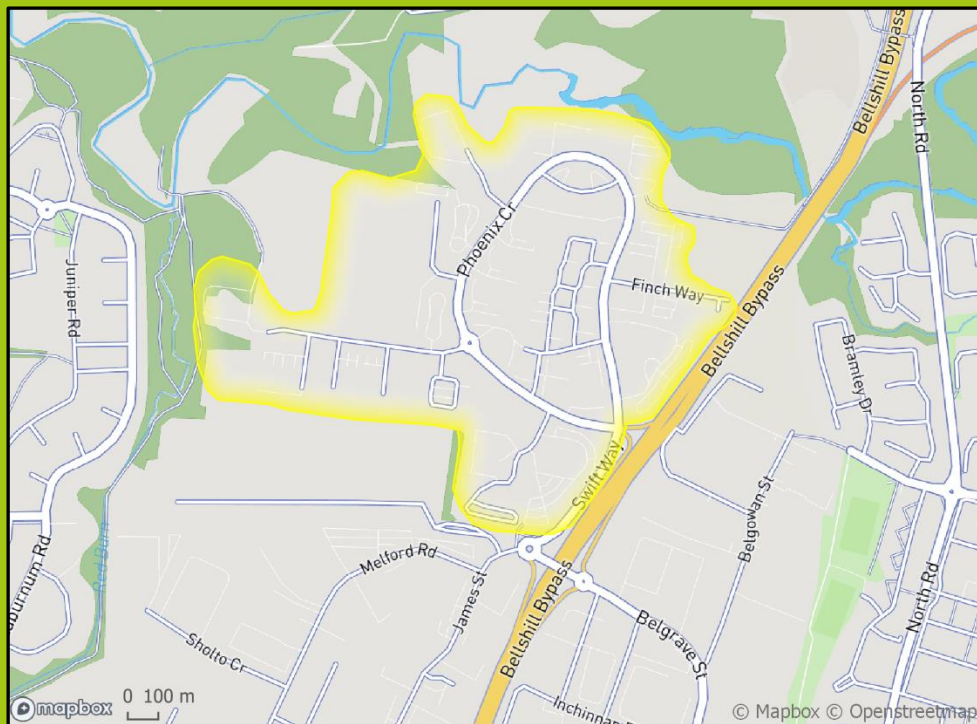


Out of town and out of step

Active travel and Scotland's business parks



We are Living Streets Scotland, part of the UK charity for everyday walking. We want to create a nation where walking is the natural choice for everyday, local journeys.



Contents



Contents	2
Executive Summary	3
Introduction	4
Context	4
Scope of research.....	6
Factors influencing walking.....	8
Findings	10
Locations chosen for car access	10
Site design focused toward major roads.....	13
Dominance of provision for cars on site.....	15
Boundaries separating parks from their surrounds	16
The future for business parks.....	20
Business parks and car dependency	21
Recommendations	24
Conclusion	25
Appendix.....	27
Strathclyde Business Park.....	27
West of Scotland Science Park	30
Castle Business Park.....	32
Aberdeen Innovation Park	34
Dundee Technology Park	36
Riverview Business Park, Friarton Road, Perth	38
South Gyle.....	40
Lothian Road, Edinburgh	42



Executive Summary

For many years, Scottish Government policy has sought to create well-located places which benefit from high standards of design, particularly in relation to promoting active travel and reducing the need to travel by car. However, Living Streets Scotland has been concerned that this is not being delivered in practice.

Thanks to support from Transport Scotland, we set out to explore how major centres of employment work in practice for pedestrians. To understand this, we undertook a strategic assessment of the connectivity and walkability of eight business locations in Scotland:

- Aberdeen Innovation Park
- Riverview Business Park, Perth
- Castle Business Park, Stirling
- Strathclyde Business Park, North Lanarkshire
- Dundee Technology Park
- South Gyle, including Edinburgh Park
- West of Scotland Science Park, Glasgow
- Lothian Road (office quarter), Edinburgh



We then considered factors that would encourage or discourage walking. Whilst the project was disrupted by COVID-19 restrictions which meant we couldn't see the parks functioning normally, it was still possible to draw the following conclusions:

1. Most parks are poorly located, particularly in relation to walking, but also cycling, due to the distance from residential areas and city centres;
2. Access by car is well catered for and dominates layouts, particularly in terms of parking and features such as wide access roads and junctions that are challenging to cross on foot;
3. Connections to nearby communities are generally poor and this discourages trips on foot and by bike;
4. Levels of landscaping and greenspace vary, but generally the lack of human interest does little to encourage walking;
5. Most people will be encouraged to travel by car to and from these locations as the 'normal', quickest and most convenient way to get to work. Conversely, there is little incentive or advantage in walking in terms of time or experience.

We recommend substantial and strategic action to uphold existing planning policies, which, if followed previously, would have resulted in better located and designed developments. We also believe the existing parks must be improved through city-wide action to make walking and cycling safe, convenient and enjoyable. This could take advantage of the current window we have for change while people's commuting patterns are disrupted.

Introduction

Between April and May 2020, Living Streets carried out an assessment of conditions for walking and cycling around eight business parks in Scotland, asking:

- Is it practical for people to travel to Scottish business parks on foot or by bicycle, perhaps also including public transport as part of their journey?
- What design elements support walking, wheeling and cycling, and what works against these?
- What can we learn from this research, looking to a future where we begin to prioritise walking and cycling over travel by private car?

Context

It is widely accepted that walking and cycling, and travel by public transport, should be encouraged. This was established before the COVID-19 crisis and has been reinforced since the pandemic began¹.

We note that planning policy has, in theory, favoured walking and cycling for a great many years. The Scottish Planning Policy for example states in paragraph 68:

“Development plans should adopt a sequential town centre first approach when planning for uses which generate significant footfall, including retail and commercial leisure uses, offices, community and cultural facilities and, where appropriate, other public buildings such as libraries, and education and healthcare facilities. This requires that locations are considered in the following order of preference:

- town centres (including city centres and local centres);
- edge of town centre;
- other commercial centres identified in the development plan; and
- out-of-centre locations that are, or can be, made easily accessible by a choice of transport modes.”

Scottish Planning Policy also discusses the need to consider:

“place and the needs of people before the movement of motor vehicles. It could include using higher densities and a mix of uses that enhance accessibility by reducing reliance on private cars and prioritising sustainable and active travel choices, such as walking, cycling and public transport. It would include paths and routes which connect places directly and which are well-connected with the wider environment beyond the site boundary. This

¹ COVID-19 can be an historic turning point in tackling the global climate crisis, the Climate Change Commission (2020) <https://www.theccc.org.uk/2020/06/25/covid-19-can-be-an-historic-turning-point-in-tackling-the-global-climate-crisis/>

may include providing facilities that link different means of travel.”

This is further supported by the Scottish Government’s Creating Places ² design policy, which state:

“Design provides value by delivering good buildings and places that enhance the quality of our lives”.

This is defined as:

- physical value - enhances a setting.
- functional value - meets and adapts to the long-term needs of all users.
- viability - provides good value for money;
- social value - develops a positive sense of identity and community; and
- environmental value - efficient and responsible use of our resources.

Creating Places states *“sustainable places are often characterised by well-designed, walkable mixed-use neighbourhoods with integrated facilities”*, and discusses the need *“to reduce our carbon emissions through widening travel choices. Fundamental to this aim is the need to encourage more travel by foot and bicycle and a move away from the reliance on private cars.”* Finally, it acknowledges *“emissions related to short journeys taken in everyday activities can be reduced by designing places that are compact, walkable and have mixed uses”*.

These policies are well established, with the statement on design established in 2013. Planning policies have their origins as far back as the late 1990s.

Walking and cycling are methods of travel that people often want to use if they feel they can – if the streets are safe, if the routes are logical, and where their work allows for it. We also know that many people believe our cities would be better places to live if there was more walking and cycling.

Since lockdown began in March 2020, many more people have been walking and cycling; a YouGov survey revealed that 61% of Scots were walking more now than they did before pandemic measures³. This combination of factors could mean we would expect to see more walking and cycling as part of people’s commute – but it is too early to tell if these changes will be sustained or at what level.

A key determinant of choices and behaviour will continue to be the location and design of Scotland’s major employment centres.



² Creating Places: A policy statement on architecture and place for Scotland, Scottish Government (2013) <https://www.gov.scot/publications/creating-places-policy-statement-architecture-place-scotland/pages/3/>

³ Yougov Parks and Exercise survey results (2020) <https://docs.cdn.yougov.com/cge429j26n/YouGov%20-%20Parks%20and%20Exercise%20Results.pdf>

Scope of research



An issue which we encountered early in this work is that the term “business park” is used in very flexible ways. For the purposes of this work we decided to consider a business park to be:

- A group of buildings primarily designed for office-based work, and which
- EITHER are collectively advertised as belonging together as a business park by some coordinating agency,
- OR are likely to be seen by the general public as belonging together (whether officially one or more sites).

This definition was intended to help us to focus on places where office buildings have been built together, and to explicitly avoid investigating more industrially focused sites. It highlights the difference between a business park and an industrial estate.

We found three important issues relating to this definition.

Association with industrial estates

Many of the business parks we investigated were only one part of a much larger area of land, containing buildings focused on (non-retail) commercial activity. While perhaps in management terms the business park was a separate entity, and was advertised as such, in many other respects we saw that areas combined to become one distinctive area dedicated to non-retail commercial activity.

For walking and cycling, the distinctions in ownership are unimportant, but the character of buildings and roads in neighbouring areas may matter a lot. Access roads in an industrial estate may be built to carry very large vehicles, and it is much less likely that such an estate would be built to include pleasant outdoor space. We focused on the business park part of these combined sites, but we also tried to consider the relationships between the two.

Inconsistent use of titles

We encountered some sites which describe themselves as business parks, but which might better be described as an industrial estates or industrial parks – with some office accommodation. We researched business parks which were titled ‘innovation park’ / ‘technology park’ / ‘science park’ but which we felt met our definition of providing non-industrial office-like buildings.

Association with other office property

The third line in our definition (above) caters for situations where groups of office buildings feel as if they belong together but are managed or marketed separately. South Gyle provided the most obvious example of this. Any boundaries of the area managed as ‘Edinburgh Park’ are unobvious on the ground, and in some directions

there is a gradual merging of office based and more industrially focused property – creating a distinct commercially-focused area, but not one distinct ‘business park’.

We sought to find a range of sites from across Scotland which offered a reasonable sample of business park location and design. The Living Streets Technical Coordinator for Scotland, assisted by a team of associates, analysed the following eight locations:

- Aberdeen Innovation Park
- Riverview Business Park, Perth
- Castle Business Park, Stirling
- Strathclyde Business Park, North Lanarkshire
- Dundee Technology Park
- South Gyle, including Edinburgh Park, Edinburgh
- West of Scotland Science Park, Glasgow
- Lothian Road (office quarter), Edinburgh

Six of these are more ‘traditional’ business parks. We included Riverview Business Park in Perth partly to further investigate the links between business parks and industrial estates. Finally, we investigated the Lothian Road area of Edinburgh, which is not a business park, but which might be thought of as providing a city-centre office ‘quarter’.

This work took place during the COVID-19 ‘lockdown’ period in April and May 2020. We used desk-based research with information available to the general public⁴. The main limitations to this approach are that information can be out-of-date and that some parts of these sites may not be covered by tools like Google Streetview. Some of our assessments are supported by personal experience of these business parks from one or more of the team, but it would also be helpful to speak to those with experience of journeys to particular business parks as part of further research.

We do not consider these limitations to our approach are significant in drawing useful conclusions.

We wanted to assess conditions as they currently stand for each business park and to look to be realistic about what choices people would make and why – rather than simply studying whether walking or cycling were theoretically possible.

Key findings for each location are presented in two-page summaries in the appendix to this report. The individual short reports are also available on request to local authorities, business owners and researchers.



⁴ The key sources of information for this research were Google Streetview, Openstreetmap data and mapping based on this, information from public transport providers, other mapping such as aerial imagery and historic maps, and existing local knowledge.

Factors influencing walking



To make our assessment we considered a range of features which may influence people's decision to walk or cycle (or 'wheel'⁵) to the business parks.

The **boundaries of the business parks**, considering how distinct or vague these are and whether they can easily be crossed on foot or by bicycle.

What **other features defined the park**, considering the style of property, street design and the **presence of large areas of car parking**.

Conditions for pedestrians within the park (including for people using mobility aids), estimating the likely speed and volume of traffic and the likely safety of people on carriageways. We considered whether pedestrians need to navigate spaces designed for vehicles, such as carriageways or car parking areas.

