

# NHS GREENSPACE

## Good Design of the Outdoor Estate

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This report was commissioned by the Green Exercise Partnership (Scottish Forestry, NatureScot, Public Health Scotland and NHS National Services Scotland) as part of the NHS Greenspace Demonstration Project. The views expressed by the author(s) of this report should not be taken as the views and policies of the Green Exercise Partnership.



Forth Valley Hospital  
Ian White Associates



# INTRODUCTION

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The purpose of this guidance is to inform both the design process and the physical design of healthcare facilities in Scotland. It is focused on the recognised and quantifiable benefits of well designed, useful and attractive outdoor spaces for staff, patients and visitors. This document explores what has worked well, what has failed to meet potential and what we need to carry forward into future projects.

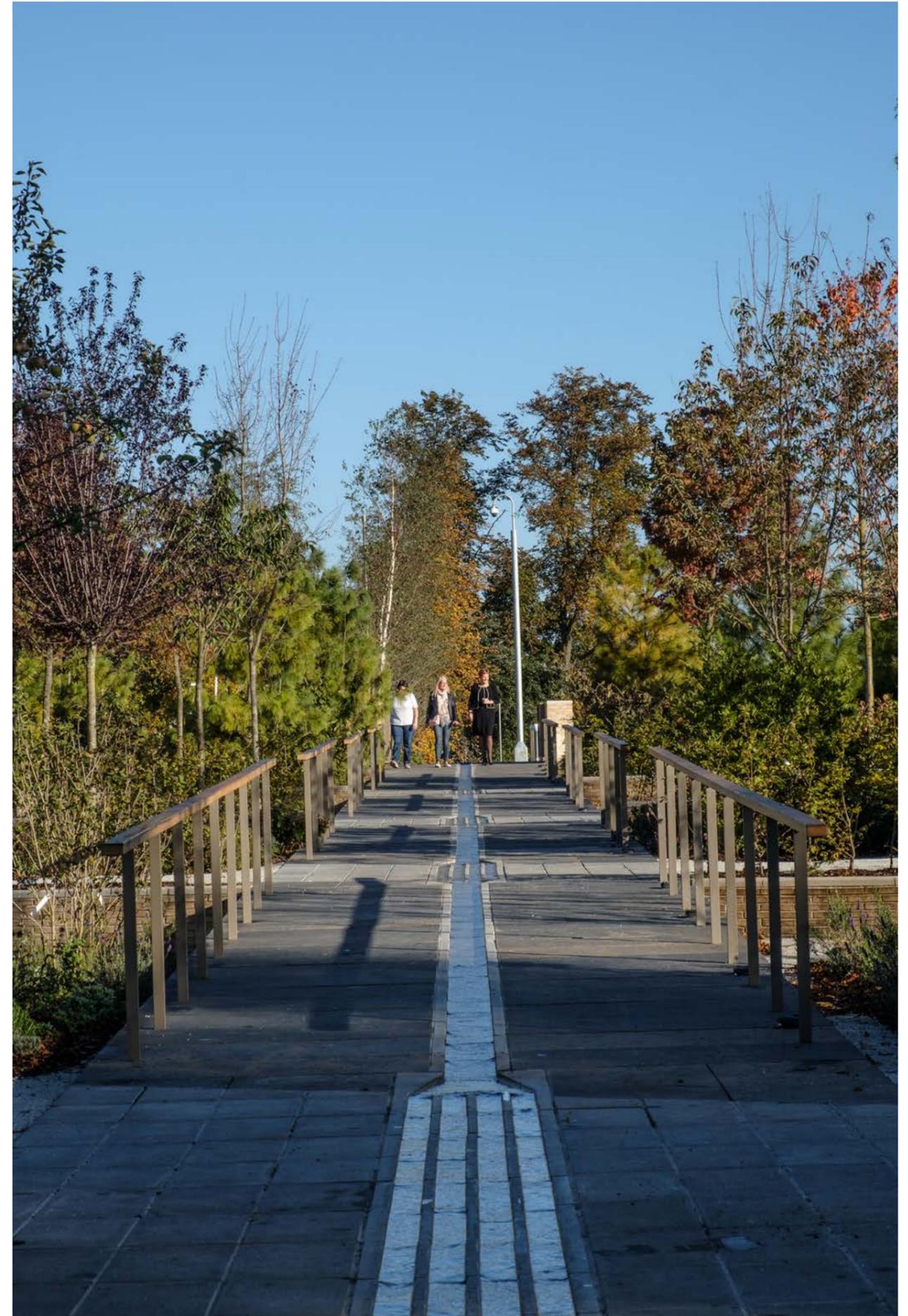
This document is not seeking to reassert the proven need for good outdoor space at healthcare facilities, but rather explores how best to achieve it. The document presents the key issues associated with good landscape design and concludes with a series of case studies that review three recent designs for external environments at Scottish new build healthcare facilities.

The case studies are based on plans, photographs and diagrams, to demonstrate visually how investment into the design process and design delivery of the outside spaces can add value to both the healthcare facility and the surrounding neighbourhood.

The overall aim is to explore what worked well, but also to communicate lessons learnt and to suggest ways forward that will ensure opportunities are not lost and the benefits of good external spaces are maximised.

This is important because the delivery of good and useful outdoor spaces for new build facilities is also embedded in the 'Sustainable Construction and Design Guide' (NHS NSS 2021).

Right: Prince and Princess of Wales Hospice, Glasgow  
erz





Photos top to bottom:

Prince and Princess of Wales Hospice, Glasgow (credit erz/Keith Hunter)

Possil outdoor gymwall (credit erz/David Cadzow)

Pop up Green R&R Station by erz 2020

## HOW GOOD LANDSCAPE DESIGN CAN SUPPORT HEALTH AND WELLBEING

It is well recognised that good landscape design can add value to any healthcare facility, and this is embedded in Scottish policy, in the NHS and beyond into partner organisations \*

Any green space will offer some of these benefits. However well designed and purpose-built systems of green space, that have a strong sense of place complimented by good water management, accessible and inviting circulation and links in with the wider community will offer exponentially greater return on the investment made. This document explores how to get the best from a new landscape design.

A note on COVID Green Recovery: Greenspaces and well designed environments can be part of the NHS COVID response strategy. Even a few days of walking outside provides evidence of improved immunity and resilience. Staff, patients and visitors should be encouraged to spend time outdoors in green settings to aid resilience and recovery. Being active outdoors can help improve mood, combat stress and boost the immune system. High quality, accessible outdoor spaces should form a key part of any COVID response strategy.

In summary green spaces in healthcare settings may make a contribution to:

- Accelerate patient recovery
- Improve community health
- Create conviviality and social cohesion
- Improve air quality
- Mitigate against global warming
- Help with green infrastructure and surface water management
- Increase biodiversity
- Reduce carbon emissions
- Help protect against the spread of some infectious diseases by offering space and fresh air for patients and staff
- Relieve stress for staff and patients and visitors
- Create noise screening and ambient noise barriers
- Support green recovery from the COVID pandemic
- Contribute to meeting the NHS's statutory duties on biodiversity and climate change

\*Information summarised from the NHS Forest resources on evidence and research into benefits of green landscapes for healthcare facilities <https://nhsforest.org/evidence-benefits>

## *Additional benefits*

In addition, improvements to the quality and use of NHS green spaces has the potential to offer financial benefits through:

- Reduced energy and site maintenance costs
- Reduced costs due to flood prevention
- Intrinsic value of greenspace for leisure and for carbon offset
- Natural Capital - an amenity tree can be valued at tens of thousands of pounds
- Improving the quality of the outdoor estate raises the inherent value of the estate itself as well as the value of surrounding buildings
- Access to high quality outdoor spaces raises community and staff health with economic and social gains
- Access to high quality greenspace may contribute to improving patient health and recovery time, bringing economic benefits for the health service.

