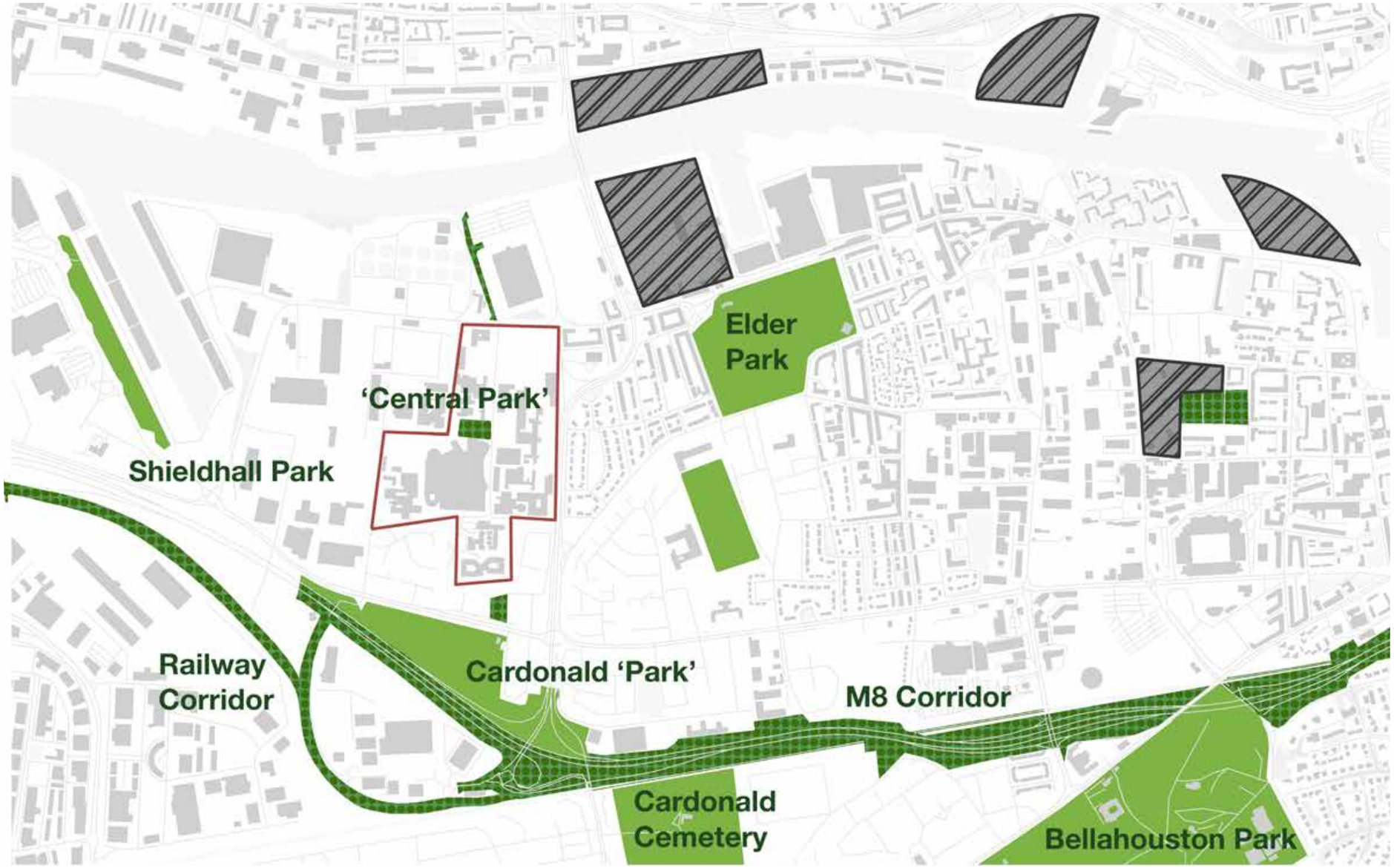
Core paths fragment around the site and do not connect to wider networks except on routes into Govan, because of the many barriers to movement surrounding the site.

CORE PATH NETWORK



Main cycle routes lie north of the river at the moment and are not easily reached.

NATIONAL CYCLE NETWORK



GREEN SPACE AND HABITAT NETWORKS

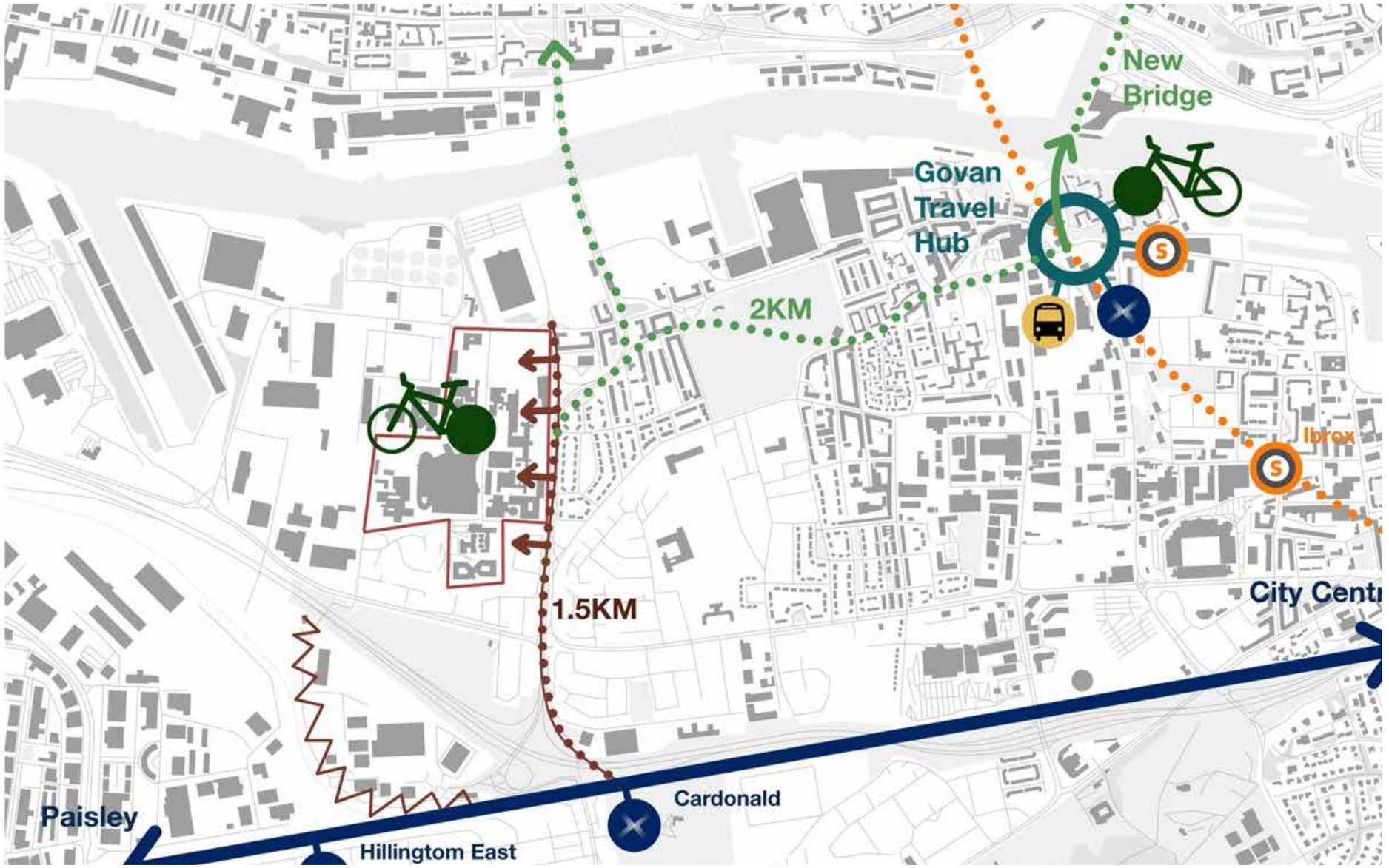
There are pockets of notable green space near the campus, including the historically significant Elder Park, donated to the people of Govan by Isabella Elder - she also funded Queen Margaret College - the first college in Scotland to offer higher education to women - which established a women's medical school in 1890. The park has a statue to Isabella Elder - the only statue to a woman in Glasgow apart from Queen Victoria in George Square and one with medical connections.

Bellahouston park lies two miles to the south east and houses many facilities and activities.

Both parks could be made far more easily accessible by foot or bike.

Incidental green corridors connect along rail and roads and there are large pockets of derelict land to the north along the Clyde corridor.

Linthouse Burn is a secret channel of green leading north to the Clyde.

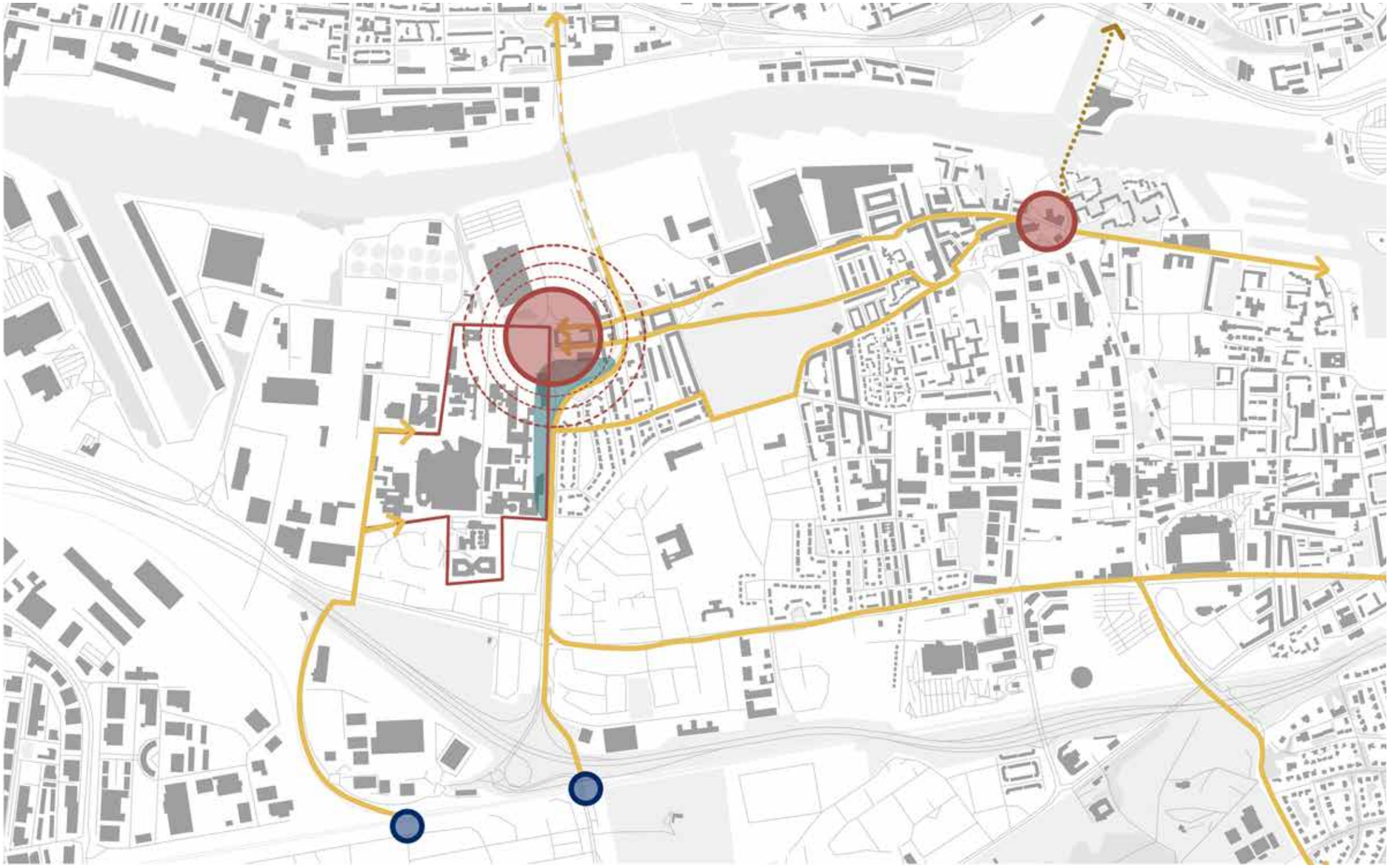


Govan has a major transport hub with rail, subway and bus connections, a bike station and a new bridge in development north to the Transport Museum and NCR7.

This lies about a mile from the campus and a good route could be developed via Elder park connecting into the hospital at its north east corner.

It is also a short walk to Cardonald station, but here there is no wider active travel connections and the route is intensely trafficked and quite hostile to pedestrians. It could be improved and bike station facilities added at Cardonald.

TRAIN AND SUBWAY ACTIVE TRAVEL CONNECTIONS



In conclusion, although the site is inaccessible and generally land locked, there is potential to open up towards the community of Govan, its transport hub, the new bridge and Elder Park to the East. There are also small links possible to the train line to the south.

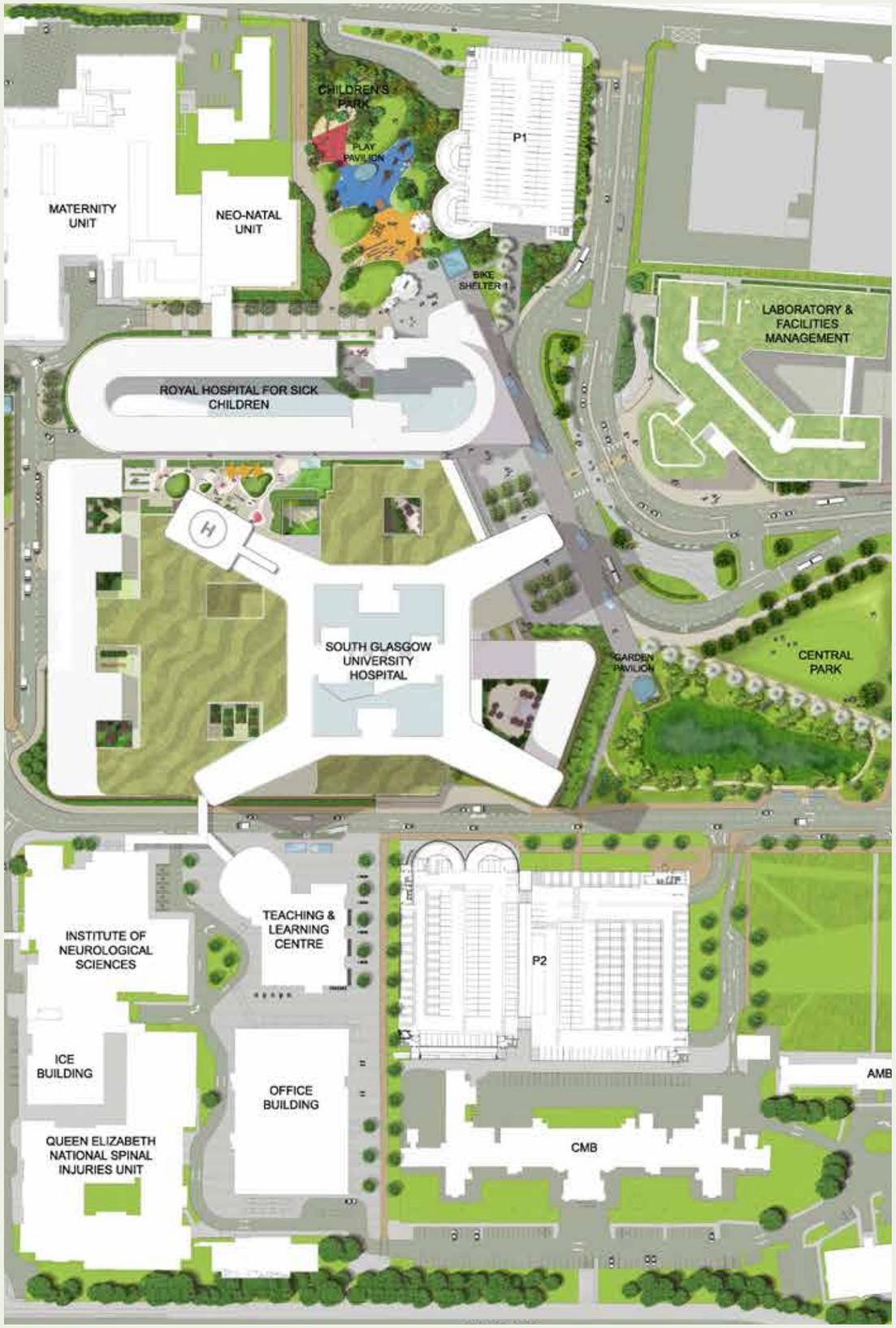
This places emphasis on a new entry to the site at the north east corner.