Whether space is likely to feel socially **safe for pedestrians**, considering if it is visible from properties or the streets nearby, both in daylight and after dark, and if it feels isolated at different parts of the day (such as after standard working hours).

Surface conditions for walking, considering surfacing, steps, path widths and ramps.

Conditions within the park for cycling, and in particular whether carriageways were welcoming enough so cycling would be seen as something open to everyone within the park. We considered whether off-carriageway cycling would be able to accommodate ordinary bicycle speeds or whether such speeds would inconvenience or alarm pedestrians.

Options to arrive and leave the business parks by public transport, including the frequency of services and journey lengths to and from various origins and destinations. We considered the routes to bus or tram stops and stations for journeys, both locally and from other towns and cities.

Distances between the business parks and residential areas, and town or city centres, considering whether daily journeys on foot, by bicycle and by public transport would be realistic.

Routes for cycling, evaluating whether these were accessible from the business parks, key residential areas and town or city centres. We considered whether these routes provided safe and pleasant conditions for cycling, including after dark.

Distances where active travel is viable, assuming that, for the majority of people, commuting journeys of half an hour or less would feel practical, and of more than one hour would feel impractical. We assumed that many people would be able to walk a kilometre in less than 15 minutes and to cycle a kilometre in less than five minutes.

⁵ We consider pedestrians to include people using wheeled mobility aids, and that for the purposes of this report 'walking' should be understood to include this.

The proximity of public transport links, assuming that those visiting offices might be more flexible with timing, but that journeys of more than half an hour from key public transport interchanges (by any combination of public transport, walking and cycling) would make an office feel relatively inaccessible for those from outside the town or city.

Safety considering that this, and perceived safety, is a key factor in the choice of transport mode for most people. This extends to people's perceptions of safety when walking or cycling under particular conditions, such as in darkness or bad weather.

Tolerance of poor conditions / seasonality assuming that, for many people, the decision to walk or cycle regularly is linked to the worst conditions they encounter when doing so: if people stop walking or cycling because they encounter bad weather or feel unsafe in the dark, they are less likely to have a regular habit of walking or cycling thereafter. We assumed that 'good conditions' are such that people do not need special information or training on how to stay safe when walking or cycling regularly along these routes.

Attractiveness and human interest considering this to be a key factor in choices around transport mode. Being in green space can be advantage to active travel, but if this provides an unpleasant experience, or even simply a boring one, then we consider that most people will choose an alternative which is less unpleasant or boring. Darkness, and with it any sense of isolation, will put many people off – and a sense of isolation or vulnerability to crime can also exist in daylight.

Traffic dominance considering that walking and cycling may be made unattractive through the proximity of fast-moving traffic, because of its noise, or through the water or spray thrown up. Large roads can also be unpleasant to walk beside because people are dazzled by vehicle headlights.

Opportunities for human interaction considering that the presence of other people who are also walking or cycling would also seem to be an important factor, not only because this makes walking or cycling feel more normal, but because it makes a journey more interesting.



Findings

Below we present our observations of issues around existing business parks. The issues we observed are complex and interconnected, but we've divided our comments into short sections focused on the following four major themes:

- **Locations chosen for car access:** We report that the general location of the business parks (relative to nearby towns and cities) maximises access by car, at the expense of access by other means.
- **Site design focused toward major roads:** We report that the business parks themselves are designed to face major roads, with a layout designed to support entrance and exit by car onto these roads, at the expense of access by other means.
- **Dominance of provision for cars on site:** We report that the parks are dominated by the provision of car parking, with most access roads built for capacity, flow and speed, both at the expense of the pedestrian experience.
- **Boundaries separating parks from their surrounds:** We report that generally the business parks are, by accident or design, kept separate from the surrounding urban area, at the expense of access by people walking, cycling and/or using public transport.

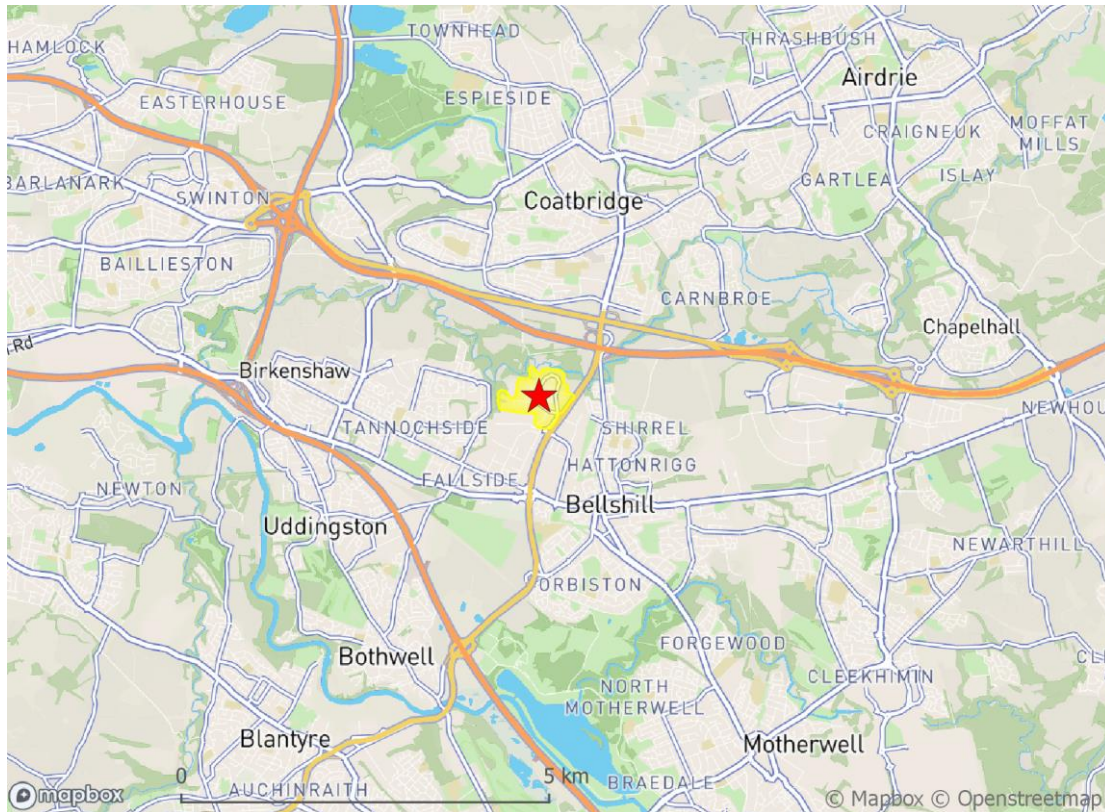
Locations chosen for car access

Most of the business parks we looked at were located next to major roads or motorways, with little priority given to access on foot, by bicycle, or public transport. It appears businesses are generally happy to be located in spaces that are only likely to be accessed by car. This contradicts established national planning policies, aimed at reducing car use and encouraging active travel.

Strathclyde Business Park provided the most striking example of this situation; the park is located well outside any major urban area and is effectively part of a much larger industrial estate. It seems clear that the business park and larger industrial estate are located here because of a junction on the A725, with the direct access this provides to both the M8 and M74.

Looking more widely, the area around this business park and industrial estate are themselves part of an even larger area with heavy commercial land use, interspersed with smaller settlements with which they have few connections. Around 2km west of Strathclyde Business Park is Tannochside Business Park. Around 3km east is Maxim Business Park and the neighbouring Eurocentral Industrial Estate. Around 5km east is Newhouse Industrial Estate.





Strathclyde Business Park location

The location of Strathclyde Business Park does not lend itself to access by pedestrians, by bicycle or by public transport. While there are some paths provided, the distances involved, and the environment they pass through, make it seem very unlikely that they will be used by anything other than a very small proportion of the workforce here.

Castle Business Park (Stirling), Riverview Business Park (Perth), Dundee Technology Park, and South Gyle (Edinburgh), are all situated right at the edge of their associated conurbations, each also close to major roads or motorways. For these locations access is relatively difficult unless by car, and it seems clear that the proximity of these roads is a major reason for the parks' locations.

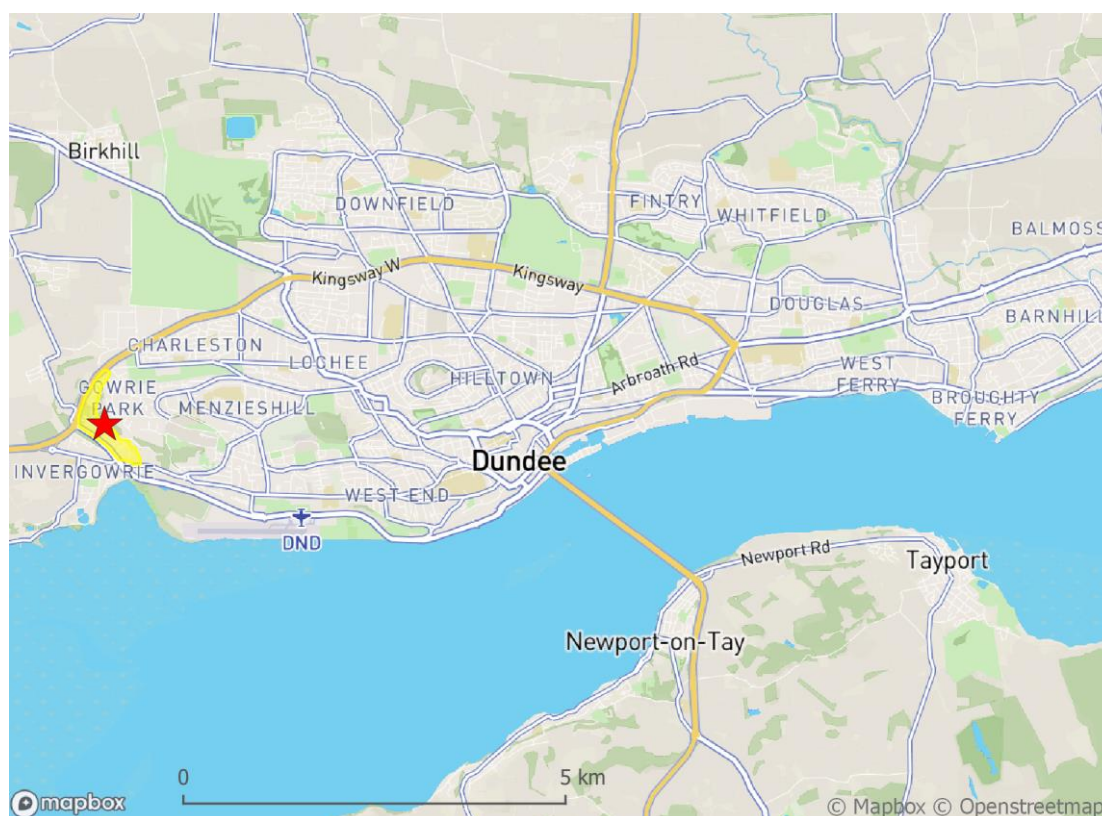
One clear issue is simply that people living on the opposite side of an urban area are a long way from a site like this. That may not be such a big problem in a city the size of Perth, where the southern boundary of the city is only around 5km from the northern boundary. However, Dundee Technology Park is on the extreme west of its locality and is thus around 15km from Monifieth at the east of that area. In theory, Castle Business Park is a relatively short distance (around 6km) from many residential areas around Stirling, but there are physical boundaries and associated road layouts which seriously limit access. These include the Castle rock, and the River Forth, and the vehicle focused A9, A84 and A811.

South Gyle is at the extreme west of Edinburgh, placing it far away from many residential areas (for example, Musselburgh in the east is around 16km away).

However, Edinburgh is a larger city, so a significant number of people live within distances which are more easily covered by pedestrians or on a bicycle.

South Gyle also differs from other sites in that it is a large enough overall site that many public transport services can be provided. It might be argued that South Gyle benefits from direct public transport links from the north and west avoiding the city centre. Overall, however access by public transport, walking or cycling – is poor in comparison to access by car.

In comparison, the office properties we studied on Lothian Road in Edinburgh were much more easily accessible on foot, by bicycle, and by a wide variety of public transport services. The properties are located in the centre of Edinburgh, and a large proportion of the city's population lives within 5km. However, we also understand that a key difference here is that there is limited access by (and parking for) private cars.