Hospital gardens in particular, can offer many benefits:

- May contribute to lower levels of stress
- Providing patients with a therapeutic setting for individual contemplation
- Creating settings for physical, horticultural and occupational therapy
- Providing staff with a needed retreat from the stress of work
- Providing a relaxed setting for patient/visitor interaction away from the hospital
- Outdoor waiting areas for patients and visitors
- Fresh air and well ventilated spaces for groups of people during the COVID pandemic
- Creating a context for outdoor therapy, exercise and community away from the medical environment

Right: Growing space at Possilpark Health Centre



# CURRENT SITUATION OVERVIEW

Healthcare 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 healthcare 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 this, 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 settings of buildings that are being produced.

Collaborations such as NHS Forest, the Green Exercise Partnership and Central Scotland Green Network are working to ensure that greenspace is embedded in policy, briefing and delivery of new healthcare facilities. The new 'Sustainable Construction and Design Guide' for the NHS in Scotland will also reinforce the need to address the external environment during procurement, design and build.

However, even within this positive context there is still room for improvement.

We all want Scotland to be a place where everybody thrives and has a better quality of life. Vibrant, healthy, safe and sustainable places are key to improving health and wellbeing and reducing inequalities, and the NHS Scotland estate must play its full role in realising this ambition. The growing threat to public health from current climate and ecological crisis increases the need for action. We all have a clear responsibility to respond in a way that nurtures good health for the population and the planet.

Foreword to Unlocking the potential of NHS greenspace for health and wellbeing: the Green Exercise Partnership, 2020  
Malcolm Wright, Director-General for Health and Social Care and Chief Executive of NHS Scotland

The effect in sickness of beautiful objects, of variety of objects, and especially of brilliancy of colours is hardly at all appreciated [...] People say the effect is on the mind. It is no such thing. The effect is on the body, too. Little as we know about the way in which we are affected by form, colour, by light, we do know this, that they have a physical effect. Variety of form and brilliancy of colour in the objects presented to patients are actual means of recovery.

Florence Nightingale,  
Notes on Nursing, 1859

Therapeutic design for the NHS Estate landscapes has been actively discussed and encouraged in Scotland for many years, and perhaps has its roots in the "green" philosophies of Victorian mental health institutions which often adopted an agrarian response: getting people working outdoors and productively on the land. A cross party working group in Scotland, established as early as 2014 was promoting green space as a preventative and therapeutic contributor to wellbeing and recovery:

The vision for a Health Promoting Health Service (HPS) is a cultural transformation that ensures that every healthcare contact is a health improvement opportunity. Although this ethos applies to patients and visitors, the promotion of staff health and wellbeing is equally central to the HPS vision.

Prevention lies at the heart of the HPS policy. It is about promoting healthier behaviours and discouraging detrimental ones by ensuring that healthier choices are the easier ones.

We need to sustain and deepen commitment to HPS, and continue to drive forward its application at all acute, mental health, maternity, paediatric and community hospitals.

HPS & Greenspace in PAMS 2015

The UK All-Party Parliamentary Group on Arts Health and Wellbeing states in Creative Health: The Arts for Health and Wellbeing that:

The WHO Commission on Social Determinants of Health took account of the natural and built environment in which people reside. The natural environment has a part to play in maintaining healthy lives.

In 2014, Lord O'Donnell chaired a team, including Lord Layard, which produced a report entitled Wellbeing and Policy. This noted that 'physical or visual access to green spaces, water, or natural light appears to have a surprisingly powerful direct impact on subjective wellbeing'.

The National Planning Policy Framework embraces the value of open space to health and wellbeing.

# ROLE OF THE LANDSCAPE ARCHITECT IN DESIGN AND DELIVERY OF HEALTHCARE FACILITIES

The landscape architect is the professional best equipped to design outdoor spaces for healthcare facilities – only a landscape architect will have the requisite training to combine and balance the competing uses and needs of a site:

- Building location and site design
- Microclimate
- Pedestrian and vehicular circulation and wider links
- Welcome, navigability and legibility
- Ecology and biodiversity
- Conviviality and community/social/civic space
- Active travel
- Creating clinical spaces outside
- Water management and green infrastructure
- Maintenance and management of landscape
- Levels and gradients, balancing cut and fill whilst creating good spaces for people
- Placemaking
- Spatial design
- Planting design
- 

For this reason the landscape architect needs to be a key part of any design team working on a healthcare project. The landscape should be an integral part of the design process and not an adjunct activity.

There are currently impediments to the fulfillment of this role in the procurement and design processes.

## *Procurement / process protocols*

Most new healthcare buildings in Scotland are procured through the Scottish Futures Trust and the regional HUB Companies used for delivery of major projects. The HUBCos bring together design teams that define “Tier One” contractors and consultants as those who are key to the process. Tier One usually consists of the main contractor; the architect; the civil and structural engineers; the mechanical and electrical engineers; quantity surveyors and project managers; CDM consultants and Principle Designers. Within this list there is no specialist in site planning or landscape design. Whilst landscape architects are frequently in the overall team, their status is usually Tier three – brought in as a subconsultant at the discretion of the tier one partners. The landscape architect’s appointment therefore happens too late in the design process. This creates impediments to a good design outcome for the external spaces.

One of the main issues is that when early site decisions are made without a landscape architect’s input, buildings may be poorly located, external spaces may not be usable and there could be impediments to access that are caused by setting the wrong finished floor levels. All of these inhibit good landscape design when they are not considered at the right stages of the design processes. The case studies included in this report demonstrate many problems as a result of this procedural issue. In addition, links to community, health and wellbeing outdoors, outdoor exercise and therapies and other issues that are embedded in NHS and government policy are difficult to achieve when the landscape architect is not a principal discipline because they are not designed in from the outset and cannot always be accommodated later in the process.

## *Site selection and site planning*

Early involvement by a landscape architect is essential to ensure the best use of any site, since the building location and finished floor levels will have a major impact on both external circulation and levels – affecting accessibility options and the ability to link to other parts of a community such as parks and community hubs etc. The landscape architect is also best placed to assess opportunities and constraints in relation to biodiversity and green infrastructure which should ideally be embedded in the design from the start.

Earlier partnership working between the architect, landscape architect and the client team would ensure building location is considered at the earliest stages – it does not take a lot of time input from a landscape architect to make a big difference to the outcomes if they are part of the early dialogue – it would save time and money and protect against lost opportunities for joined up thinking.

Poor building location can affect microclimate – for example north-facing and overshadowed outdoor spaces will not be fully usable, nor those that are very exposed to wind. In Scotland these are fundamental considerations that are frequently overlooked as our case studies demonstrate.

## *Fees*

The landscape architect is a professional role akin to the architect but the fee brackets they are put in are far less. This means they have less time to input into the design process and for this reason are also often brought in too late in the process. The fee margins are so low in some examples (Such as our case study Eastwood Health Centre) that the landscape architects services are too curtailed to be able to deliver the job effectively.

The fees are set based on assumptions about time input required. Responsibility Matrix’s often list a workload under LA but don’t recognise the time input required to meet the brief properly. This is all based on historic assumptions about the role of the LA and doesn’t reflect current best practice or the aims and ambitions of contemporary policy.

## *Landscape budget*

A proper budget needs to be set and protected for external works. The project metric is set by Gross Internal Floor Area (GIFA). There is an argument that certain types of outdoor space such as clinical/therapeutic/exercise areas should be considered part of the GIFA. This would ensure a better budget for intensively used, actively managed outdoor spaces.

However funded, external areas need to be appropriately specified in a brief, spatial requirements set out and appropriate budgets set aside.

There is not always a clear understanding of the need and value of greenspace by quantity surveyors who are mostly trained in the delivery of hardworks and buildings. This is another reason that the landscape architect should be part of the design team from the start.

If the landscape architect is able to properly contribute to site design including access and parking, then there will be a greater ability to budget for the areas with most health and wellbeing benefits. Vehicular circulation could be integrated with walking routes and arts trails as seen at Eastwood Health Centre in our case studies, for example.

## *Budgets and value engineering*

The landscape budget needs to be protected during the contract. Frequently the building works will go over budget and the landscape budget is used as a sump to top up over spend during the contract. This is partly a cultural issue in the way quantity surveyors and other professionals favour the building over external works, and partly practical since the landscape is usually built last. Either way the end result is detrimental to the end users and the positive outcomes associated with good quality greenspaces.