ACTIVE TRAVEL OPPORTUNITIES

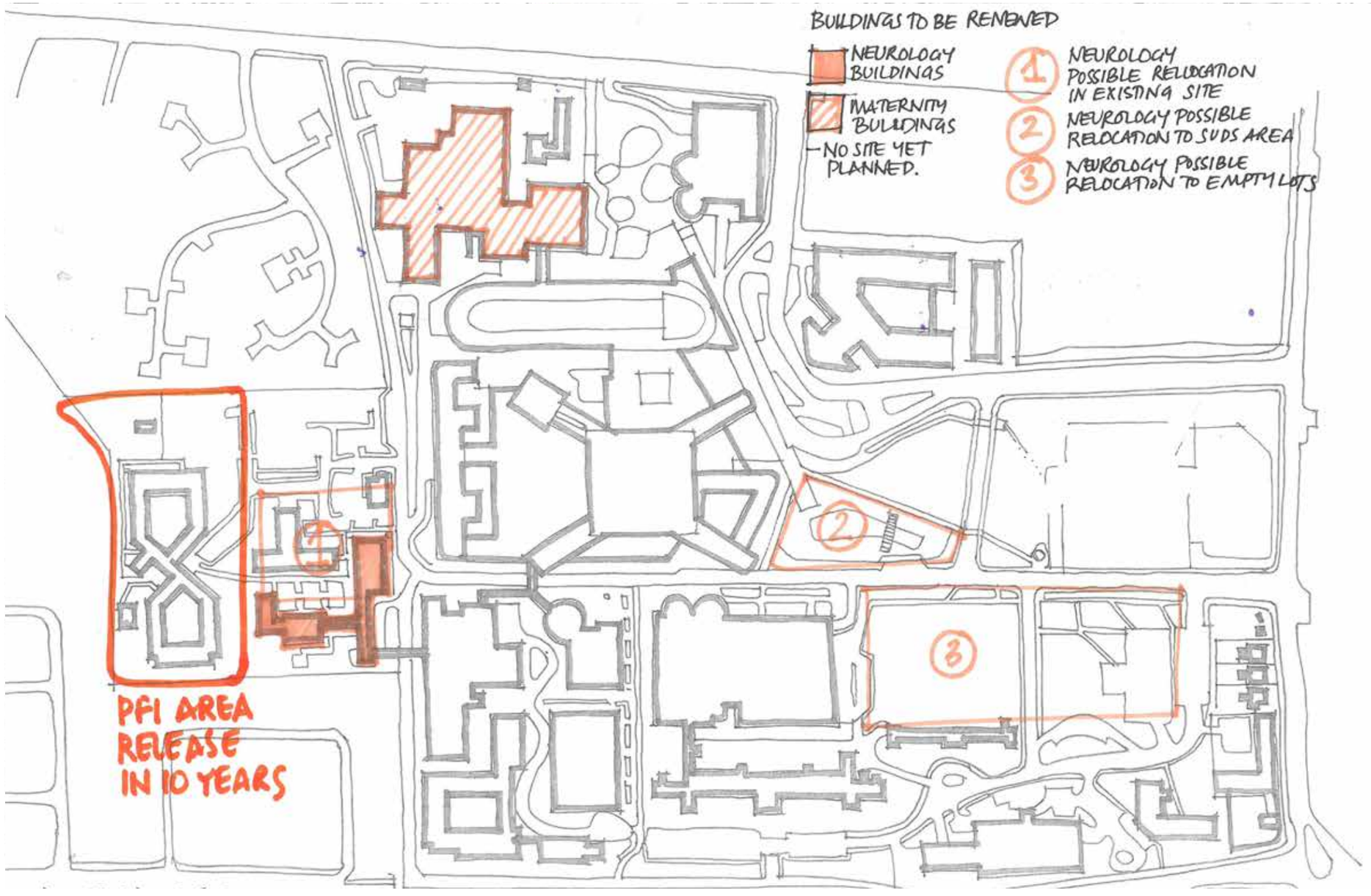
QUEEN ELIZABETH UNIVERSITY HOSPITAL:

Campus Survey And Analysis

The following section explores the hospital campus itself, seeking ways to improve access, wayfinding, navigability, visitor and staff comfort and active travel.



Right: Extract of campus masterplan



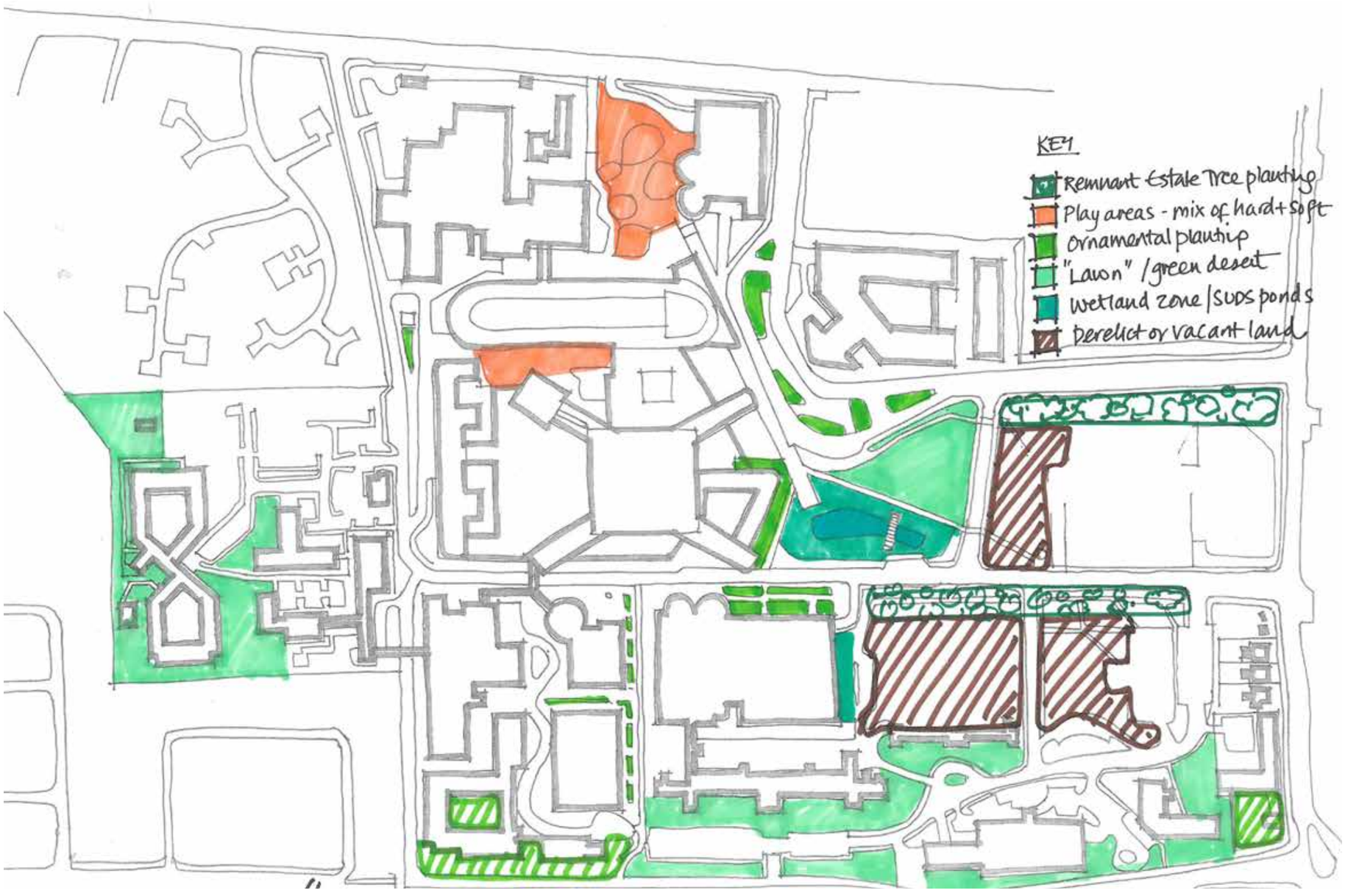
ANTICIPATED CHANGE

The are significant potential changes in the next ten years:

Sections of the neurology departments need to be redeveloped - with options for on-site redevelopment, relocation of the entire neurology unit to the site of the SuDS pond in a tall tower, or a lower development on the two vacant plots north of the teaching buildings.

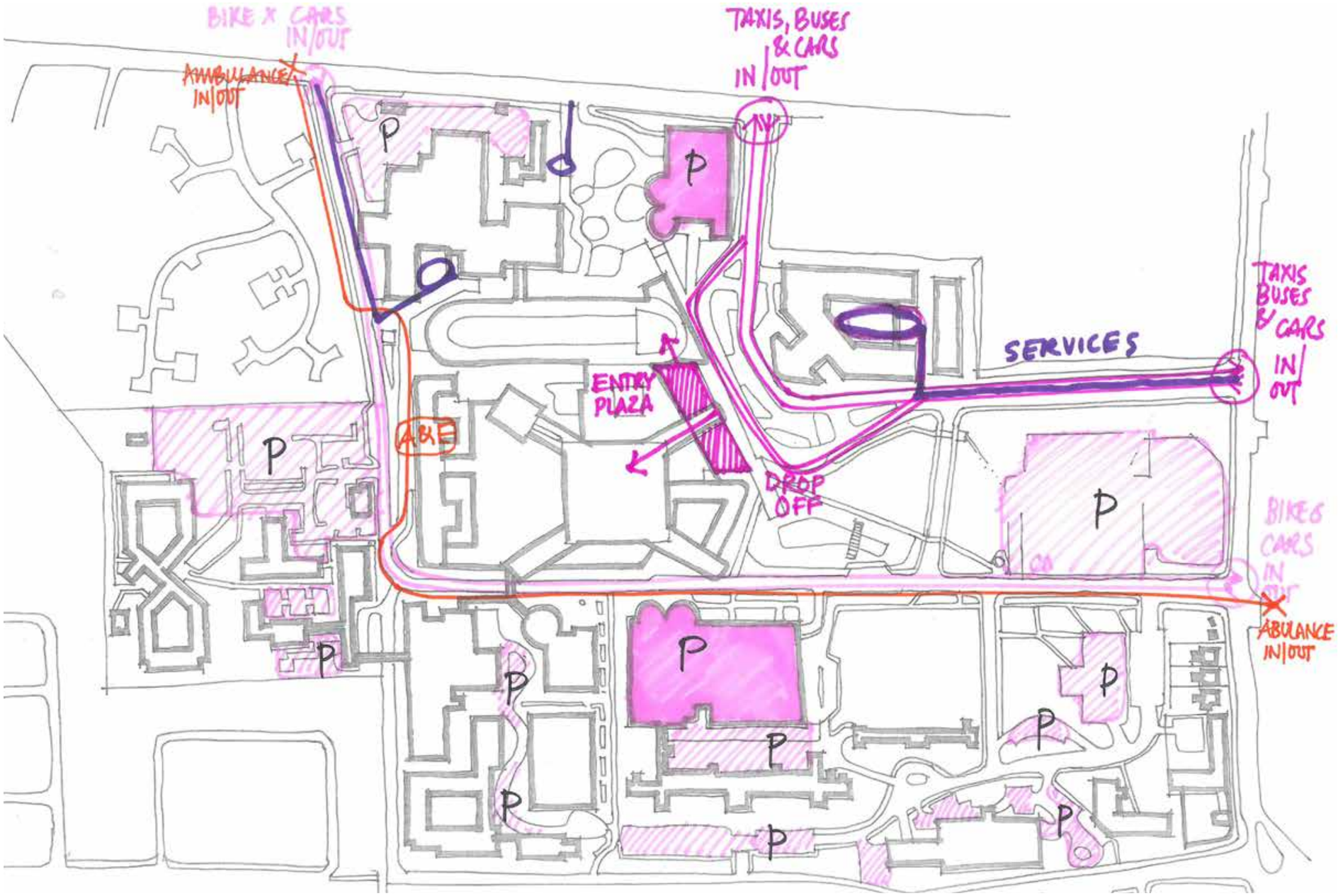
Following this there will be a need to redevelop the maternity wing which is an older building.

The Langlands Building is a PFI whose contract will expire in around ten years time. This building has a very poorly designed approach and the parking here is chaotic and dominates this part of the campus.



The campus is not currently very biodiverse, and has large areas of mown lawn, small areas of remnant mature tree planting and large vacant lots. It also has a lot of surface level parking, roads and paving. The two play areas incorporate some green areas. The Central park is dominated by the poorly designed SuDS pond.

LAND USE - 'GREEN SPACES'



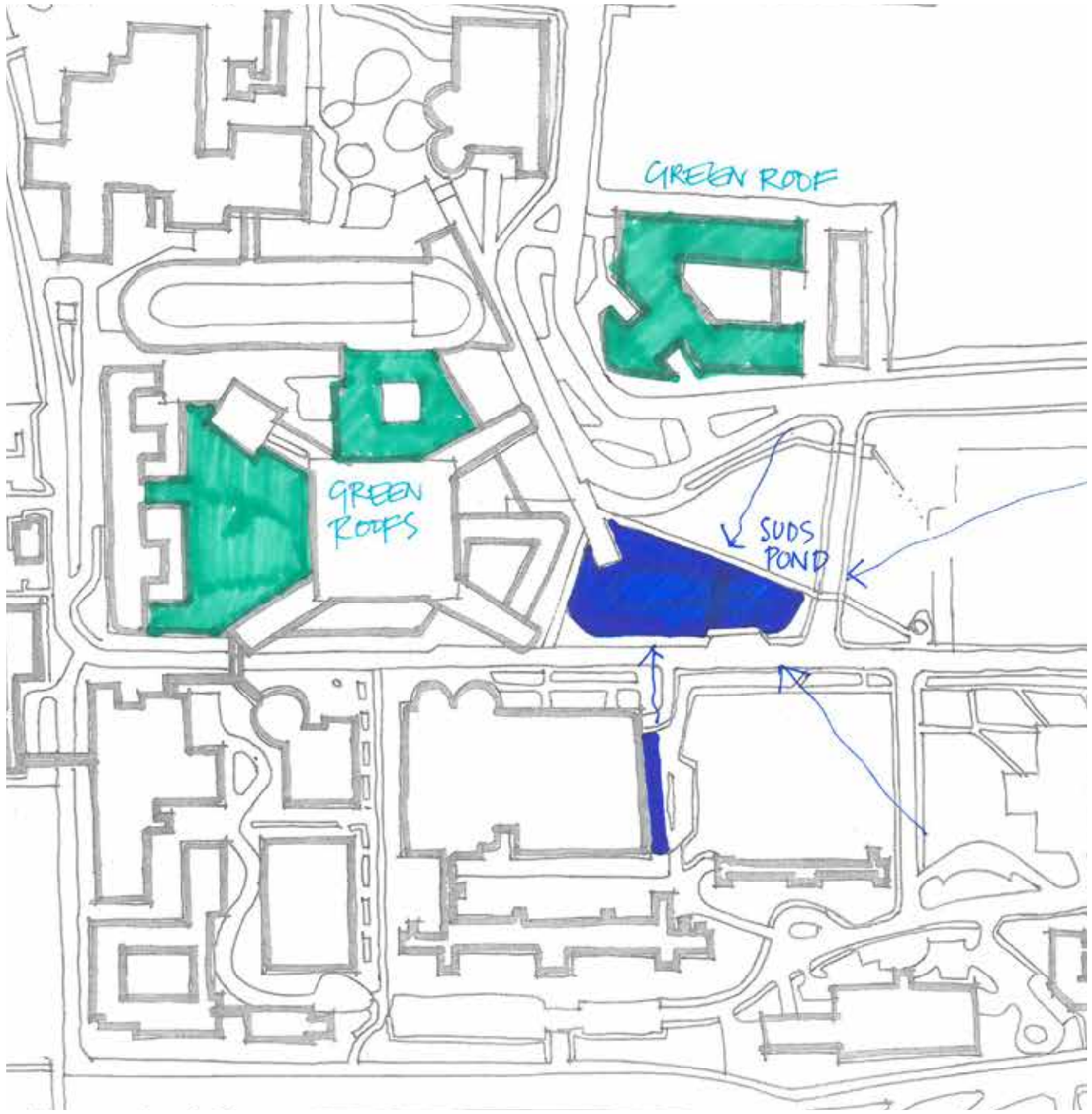
VEHICLE CIRCULATION AND PARKING

Two main vehicular and pedestrian routes bisect the site and are both two-way systems with little hierarchy. It can be confusing to approach by car and hard to find the access to the car parks, especially the two multi storeys.

One of the through routes is also an ambulance route, the other incorporates taxis and buses.

This means that pedestrians and cyclists are competing for very busy road space and also share entries with large vehicles.