Dundee Technology Park location

We noted that Aberdeen Innovation Park and West of Scotland Science Park in Glasgow are not at the extreme edges of these cities. However, neither park is near their respective city centres, and both are served primarily by larger vehicle-movement focused roads.

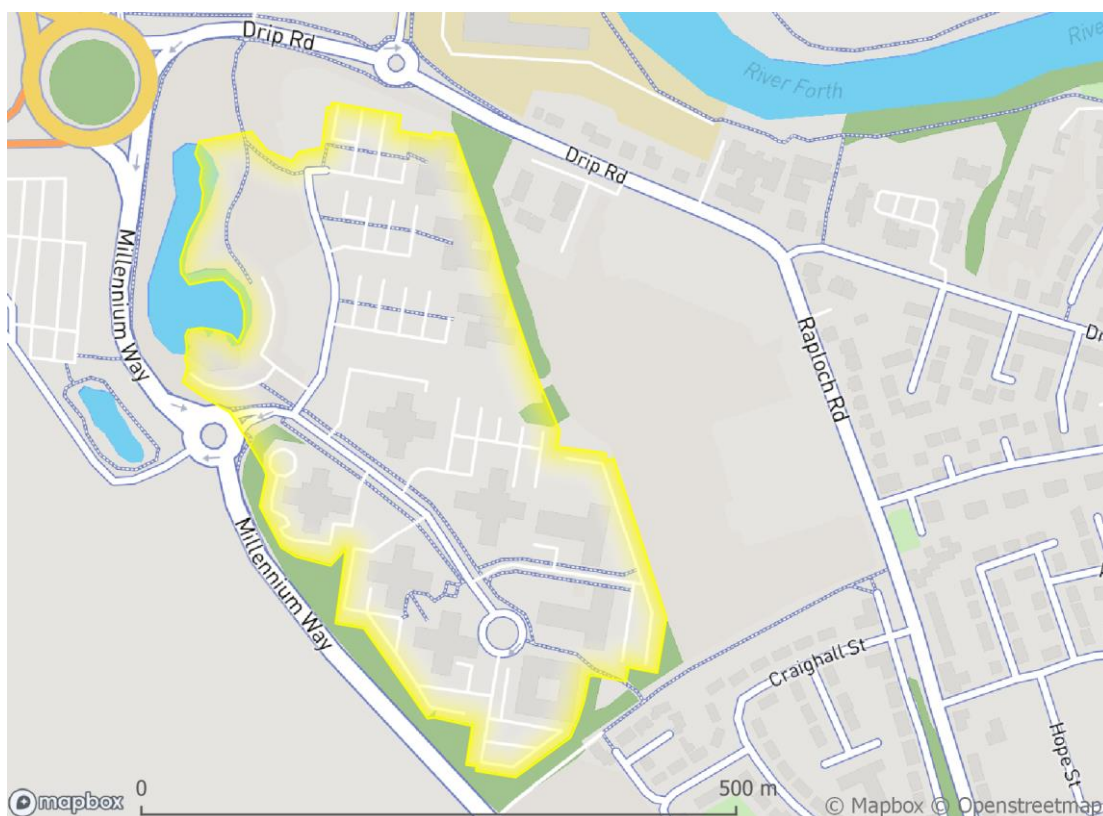
Site design focused toward major roads

The business parks we studied mostly seemed to have been designed on an assumption that those visiting would be doing so by car. While pedestrian access and access by bicycle was always possible (even, in theory, to Strathclyde Business Park) it felt like this was provided as an afterthought or token gesture in terms of the street and path layout.

In general, the business parks we studied were designed so that their access roads focused on connections to much larger vehicle-focused roads, and not to ordinary city streets. Their main connections were often onto roads quite separate from the urban body. It could be said that in design terms the parks seem to face these major roads and to turn their back on any more human-scale streets or areas nearby.

This contradicts the Government's aspirations for design and place.

Strathclyde Business Park is designed around the A725, which effectively functions as a motorway / expressway. The main entrance to Dundee Technology Park is from the A85 (Riverside Drive), which is effectively here a stretch of urban bypass road. The main entrance to Castle Business Park is from the A84 (Millennium Way), also working here as a stretch of urban bypass for Stirling.

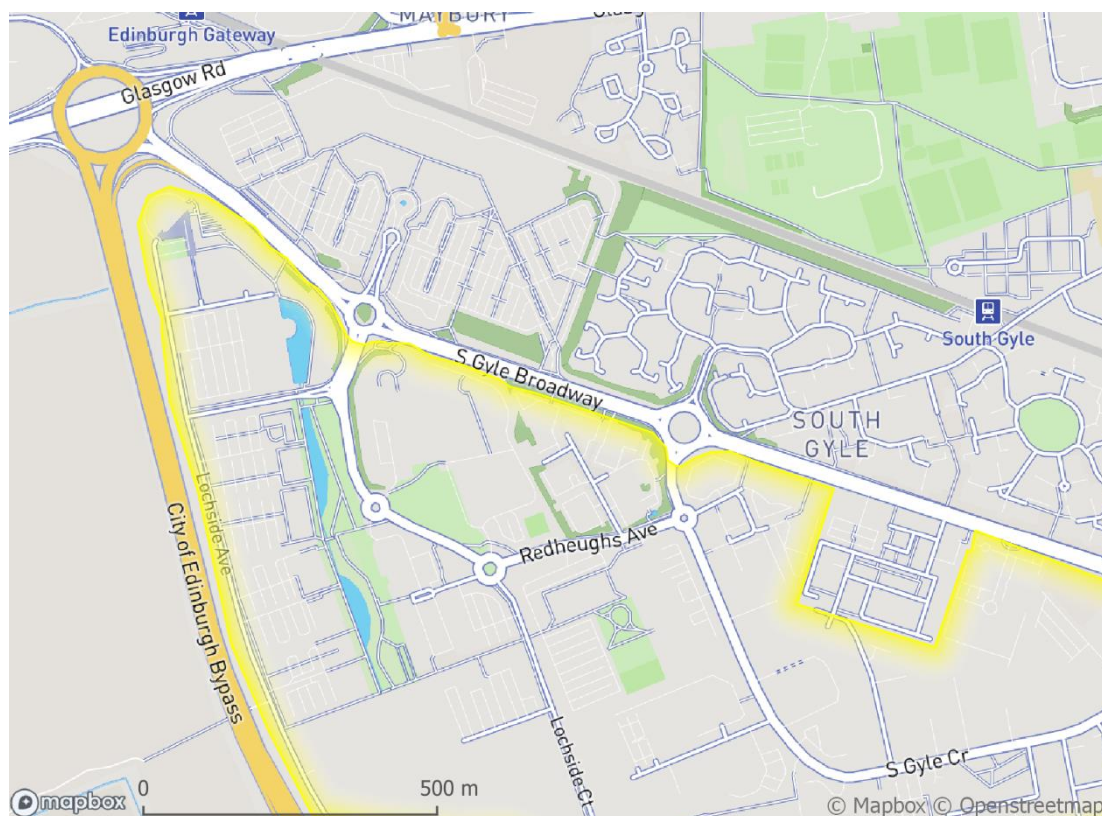


Castle Business Park, entrance and road layout focused on A84

West of Scotland Science Park and Aberdeen Innovation Park face onto roads with a slightly more urban character, but problems remain. The roads are still very clearly focused on vehicle capacity, speed and flow at the expense of other functions. For

West of Scotland Science Park, the A81, Maryhill Road, is at this point a dual carriageway, and the entrance to the park is from a two-lane roundabout. The A81 also connects to a major gyratory junction 1km northwest. Balgownie Road in Aberdeen is smaller, but there are few properties facing onto it – this is a flow-focused road designed for vehicle movement, not an ordinary city street. The entrances to the Campus Two and Campus Three sections of the park are from an even more isolated road.

In each of these cases the business parks can be accessed by pedestrians and people cycling by using paths through woodland or green space, or in between buildings. These seem effectively to be back entrances. Access can be on a convoluted route, and away from any desire line, which gives the strong impression that this type of access is not a priority. One result is that walking and cycling by these routes feels to be something unusual, and we think this has a discouraging effect. But perhaps the most powerful effect of this situation is that access for pedestrians becomes unwelcoming for many people after dark.



South Gyle – area access road as dual carriageway, entrance at bypass

South Gyle effectively has its own dual-carriageway access road running along the edge of the area, servicing the internal access roads, connected to these at large roundabout junctions. This is directly connected to the A8 and the city bypass, which in turn connects to the end of the M8 motorway nearby. Close by, in Corstorphine, the A8 has been flagged as being one of the most polluted streets in all of Scotland. The internal access roads themselves are built so that many of the junctions between them utilise large roundabouts. Despite the proximity of public transport options it is difficult to access the site without needing to negotiate these roads.

South Gyle differed from the other areas in terms of public transport access, and the more welcoming pedestrian-focused design which exists on one part of the “Edinburgh Park” part of the site. While these things were encouraging, we saw nothing else like this in the other sites we studied. There are key differences between this site and the others we looked at because it is based in Scotland’s capital, in a larger more compact city, and because public transport has an unusual level of support from the city council. Also, while it is on the outskirts of Edinburgh, it is to the west, and is thus served by public transport routes toward Glasgow and much of the rest of the central belt.

Riverview Business Park in Perth is quite different to the other parks in many ways. It is accessed from what is really an inner-urban industrial access road – perhaps matching the fact that this feels to be more of an industrial estate than a business park. Parts of all of the routes to the park appear to be just as unpleasant for walking and cycling as to the other parks, but fortunately the estate is only around 200m from where Friarton Road crosses the railway into a residential area. Here other route options become available, so overall access might be seen to be much more pleasant.

Had the offices in Perth been closer to the north end of Friarton Road it might have been possible that public transport to the centre of the city would have dropped workers near enough to walk the last part of their journey.

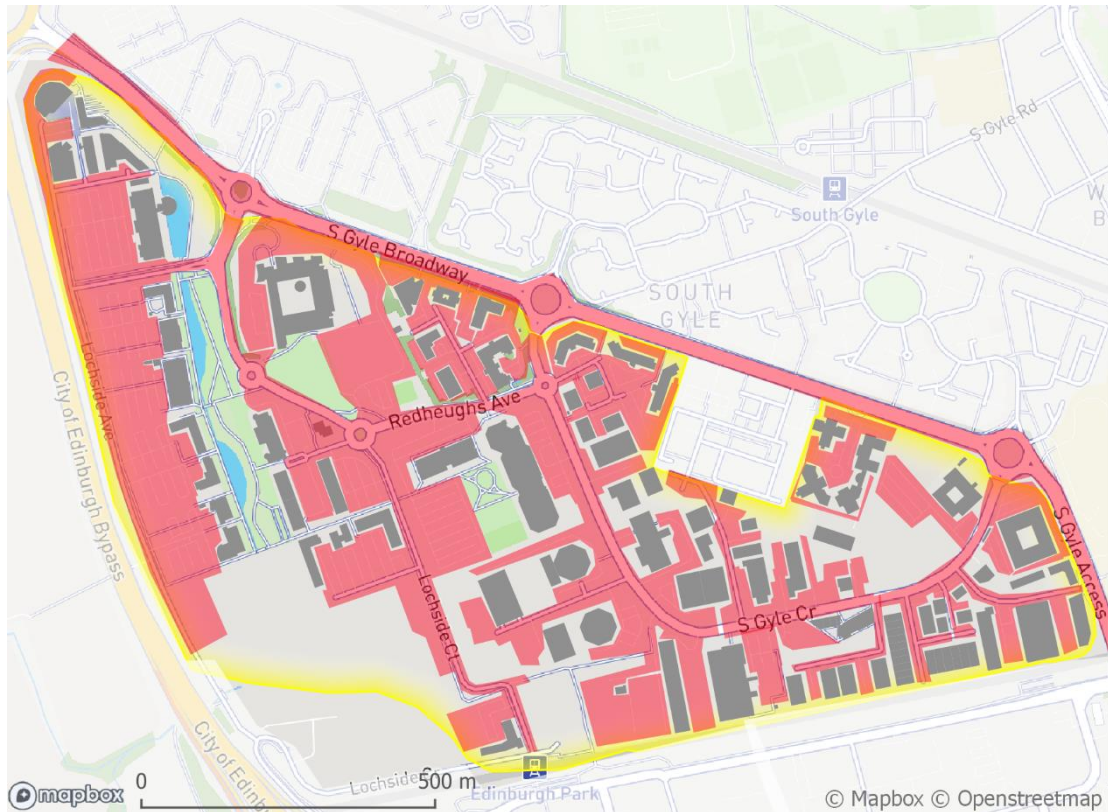


Dominance of provision for cars on site

Most of the business parks we looked at are designed to allow large numbers of cars to park on site, mostly close to the main entrance of individual office buildings. The need to traverse these car-focused areas has a powerfully negative effect for walking and cycling, emphasising that car users have been considered first.