Again better briefing will help to ensure landscape outcomes are protected – specific non-negotiable requirements set out in the brief will help protect the outdoor spaces.

## *Quality control*

Landscapes are a designed and built element that need to be designed by professionally trained and qualified people. There is sometimes a move to de-professionalise landscape design and deliver greenspaces via volunteer organisations or other similar mechanisms. Healthcare landscapes need to be Disability Discrimination Act compliant, well drained, resilient, easy to manage and maintain and need to meet the specialist therapeutic or social requirements of the buildings and people they serve. For this reason the landscape design cannot be delivered through non professional routes.

## *Education*

More education for the rest of the design team would be beneficial – the considerable research that has been undertaken showing the positive outcomes and benefits of good landscape design in healthcare settings needs to be shared and promoted throughout the other design professions, many of whom will have little knowledge of this. Again some of this can be achieved through the brief.

It is worth noting that this lack of knowledge of the affordable benefits of well designed outdoor space extends frequently to the clinical and managerial staff who may be involved in design dialogue. There is a need to review medical training in light of what we know about the health and wellbeing benefits of good outdoor environments in order to ensure spaces are not only well designed and useful - but also well used.

In retrofit examples, on site training and activities should be considered to enable staff to use the spaces well and understand how to get the most value from them.

# DESIGN ISSUES THAT SHOULD BE EMBEDDED INTO THE BRIEF

## *Briefing considerations*

There are design considerations that should be integral to any healthcare facility and which should form part of every brief. These determine and describe the role of the landscape architect and will assist the client, project manager and design team in getting the best value from the landscape design. "Value" refers to cost and benefits and has measurable outcomes.

What becomes clear is that knowledge and evidence base are not the cause of any problems in delivery. Where problems arise it is because either the brief, specifically in relation to landscape, is inadequate and/or the procurement and build processes undermine the brief. The design issues that affect the quality of outdoor space are specific and can be built into a brief so that certain outcomes are required.

This section sets out key issues that should be non-negotiable in the brief. These should be set out to define and clarify the role of the landscape architect from inception to delivery and to protect the desired outcomes for the end users.

## *Dialogues*

- Consultation and dialogue with end users – the end users should be consulted about their needs and aspirations – staff, patients and the local community and local groups and stakeholders need to input into dialogue around landscape design and future uses and activities.
- Activities – outdoor activities can be embedded into the brief: examples include outdoor growing spaces – many health centres have growing spaces for horticultural therapy and healthy food production and education
- An Art/Environment Strategy should be integrated into the external spaces as it develops, with a collaboration between landscape architect and arts co-ordinator

## *Site*

- Site selection is key to the delivery of good and useful outdoor places, and the landscape architect can play a key role in site evaluation: ecology, active travel, wider links, levels strategies and parking strategies are all contingent on the qualities of the site
- Site planning – building location, levels strategy and green infrastructure issues such as water management need landscape input from the start of a project to ensure joined up thinking
- Microclimate can play a major role in the usefulness of the outdoors. The landscape architect will be able to advise on natural ways to make the outdoor spaces usable. The landscape architect will also be able to advise on the design of courtyards to ensure they can support planting effectively with adequate light and water.
- Existing vegetation needs assessment and should be retained where possible because of the potential biodiversity value and the contribution vegetation can make to site character and carbon sequestration. New designs should seek to deliver an overall biodiversity gain.
- Circulation and navigability – a coherent site design with a clear external circulation hierarchy, good signage and routes for pedestrians and bikes
- Well designed links to adjacent parkland and other green spaces will allow the easy use of green prescriptions.

## *Active travel and circulation*

- Parking design can integrate walking routes, green spaces, artworks and SuDS
- Carpark levels – car parks should be integrated into natural slopes and not incur excessive movement of fill off site
- Active travel links and connectivity – ensuring fluid links to communities and public transport hubs
- Cycling needs to be integrated into the master plan from the start with bike storage and easy cycle access designed in not added at the end.
- Pedestrian networks should be the main framework for the site circulation, taking precedence over vehicles - this requires coordination between the landscape architect and the traffic engineer at the start of the design process.
- Outside spaces accessible to all should be planned from the start - careful levels coordination is needed to ensure civic spaces can be accessible and that the floor levels of the buildings do not create challenges to access outside - this requires early co-ordination between the architect, engineer and landscape architect.

## *Spaces and places*

- Usable civic space – health centres often involve civic space in the form of entry plazas and small squares which should have sunny spaces, shelter, seating and a sense of enclosure in order to be viable. The scale of these is very important, big enough to allow activity but small enough to create comfort and enticing human scale
- The success of civic space is dependent on good spatial design – levels in particular can make a space less usable if not properly designed for social uses. Sloping spaces are hard to use for setting up stalls, locating seats or parking prams for example.
- Breakout spaces for outdoor meeting rooms – in the COVID pandemic outdoor waiting rooms may also be considered.
- Outdoor gym equipment, gardening, small sports areas, physical therapies, occupational therapies, sensory activities, walking routes, steps and climbs, laundry and domestic activities in mental health settings, and many more.

## *Ecology*

- Biodiversity – NHS policy requires that the NHS Estate should be managed for greater biodiversity. This can be briefed and elements such as native planting, wetlands, meadows, orchards and woodlands can be incorporated or introduced into the site designs. Carparks, for example could have a woodland setting, courtyards can be used to demonstrate best practice and alternative maintenance regimes.
- Soils are a living organism and need to be protected in the brief. Significant cut and fill should be avoided and soil where possible should not be imported or exported from site. This means careful planning in regard to car park design and building locations right from the start.
- Blue green infrastructure and Sustainable Urban Drainage Schemes (SuDS) should be incorporated early into any site design to ensure that they not only serve the water management functions required but also offer useful people places and education. Examples include rain-gardens, ponds and rills instead of attenuation tanks and hidden land drainage.
- Biodiversity is embedded as a goal in NHS policy, and protection and enhancement is a statutory duty for all public bodies in Scotland – reporting to Scottish Government regularly on progress.

## *Integration of indoor & outdoors*

- Courtyard uses and design – ensuring courtyards get enough sunshine to be useful, have doors in the right places, can be maintained easily and have purpose.
- Café – ensure café flows into outdoor spaces that have shelter and sunshine with movable, comfortable and accessible furniture.
- Quiet contemplative spaces for rest and relaxation, contemplation and sanctuary that are easily found and accessed
- Accessibility from buildings to the outdoors for staff to take a break during/after their shifts to exercise or de-stress, including the potential for staff to take patients for outdoor therapies.

## *Therapeutic design approach*

- Actively working with clinicians to design outdoor spaces that enable outdoor therapies – examples include physiotherapy spaces such as practice steps and handrails; sensory spaces; destination spaces to encourage movement after surgery; growing spaces for horticultural therapy; green gyms; outdoor cardio equipment; calm spaces for one to one dialogue, counseling and complementary activities such as yoga.
- COVID recovery – green recovery from COVID might include outdoor waiting and therapy spaces, outdoor meeting rooms and breakout spaces, areas that enable safely socially distanced activities outside, R&R spaces for staff, commemoration and remembrance areas, sanctuary spaces etc.
- The landscape design team should collaborate with the arts co-ordinator to ensure that the arts strategy is embedded outside as well as inside, helping to create sense of place and entice people outside.

# CASE STUDIES

## *Eastwood Health and Care Centre*



Eastwood Health and Care Centre was built in 2014 and replaced four local GP surgeries. It is located in Drumby Crescent, Clarkston and serves the whole of the Eastwood area of East Renfrewshire. It offers access to a wide range of health and social care services under one roof and is also the Headquarters for East Renfrewshire Health and Social Care Partnership. The building, by Hoskins Architects, has won several awards and is a light and airy space with services accessed off a central atrium that overlooks two external courtyards.

Architect: Hoskins Architects  
 Landscape Architect: Harrison Stevens  
 Project budget: circa £25m  
 Landscape Architects original fee circa £5k

There is a very large car park surrounding the centre where there are over 280 car parking spaces for staff, patients and visitors of the centre including disabled/parent and child bays, and also over 30 spaces for park and ride users.

A small civic space welcomes pedestrians off the main road and pavement, leading to the front of the building.