The parking is heavily used and there is a great deal of scattered parking and illicit parking in hidden nooks.



CURRENT DRAINAGE STRATEGY

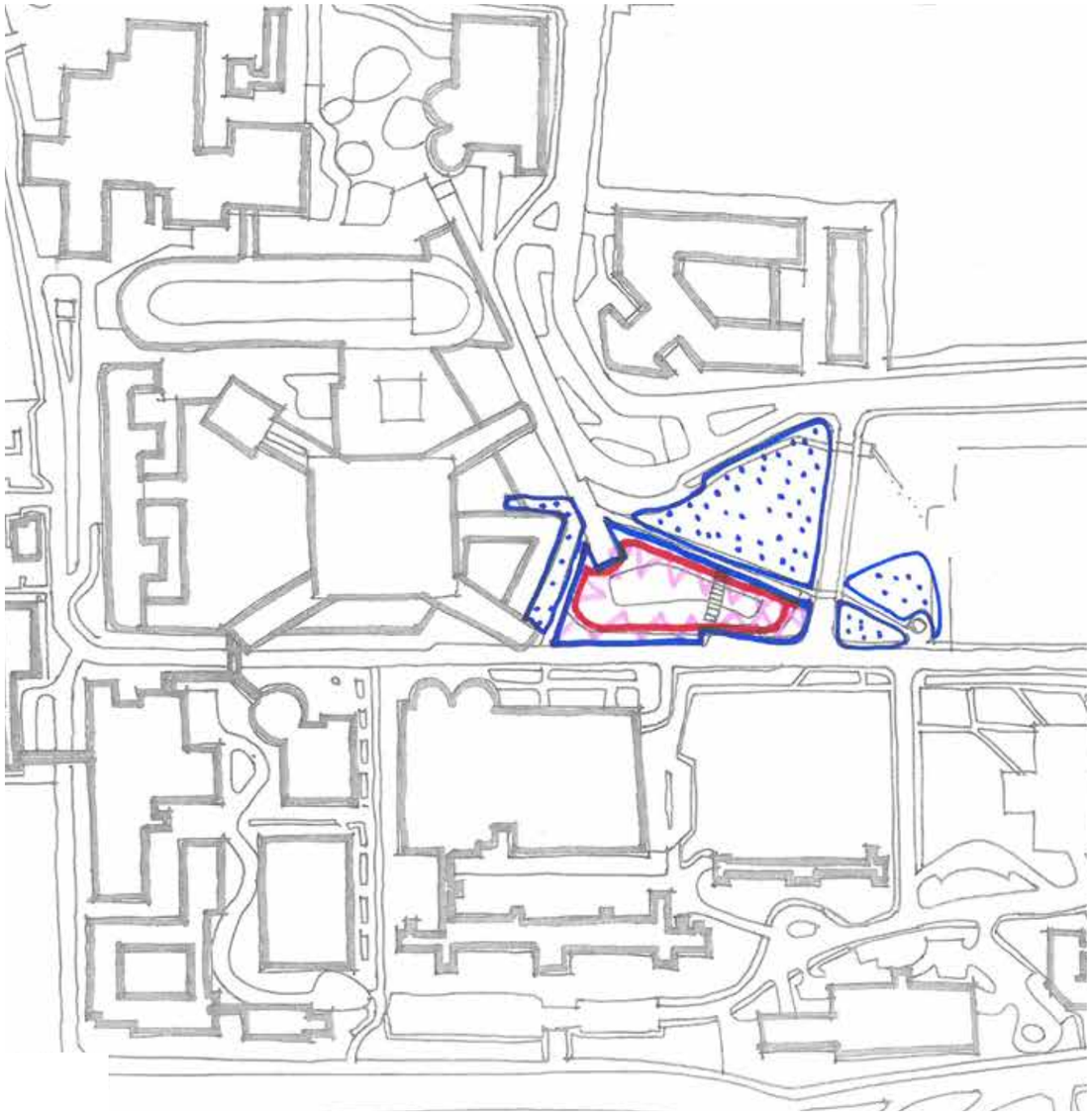
Green roofs are used on the newer buildings.

The central SUDS tank dominates the campus. A large swale feeds into it from the east.

Further data on drainage has not been available for this study.

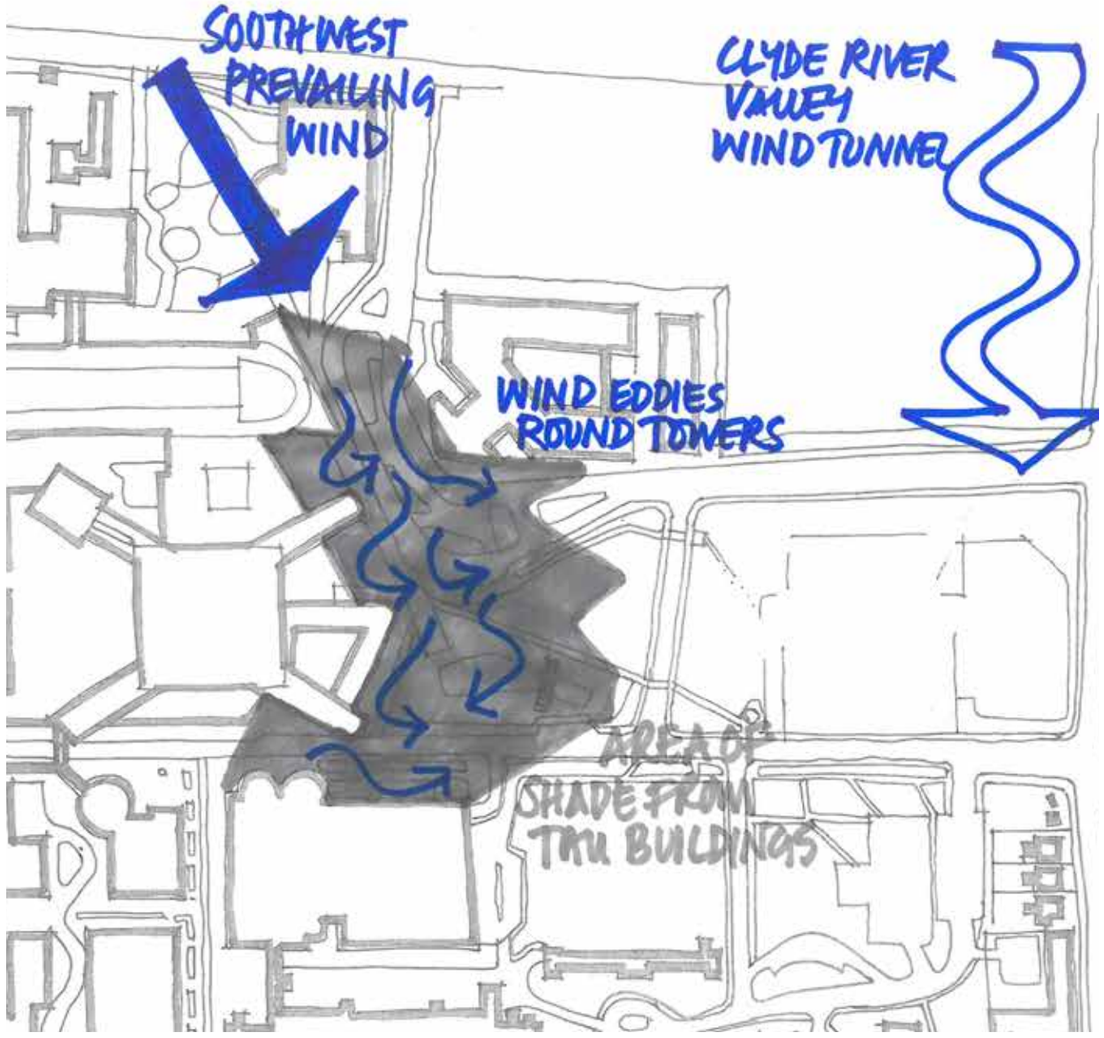
Site survey shows us that there are localised flooding issues especially in the green areas and this observation is reinforced by SEPA flood map data available on line

Better and greener land drainage would be a good way of improving surface water management and increasing biodiversity and social space.



DRAINAGE ISSUES

This map shows localised wet areas observed on site - the soil in these areas is poor and probably compacted during the recent building of the new hospital buildings.

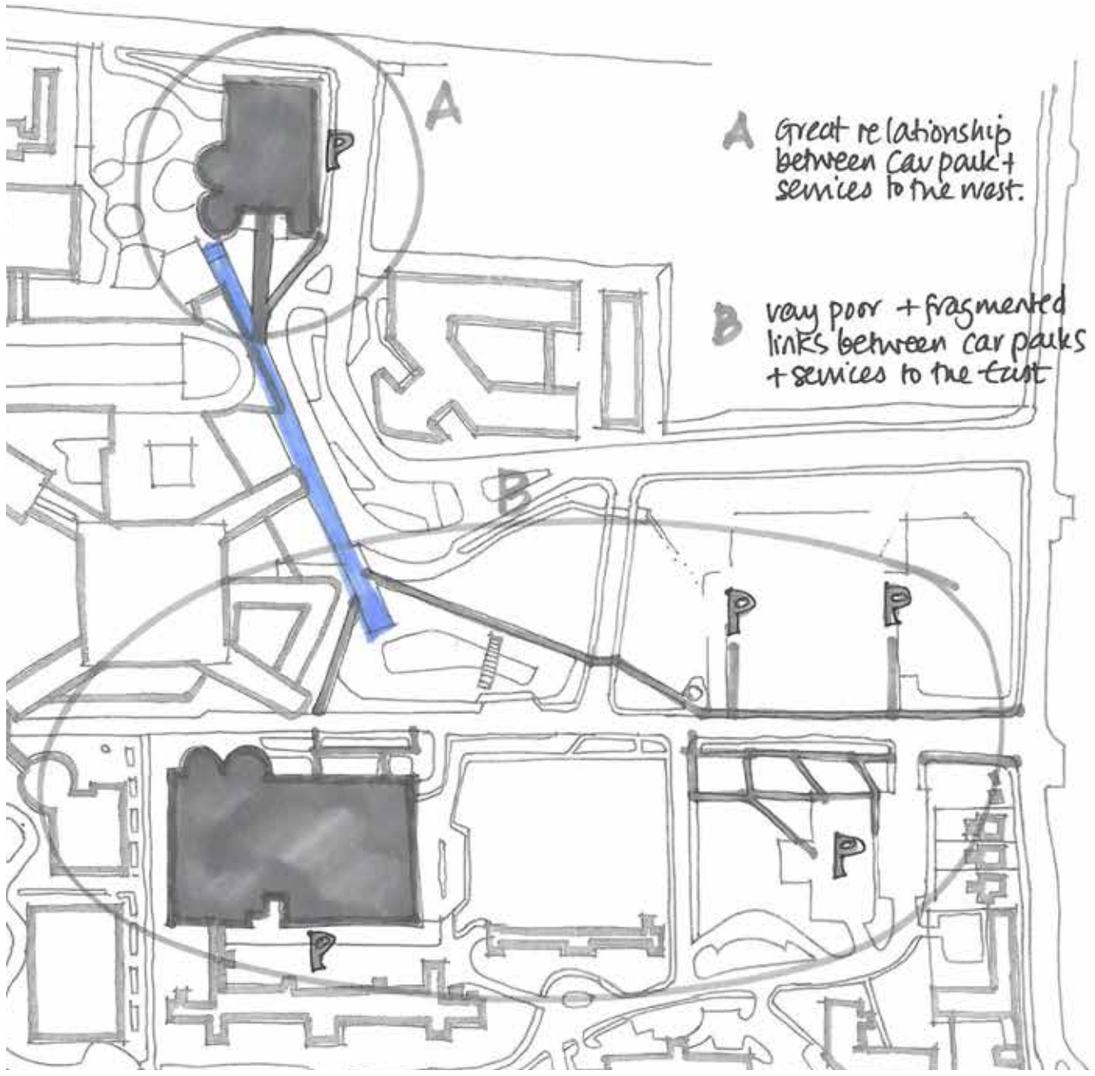


MICRO-CLIMATE

The prevailing south west wind and the wind that flows up the Clyde valley from the sea are both funnelled in eddies around the tall ward stacks of the new hospital building creating, at times, a very windy environment around the two main entries.

This is exacerbated by the north facing orientation of the entrances which are often in full shade especially in the low Scottish winter light.

The best way to reduce wind is by shelter belt planting with a mix of trees and shrubs.



PEDESTRIAN ENTRANCE JOURNEY; PARKING

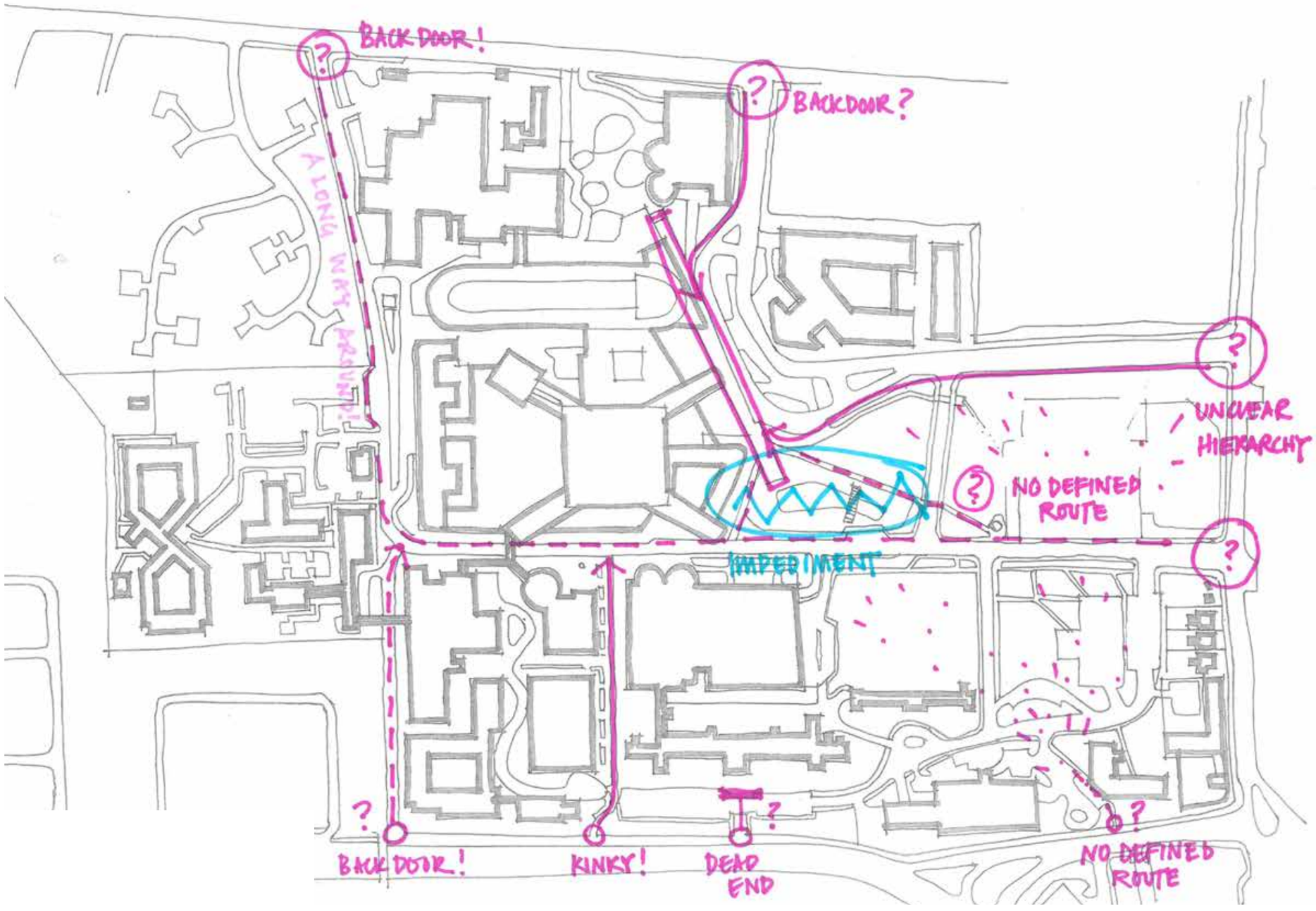
If you approach from the p1 multistorey car park on the west entry to the site, the visitor journey to both main hospitals is direct and smooth.

If you approach from the P2 multistorey car park to the east, the route is blocked by the access road and the SuDS pond and is not direct or smooth.

From the surface car parks there is no direct or clearly marked route and again the flow is redirected by the SuDS pond.

Clearly the SuDS pond needs to be reconfigured to enable a good visitor journey into the hospital.

Poor visitor journeys create a stressful arrival. Good visitor flows enable a calm and welcoming reception.