The office buildings are generally separated from one another, surrounded by a sea of car parking spaces. There is sometimes an attempt to make the necessary space then feel open and pleasant. In many of the business parks, green space and trees surround the buildings, access roads and car parking areas, which gives the impression of an open pleasant landscape. However, benches for sitting are unusual or unknown in these spaces, highlighting that they are decorative or are provided to divide one plot of land from another. We would not characterise most of these spaces being places where people would choose to spend time.

Advertising for Edinburgh Park describes “tree-lined boulevards and beautifully landscaped surroundings” and there is some prominent public art which seeks to create a more interesting environment. Overall, these feel to have been cosmetic efforts, with the business park and surrounding South Gyle area having large uninteresting spaces for pedestrians to travel through. Given the likely vehicle flow and speed on the ‘boulevards’ they have little to offer pedestrians, despite the presence of trees alongside them. It is unlikely anybody would choose to sit in to read, have a coffee break or lunch in these spaces.



South Gyle: grey = buildings | red = vehicle orientated/dominated space (approx.)

The proportion of space given over to car parking or vehicle access in some of the business parks is very high, being several times that of the building footprint and landscaped areas. If we consider the footprint of the access roads, it becomes apparent that only a small proportion of the space of most of these business parks is being used for the offices themselves.

There were a few notable exceptions. As explained above, a small section of the Edinburgh Park business park, within South Gyle, has buildings where car parking has been relegated to the rear, meaning they face an attractive green space, which even includes seating and a tram stop. The Kelvin Campus section of the West of Scotland Science Park has residential property within it, and the winding access roads are only of a single vehicle's width. There may still be issues here with the isolation of pedestrian routes, but the environment feels to have a human scale and some human interest.

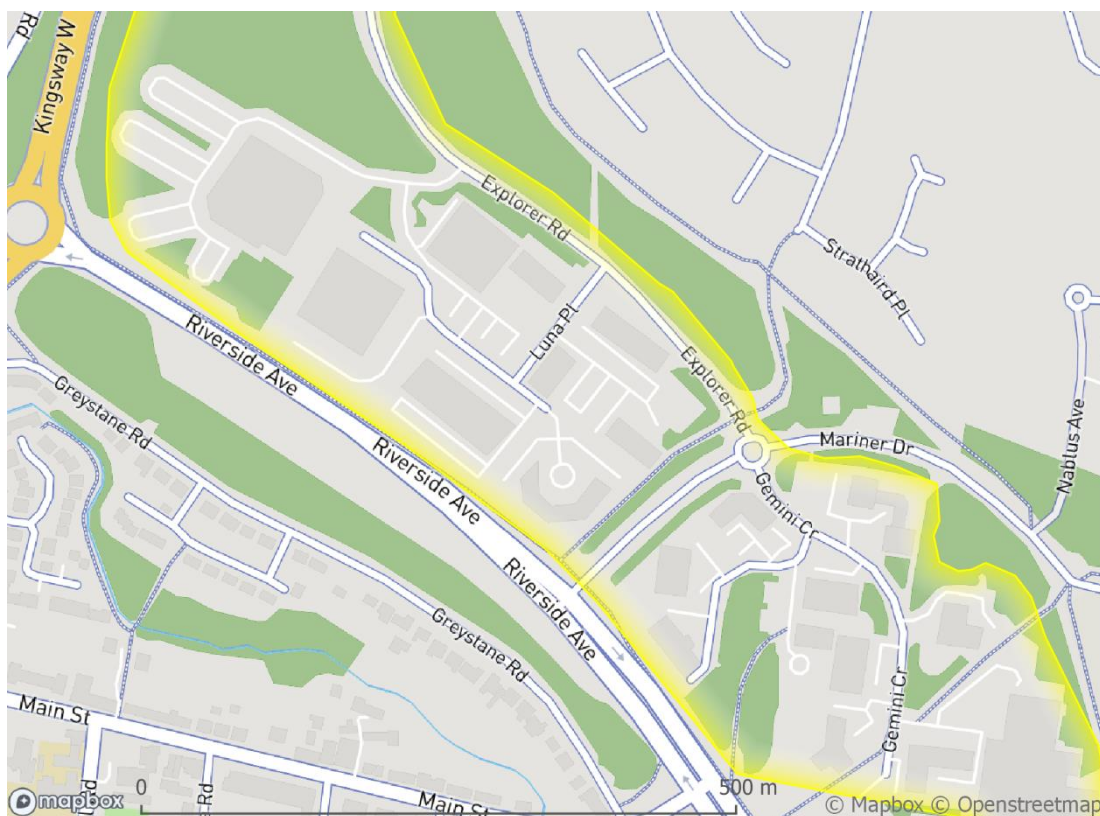
Boundaries separating parks from their surrounds



Many of these business parks are separated from the urban environment around them by clear boundaries. Sometimes this was by barriers which seem to have been designed, and sometimes barriers seem accidental – in either case they create significant obstacles for people walking and cycling.

Strathclyde Business Park has a waterway on two sides, a motorway-style road on one and a large industrial estate on the other.

West of Scotland Science Park has the River Kelvin to the north, west and south, and is also surrounded by woodland and other green spaces for sports use. The only main access into the area is along the footway of an urban dual-carriageway road.



Dundee Technology Park, woodland and dual-carriageway barriers

Castle Business Park backs onto a residential area of Stirling but with woodland and green space acting as a border between the two.

Dundee Technology Park is bordered on two sides by large bypass-style roads – one effectively cutting it off from the nearby suburb of Invergowrie. To another side is a large residential area, but it is separated from this by the estate’s access road, a border of woodland and the rear gardens and fences of a long line of residential property.

Aberdeen Innovation Park is surrounded by bands of woodland, which also separate parts of the park internally. There are paths through the woodland, but they are unwelcoming after dark and surfaces may make them unsuitable for some journeys (for example, while wearing smarter clothes).





**Aberdeen Innovation Park: dark green = border woodland
orange = streets lacking neighbouring property or bordered by the rear of property**

Significantly, the business park and close by green spaces also form something of a barrier separating the surrounding residential areas from one another. Most of the local walking and cycling routes are either on vehicle-focused roads, designed to skirt residential areas, or on roads through green spaces. Where there are properties neighbouring these roads, these generally face away from the road, with high fences or walls, and many of the roads lack neighbouring buildings entirely. Roads like this might statistically be safe to walk along, but even where they have provision for safe cycling they create uninteresting vehicle-focused environments which feel very much less welcoming after dark.

Riverview Business Park is effectively part of a much bigger industrial-estate area which can be seen to be sandwiched between the River Tay and a main railway line. Access opportunities are therefore limited and the area seems quite separate from the city.

The business park areas at South Gyle are part of a much larger commercially focused area. Barriers are less obvious because the business park areas merge into the industrially focused areas around them. However, the area as a whole is in many ways separate from the surrounding city. This is partly due to its size but also a selection of boundary features. These include a significant railway track with few crossing points – along with issues around those crossing points. On the other side of this railway is an unwelcoming industrial estate bounded further south by a dual

carriageway. To the northeast, the dual carriageway providing access for the whole site is itself a significant delineating boundary. Junctions with this and each of the smaller access roads within the area are at large roundabouts engineered to support traffic capacity, speed and flow.

At South Gyle there still feels to be potential to design a new section of the business park area, focused on Edinburgh Park station and tram stops, in such a way that they provide a main entrance to the area. The wider area is difficult or unattractive to navigate on foot and by bicycle, yet there are establishments within the general commercial area which might benefit from stronger connections to the city. Hermiston Gait retail park is particularly badly disconnected from nearby residential areas, and the Gyle Shopping Centre is very poorly connected with the large residential population to its north and east.

Cycling around South Gyle

Cycling challenges are highlighted by the state of one of the best available connections into South Gyle. South Gyle Road offers relatively quieter traffic conditions and part of it is signed as one of Edinburgh's 'Quiet Routes'. However, progress by bicycle to and from South Gyle involves hopping over a kerb on the barrier which closes the road to through traffic. Connection between the end of the road and the business park via a toucan crossing involves noticing the presence of hidden paths on either side of South Gyle Broadway.

Within the commercially focused area, any trip to and from this crossing involves the negotiation of a set of roundabouts which most people would find to be threatening environments for cycling. Coincidentally, parallel to this route and only around 500m east, a new housing estate has just been built. This is directly connected to a large roundabout on South Gyle Broadway but nonetheless some effort has been made to try to create an estate where car movement and parking does not dominate.

However the layout of this estate seems to turn its back on an established pedestrian route through the area, which it appears had the potential to provide a strong link for walking and cycling between the east end of the South Gyle commercial area and substantial areas of residential property - and quieter streets for walking and cycling - further east. It is possible to weave a route through the area, but this provides an unattractive, unobvious, inefficient and indirect option.



The future for business parks



Our observations around existing business parks point to the need to consider both changes to the existing parks, and a different approach in future. The main issues can be seen to be around location, design, and connection.

Location

Even if business parks are to continue to be located in places which remain relatively accessible from major roads then they must not be completely peripheral. For example, sites hoping to have a balanced mobility profile might need to be within 20 minutes' walk of major residential areas and no more than 30-minute cycle from the city centre. Public transport options need to be within a 15-minute walk.

We note that Aberdeen Innovation Park and West of Scotland Science Park are designed around access by car, but that they are not in such extreme locations as the other sites we looked at.

With this type of more urban location in mind we note that there are locations within Dundee which are currently used for industrial estates, and which are close to major roads, but which are also significantly closer to the heart of the city.

Design

Even if a market prioritises building new premises in locations chosen to enable access by car, there are improvements that can be made that would not so completely discourage alternative means of travel. Parks can be designed internally to be much more pleasant for walking and cycling. This will bring wider advantages in terms of physical activity during the working day and the general quality of experience of working in these places.

As we noted above, a small part of Edinburgh Park business park at South Gyle is designed so that the office buildings themselves remain close together, with parking at the rear, and a pedestrian focused environment at the front. This creates a significantly more pleasant business park and creates much more potential for other businesses to emerge – for example, bars and cafes aimed at office workers on-site (there is already a 'bar and diner' at this location). We note that this type of walkable environment can bring significant profits for businesses⁶.

⁶ Living Streets, Pedestrian Pound (2018), <https://www.livingstreets.org.uk/media/3890/pedestrian-pound-2018.pdf>

In addition to building layout there are other elements of a park's design which make a major difference to how it feels for walking and cycling. The design, for example, of the Kelvin Campus at West of Scotland Science Park, has a narrow single-carriageway access road, where it is clearly necessary that vehicles be driven slowly. This contrasts with much of what we saw elsewhere, where it seems that the design tries to support speeds of 30, 40 or 50mph (despite posted limits), and two-way steady flow, right up to and even into the car parks.

Connections

The business parks we studied are generally designed so that they are disconnected from the areas around them, with access on foot or by bicycle feeling to be only an afterthought. This is unnecessary; even if nothing else were changed, they could still have been properly connected to the local area.

It should be relatively easy to properly connect parks to the urban streets nearby, rather than only focusing on the surrounding major roads, with positive effects both for the parks themselves and on these areas.

For example, in Aberdeen, the business park development could have created more ordinary, street-like connections to the local area, instead of acting as a barrier for walking and cycling. In Dundee, new connections toward the hospital site could be created using a direct and inviting route, providing a proper entrance to the business park from this direction. Such a link could also support active travel to and from the hospital site itself. Good links into and through the area around the business park in Perth, with its riverside setting, might create further opportunities for that area. In Stirling there is currently land which could be developed, sitting between the back of the business park and the neighbouring residential area. There seems to be a huge potential here for properly linking the business park to Raploch, potentially creating other commercial opportunities in the area, and at the same time more openly providing a resource for a community which already uses it.

The West of Scotland Science Park stands out as integrating residential accommodation within the park area. This makes it much more likely that life remains in the area outside working hours.

We note that there have been proposals to include residential development around Edinburgh Park. Without care, such a development could simply create more car-dependent households who rely on their vehicles to bridge the barriers which exist between the park and the surrounding city. Alternatively an opportunity may exist to use such a development to prompt the work needed to properly bridge these gaps.