Images clockwise from top:  
 View to health centre from main road  
 Internal courtyard  
 Cafe and external courtyard  
 Aerial view of site





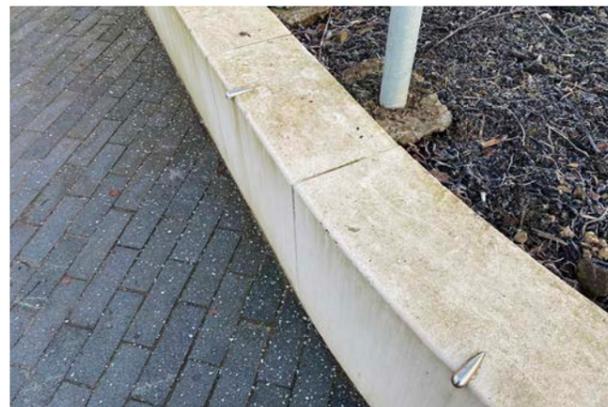
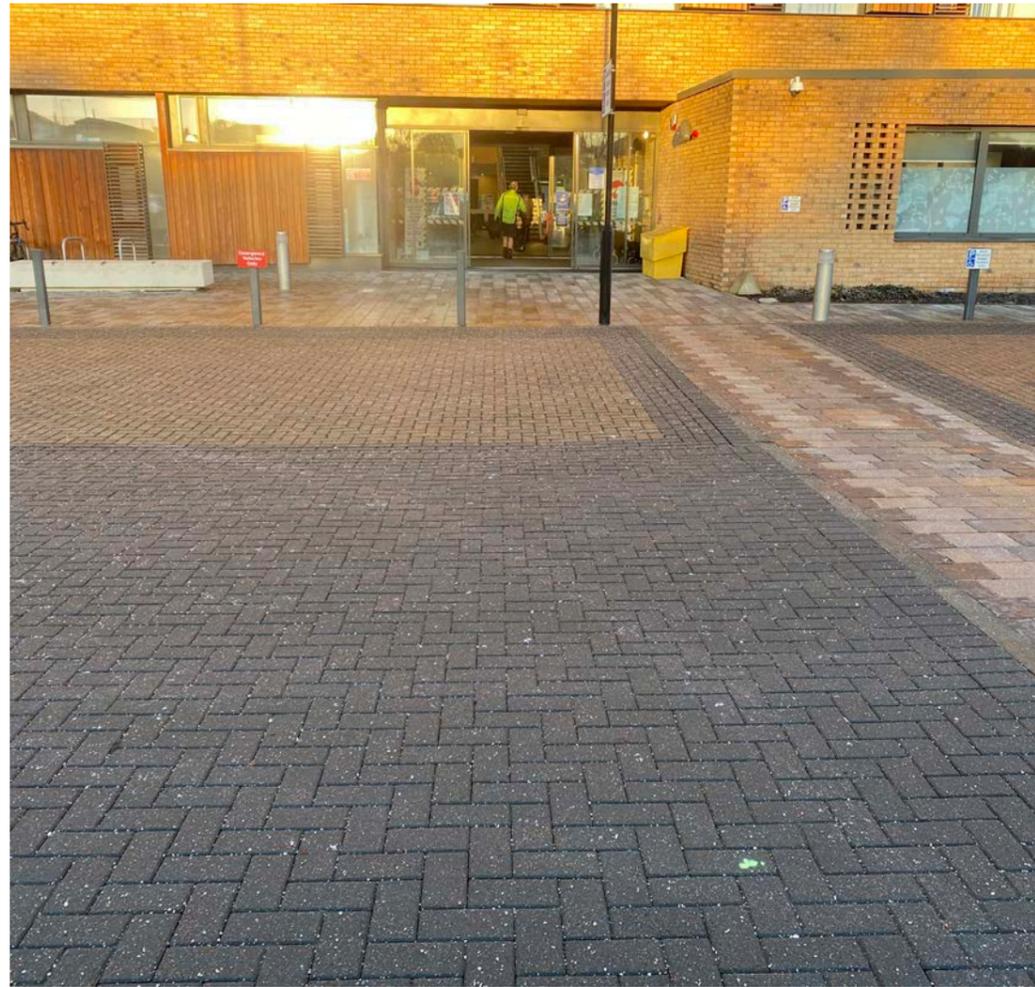
## Review of the design

### What was successful outside

Eastwood Health and Care Centre is a very successful building. It is also successful in terms of its outdoor estate for the following reasons:

- It is well located near to a train station and bus routes
- The building has a good relationship to the street and is visible and attractive
- It is near to Huntly Park, a popular and well-used local greenspace
- It has two good sized protected courtyards
- The cafe is located overlooking one courtyard and there is a door and seating area outside
- There are over seventy trees on site, creating a soft green setting
- There is a biodiverse seating / picnic area within the car park
- An arts strategy for inside the building extends outside as paths and informational signage
- There is a small public meeting space which enables community engagement
- Active Travel: There is covered bike storage beside the staff entrance to the building.

Images clockwise from top left:  
 Extensive tree planting on site  
 Entry sequence from Eastwoodmains Road  
 Picnic area by GEP  
 Expansive car park  
 Art trailhead



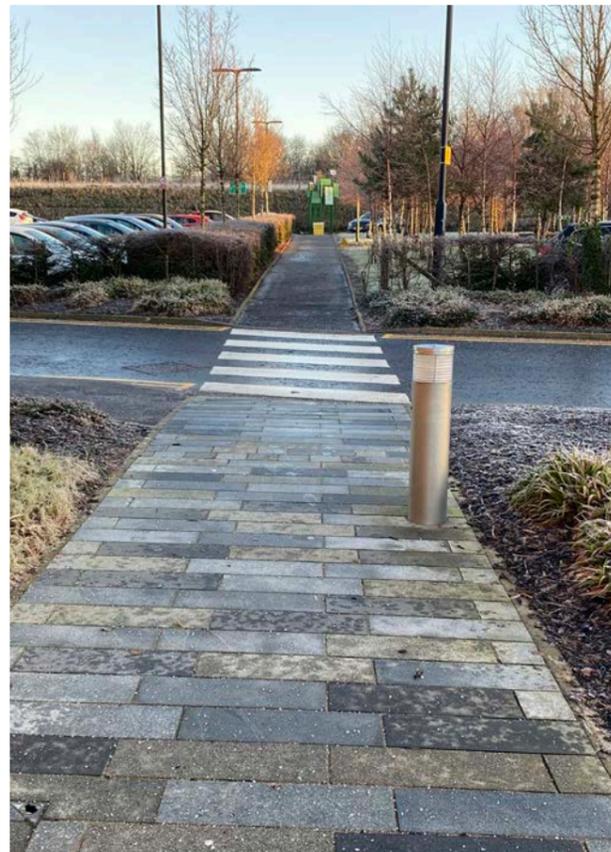
- The connection between the train and the health centre is poor as the train station has a convoluted access and is the other side of a very busy road. There is a potential direct and safe pedestrian link by existing bridge which has not been exploited
- There is no good access to Huntly Park
- The courtyards have not been designed to encourage activity and they get little direct sunlight as they are too narrow and too deep for sun to penetrate to the bottom
- Despite the doorway the cafe does not have great facilities outside
- The car park is very large and the site is dominated by cars
- The picnic area is popular but is in a remote setting in the car park and would be more accessible nearer the building
- The layout and scale of the car park means there has been very little usable space outside for arts or health
- The public plaza is not very user friendly, does not have good seating and is noisy
- Wheeled sports have been designed out - even though there is little activity for kids in the area, and this was an opportunity.

The reasons for the lost potential in these areas of this project stem from the procurement and design processes. The successful elements of the landscape are largely due to intervention by Green Exercise Partnership during the later stages of the design process.