PEDESTRIAN AND CYCLE CIRCULATION; ENTRANCES

If one approaches the hospital on foot there are several entries - none of which have good signage, waymarking, orientation information or gateways.

Often the routes in from the entries are indirect or “back of house”.

The entries have no hierarchy. Some are historic and now obsolete such as the gate in front of the old poorhouse building which leads no where in either direction, in or out.

The SuDS pond impedes direct access on foot once you are near the main hospital buildings.

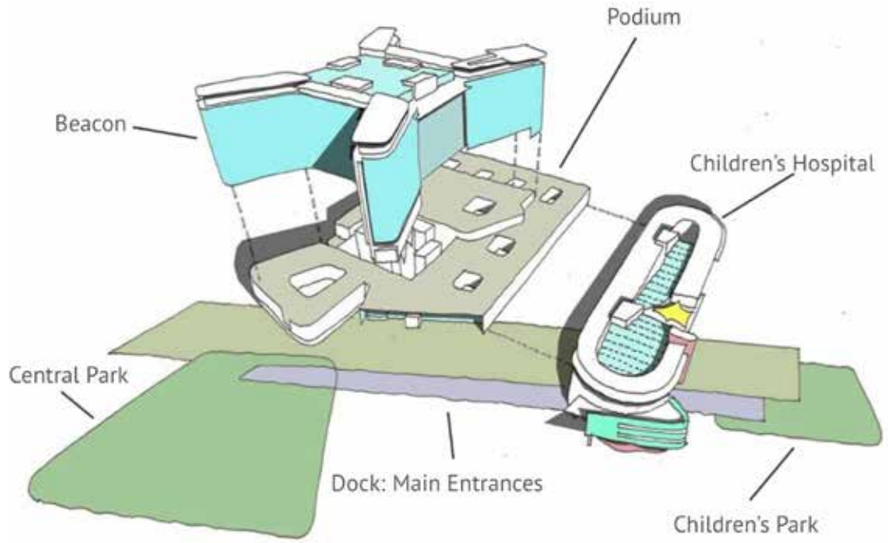
The welcome is poor and would add to stress for visitors and staff.

PEDESTRIAN INTERNAL CIRCULATION

There are many other impediments to good pedestrian flow - lots of roads to cross, vacant land, narrow footpaths and heavy traffic, poorly arranged parking and lack of signage and waymarking. The best routes follow the two main link roads, but here a pedestrian competes with buses, taxis, cars and ambulances.

Again this adds to stress and discomfort when approaching the hospital, instead of offering a calm and welcoming environment.

WAYFINDING STRATEGY



Above: Wayfinding strategy

Wayfinding and Arts strategy set out in "Working Well: People and Spaces A therapeutic design and art strategy for New South Glasgow Hospitals"

The document sets out a strong case and recognises the benefits for an integrated strategy that supports many aspects of the provision of healthcare - as noted in the adjacent extract.

The wayfinding and art strategy covers both internal and external spaces. The strategy is based on a number of principles including the provision of 'landmarking' along routes. The strategy sets out how this will be achieved however lacks detail or consideration of how this will be delivered externally in the landscape.

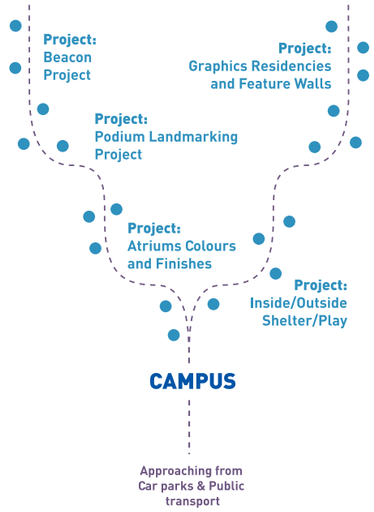
The core strategy focusses on the provision of shelters and pavilions in the landscape. There is also an ambition for an enhanced lighting strategy as part of the 'enhancement programme'.

The landscape strategy for the site focuses on the key elements set out in the diagram adjacent connecting the key greenspaces, entrances to the main acute adult and children's hospital and car park 1.

The strategy draws on the substantial evidence base for the role of therapeutic design and art to reduce stress through enhanced way finding; de-institutionalisation of spaces to enhance staff and patient dignity; positively impact on recovery times; reduce requirements for pain relief medication; increase staff retention rates - all of which save money for the NHS.

WAYFINDING PROPOSED CHANGES

Above: Extracts from Welcome to the QEUH - Bute Square Proposal



Above: Extracts from Welcome to the QEUH - Wayfinding Proposal

There is a recognition that wayfinding needs to be improved around the hospital campus to improve visitor experience and that the strategy internally must coordinate with the external environment.

There are proposals to:

- Improve the main Atrium space with improved welcome desk, new signage and wayfinding - using the colour strategy already utilised within the building
- Create 3 distinct 'squares' within the atrium - including new signage, artwork, seating and colour strategies - starting with Bute Square.
- Create, enhance and promote new walking routes around the campus for use by staff. This could include seating, signage and artwork.

Any improvement to these elements should be coordinated with the wider review of the campus routes and spaces and developed to provide the greatest multiple benefits to both staff patients and visitors.

OPPORTUNITIES

This section of the report explores opportunities within the campus to develop better:

- biodiversity
- active travel
- wayfinding and navigation
- human comfort
- conviviality
- clinical spaces outside
- integrated green infrastructure

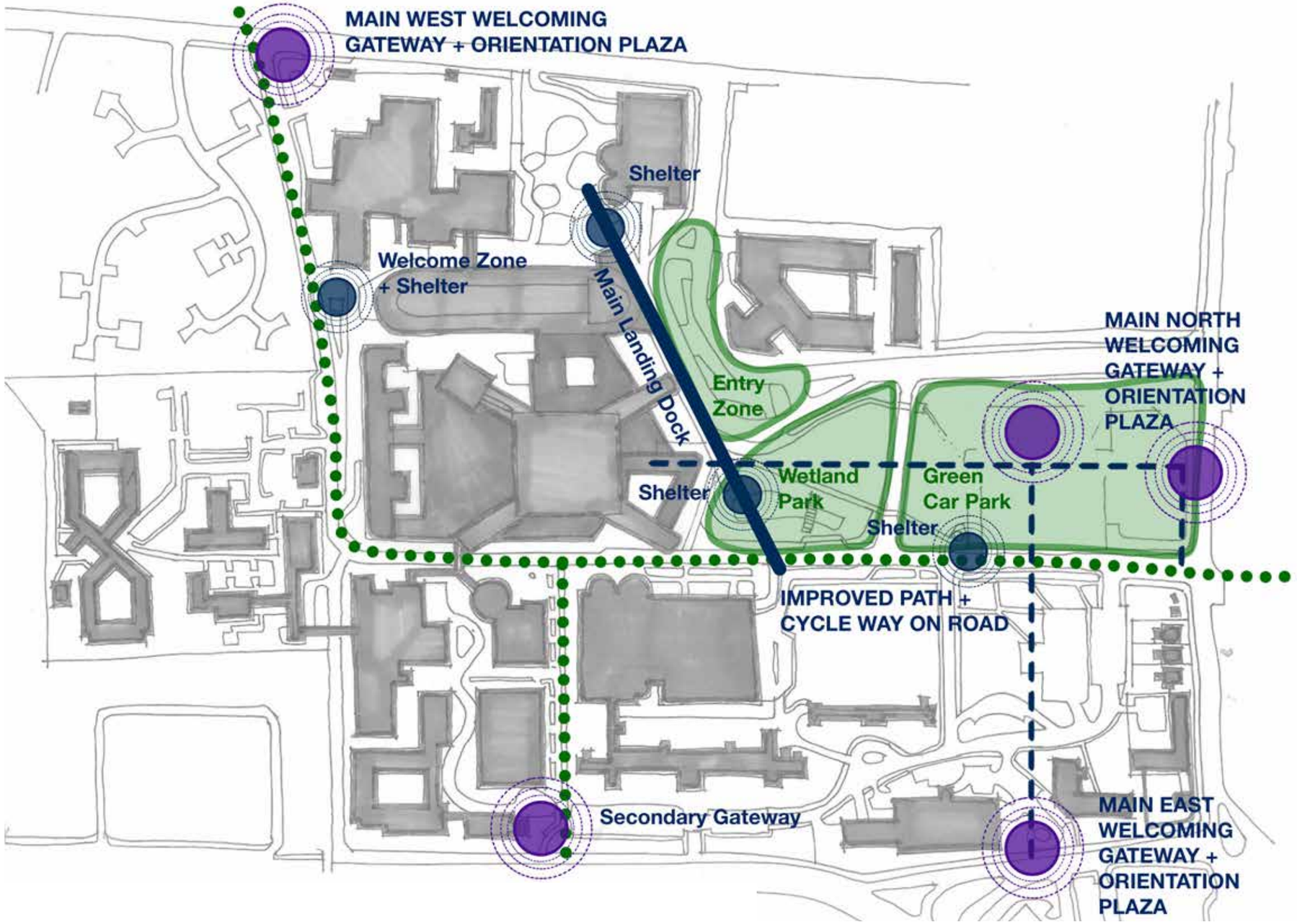
The section is divided into:

- Longer term strategies
- Quick wins

Longer Term Strategies

The first section explores bigger strategies for more significant and impactful change. These strategies are set out as diagrams with supporting precedent images and sketches.

Right: Active travel routes at New Craigs hospital campus in Inverness (erz 2018)



Above: Active travel routes at New Craigs hospital campus in Inverness (erz 2018)

ACTIVE TRAVEL STRATEGY

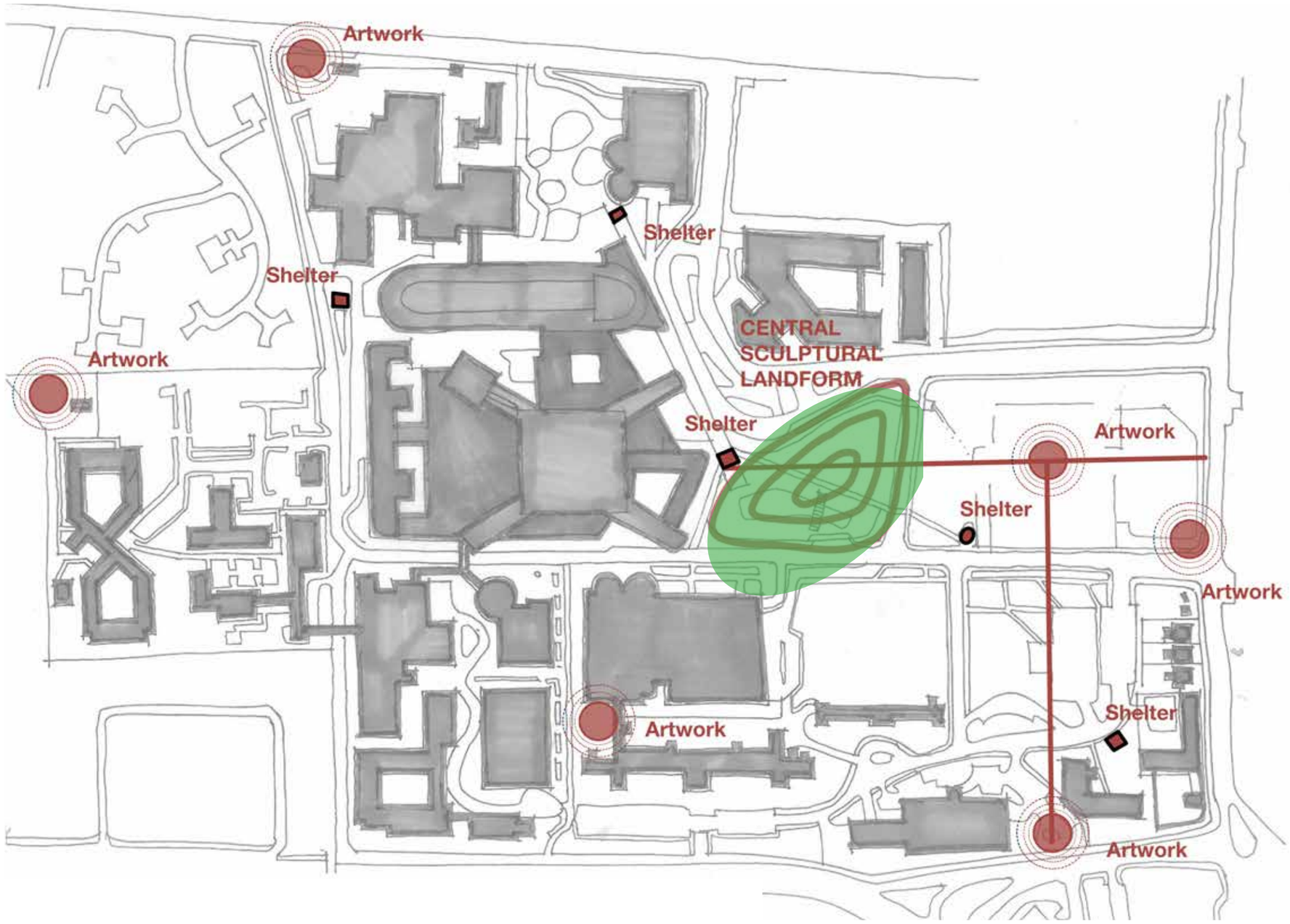
Create an active travel strategy and an active travel hub at the heart of the campus.

The campus will have the central park as a hub space and active travel routes will form a network around it linking the campus to the wider community wherever possible.

A clear hierarchy of welcoming entrances, landmarks and routes will create an intuitive system of travel for pedestrians and cyclists throughout the campus.

Clear pedestrian routes are created off road. On road routes are redeveloped to create formal routes for bikes and people.

Good signage will support active travel.



Ponds on Hospital grounds can be a real asset:

Above: This is Forth Valley Hospital jetty and pond by Ian White Associates for the Green Exercise Partnership.
Through a landscape masterplan, management framework and design guidance, the hospital site has been transformed into a green infrastructure asset.

New park developed at Foresterhill Hospital campus for NHS Grampian by erz, currently out to tender and due to be delivered 2021.

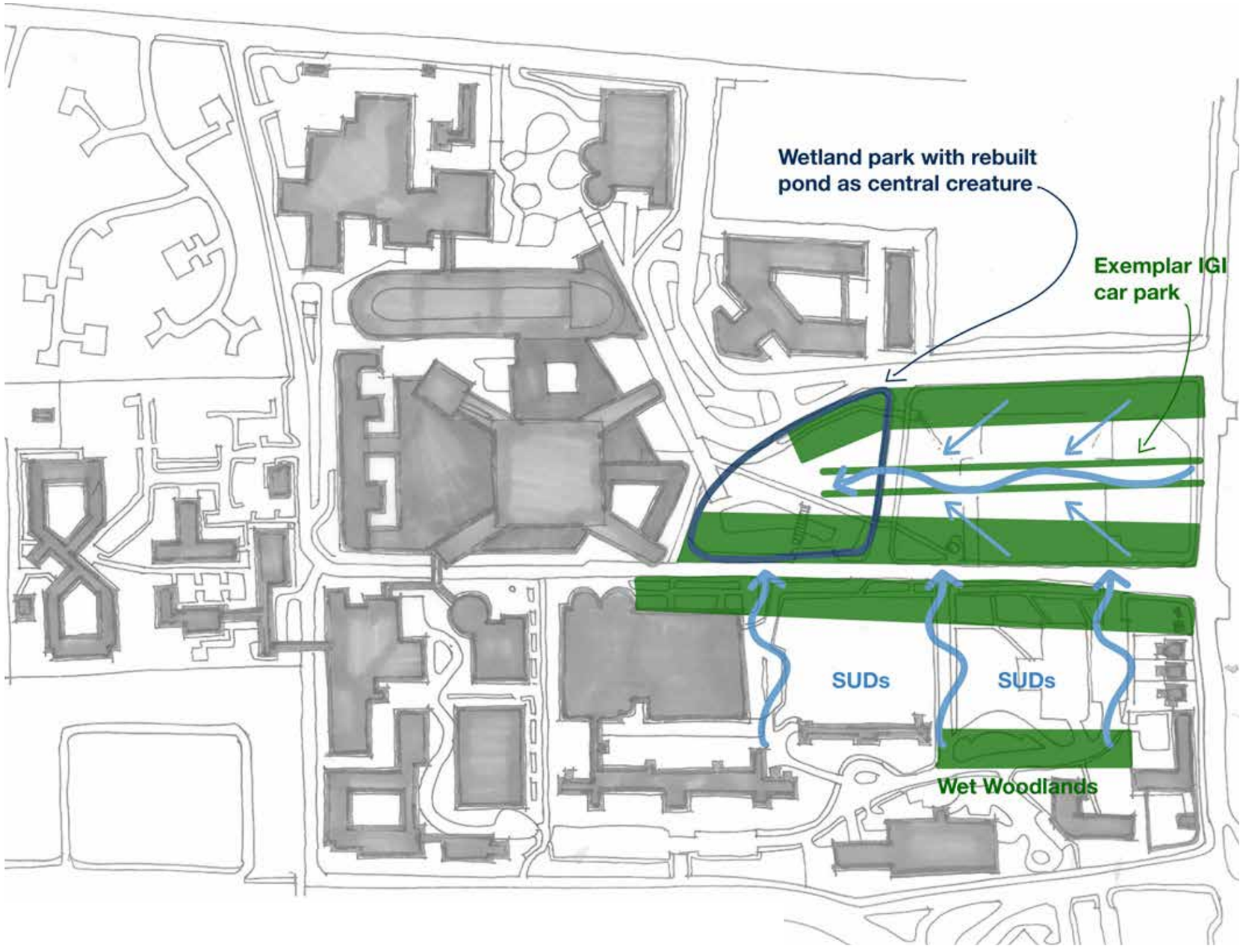
GREEN HEART TO CAMPUS

Creating a green heart will reclaim the middle of the campus as social and convivial space.