Business parks and car dependency

Our research shows that substantial amounts of office space have been built in Scottish cities in a way which means that people must either arrive by car or face substantial, and in some cases insurmountable, barriers. The majority of people who drive to business parks probably see no viable alternative to commuting by car. This



is problematic in simple terms. Many households are locked into a degree of dependence on their cars, needing to be able to reach their workplace efficiently, conveniently and reliably. But this also creates wider problems: where the needs of these car commuters are prioritised this can create difficulties for other people wanting to walk or cycle. If, then, only a minority of people cycle or walk, their needs are likely to continue to be ignored.

Efforts at a national level to encourage walking and cycling can only be effective if it is possible for people to take up these forms of transport. In practical terms, if the design of people's routes to work precludes them from walking or cycling then they are unlikely to gain from wider changes to encourage active travel – and at worst, may be alienated from messages encouraging walking and cycling. When listening to people promoting walking and cycling this group of people may feel that they are being personally criticised for something they feel they can do nothing about.

When only a minority of people will cycle or walk, calls for change will be limited.

We think that the location and design of business parks raises complex questions about travel to work in Scotland. It is understandable that companies which believe that their workforce want to commute by car will choose out-of-town sites. It is understandable that a workforce needing to reach out-of-town sites will choose to commute by car. The bigger question is why planning policy directed at supporting inner-city land use, because of the wider social benefits, has not led to this.

Can city centres compete?

Our observations of Lothian Road in Edinburgh indicate that competing inner-city sites are not without their problems. We know that traffic congestion and a lack of parking are key reasons why employees working at these sites choose to travel by other means, and that there can be some pressure on employers to provide workplaces which are easier to drive to. We know also that cycling has felt unsafe or unattractive to many, public transport has seemed unreliable, and distances have seemed too great for many to walk. COVID-19 fears around the use of public transport may now also encourage companies to favour locations employees can drive to and park beside.

At the time of writing this report, we have seen increases in the numbers of people walking and cycling. It seems clearer than ever that our streets need to be welcoming for walking and cycling to deliver lasting change. While there have been emergency measures supporting social distancing in town and city centres there has perhaps been less emphasis on supporting journeys to sites away from city centres (aside from to hospitals). If private car use is allowed to remain the most attractive option because of the infrastructure we provide then there is a real risk that business parks will win out against city-centre sites.

Looking beyond business parks

Living Streets Scotland has recently carried out a substantial piece of work investigating conditions for walking and cycling around properties managed by

housing associations and other registered social landlords. In this work we observed a host of issues common to each of the areas we reviewed. Many of the people resident in these areas may not have access to private cars or find car ownership a financial burden. However, car-orientated infrastructure in these neighbourhoods made walking and cycling, and certainly access by those with disabilities, difficult and unpleasant, and sometimes dangerous or impossible. Given the infrastructure, anyone wishing to regularly travel from or through these neighbourhoods to one of the business parks we studied shouldn't be blamed for wishing to use a private car for the purpose. For this reason, we caution looking at business parks in isolation.



Recommendations



We need political leadership both nationally and locally and conviction in existing planning policies, on top of any discussion on technical documentation or guidance, if we want to create places where more people walk and cycle to work. Existing policies seem adequate but have not been enacted locally.

Without a stronger steer on this the 'market' will continue to promote places which are focused on access by car and which as a consequence are difficult to walk and cycle to.

People who have invested in a car for other reasons will see few advantages in leaving it at home whilst using this remains the most convenient and quickest form of travel to work. People who don't own a car, but who need to work in one of these business parks will see many advantages in buying one.

Change requires strategic action, and town and city scale interventions and efforts to improve the design of places. To realise aspirations around equitable access to employment, reduced car use, lower emissions and congestion, we recommend:

Strategic action

- Active leadership which seeks to build a strong consensus across fields, professions and political viewpoints, highlighting and promoting a vision of towns and cities where car commuting isn't an expectation which underpins designs and policy.
- Planning authorities to vigorously enforce longstanding policies which aim to prevent the creation of poorly connected, out of town workplaces, where driving is the natural commuting choice.
- Future developments to be designed to be compact and mixed use, meaning it is practical to live near workplaces and that other facilities are within walking and cycling distance.
- Active enforcement of national rules, principles and guidelines about street design, which when implemented lead directly toward the creation of places which fit the vision of a travel hierarchy favouring walking, cycling and public transport before car use.
- Funding of strategic changes to existing streets in and near business parks, and across city centre office districts, as part of long-term programme, rather than ad hoc standalone projects.
- Recognition that better access to town centres by bike and public transport is vital if these areas are to compete with the appeal of edge of town sites with plentiful parking.

Projects and funding

- A programme of creating or retrofitting districts of cities and towns where the convenience of walking and cycling outweighs the convenience of driving, looking at residential and commercial areas and how they are connected.
- Engagement with the owners and tenants of existing business parks to consider a programme of measures to better connect them to nearby neighbourhoods via easy wins such as short paths, gateways, or safe linking routes across car parks.
- An attempt to address the sheer dominance of vehicles in business parks both in distribution roads, junction design, road widths and general design speed, with safer routes to traverse car parks.
- Investment in exemplars to show what is possible, and to demonstrate the alternative to car dominated environments, so these become the market standard with people wanting to live and work in places like them.
- Consider how the blunt tool of parking controls can be used in conjunction with softer measures to change behaviour focused on people trying alternatives and adapting their lifestyles.
- Prioritise putting in place bus priority measures on all main routes to places of work to reduce journey times, ensuring stops are accessible.

Designing better places

- Promote detailed design guidance which makes it easy for people to walk alongside main roads without needing to pause at side roads, and with signalised support to cross at all main junctions.
- Support plans for places that can sustain a variety of uses and local services, not just employment.
- Ensure connecting residential streets work in favour of the safety and comfort of pedestrians and people cycling.
- Mandate that cycling is supported beside main roads to major centres of employment, even if this is at the expense of carriageway or parking space.
- Make cross city centre trips by pedestrians and people cycling substantially quicker and more convenient than short journeys by private vehicle, anticipating that this will have local and wider benefits – e.g. reduced journey times to peripheral sites.

Conclusion

It is an opportune time to rethink the way we travel to work, and more generally, in Scotland. While Scotland's business parks and neighbourhoods commonly cater for driving, 2020 has seen the biggest shift in travel patterns since the end of the Second World War and new ways of working have been adopted in a matter of weeks.

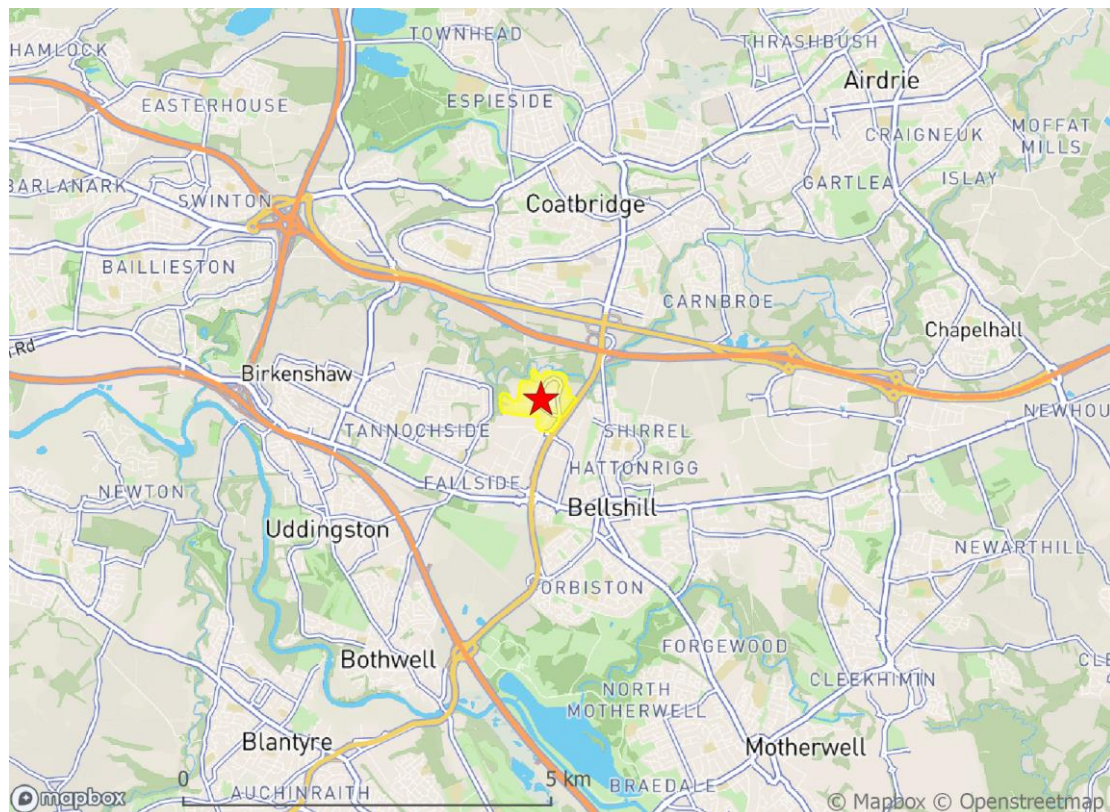
Many people who can work from home will question the rationale of spending hours out of their day on a commute to business parks and similar workplaces. Others will have taken to cycling and walking in their neighbourhoods for the first time thanks to lower levels of traffic. This opportunity must be seized: people are still invested in their cars and alternatives such as public transport will be limited for some time. This could, if pursued with vigour, finally deliver outcomes sought by the Scottish Government for sustainable, healthy communities.



Appendix

This appendix provides a two-page summary of each of the individual business park reports.

Strathclyde Business Park



Summary

Strathclyde Business Park lies in attractive landscaped grounds and has a good range of on-site amenities: two restaurants, several food outlets, a convenience store and post office, a hairdresser, a leisure club and a four-star hotel.

Unfortunately, its design is very much focused on arrival by car from the A725 and therefore from the connecting major roads and motorways. The absence of formalised crossings over the main access roads and the predominance of car parks seem likely to make it difficult or time consuming for pedestrians to move around the park.

Public transport is very limited with the nearest regular bus stops, and Bellshill Station, 2-3km away, on routes which are likely to be unwelcoming.

The points below highlight what we observe to be key strengths, weaknesses, opportunities, and threats in terms of whether cycling and walking will be commonly used for functional journeys by those working in and visiting this business park.

Strengths

1. A new network of pedestrian and cycle paths immediately to the north of the business park (built as part of the recent M8, M73 and M74 extensions) provides a good route for people cycling to the general area, at least in daylight and for those happy to undertake longer journeys, from Bailieston, the Coatbridge area and Holytown.


Weaknesses

1. The location of the business park makes it inherently unfriendly for arrival by bicycle or on foot – with or without the use of public transport, unless from the limited residential areas nearby.
2. The design of the site seems to be focused on arrival by vehicle from the A721. This might have proven to be a sound decision based on a wish to make it accessible to personnel wishing or able to travel by car. It also restricts the potential to arrive on foot or by bicycle.
3. Pedestrians will find it hard to make their way around the site, especially in busy rush hour traffic.
4. Links to public transport are poor.