## Review of the design

### What could have been improved

Images clockwise from top left:  
 Expansive car park as seen from entry  
 View to health centre main entry across parking court  
 Plaza sloping awkwardly towards busy main road  
 No skateboarding allowed!  
 Uninviting courtyard

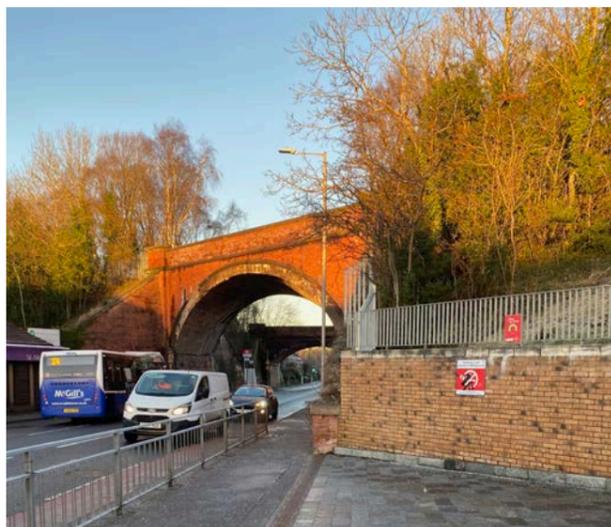
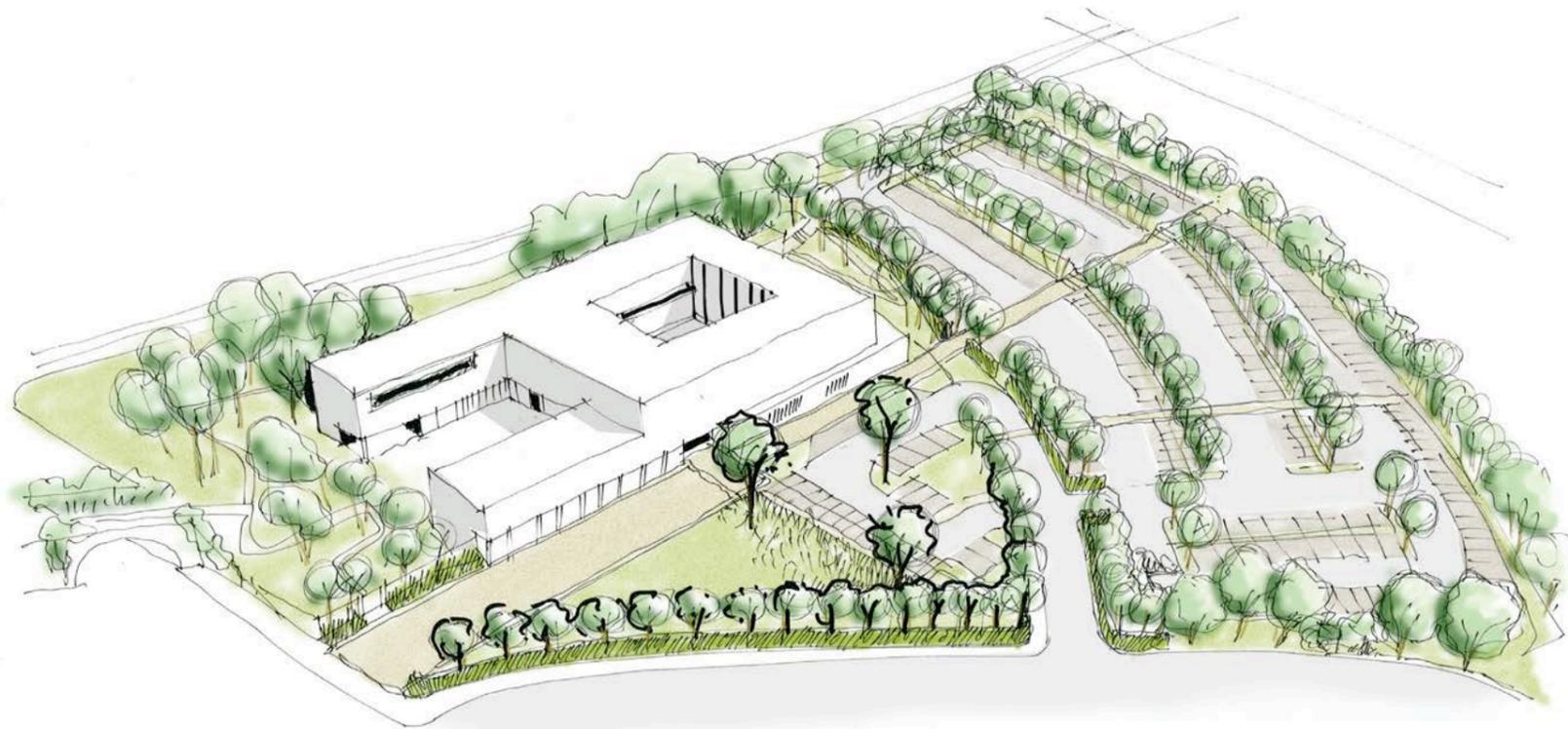


## Review of process

## What was successful

- The project had a landscape architect, Harrison Stevens, who had been appointed with the design team
- The building had been designed to have a good indoor outdoor structure with courtyards and big windows, access doors to outside and views from key spaces into the courtyards and there was dialogue between the different parts of the design team in the development of the key outdoor spaces. However the landscape architect was not given enough time to undertake the work and develop a rigorous design, nor were they adequately involved in site planning and wider contextual links were missed.
- Active travel was embedded in the brief and the site has bike storage and park and ride
- The arts strategy was embedded in the design process for the building
- The role of Green Exercise Partnership was a timely intervention which generated a second layer of input into the external realm
- Green Exercise Partnership were able to support a more meaningful input from the landscape architects, although this was late in the process. As a result there were tweaks to the car park that created the green picnic area, and led to the addition of over seventy trees.
- A clear and green route through the site enables a calm and distinct passage from the car park to the front door
- A circular route wraps around the car park creating a green edge and offering exercise opportunities
- The arts strategy was able to engage successfully with the outdoors and a path and signage were added.
- Biodiversity was greatly improved by the addition of over seventy native trees and the green seating area in the car park.

Images clockwise from top:  
View to health centre from green walk  
GEP interventions include the green walk through the site  
Picnic space and woodland along green walk



### *Elements that could still be retrofitted*

- Courtyard activities
- Active travel links to station
- Civic space improvements and better seating
- Management for biodiversity
- Exercise opportunities
- Reduction on parking numbers

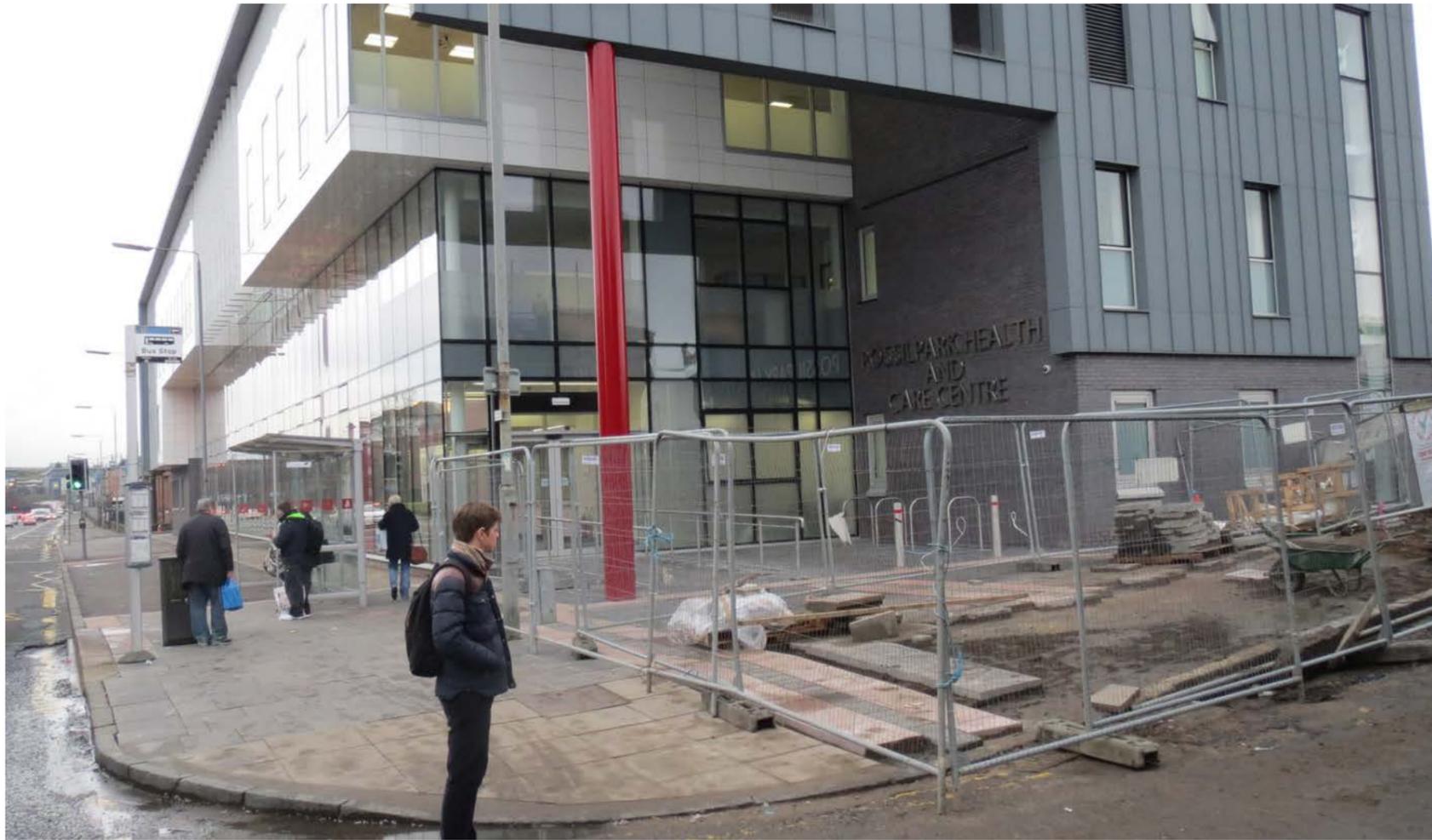
### *How this project could have worked better*