The existing central “park” is currently dominated by an unsafe and unsightly SuDS tank. This tank obstructs the “landing dock” the main navigation space at the building entry and impedes flow to the car parks.

The central park is poorly designed and not very useful, so this strategy seeks to create a new landmark space that can be used not only for water attenuation but also for convivial, functional and clinical activities, such as meetings, R&R, physiotherapy, occupational therapy, mobilisation and green exercise.

The attenuation tank is redesigned as positive and attractive water feature with safe edges and a biodiverse remit.



INTEGRATED GREEN INFRASTRUCTURE

The pond at the new Prince and Princess of Wales Hospice delivers a calm focus for social activity and a wonderful setting for the new building, creating convivial space, creative and attractive functional water management and biodiversity. (erz 2019)

Integrated green infrastructure uses water management systems to create opportunities for placemaking and biodiversity. This approach offers myriad benefits and delivers substantial gains for efficient spend.

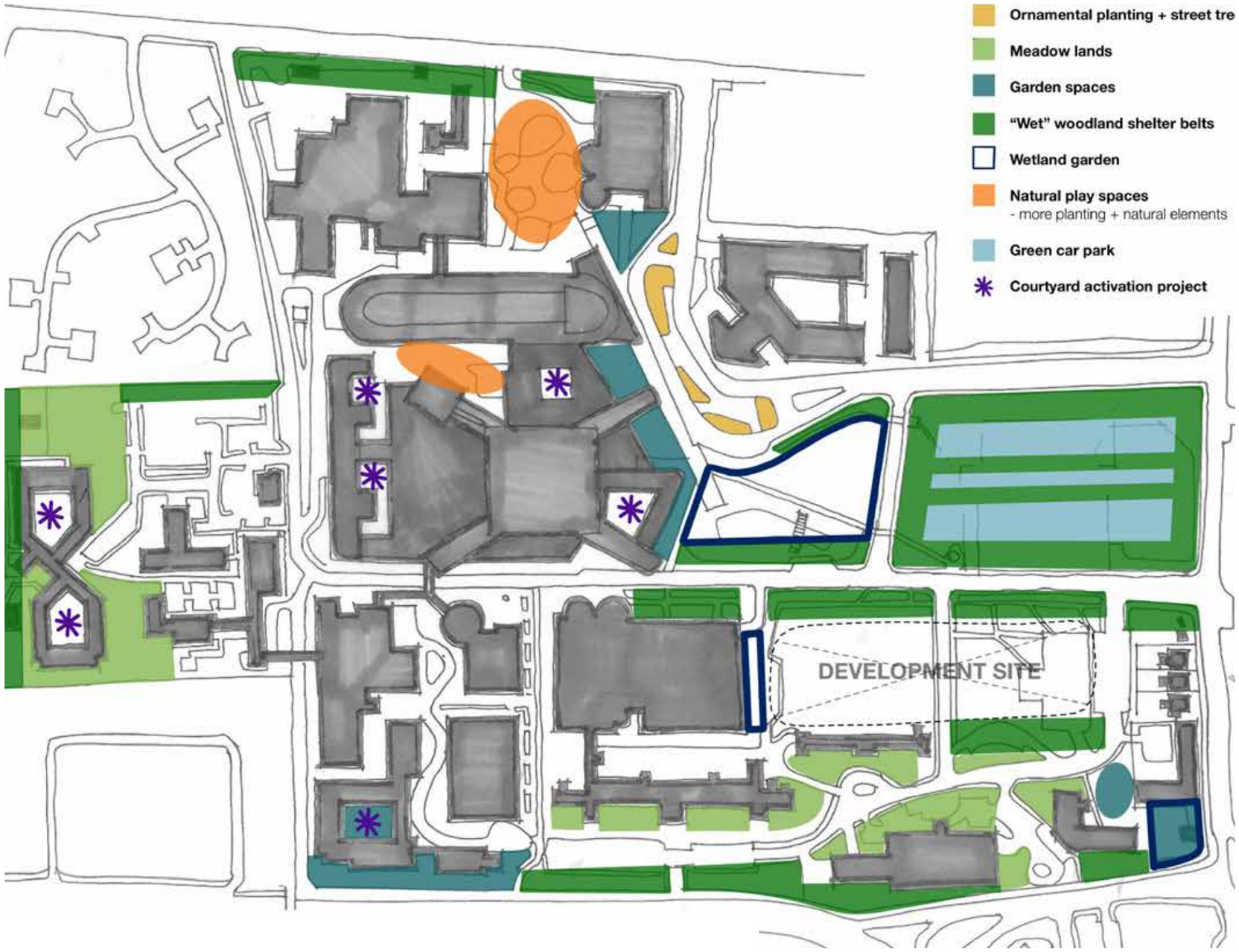
Creating a green infrastructure landscape strategy for QEUH can help meet targets for:

- biodiversity
- social justice
- health inequalities
- natural capital

And it also delivers on social goals:

- conviviality
- stress reductions
- visitor flow and journey
- therapeutic design
- staff retention
- improved recovery times

As part of this strategy the main surface level car parks will be redesigned to be an exemplar for integrated green infrastructure, with permeable paving, SUDS, green walkways, rain gardens and wet woodland shelter belt planting.



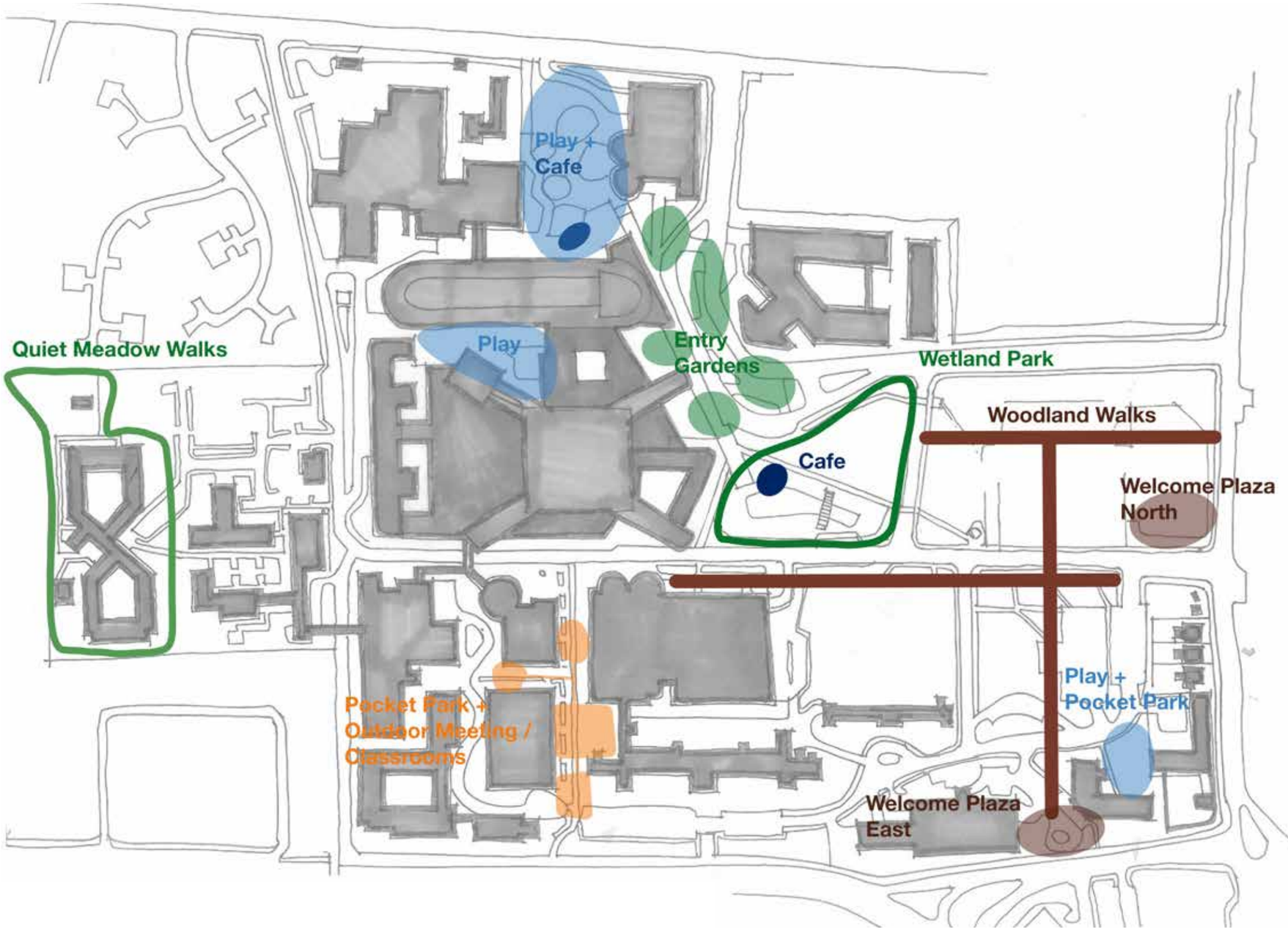
Wildflower meadow at Midpark Hospital reduces management costs, adds biodiversity and natural capital to the site and creates visual interest

erz 2010

BIODIVERSITY AND GREEN MANAGEMENT

The campus will offer a wide range of habitats and varied green spaces that can support a diversity of ecology from meadows, to wetland, to wet woods, swales and eco-forests. The campus will be punctuated by pocket parks and gardens. It will have play areas with natural as well as off the peg play equipment. It will be an exemplar in sustainable management. A link could be explored to the nearby Linthouse Burn and there is even a possibility of daylighting the burn which runs under the campus. With the majority of the QEUH estate comprised of amenity grass, it should be recognised that making no changes is not free, with amenity grass one of the most labour intensive and expensive ground coverings to maintain. In the vast majority of cases, the combined social, clinical and ecological benefits provided by amenity grass do not match the economic cost.

- Well designed areas of grassland and wildflower meadow drastically reduce the time and money spent on maintenance whilst greatly increasing the value of the landscape for insects and pollinators.
- Native pollinator populations are in decline. The Scottish Government’s National Pollinator Strategy aims to halt and reverse this decline and recommends using less intensive management practices and creating native flower-rich habitats to support a national ecological network.
- It is also important to recognise the value of woodland to wild pollinator species and support the development of these through the planting of blossoming trees and sensitive management practices.

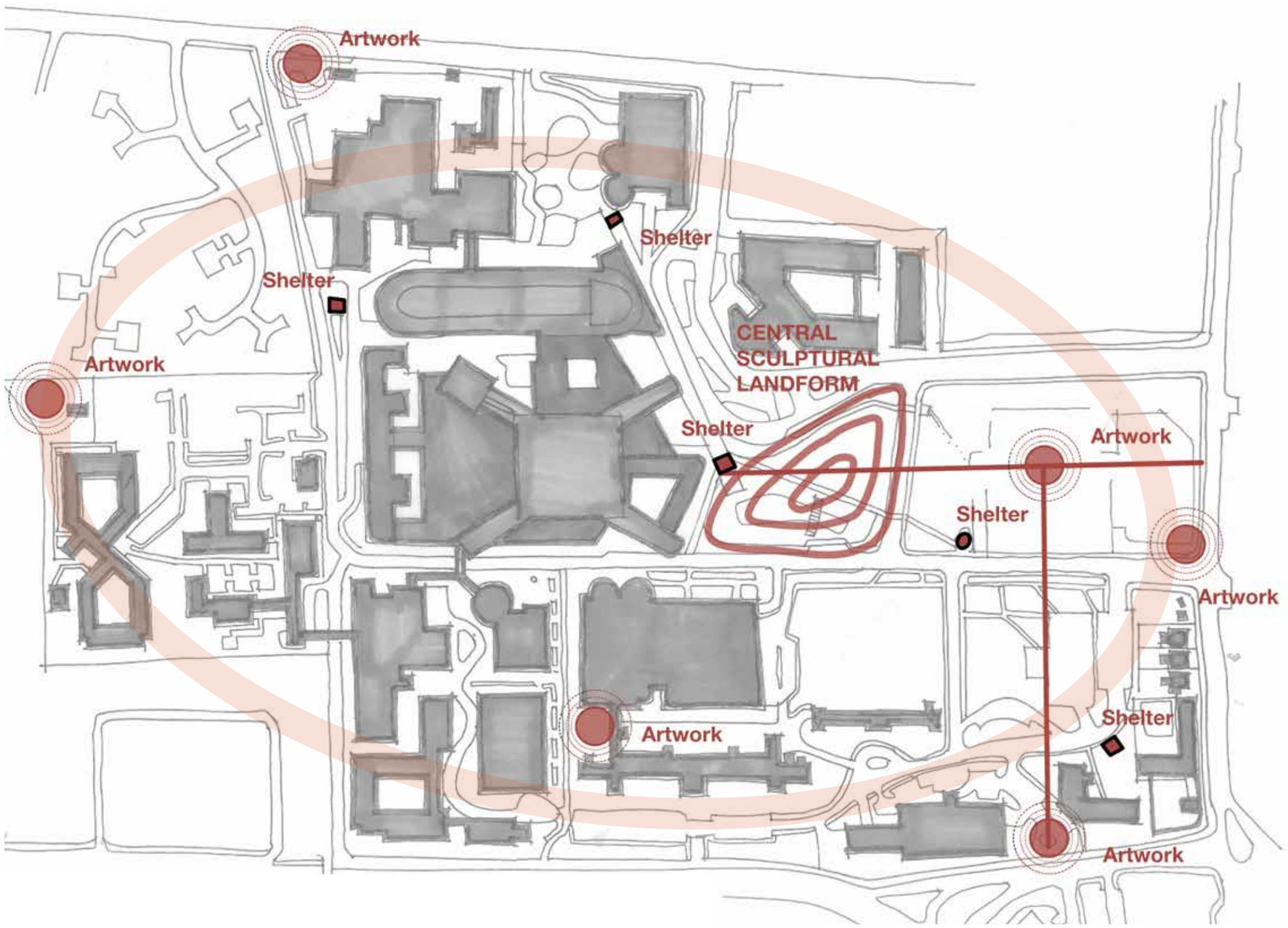


The Hidden Gardens, Glasgow
photo by erz

THERAPEUTIC DESIGN FOR CONVIVIALITY

Longer term strategies: create a convivial campus with a variety of useful outdoor spaces.

The campus will be full of spaces that can be used for social, clinical and therapeutic purposes, inviting in local people, staff, patients and visitors to enjoy the health and well being benefits of good outdoor spaces.



Artist designed seating, Midpark Hospital
erz 2010

Sculptural landform at Midpark Hospital
erz 2010

ART STRATEGY

The campus will be punctuated by a series of sculptures and installations helping create intuitive navigation and sense of place. Where possible these will relate to the functions of specific buildings, giving identity to the activities within.

The sculptures will form a “string of pearls” around the central park, creating a series of destinations to encourage people to walk and explore other parts of the campus.

Overall, the campus will become a sculpture park, with various sculpture trails, encouraging wider community use of the estate landscape.

The existing shelters will be integrated into the sculpture strategy.

Landforms, land art and public art can form both a key part of orientation and wayfinding strategies and also a positive way to create convivial and useful spaces for social and clinical activities.

GREEN CAR PARKS

Car parks can be very stressful environments if they are poorly designed. The combination of hard and exposed spaces, with poor legibility and navigation, can add to stress already felt about visiting hospital.

In addition the surface run off from large areas of hard standing is hard to accommodate on a campus with little spare land for attenuation tanks and ponds.

The car parks at QEUH are in poor condition, are chaotic to navigate on foot and require urgent maintenance.