Opportunities

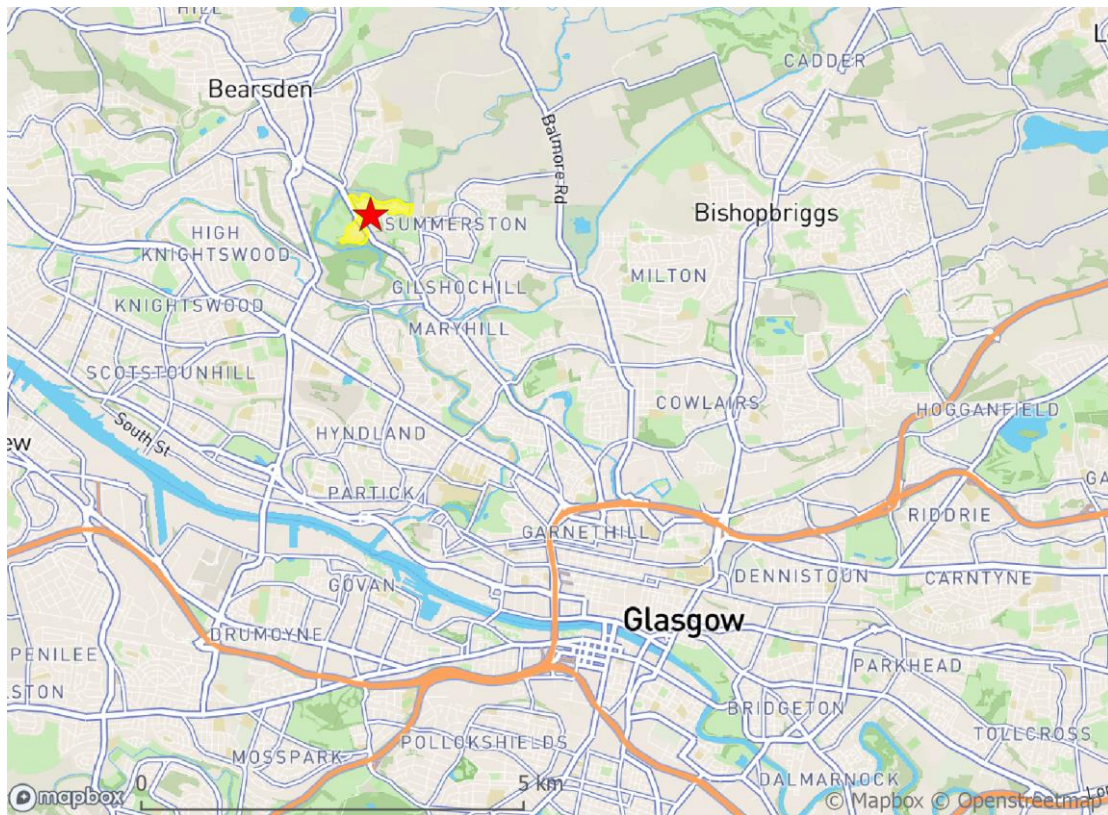
1. A new bus stop on North Road adjacent to the new cycle/pedestrian bridge over the A725 would provide business park workers with easier access to the 201 bus route.
2. It might be advantageous to create a high-quality route which could be used for walking and cycling through the heart of the business park linking to the new pedestrian and cycle entry in the north. This might connect to Starling Way (probably along the line of Pochard Way and Linnet Way, with formalised crossings over Phoenix Crescent).
3. There are residential areas close by the park and the wider industrial area to its east and west. Overall, these are cut off from the park. Connecting to them with high quality paths for use by bicycle





and for pedestrians would also link these residential areas to one another.

West of Scotland Science Park



Summary

This business park appears to be fairly well connected within an urban environment, given that it is well within the City of Glasgow. It is probably located further from the city centre than many would cycle, but there are useful public transport links. There are, however, significant local issues, the first of which is that the park is inward looking, generally being isolated from the surrounding areas by woodland. The main access is along Maryhill Road, which in being designed around a wish for traffic speed and volume is a less pleasant environment for walking (and which provides an unwelcoming environment for cycling).

Internally, there is a significant contrast between the two campuses.

Kelvin Campus feels like a village. It retains much of the parkland feel of the Garscube Estate with large mature trees and areas of woodland. The access road is narrow with significant traffic calming and there is a separate network of footways providing good access to the main entrances of each individual building. The campus feels designed for pedestrians.

Todd Campus is a greenfield site with far fewer mature trees. Access roads are wider with broad entrances into car parks. Pedestrian access to most buildings involves crossing part of a car park or walking along a roadway. Where there is

direct pedestrian access to buildings, there are often steps. The campus feels designed in the assumption that it will be accessed by car.

The Science Park has relatively good public transport links, largely a result of its urban setting.

The points below highlight what we observe to be key strengths, weaknesses, opportunities and threats – in asking whether cycling and walking will be commonly used for functional journeys by those working in and visiting this business park.

Strengths

1. Kelvin Campus feels like it is designed for pedestrians. Sharing the site with the conference centre, student residences and the sports complex ensures that there will be people there outside normal business hours making it feel safer for anyone working late.
2. There are good public transport links to the city centre and to a wide variety of residential areas.
3. Urban traffic congestion and relatively poor access to motorway network may mean that walking and cycling become more attractive modes of travel.

Weaknesses

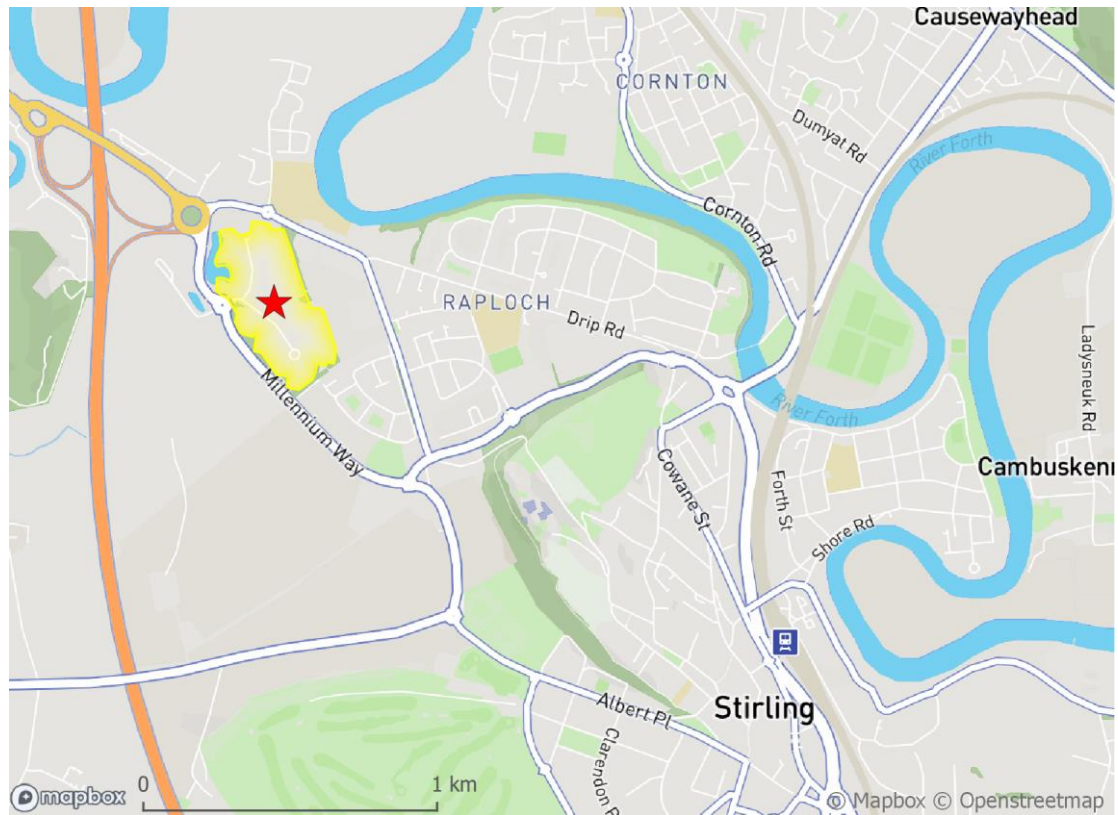
1. Many of the Todd Campus buildings are difficult to access on foot with walking along roadways, crossing areas or car park or using steps, implying that access by car is the norm.
2. Maryhill Road is an unattractive route for walking and particularly for cycling.
3. There are few facilities such as shops, cafes or a hotel on site or in the immediate area.

Opportunities

1. The footpath network on Kelvin Campus could be extended to provide pedestrian access to the Wideblue building.
2. The priority of the pedestrian paths, over vehicle use, could be very significantly strengthened on Todd Campus, probably without any significant impact on access by car, particularly at junctions along the main access road.
3. The conditions on this section of Maryhill Road appear to provide a significant barrier for journeys on foot and particularly by bicycle, between two very large sections of urban area. Improvements to the conditions for walking and cycling here might have multiple advantages, not simply improving access to the business park.



Castle Business Park



Summary

Castle Business Park lies in attractive maturing landscaped grounds immediately beneath Stirling Castle. Many of the buildings reflect aspects of the castle's architecture in their construction. The park is screened by woodland and has on-site conference facilities and a small lake.

There are reasonably good pedestrian routes within the site, but the business park generates a great deal of traffic during the rush hour. Pedestrians may find it difficult to cross access roads at these times, and people cycling may not feel safe on them. It is clear that the site is designed with a focus on arrival by car, effectively facing toward Millennium Way, and junction 10 of the M9. While access on foot and by bicycle is effectively through a less obvious back entrance, this is certainly possible.

Stirling City Centre might be about 30 minutes' walk away for many people. There are good cycle and pedestrian and cycle links to it, and reasonably good links throughout the urban area (which is surprisingly small). However, many of the links toward the city centre are defined by the presence of the major road network here.

The points below highlight what we observe to be key strengths, weaknesses, opportunities and threats – in asking whether cycling and walking will be commonly used for functional journeys by those working in and visiting this business park.

Strengths

1. There is a good network of pedestrian footways within the park. They are well surfaced and provide safe access to the front doors of all the main buildings.
2. The parkland and the Riverhouse Restaurant bring outsiders on to the business park site at times when it might otherwise feel isolated and consequently unsafe.
3. The park is within a distance of the city centre and much of the north which many people would likely be able to cycle or walk within reasonable commuting times.

Weaknesses

1. Because the park is built at the edge of Stirling, access from the significant proportion of the city which is to the south of the centre is more distant than many would seem likely to want to walk or cycle regularly.
2. The park is designed with a focus on arrival by car. Entrances for those on foot or cycling are significantly less welcoming.
3. The main access road in the business park is likely to be difficult for pedestrians to cross in rush hour traffic and to feel unsafe for people cycling.
4. Routes toward the area of the park from the centre of the city, on foot and by bicycle, are defined by the presence of major traffic-movement orientated roads.

Opportunities

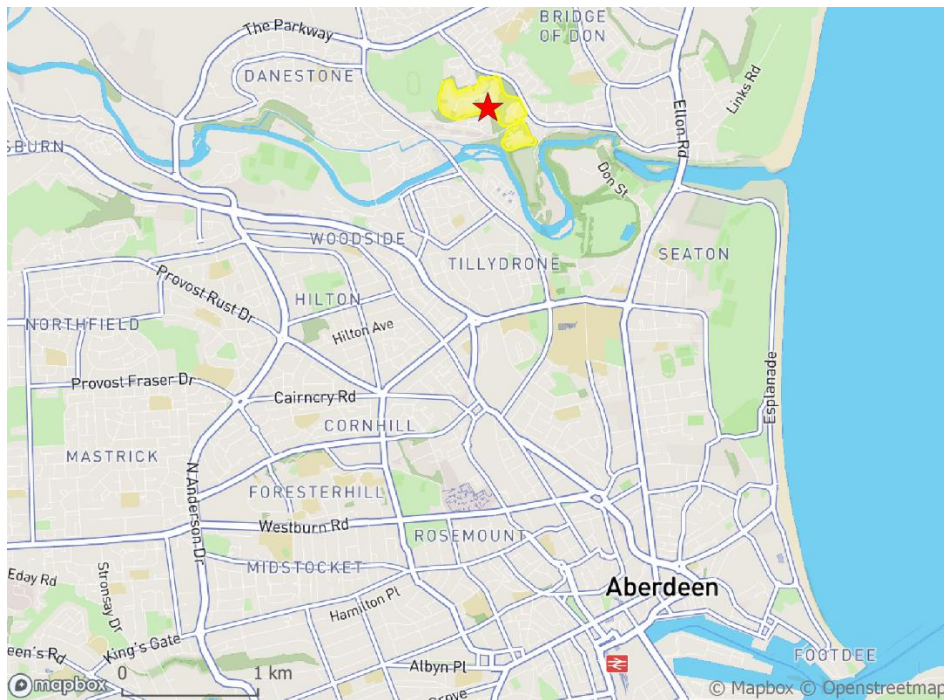
1. Development in the area could provide opportunities to improve links which can be used by bicycle and on foot from key residential roads and areas, making these feel more to be main entrances to the park.
2. A footbridge over River Forth could provide a shorter pedestrian/cycle route to Bridge of Allan and Dunblane.
3. Development in the area may lead to increases in public transport services.

Threats

1. If a new road bridge is built over the River Forth and significant phase 2 business park development takes place then increases in traffic levels may make walking and cycling (and potentially bus travel) less attractive.



Aberdeen Innovation Park



Summary

This business park is clearly sited well within the boundaries of the city, rather than sitting beside a motorway junction at the edge of an urban area.

Conditions within the park for pedestrians are generally good. There are some areas where pedestrians are expected to make their way across space designed for vehicle use. This may make arrival by car feel to be the more 'normal' behaviour, with valued visitors or more senior staff expected to arrive this way. Carriageways are narrow and clearly designed for slow speed use only by small vehicles. Street lighting is present in the developed areas of the park but not along the numerous footways that run through woodland, probably making these less desirable routes after dark.