- Procurement: The landscape architect was appointed as a sub consultant to the architect, but on a very small budget meaning they could only provide limited input into the site-wide decisions.
- Site planning: The planning process was challenging and resulted in a very large car park - meaning that a lot of soil had to be taken off site - poor environmental practice. There was no-one to advocate against this until it was too late to change.
- The car park design was not as efficient as it could be and there was practically no space left over for any other activity. A different parking layout and less soil removal would have led to a more sensitive and environmentally friendly scheme, which could have had well-positioned space for social / clinical activities.
- Links to the wider area could have been facilitated - a path to Huntly Park would have been beneficial.
- Architecture and indoor/outdoor relationship: had courtyards been developed in a way that enabled their integration into clinical practice, they could have become a useful set of spaces for green prescriptions, or healthy activities such as horticulture, outdoor meeting spaces and class rooms. Instead they are decorative and underused. The cross section of the building needed to consider sunlight penetration into courtyards to make them sunny and inviting.
- Spaces for activities such as growing and exercise could also have been built into the courtyard and the adjacent railway land
- The entry plaza could have been larger, more welcoming and with better levels, encouraging neighbourhood uses through seating, a noticeboard, public art, exercise equipment and other social uses
- There was a great opportunity for active travel connections to the railway station, with an existing footbridge which was ignored
- Better consideration of biodiversity and maintenance implications in the courtyards may have helped the longevity of the planting in the courtyards which has not fully survived
- The courtyards are a missed opportunity for useful social and clinical space, further art and biodiversity.

Images clockwise from top:  
 Sketches showing a more sensitive parking arrangement that frees up space for human activity and reduces soil movement, which would have saved considerable money and been greener.  
 Good possible link to station remains unexplored

# CASE STUDIES

## Possilpark Health and Care Centre

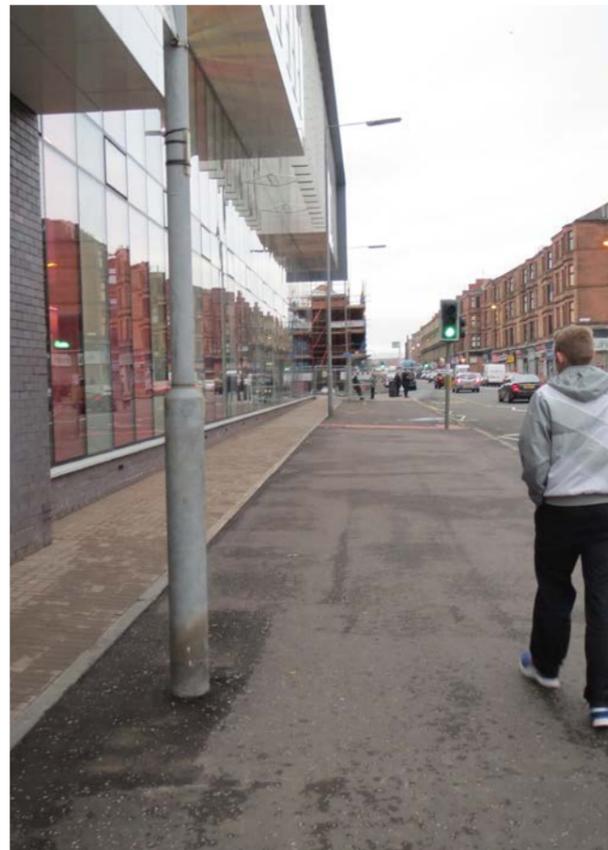


Possilpark Health and Care Centre was opened in 2014 and serves the Saracen Street area in the north of the city. It was delivered as an SFT/HUBCo project and was designed by architects AHR. It is designed to have a strong relationship to the street and is part of a wider regeneration strategy in this part of Glasgow.

Architect: AHR  
Landscape Architect - none appointed  
Building budget: £10M  
Landscape budget n/a