There is a real opportunity here to redesign the car parks with better pedestrian navigation, welcome areas, trees and greenery (which have measurable calming effects) and SuDS - surface water infiltration using wet woodlands, rain gardens and swales to hold, cleanse and soakaway runoff instead of feeding it directly to the one attenuation area available on site. In addition permeable paving will aid reduction in run off.

The benefits would include:

- Better arrival and welcome sequence
- Calmer car park spaces
- Clearer navigation to entrances of key buildings
- Ecological and biodiversity gains
- Water management gains

Clockwise from top left:
PWPLA - Tree planting defining parking rows
Urban Green Blue Grids - Grassed bays
Green clad multistorey car park
PWPLA - Biodiverse pedestrian arrival space
NRC Solutions - Car park SuDS

QUICK WINS

This section explores simpler stand alone interventions that will be easier to achieve logistically and financially. Often these type of projects are useful to show change, demonstrate positive impact and garner support for more ambitious projects in the mid to long term.

Inner Landscape
Littlewhitehead
90x900x400 (hxwxd)
Mild steel, concrete, ferns, soil

This artist duo has worked together for 10 years, mainly producing sculpture. This work was created for artist collective Thank You Very Much summer residency at David Dale Gallery in Glasgow, 2017.

Plants may need maintenance. Diving boards can be altered in height or fixed directly to the ground depending on height of plants. Real or fake plants can be used and dimensions can be variable.

20/20
Alex Allen
240x120x120 (hxdxw)
Concrete

Part of a series of works made by Alex Allen during a residency at the Scottish Sculpture Workshop, Edinburgh. Allen produced a different concrete sculpture everyday during a month-long stay at the Workshop. This piece is made from the stacking of 40 ‘off the shelf’ concrete paving slabs.

OUTDOOR ART OPPORTUNITIES

NHS GGC have been working with a curator to establish opportunities for sculptural loans which could be installed both inside and outside at QEUH.

Sculpture Placement Group (SPG) is an organisation which aims to prolong the life of sculptures. In doing this it brings “sculptural joy into people’s lives” and offers both practical and economic solutions for artists. Through their innovative and award winning SCULPTURE ADOPTION SCHEME, SPG look to match sculptures by some of the UK’s leading artists with new guardians. SPG have worked with artists to identify sculptural works in long-term storage with no current future that they are happy to offer for adoption by communities and organisations.

SPG have worked with artists to identify sculptural works in long-term storage with no current future that they are happy to offer for adoption by communities and organisations.

From SPG’s catalogue of available artworks the following are examples of work which could feature in the improved landscape works currently being explored.

This selection of possible sculptures shows diversity and how a set of large scale public art works could be used to create sense of place and landmarks in the outdoor estate at QEUH as well as in the atria.

The art strategy could be started almost immediately and could help to create intuitive waymarking around the campus. Examples of possible sculptures below.

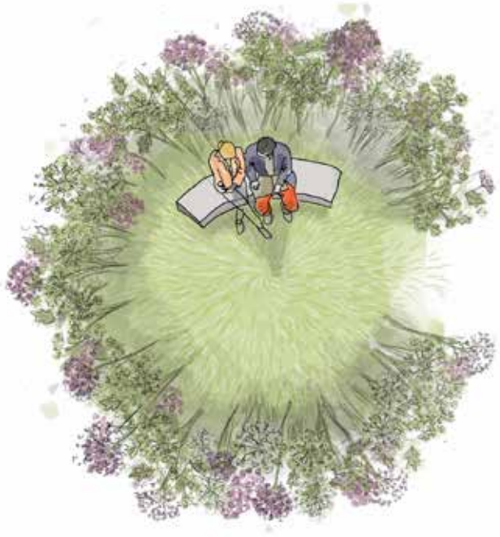
Growth
Matt Smart
180x55x65 (hxdxw)
Molehills, fibreglass, bioresin, wood, steel, scrim

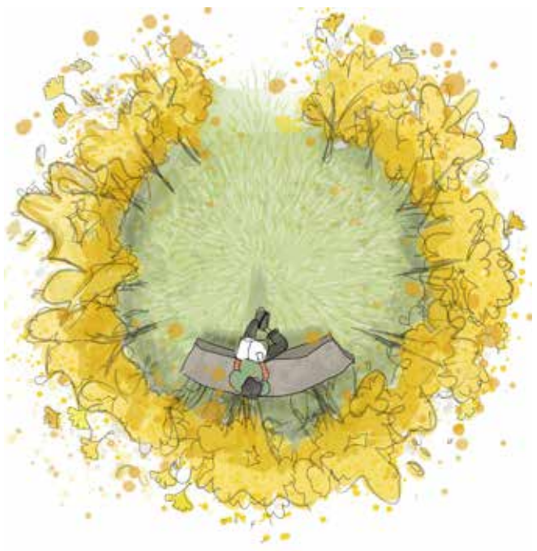
A human arm and fist triumphantly breaking through the ground. Smart’s steel and fibreglass sculpture could act as a wayfinder or marker on any outdoor trail. Its representation of the human body and triumphant, celebratory form could offer solidarity with hospital users.

Formations (after Mexico) 01, 03, 04
Andrew Lacon
4 x 25 x 102cm (hxdxw)
Cement, marble, pigment

The work, influenced by a residency in Mexico City at Soma during 2015, takes reference from architectural details, Pre-hispanic sculpture and ubiquitous European crazy paving. This was the first iteration in the development for Fragments, a solo show at Dundee Contemporary Arts.

Formations is suitable for outdoor display but will be subject to fading. This is a normal effect of weathering. The sculpture would need to be placed in a concrete bed to secure it in place.





THE HALO PROJECT

The HALO Project is a GEP supported project that uses plants to create socially distanced, human scale outdoor rooms that can be used for meeting places, sanctuary, relaxation, therapies, yoga and any other use that might require a protected outdoor area.

Conceived as a COVID commemoration project, HALO is designed to be a celebration of the healing powers of outdoors and conviviality.

HALOs could form part of the arts strategy, and placemaking strategies for QEUH, and would be compatible with the several areas: the meadows, the pocket parks, the play areas, the outdoor cafés and the central wetland park.

A HALO circle costs around £2-3k to deliver and can be a therapeutic volunteer opportunity for staff or patient groups.

CLINICAL SPACES OUTSIDE

Many clinical activities can be brought outside if spaces allow. There is ample evidence that healing and wellbeing are enhanced by being in fresh air and green space. Even quite tricky spaces can be adapted for practical uses.

Examples include the Possil Gymwall shown opposite which can adapt to existing walls and building façades ad offers a full prescribable work out.

Physiotherapy gardens can create spaces for exercise, practice and challenge.

Specific clinical groups can benefit from especially designed gardens - at QEUH Horatio's Garden provides social and clinical spaces for the Spinal Unit.

Examples are shown here of dementia gardens and gardens for acute mental health. Horticultural therapy spaces is another example.

These can be stand alone projects that provide support for specific wards or units within the campus.

Clockwise from top:
Possil gymwall - a full work out built into the side of Possil Health Centre, by erz for Green Exercise partnership 2014
Horatio's Garden at the QEUH
Acute mental health ward garden Midpark Hospital, erz 2010
Dementia Garden Newcraigs Hospital, erz 2017

Left: erz GRO Gardens can incorporate calm green planted areas that will create sanctuary spaces for staff break out, which are 2.4m square - perfect for socially distanced meetings.

Left: erz GRO Gardens are a recycled timber kit that can be used to create waiting rooms, R&R Spaces, social areas and shops, cafes or info booths. They are movable and do not require foundations, so are perfect for meanwhile uses. This drawing shows a GRO Garden being used for outdoor waiting areas

POP UPS, TEMPORARY SPACES AND MEANWHILE SPACES

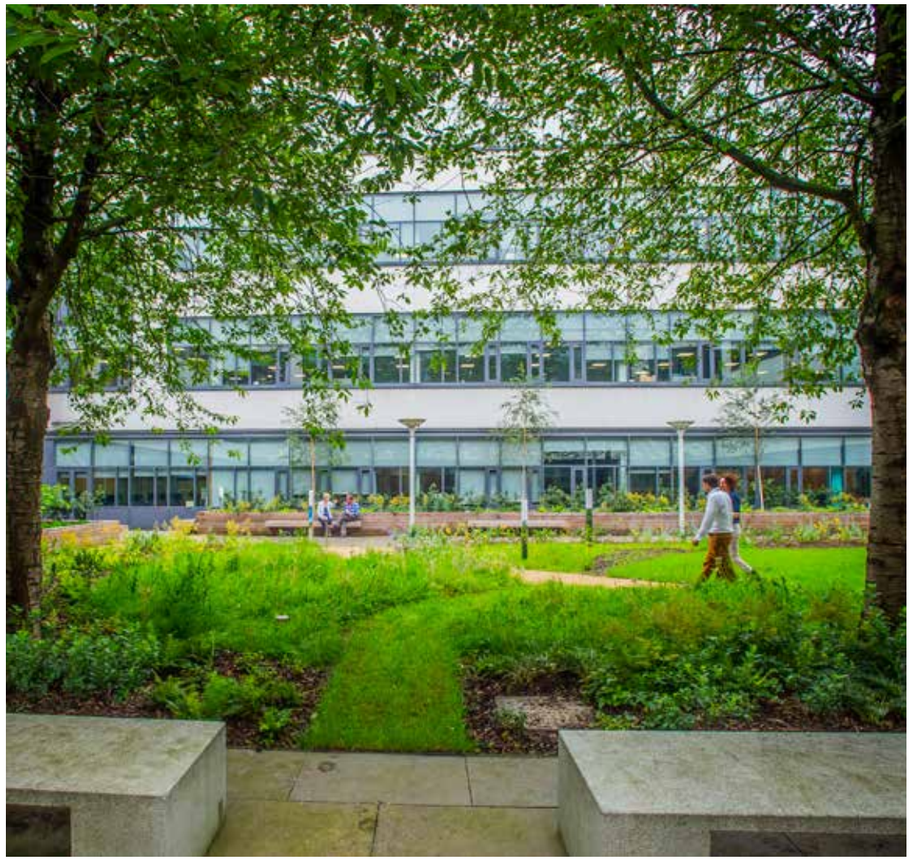
Pop up cafés, galleries and even waiting rooms can create valuable extra spaces and generate activity outside.

At QEUH this could range from ice cream vans in the children's play area to erz GRO Garden KIT spaces for staff R&R and temporary waiting rooms after COVID.

Pop up theatres and outdoor cinemas can welcome people for social events that support staff or clinical practice. Music and art have proven therapeutic benefits.

Moveable furniture can also help entice people outside. This simply needs a safe storage location.

Other meanwhile uses could include toy libraries in shipping containers, growing spaces and community gardens, marquees for events and pods and temporary buildings for extra space.



The Gyle Centre courtyard, home of NHS National Strategic Services has been redeveloped as an exemplar project with outdoor meeting and exercise areas, volunteer opportunities and a new bio diversity strategy for future management.
Photo credit: Alan Peebles for Green Exercise Partnership.

These images are all from the Gyle Centre Courtyard in Edinburgh, the HQ for NHS National Services Scotland, where a trial project has been undertaken to create biodiversity in the corporate courtyard. Use of native plants, retention of mature trees and changes to mowing regimes are combining to create a wildlife haven and a great social space for the workers in the building (erz 2018).

ECOLOGY

Quick win measures that can be taken to enhance the ecological value of the site:

- Semi-mature and mature trees are likely to provide important habitat within the local context and should be retained. They provide extensive habitat for use by nesting birds and there are three mature ash trees which may be suitable for use by roosting bats
- Provision of insect hibernacula within amenity planting, to benefit wide range of species reliant on insects for food
- Introducing vegetation within the SuDS pond area including riparian species and wet woodland species
- Limiting use of lighting, particularly around the pond area, to prevent lighting from discouraging use by bats
Creation of hedgehog houses and installation of bat boxes on retained trees.
- Creation of wildflower meadow with an emphasis on suitability for butterfly orchids - this is particularly feasible around the Langlands Building
- Creating new woodland belts that will offer windbreaks, biodiversity, human scale and noise buffer
- Retaining woodland and scrub and filling in gaps in tree cover to increase connectivity of habitats
- Planting of tree species along hospital and residential housing boundary to create opportunities for wildlife to commute

Left: A wooded and leafy drainage swale becomes an attractive amenity
image from www.wildflowerturf.co.uk

TINY FORESTS, WET WOODLANDS AND SHELTER BELTS

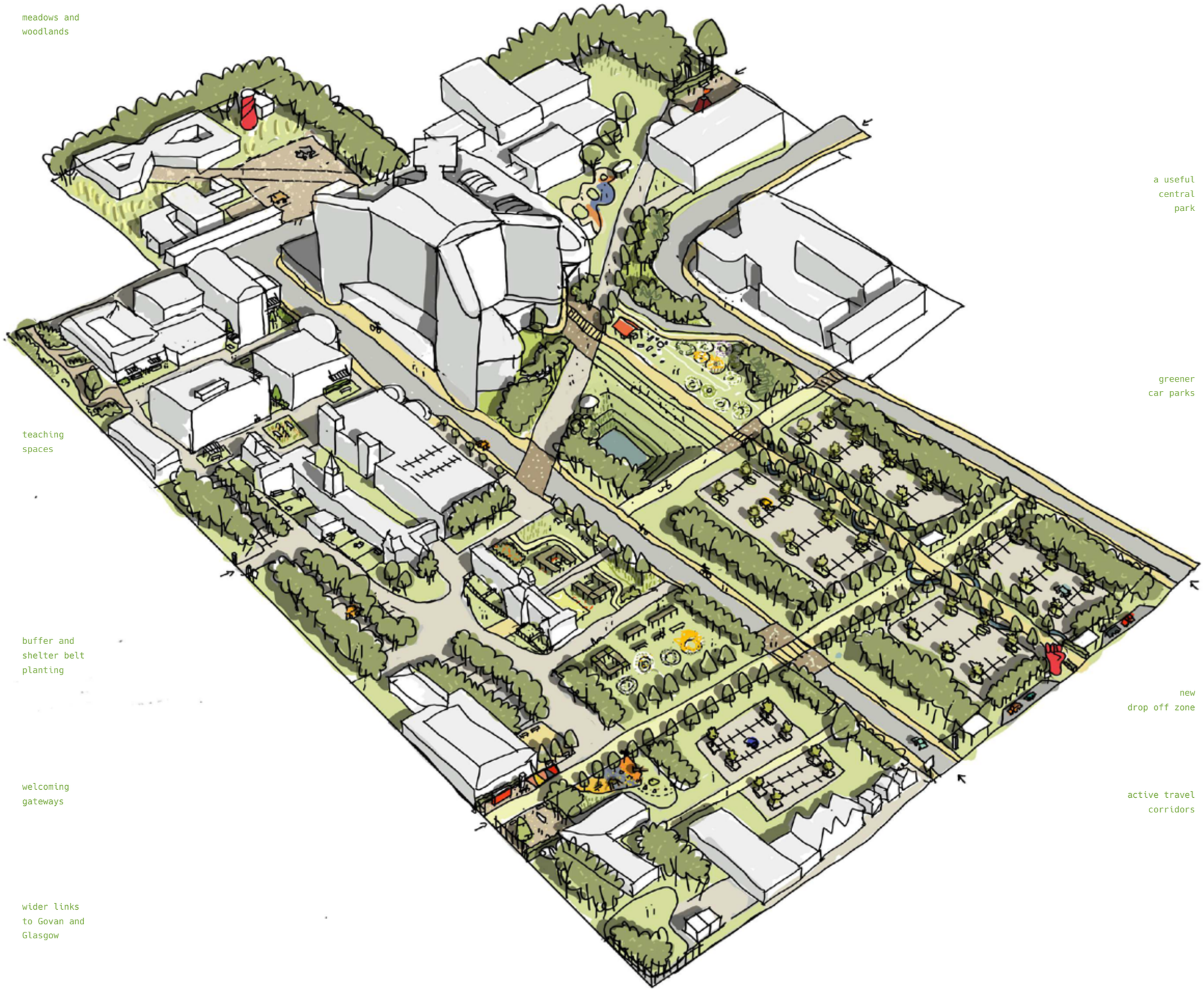
Blocks of woodland planting are cheap to deliver, offer great volunteering opportunities and create micro climatic shelter, biodiversity, calming green environments and potential for blue green infrastructure and water management.