The park seems disconnected from its surrounding environment. Nothing supports through journeys by pedestrians or by bicycle. Conditions just outside the park boundary are relatively unwelcoming for pedestrians, with roads in any direction being designed around vehicle use, with housing absent or presenting its rear aspect.

The natural environment in the park is attractive and routes for pedestrians and people cycling might feel less isolated had it been possible to create conditions supporting the general public to use them. The biggest questions which arise are about the general navigability of the surrounding area on foot and by bicycle, and the frequency and convenience of public transport links.

The points below highlight what we observe to be key strengths, weaknesses, opportunities and threats – in asking whether cycling and walking will be commonly used for functional journeys by those working in and visiting this business park.

Strengths

1. The natural environment of the park is attractive.
2. The location is close to large residential areas well within the urban boundary.
3. Access carriageways are generally narrow and designed for slow speed use by small vehicles.
4. There are public transport links to the city centre.
5. There is some support for cycling nearby, which may also help to make paths, which would otherwise be isolated, busier and more welcoming for people walking.

Weaknesses

1. Some routes for pedestrians within the park are poorly signposted and are isolated, and some require use of areas built for vehicles (including car parks).
2. The park is built in such a way that it is isolated from the surrounding areas, accessed only by workers with a need to be there, rather than being connected to them. The result is a powerful disconnection for pedestrian use, and arrival by car probably feels to be the more expected behaviour.
3. The general urban environment immediately outside the park (rather than in the wider residential areas) is relatively unwelcoming for use by pedestrians and people cycling.

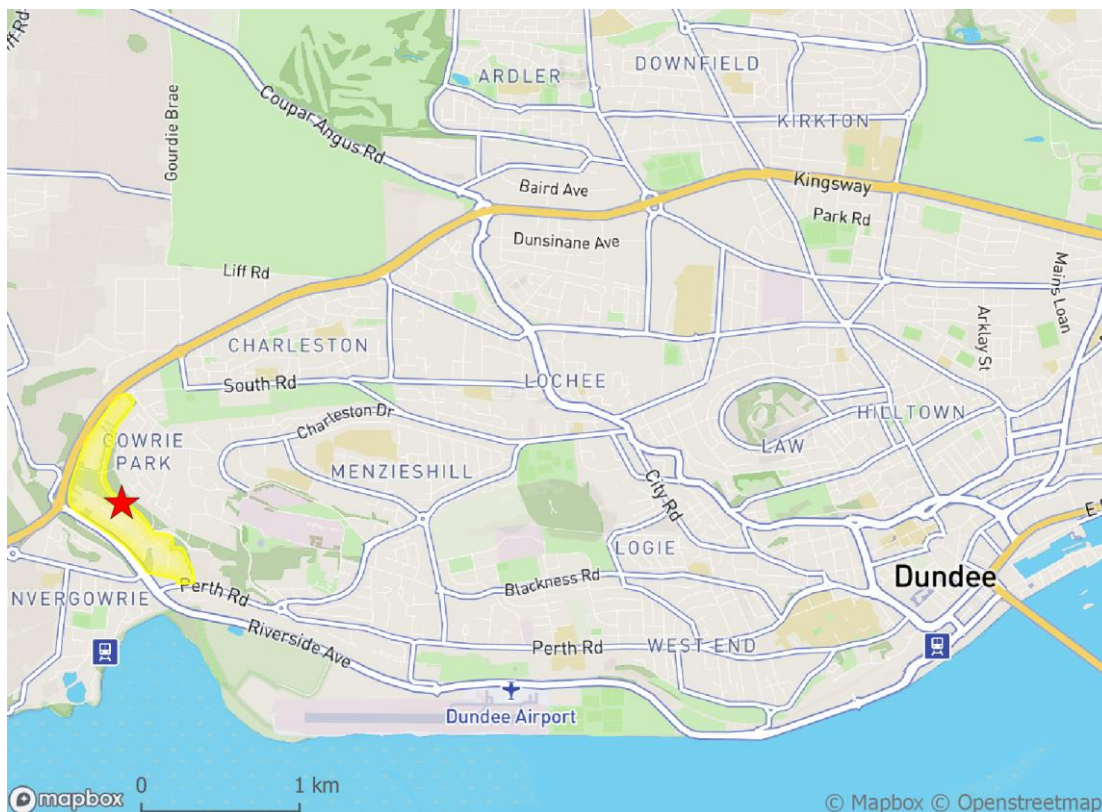
Opportunities

1. Current usage permits restrict use of the park but its owners submitted a Development Bid to Aberdeen City Council in May 2018 to be included in the Aberdeen City Council's Local Development Plan 2022. The bid seeks to expand the uses permitted within the park so that those not working in the park could use the facilities.
2. Further planning bids have been submitted for the land formerly occupied by the University of Aberdeen, which sits north-west of the Innovation Park. Any development granted for these areas should seek to encourage passage through the area (including this business park) by people on foot and cycling. It is important that any increased connections are designed to feel like main routes, even if not open to motor vehicles, overlooked from buildings and providing direct passage in more public areas, rather than being back routes through wooded areas only welcoming in daylight.

Threats

1. Any economic downturn which increases building vacancies in the park may lead to a sense that some areas of the park are abandoned, making them feel even more isolated for those walking and cycling.

Dundee Technology Park



Summary

Dundee Technology Park is a large business area with a wide range of office settings to suit a variety of businesses.

The key issue, in respect of walking and cycling, is the location of the business park. The centre of Dundee is well outside of a normal walking distance for commuting purposes. Daily journeys by bicycle over this distance are certainly feasible if in pleasant, relaxed conditions, but routes providing such conditions are unobvious or absent. The most obvious route for cycling bypasses most of the city and is not well connected to it at all. Journeys from more northern and eastern parts of Dundee (or surrounding towns) are even longer.

The park's access road system is focused on access by car from Riverside Drive. While routes usable by bicycle and on foot exist, at least in daylight, they were clearly not the focus of those who designed the site. Overall, we feel that the site is designed and sited in the way it is because car use is assumed to be the primary mode of transport for staff and visitors.



The points below highlight what we observe to be key strengths, weaknesses, opportunities and threats – in asking whether cycling and walking will be commonly used for functional journeys by those working in and visiting this business park.

Strengths

1. The proximity of Invergowrie, with facilities and a rail station, is a strength.
2. There are bus routes from nearby, and through the park, to the city centre.
3. There are residential locations near the park which would be more easily accessed by bicycle and on foot than by private vehicle.

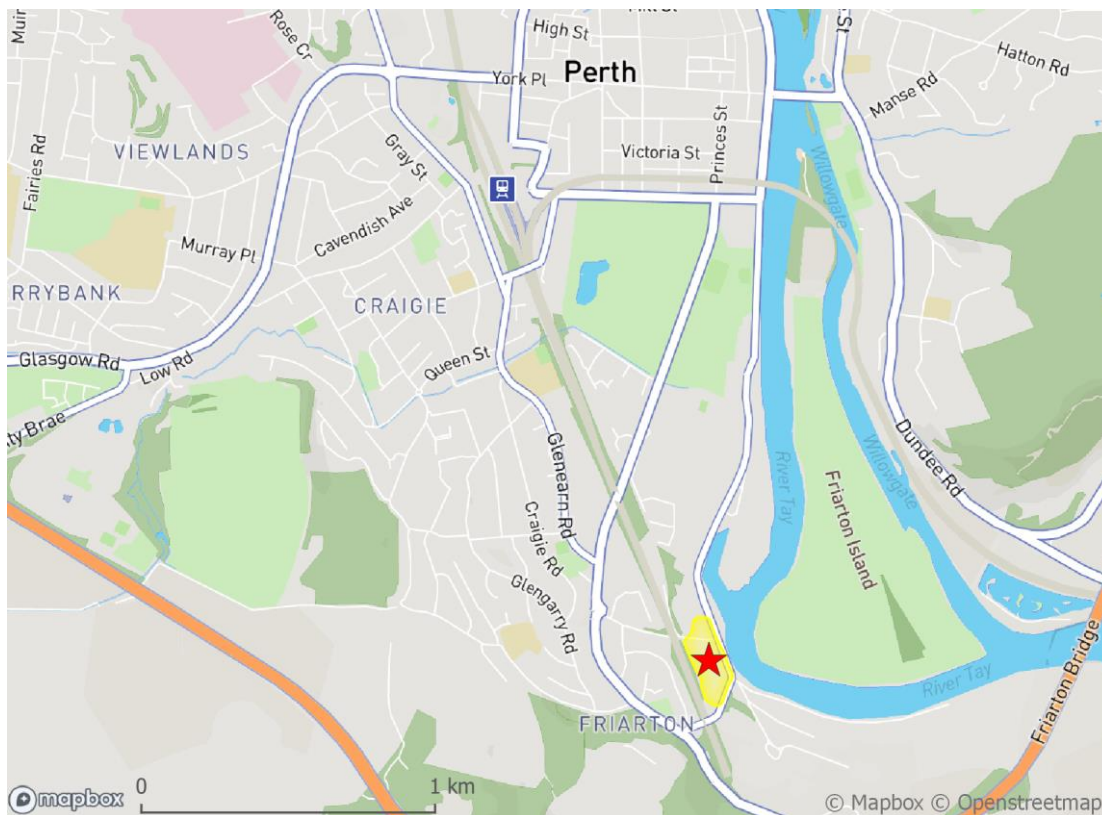
Weaknesses

1. The park is on the extreme western edge of Dundee. The other large non-residential areas beside it mean that comparatively few people live within more ordinary cycling and walking distances, and that even the city centre is beyond what many would consider to be an acceptable cycling distance (for relaxed daily journeys).
2. There are few facilities available on-site for employees working within the park, and journeys to those nearby may be significantly easier using a private vehicle.
3. Locally the park is isolated from areas on all sides nearby, and it has clearly been designed around an assumption that most visitors and workers are arriving by private vehicle from Riverside Avenue, with opportunities lost to provide high quality connection for those walking and cycling.

Opportunities

1. Improvements to the rail service to Invergowrie, if accompanied by small but significant improvements to the walking route between the park and the station, could substantially increase public transport access.
2. With the cooperation of the relevant agencies, routes through Ninewells Hospital could be radically improved for people cycling or walking with comparatively minor physical changes. This might have wider benefits.
3. Development of this general area may continue. There may be big opportunities to put pedestrian and bicycle access at the heart of new development, overlooked by properties, providing more pleasant access between buildings and therefore increasing the future flexibility of the site. With such development also comes the possibility that a broader mix of uses might allow for closer connection between the business park and residential areas to the north and east – to the benefit of both. For this to be successful it must be understood that development should provide an environment focused on movement on foot or by bicycle, with access by car working around the resulting requirements. We would highlight that such design may create a more commercially successful business park, where workers can easily access basic facilities on or close to the site.

Riverview Business Park, Friarton Road, Perth



Summary

It is debatable whether this mixed-use area should be described as a business park, however its office building does provide accommodation for more than one business and an assessment in line with this project feels appropriate. This mix of uses actually reflects a common situation seen at other locations, which is that office based 'business park' activity and industrially focused 'industrial estate' activity are sited beside each other. At Riverview, both uses are managed by one agency but in other areas separate agencies are involved.

Although this location is at the southern edge of Perth it has the advantage of being at a distance from the centre of Perth which many could walk, and at a distance from much of Perth which many could cycle. However, locally conditions for walking are unwelcoming and conditions for cycling seem well below what would be required to encourage most people to choose to do so.

The effect of these conditions should not be underestimated, although they may seem relatively minor to people who live locally. Because of the presence of north-south routes through residential areas to the west of Edinburgh Road and the railway, it may be that access to this park on foot and by bicycle is, overall, fairly good.



The points below highlight what we observe to be key strengths, weaknesses, opportunities and threats – in asking whether cycling and walking will be commonly used for functional journeys by those working in and visiting this business park.

Strengths

1. This business park is only around 2km from the centre of Perth, and most of the built-up area is within 5km radius.
2. There is a band of residential property stretching continuously between this general area and the city centre, and then further north. There are a range of roads in the area which support relatively direct routes through this area. Such areas provide significantly more interesting environments for walking, and there is the potential for them to provide safe routes for cycling.