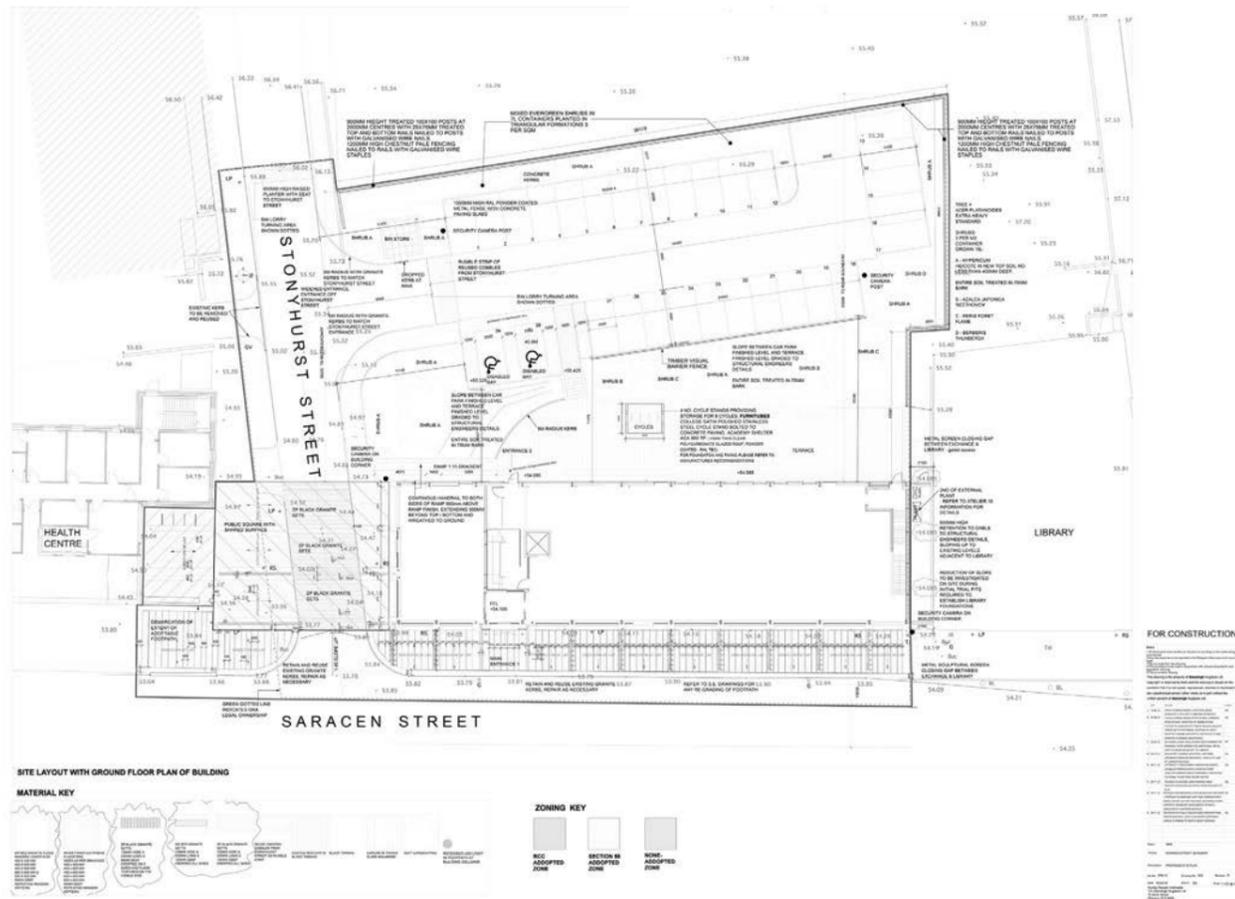
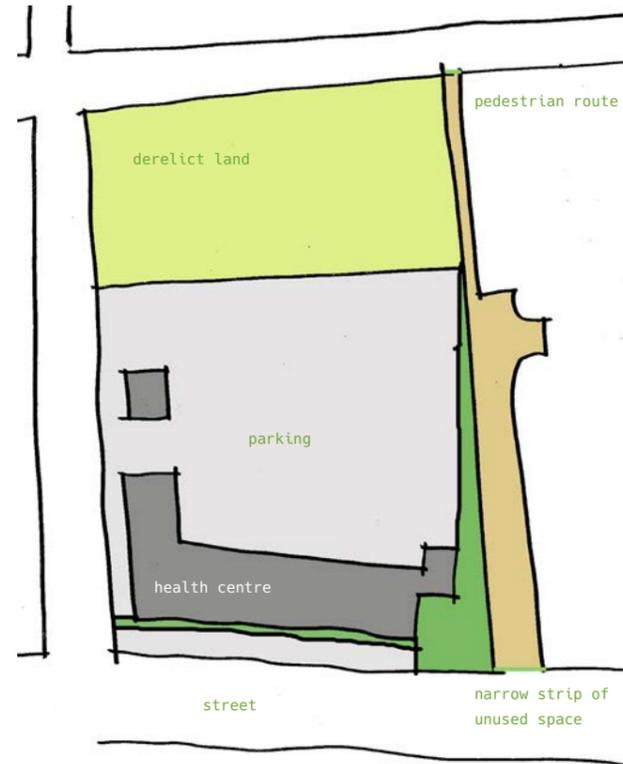
The health centre sits along the pavement line of the street and all services are in the car park and service yard to the rear of the building. At the time of its design no outdoor spaces were considered for people or health and wellbeing.

Green Exercise Partnership became involved when the building was under construction.



Images clockwise from top:  
The health centre under construction, 2014  
Frontage to Saracen Street  
Aerial view of site

## Review of the design



## What was successful outside

Possilpark Health Centre works as a strong urban form reinforcing the street edge and adding activity and destination in the heart of an area of multiple deprivation. It has strong architectural identity and the corner entry and glass facade invite people in:

- The building has a good relationship to the street and is visible and attractive
- Active Travel: There is covered bike storage beside the staff entrance to the building at the rear
- The health centre is located near several pedestrian routes and green spaces

## What could have been improved outside

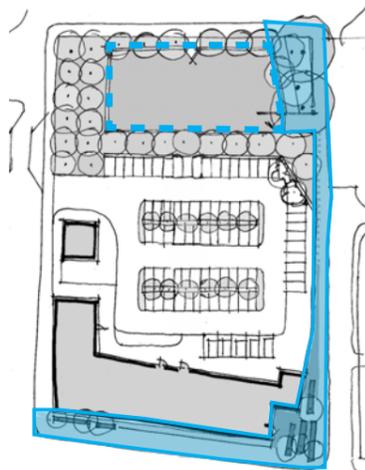
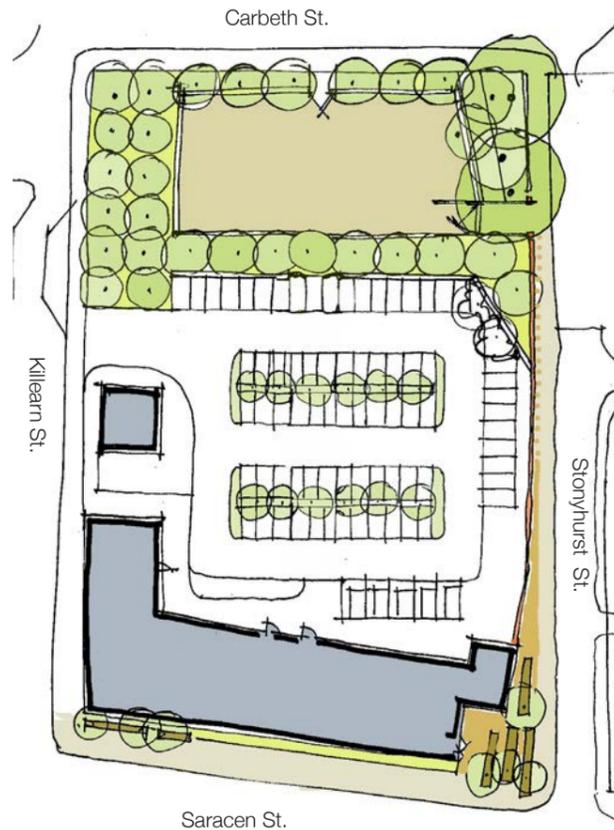
- The scope for health and wellbeing outside was minimal
- There was very little space for people to use outside, except the pavement on the street
- If the rear of the site wasn't all devoted to parking it could have offered some potential
- If it had been included in the brief, what small areas of land were available could have been planned for relaxation or therapeutic use

- Site planning: the planning process was over before the landscape architect was appointed - see above
- Wider links could have been exploited - a path to surrounding parks and transport hubs could have been implemented and this should have been part of the brief
- Architecture and indoor/outdoor relationship: even better use of the street edge could have resulted in a small civic space on the main street which would have had community uses beyond the health centre.
- The rear of the building which has morning sun and shelter from the main road is entirely given over to car parking - it is not known how parking numbers were decided but active travel was not prioritised despite the location on a main route
- There is no evidence of the arts strategy being used to create sense of place outside
- There was no delivery of any biodiversity within the original project
- This was a building that did not relate well to the external realm.

## Review of the initial procurement and briefing process

- Procurement: The landscape architect was not appointed as part of the design team - there was therefore no apparent discussion of the use of the site for any sort of therapeutic design
- The landscape architect was a separate appointment extremely late in the process and could not assist in site planning, resulting in excess soil movement and retention, lack of green spaces and poorer links to wider green networks.