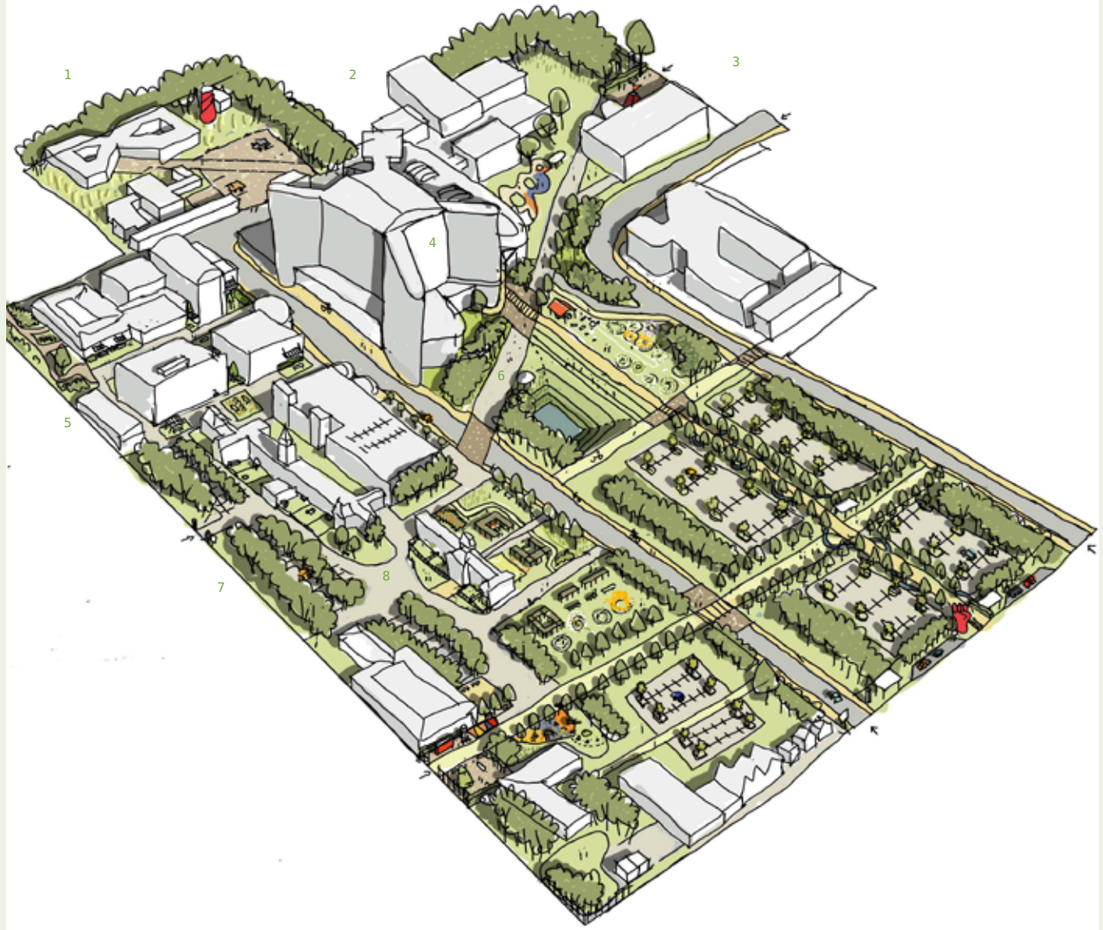
Left: Tiny Forests growing on meanwhile spaces in the Netherlands photo credit Kieran Dick-Doyle
www.earthwatch.org.uk

Right: Shelterbelts give effective wind and noise protection and can be designed to have bio diversity and amenity value.

THE VISION

This section illustrates the overall vision for the QEUH campus and breaks it down into manageable separate projects.





1. Meadow and native shelter belt planting around Langlands Buildings with nature trails and interpretative signage. New management regime.

5. Network of teaching spaces amongst the university buildings - seating shelters, wifi hotspots, pocket parks, outdoor classrooms etc

2. Reorganise chaotic car park and approaches to Langlands Buildings and incorporate trees, SuDS, artworks and waymarking.

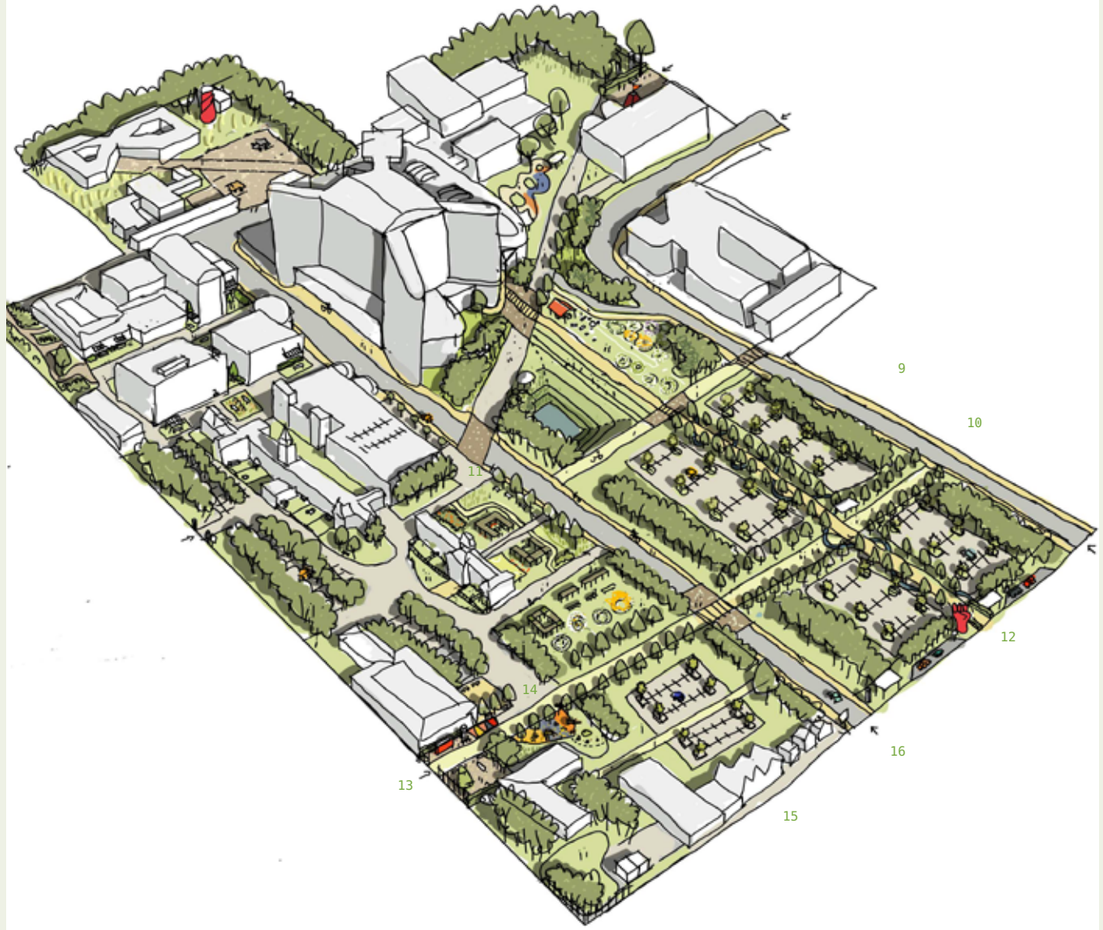
6. Central park redesigned with safe, attractive water feature: a positive central focus for the leafy park. COVID commemorative HALOs create meeting spaces around an outdoor cafe.

3. New West Gateway plaza with welcome sign, seating, shelter and planting, encouraging drop off pick up at western approach.

7. The eastern edge is greened with shelter belts and buffer planting to the main road. Parking re-organised under grids of trees with SuDS and permeable paving.

4. Calming green entry gardens, create a sheltered and welcoming approach to the main buildings. Seating and signage outdoors, and artworks, help navigation and legibility.

8. “Front gardens” are created in front of each of the A-listed buildings creating staff break-out areas in morning sun and giving the historic buildings an appropriate setting.



9. New exemplar green car parks with SuDS, permeable paving, trees and wet woodland shelter belts - reorganised to create a calm and easy to navigate environment.

13. Eastern gateway creates links to wider active travel routes to Govan and beyond. Signage, planting, artworks, seats and shelter.

10. Active travel off road corridor created from Govan Road to the front entries of the hospitals for bikes and people. Tree lined and with rest points, signage, art and shelters along the route.

14. New natural play and green gym/sport areas by rehab buildings, and Ronald MacDonald House can also serve nearby houses and wider campus.

11. Meanwhile uses on vacant land - art works, HALOs, pop ups, GRO Gardens and temporary sports or play areas, according to staff and user group desires.

15. Reorganised green parking area for staff incorporates trees, SuDS, artworks and waymarking. Green spaces around the edge could accommodate calm seating spaces.

12. New drop off zone and welcome plaza on Govan Road to encourage people to walk into the site. Welcoming shelters, artwork and signage, seats and entry to the active travel corridor.

16. On road active travel corridor on this route with cycle lanes and footways clearly marked and better clearer pedestrian priority crossing points.

APPENDIX A:

Internal landscape proposals for Atria at Queen Elizabeth University Hospital and the Royal Hospital for Sick Children.

Contents

Introduction

This appendix seeks to highlight opportunities for using internal green landscape to enhance the staff, patient and visitor experience at both hospitals.

Internal landscape is a demonstrated way of delivering therapeutic design and can assist with:

- welcome
- wayfinding
- orientation
- sense of place
- air quality
- light quality
- reduction in anxiety

Many of the research studies documenting the beneficial effects of plants on people have focused on plants outdoors or on scenes of nature. Research has shown that interior plants in individual containers can also produce the same benefits.. Research has confirmed the stress-reducing benefits of passively viewing plants. It has demonstrated that people's impressions of a room and their mental well-being can be significantly improved when plants are added. It also has shown that productivity and mental functioning are improved and that pain perception can be reduced. Research on the effects of plants on people has shown, in essence, that plants are essential for people to be at their best. Plants are needed in our lives, all around us, everyday. They have a civilizing effect; they humanize our surroundings.

What Are the Benefits of Plants Indoors and Why Do We Respond Positively to Them?

Virginia I. Lohr Department of Horticulture and Landscape Architecture
Washington State University Press
2010

This study looks at the atria at both hospitals as potential spaces for the introduction of interior green landscape components. This study does not examine the possibility of plants within clinical environments.

Right: Atrium at St Vincents Hospital, Boston.
Image: Worcester Business Journal

SITE ANALYSIS
QEUH ATRIUM

The atrium at the QEUH is a complex set of subspaces and can be broken down into the following areas:

Entrance hall and welcome desk:

This area is a spacious concourse bounded by large columns with a welcome desk at the far end. It is light and airy with windows on the mezzanine level and glass doors. The ceilings are two storeys high and the space is bordered by a mezzanine used for staff activities.

The entrance hall is quite large and has an impersonal feel. There are corridors off it that emerge before a visitor reaches the welcome desk and which can confuse. The character of the space is somewhat like a large shopping centre, or an airport concourse, in terms of both scale and interior design.

The welcome desk is quite far into the space and fairly enclosed.

A long view into the main atria spaces gives a glimpse of the larger halls within, but this is somewhat disorientating as there is nothing to suggest a route or destination, just the view into the large scale space.

Mezzanine on first floor over-hanging main atrium

There is a mezzanine at first floor level that runs around much of the atrium, housing a staff café and other meeting spaces, as well as link corridors which are open into the atria. This adds activity and vibrancy and brings the vast scale down towards ground level.

It also breaks the spaces up between those under the mezzanine and those open to the full height of the main spaces, adding drama and aiding wayfinding.

Three similar corner spaces which are tall and narrow

The main atrium actually functions as a series of three corner spaces that read as separate towers, each relating to the ward stack towers of the hospital. Above the south west one the helicopter pad is visible, and people inside can see helicopters come and go, which is dramatic and memorable.

At the moment these three spaces are used as public waiting areas, an exhibition space and a staff meeting space, but they all look very much the same. Furniture and exhibition materials are dwarfed by the towering scale of these spaces.

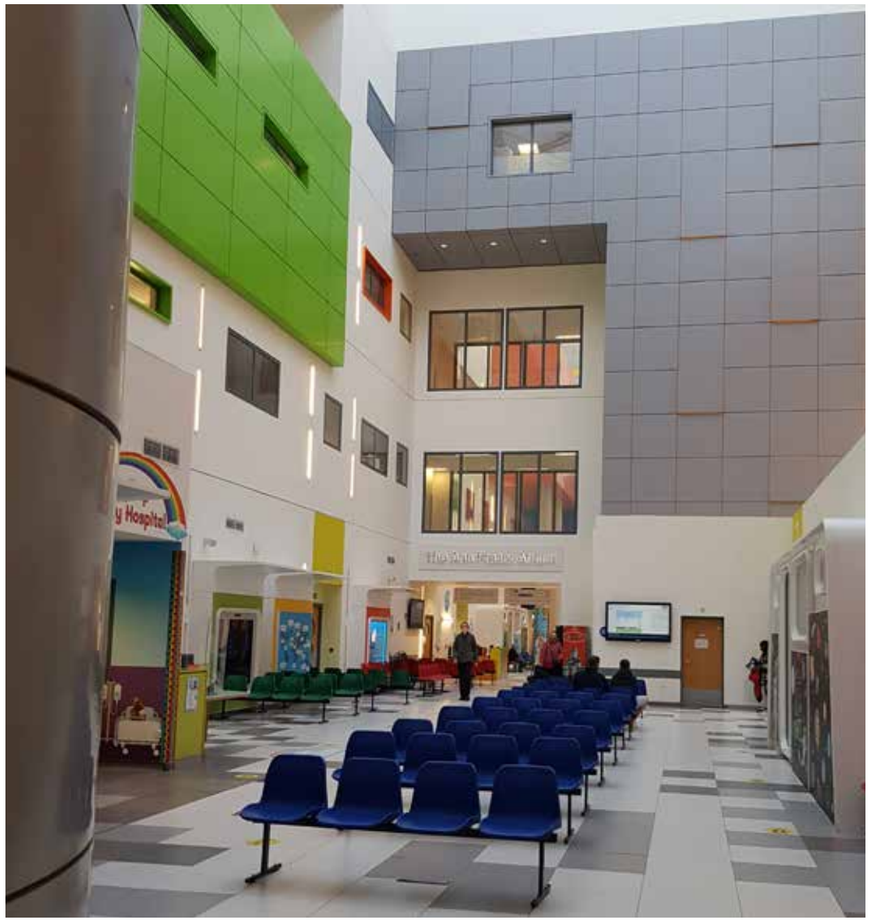
Central area

There is a central area that links the three atria towers and the entrance hall. This lies under a “bridge” of office spaces that float across and also under the free standing lecture theatre which sits on legs at first floor level. This central space therefore has a lower celling height and feels like a separate area, although the ground floor plain sweeps unbroken through out all the spaces.

Corridor to Children’s Hospital

Near the welcome desk there is a corridor link to an internal access to the Children’s Hospital. This is currently poorly signed and unwelcoming, despite it being a well-used and important route, frequented by children and families.

Clockwise from top left:
Full height of atrium
Corridor to RHSC
Overhanging mezzanine and entrance
Corner space
Corner space with view through to central area



SITE ANALYSIS
RHSC ATRIUM

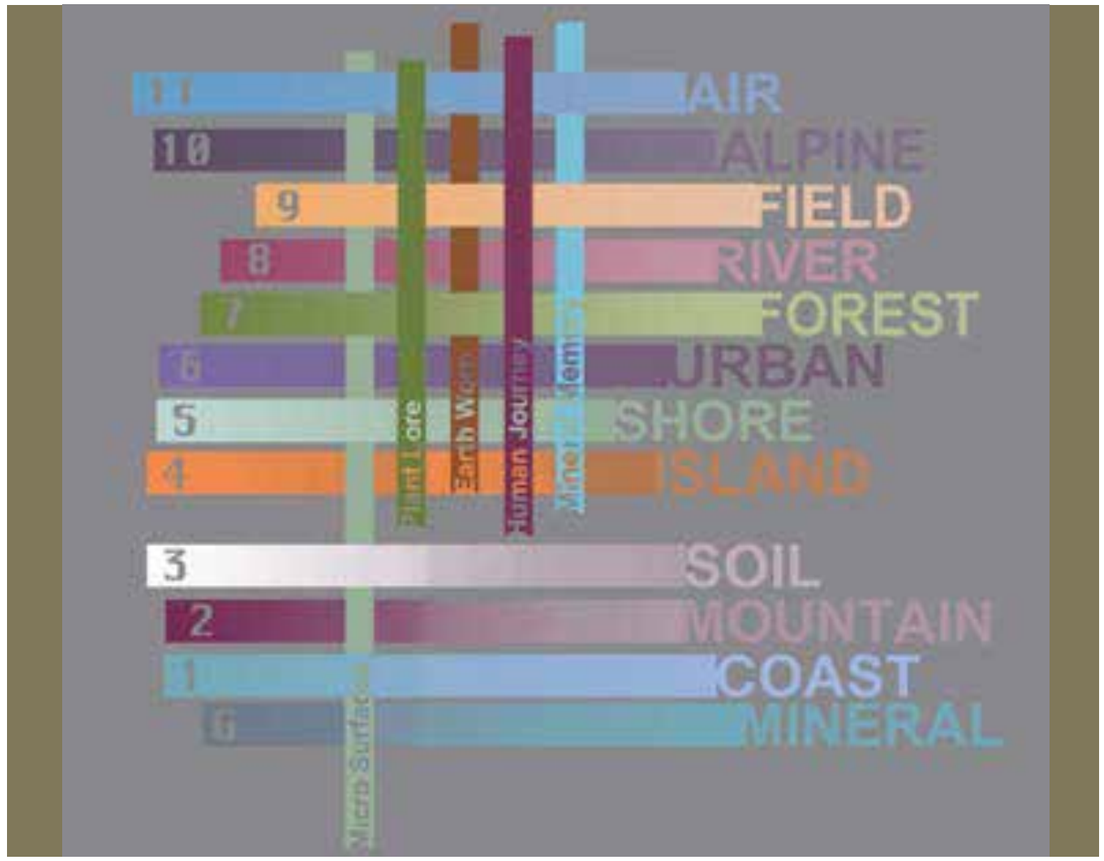
Waiting area

The children's waiting area is light and airy but has a large scale and the seating is arranged in a very formal manner reminiscent of airport lounges.