Weaknesses

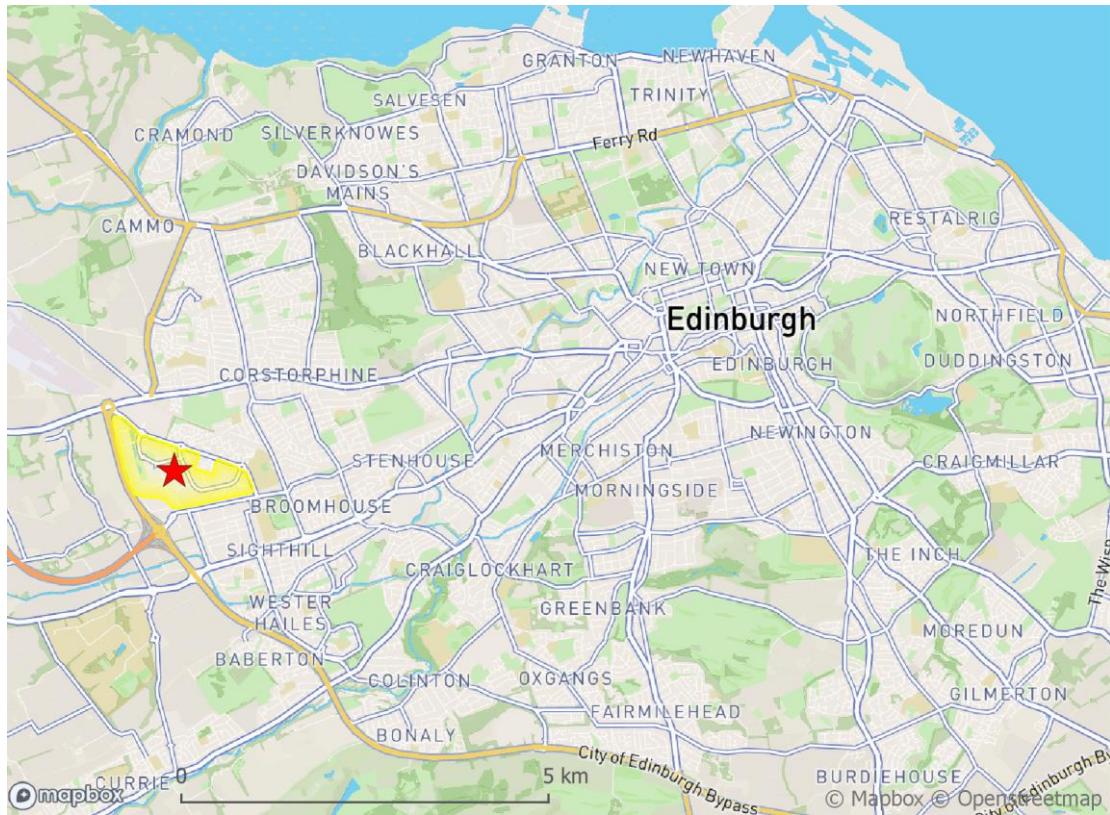
1. Conditions for walking and cycling locally, and on Friarton Road in particular, are an important issue. The industrial nature of the area, emphasised by the industrial nature of most of the buildings with the business park itself, provides for an area dominated by vehicles, some of which are heavy.
2. Despite the riverside location, this is a utilitarian environment lacking any more aesthetically pleasing or green space.
3. The National Cycle Network route, at its closest point to the business park (only around 300m), looks to be very difficult to access – using a narrow shared footway (i.e. pavement) beside a wide section of road, with full height kerbs. The wish to keep traffic flowing here means that a right turning lane has been provided (into Friarton Road) at the expense of footway width. It seems questionable whether two bicycle users could safely pass each other here. There is no obvious means to legally and safely access this section of route from the junction with Friarton Road – other than on foot, walking perhaps for some substantial distance while seeking safe conditions to cross what is the main access road to Perth from the south and junction 10 of the M90. An unobvious route through a local park significantly improves matters but will not be obvious to most people.

Opportunities

1. The numerous empty buildings and low density land use along Friarton Road (and Shore Road further north) may offer an opportunity to redefine the character of this area of the riverside, perhaps allowing for more industrial use and welcoming access on foot and by bicycle. The Perth Local Development Plan has identified the riverside areas of Perth as opportunities for development and improved conditions for walking and cycling.



South Gyle



Summary

South Gyle is easily accessible by car, being situated close to two major motorways and being bounded by other main arterial road routes. It seems clear that it was designed with ease of access by car in mind. The road connections to the wider area are significant, the internal roads are wide and designed for flow, capacity and speed and there are very significant areas dedicated to parking – creating large distances between buildings with little of human interest.

The area is well served by public transport from the centre of Edinburgh. There are also some good public transport links from outside of Edinburgh. The presence of a bus and tram stops and a number of nearby stations helps with journeys by public transport as it may not be necessary for many to walk to the edge of the area.

Some of the area, particularly around Edinburgh Park business park where buildings are much denser, would offer a pleasant walk as part of a commute but it is unlikely anyone would visit here to just walk.

The key issue for walking and cycling based journeys is that South Gyle is on the western extremity of Edinburgh, making for long journeys unless resident in the west of the city.

The points below highlight what we observe to be key strengths, weaknesses, opportunities and threats – in asking whether cycling and walking will be commonly used for functional journeys by those working in and visiting this business park.

Strengths

1. Public transport links are strong. There are four tram stops, a wide range of bus routes with stops throughout the area, and several nearby stations. Because of the significance of the area these don't only serve journeys to and from the city centre, but also from more wide-ranging origins.
2. There is a relatively high-quality route for cycling alongside Bankhead Drive, providing a direct route to and from the general area of the city centre. Without needing to cross or use any arterial roads it is possible to connect to Edinburgh's 'North Edinburgh Path Network' traffic-free paths.
3. The design of buildings to the west of Lochside Crescent, their proximity to one another, the placing of parking at what can be seen as the rear of the buildings, and the landscaping here, creates an environment where walking routes are more overlooked, shorter, and where walking feels normal. This pedestrian-focused design was not seen elsewhere in our research.

Weaknesses

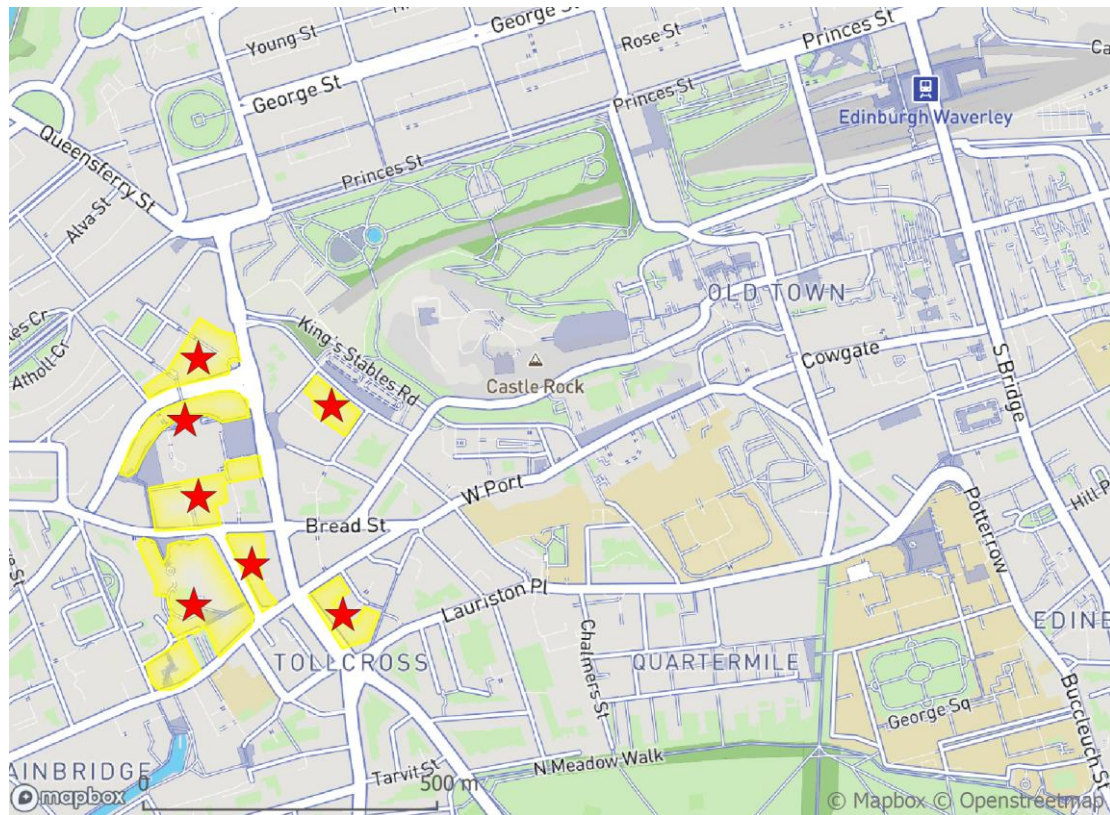
1. The location of the business area means that journeys to much of Edinburgh are much greater than many would find easy for daily journeys on foot or bike.
2. The area provides conditions which few people would consider acceptable to cycle, although some of the paths may make certain journeys easier.
3. The size of the general non-residential area, and the lack of density of the business park areas which arise from design for private car access/parking, is an issue. Journeys on foot to and from some public transport options may be relatively lengthy because of this.
4. This commercially orientated area brings together buildings which will generally only be used in working hours. Journeys on foot and by bicycle would case feel relatively isolated at quieter times after dark. The lack of any active users of the area outside working hours increases this issue. This also may mean the area acts as a barrier for wider journeys on foot or bicycle – although being at the edge of the city means this issue is not so significant.

Opportunities

1. The open nature of the area and wide carriageway space offers opportunities for supporting cycling in dedicated space.
2. There is a future phase of development proposed for Edinburgh Park, which could include up to 1,800 residential units in a mix of private and affordable housing. With careful design it might be possible to ensure that some streets maintain a sense of human life outside working hours, with some effect on the existing areas.



Lothian Road, Edinburgh



Summary

Unlike the business parks we studied, here we are considering a set of larger office premises within the centre of Edinburgh. We have focused on these because together they might be seen to create an office quarter – a part of the city centre which to some extent can be seen to provide an equivalent to the out of town 'business park'. The area has a wide range of uses, thus in other ways also providing a contrast to the business parks we have studied elsewhere.

We have existing knowledge of this area based on a previous piece of work with workers from one of the larger office buildings in this area. We also have personal knowledge of the area.

The city centre location of these offices and excellent public transport links, combined with a low number of parking spaces, clearly encourage commuting journeys in which walking plays a part. A very important additional factor, which may be the determining factor in high levels of walking and public transport use, is that arrival by car is challenging.

In our previous work in this area we concluded that for many workers travel time was the overriding factor in choice of transport mode, with many expressing the idea that an out of town site to which they could drive might be preferable.

In this same work it was found that in that particular office, which had a large number of staff, despite the availability of a room for bicycles, showers and for drying equipment, only a few employees cycled to work. In general, the centre of Edinburgh lacks any infrastructure protecting those on bicycles from vehicles – with the paths which do exist in the area very well used.

We found that there was plenty of criticism of the experience of walking here due to crowds, darkness at night and in winter, and the time walking within the city centre adding time to a commute.

The points below highlight what we observe to be key strengths, weaknesses, opportunities and threats – in asking whether cycling and walking will be commonly used for functional journeys by those working in and visiting this business park.

Strengths

1. This area is easily accessible by public transport, and in particular by bus or tram, from a large catchment area.
2. Walking routes are almost all busy, overlooked from buildings. There is plenty of human interest to make walking journeys more interesting.
3. Haymarket and Edinburgh Waverley stations are within a fairly easy walking distance for most people, as is Edinburgh Bus Station (which provides inter-urban links).

Weaknesses

1. The area is generally without any specific support cycling (although the pedestrian route to the Union Canal makes some journeys much safer).
2. Pavements can become busy, particularly around bus stops. Vehicle movement has clearly been prioritised over pedestrian experience in this area.

Opportunities

1. Lothian Road, in particular, has many traffic lanes, despite being within the very centre of Edinburgh. If, as in most cities, traffic is to be discouraged from passing through the very centre of Edinburgh this very wide carriageway has plenty of space to better support both walking and cycling.
2. Edinburgh's work to better prioritise walking and cycling within the city centre might significantly improve the pedestrian experience here.

Threats

1. One potential outcome from the current COVID-19 crisis is a significant increase in the demand for space for driving, and a significant decrease in the use of public transport. Such a change might further erode the quality of experience while walking or cycling here.