Images top:  
Wider site sketch plan  
Site plan



■ Permanent public realm works
 ■ Temporary community use of vacant site

The initial process had been unsuccessful in delivering useful outdoor space beyond the functional issues of parking and vehicle access for services. The landscape design process was instigated by GEP after the works were already started on site:

- The project had a landscape architect, erz, funded by Green Exercise Partnership at a very late stage whilst the works were already nearing completion on site
- This was initially not welcomed by the existing design team and builder because it was seen as an imposition to the agreed process, but they gradually recognised the benefits and have since become champions of investing in outdoor spaces
- Community engagement regarding the outdoor spaces was started and led to a successful community partnership to develop a growing space on adjacent land
- A strategy of using adjacent derelict land to develop a community space was explored and the land was brought into temporary community use - which has since become permanent
- The 1m wide strip of land to the north of the site, which bounded a pedestrian route, was identified as an opportunity and re-imagined as a linear gym wall
- GEP advice and funding enabled a timely intervention which generated a second layer of input into the external realm

## Review of process

### What was successful

Images clockwise from top:  
 GEP consultation graphics, pocket park at entry space  
 Early sketch proposal showing layout of plaza, gym wall and growing space  
 Usable and available space diagram  
 New street trees shield the waiting room from the busy road



## How this project was changed by GEP input

- Street frontage was softened by street trees and welcome was improved
- Adjacent derelict land was re-purposed as community growing space through strong partnership working
- Landscape architect invented an interactive gym wall for green exercise along an existing pedestrian route on the 1 metre wide strip of available land
- Biodiversity was greatly improved by the addition of the community growing space on derelict land at the rear
- A green gym was designed that has been used again in other locations
- Street trees were introduced on the pavement edge to reinforce the important relationship between the building and the street
- The existing Concrete Garden community food growing group in Possil were keen for more space and became part of the “client team” for the design of a new community food growing space adjacent to the health centre. The landscape architects undertook considerable dialogue with this group ensuring the design of the new growing space met their specific needs and it is now adopted and managed as part of the Concrete Garden.
- Concrete Garden take GP Green Prescription referrals and produce food which is distributed in Possil.
- The street trees were retrofitted into a specifically designed system to allow them to thrive in the constrained space available, with trench planting pits and a permeable surface to let rain through. The trees shield patients in the previously exposed waiting rooms on the street front elevation, and improve the microclimate inside and outside.

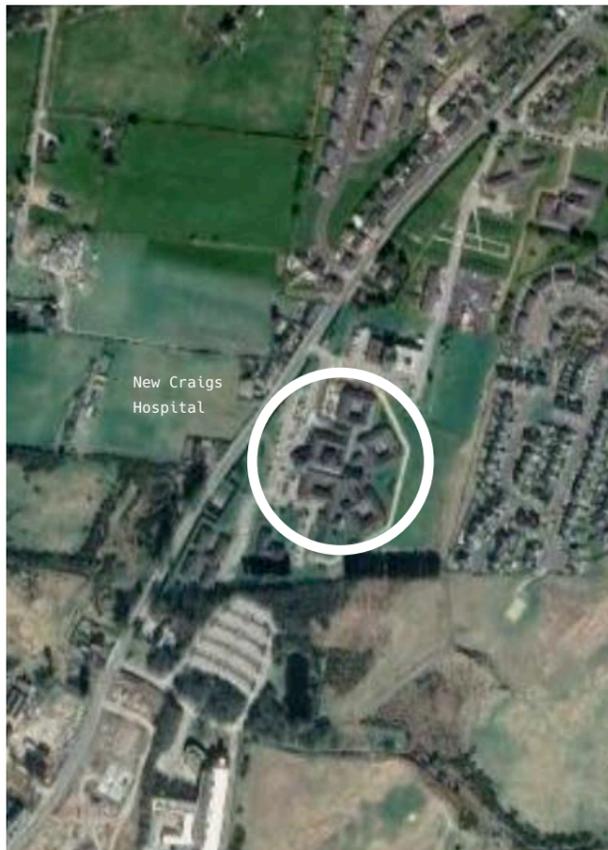


Images clockwise from top:  
 Gymwall in action  
 Inside the growing space  
 Gymwall detail image  
 View across car park to growing space

## CASE STUDIES

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### *New Craigs Hospital Inverness*



New Craigs Hospital is a mental health hospital on the western edge of Inverness delivered through a Private Finance Initiative (PFI) scheme at the end of the twentieth century. Very little initial investment was made in the external realm beyond creating traffic circulation and simple green lawns between buildings. The site was windswept, exposed and difficult to navigate. There was little impetus to go outside.

Architect: RDA Architects  
Landscape Architect - none appointed

New Craigs has a total of 234 beds. Its wards specialise in acute admission, intensive psychiatric care, and secure rehabilitation. Two dedicated wards provide dementia care, and there is a learning disability assessment and treatment unit. Various outpatient clinics are held on the hospital site.

New Craigs opened in July 2000, and was the first psychiatric facility in Scotland funded through a PFI scheme. It occupies the site of the former Craig Phadrig Hospital, and also replaced nineteenth-century Craig Dunain Hospital, whose buildings are nearby. Robertson Group built the hospital and manage the estate, with NHS Highland repaying the cost over a 25-year contract.

Images from top:  
Parking and green area  
Aerial view of site



## *Review of the original landscape design*

### *What was successful outside*

- The layout of the buildings tried to make the most of the exposed site on high ground on the edge of the city.
- Most windows provided views onto green albeit bland landscaping, or over the city below.
- The mental health hospitals in Scotland have a history of outdoor therapies that go back to Victorian times.

### *What could have been improved outside*

- Taller and more biodiverse planting could have softened the feel of the campus, provided visual interest and shelter from the microclimate.
- Much of the site was given over to vehicles, but planting would have helped to screen the visual impact.
- The scope for health and wellbeing outside was minimal, but even in the limited spaces available, the provision of seating and basic infrastructure could have encouraged relaxation and activity outdoors. Small areas of land were available could have been planned for relaxation or therapeutic use.

## *Reflections on the outcomes of original process*

Recognising that New Craigs was built over 20 years ago and lessons have subsequently been learnt, if there had been more significant input of a landscape architect during the original development, it is likely that this project would have incorporated:

- A more varied, more accessible and more attractive outdoor environment that was conducive to greater use and enjoyment by the hospital community
- A more harmonious integration of the buildings into their landscape setting
- A more evident recognition of the therapeutic value of outdoor space
- Integrated green networks within the site and links to connect to the wider locality
- Architecture and indoor/outdoor relationships that would have enabled better links between the building and the external realm
- Management and maintenance of the site's surrounding greenspace that would have delivered a richer environment conducive to developing a sense of place

Experience of PFI projects from around the country has been mixed, but in some cases, particularly in the early days of this approach, it is evident that:

- The role of a landscape architect has not been included in the project brief
- Projects have been subject to intense cost control
- Contracts governing ongoing management and maintenance have sometimes been inflexible thus limiting future improvements

## *A phased approach to retrofitting*

With GEP support, a landscape architect was brought in to explore possibilities for the New Craigs campus after it had been in use for more than 20 years. This case study explores retrofit solutions to develop improved landscape form and function at this healthcare facility.

## *Briefing*

In this instance, careful engagement was the key to the successful planning and delivery of targeted landscape interventions - over three years of stakeholder and user dialogue contributed to a very carefully constructed landscape brief that asked the landscape architect to:

- Open up the site, so that walking routes around it and between buildings are 'legible', and so patients, staff and visitors are encouraged to explore
- Enable access by improving the physical surface and condition of paths
- Create an attractive hub at the heart of the site, which will act as a space where people might sit for a while, and be a base for activities that can link the site with its local community
- Develop green spaces close to selected wards that offer therapeutic natural environments, designed to suit specific clinical needs
- Change the scale of the spaces around the buildings, giving them a more human context through tree and hedge planting.

## *Review of retrofit process*

What was successful and unsuccessful

- This was a retrofit project, therefore the scope for integrated green healthcare solutions within the grounds was limited by the existing built environment
- There were limits to what could be done due to the previous PFI procurement route and subsequent management agreements
- Community engagement regarding the outdoor spaces was started with users and staff
- A careful and ambitious brief and much stakeholder dialogue meant the landscape architect had a clear set of parameters to meet



## How this project was changed by GEP input

- A campus masterplan created a staged approach to improvements and phases one and two have been delivered
- Green desert has been repurposed as therapeutic spaces such as a dementia friendly courtyard.
- Community space has been created
- Microclimate has been improved using planting and shelters
- Character and sense of place have been created in this bleak landscape
- Bespoke signage invites and informs users and connects them to the wider landscape and celebrates the views
- Clear circulation routes have been defined using paving and sensory textures
- Sheltering planting has been added to soften and enclose spaces
- Dementia courtyard becomes a useful and attractive therapeutic space with seating, sheltering structural plants, circular walks, practice gates and steps, planting beds and social spaces.



Images clockwise from top:  
 Designs for community spaces  
 New signage by erz for GEP



Dementia ward courtyard before retrofit works



Dementia ward courtyard after retrofit works