Main atrium

The main atria has similar characteristics and although there are some interactive games built into the side walls the overall effect is not particularly child friendly, especially for smaller children.

Clockwise from top left:
Entrance space and desk
Main atrium



SITE ANALYSIS FURTHER CONSIDERATIONS

Decor

The atrium is dynamic and colourful and bright. However there are also a lot of very large blank walls and an overall lack of human scale which could feel intimidating and impersonal. The overall effect is exciting rather than calm.

The spaces have been furnished at ground level with basic hospital furniture and there is a notable uniformity to it all that adds to the need for intuitive wayfinding and better welcome and visitor journey provision.

Bringing the scale of the spaces down to human comfort levels through the use of trees would add to, not detract from, the grandeur of the main atria. The resultant contrast between the niches below the trees canopy and the big tall views beyond would be a rich addition to these key spaces.

Destination

For people visiting or staying with patients in the hospital there are no comfortable destinations for a walk or for some respite. Evidence demonstrates the healing and powerful attractiveness of plants to human beings. Creating an indoor garden in the atria would give a calm and appealing destination space within the hospital to which you could comfortably take your coffee for a break, or wheel your elderly mother for a walk from her ward without getting cold or wet.

Arts strategy

The existing arts strategy for the hospitals builds on the evidence base for therapeutic design, natural environments and art to support patients, families, carers and visitors. The creative rational for the arts strategy focuses on using physical and emotional connection to Scottish landscape to support the patient journey and connect the hospital to the catchment that it serves.

Interior landscape design for the atria can complement and build on the arts strategy work that has already been implemented. The diagram adjacent shows the concept for each floor of the hospital with the ground and first floors reflecting ideas of coasts and minerals – this could be built into the planting design and the design of associated planters and seats with a loose beach theme of rock, sand and sea.

Flexibility

Interior landscape can be grown in planters that are designed to be moveable, either on castors or by small forklift device. Flexibility can then be built in so that spaces can be rearranged as needs change or for major events or in the case of scenarios such as COVID response.

In some instances plants can be leased through interior landscape companies and returned if no longer needed.

Maintenance

The plants should be subject to a maintenance contract to ensure they are safe and hygienic and not over or under watered. Interior landscape companies can supply, install and maintain the plants.

Left top: Arts Strategy
Left bottom: Bournemouth University, I D Verde

CONCEPT PLAN

The following drawings show how planting might look within the atria:

Overall Conceptual Site Plan

This plan shows the main spaces and how differing types of spatial arrangement of plants and trees could create the much-needed variety that would enliven the spaces and aid wayfinding and sense of place.

1. Ring of trees in raised planters; central play space with sand and loose parts.

2. Trees in seat planters with boulders, logs and play mat

3. Intermediate space between QEUH and RHSC, quieter in character than the two.

4. Orientation feature and info in sight line of main entry

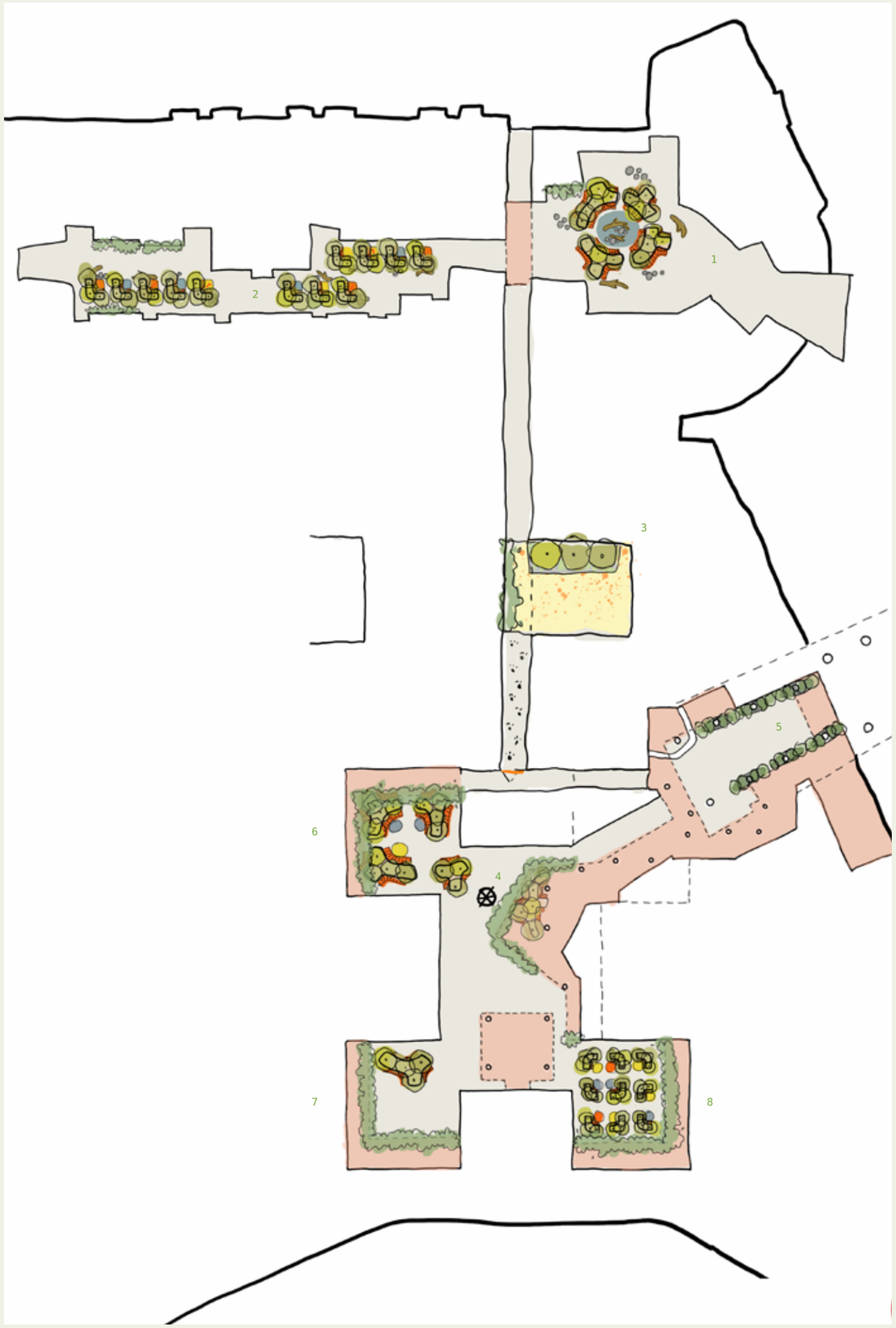
5. Entrance area; planted gateway guides visitors to the main desk

Each atrium corner has a different character to diversify the uses and aid legibility:

6. A gathering space enclosed by trees and shrubs with DDA compliant circulation around and through the space

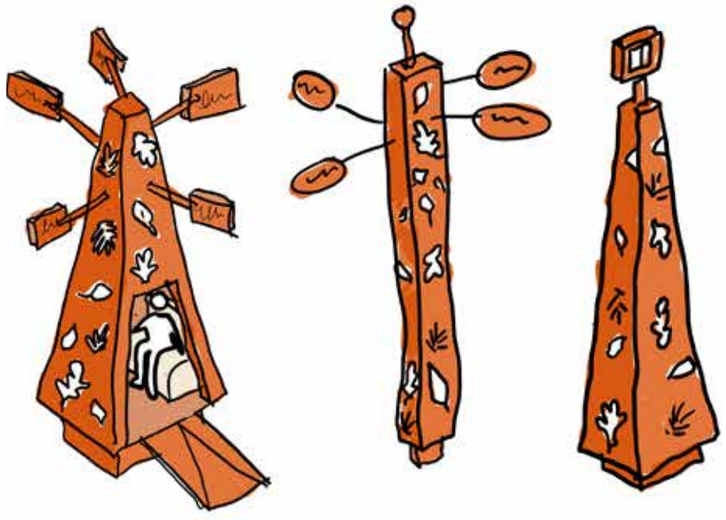
7. Flexible area with trailing plants hanging from aerial walkways and clear floors for events and meetings

8. Grid of trees with seating below creating small pockets for waiting and meeting



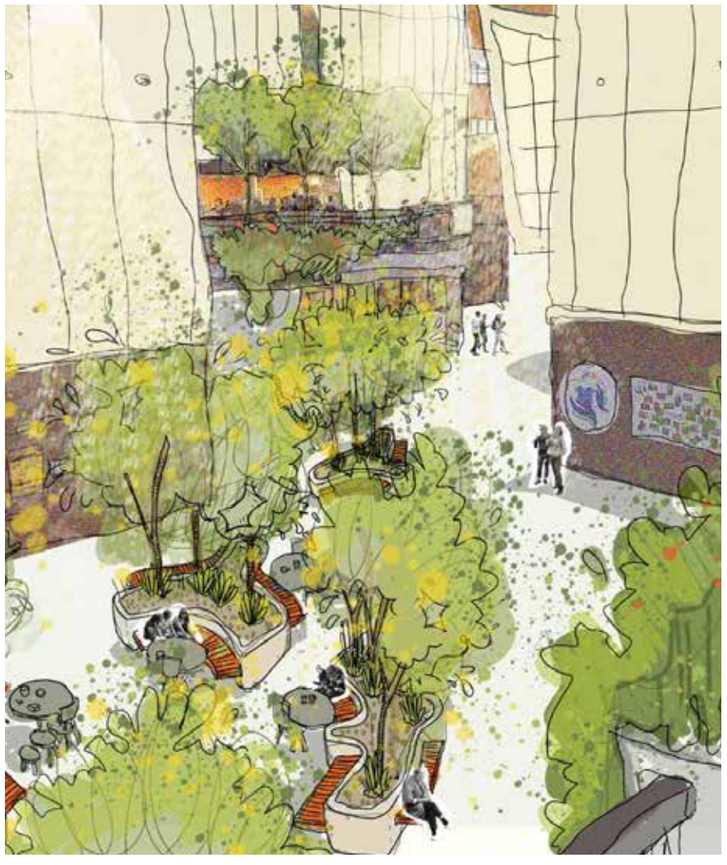
Entrance hall and welcome desk

Scale brought down by welcoming canopy trees that create a gentle corridor framing and leading you to the welcome desk. The trees will reduce the echo in this space making it quieter and they will also change the light quality to a gentler hue and with more movement, which will be calming.
Image above



Central area

The central area would benefit from large scale art works to act as a landmark, meeting point and orientation portal.
Image left shows potential wayfinding signage/art work



Three similar corner spaces which are tall and narrow

These three spaces, currently uniform in character can be greatly enhanced by different configurations of plants in moveable planters with integral seating. The spaces can then fulfil clear purposes:

(C) informal gathering space enclosed by trees and shrubs with DDA compliant circulation throughout
(D) flexible area with trailing plants off mezzanines and clear floor spaces for events and exhibitions
(E) staff dining and R&R under a grid of trees
Image above

Mezzanine on first floor overhanging main atrium

The mezzanine spaces could house both trees in planters, or smaller shrubs which will gently break the hard spaces up and soften light, whilst reducing nose levels. In addition trailing plants could be used to overhang the balustrades and hang down into the busy spaces below.

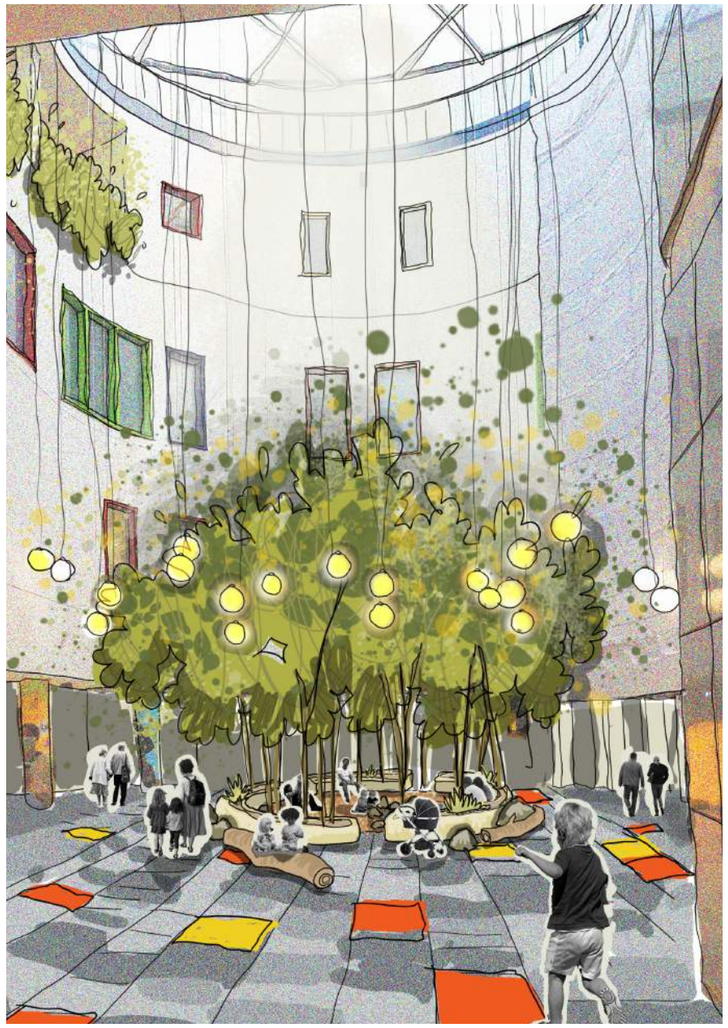
Corridor to Children's Hospital

The corridor is currently very utilitarian and is poorly signposted. Our sketch shows a clear and friendly welcome sign and a green intervention along the route making the most of the natural light from the adjacent courtyard (the courtyard could also be made much more useful and attractive).

Alternatively – or additionally – the corridor could house an immersive art work, like the one at Glasgow airport, that celebrates Scottish landscape through murals, lighting, flooring and sound installation – a magic portal from the grown up to the children's hospitals.

Children's hospital waiting areas

Trees create small scale and niches comfortable for small children. Sterilised rocks and logs can be used as supplementary seating – easy to clean and maintain – and offer visual and physical interest for small children, whilst continuing the art strategy themes of coast and minerals.



Children's hospital main atria

A loose circular enclosure contains a natural play space with seats looking in wards to view children playing.

On the outer edges you can sit looking out into the atria and see all the activity around you.

Hanging plants or green walls could add visual interest and soften the first floor helping to bring the scale down to a human level.

Quick wins and pilots

It might be useful to introduce some smaller areas of planting initially that are easier to install, move and maintain, and which would build faith in the viability of the atria project.

One idea might be the installation of some interior HALO Circles. HALO Circles are a COVID 19 commemoration project that enables safe social distancing whilst creating attractive green spaces for seating, meetings, therapies, eating etc. HALO Circles are 3m wide to allow social distance inside each circle. They can easily be installed inside buildings in small moveable planters and come with their own seats if required.

GRO Gardens are little timber pods that similarly are supported by planters and could be installed inside to create areas of focus for R&R or mini waiting rooms. Being movable by fork lift they could be reinstalled outside after use in the atria.

ERZ (Deutsch): ORE
(English)

erz Limited
21 James Morrison Street
Glasgow
G1 5PE

T/F: 0141 552 0888
info@erzstudio.co.uk

www.erzstudio.co.uk
www.twitter.com/erzstudio

Registered in Scotland Number: 315673
Landscape Institute Number: 1049