

# (Y)OUR UPDATED MOBILITY



DRAFT



# Current: inefficient mobility system

## Analysis mobility system

The M8 motorway cuts through the district, separating Anderston from Blythswood Hill and the Central Business District. Routes south to the River have been disrupted by the Clydeside Expressway, Junction 19 and the former Anderston Centre. Most consultees highlighted the pronounced negative impact of this road infrastructure on the area. Improving better east-west connections is crucial.

Many consultees recognised the accessibility of the area by public transport. However it was also acknowledged by many consultees that the quality of the passenger experience is poor and needs improved. Buses are concentrated along busy, noisy routes whilst the two low level stations are both very unwelcoming and difficult to access.

Many cited the poor quality of the pedestrian experience and disjointed cycle network (despite recent welcome investment in the area). The car dominated streets and hilly topography results in challenging pedestrian environments and cycle routes.

Better enforcement and regulation of car traffic coupled with the redevelopment of pedestrian and bike network was sought by many to create a more active, convivial business district.

Stations are hindered, and surrounded by poor quality public space

Disrupting M8 motorway erased previous links

Car dominated city grid

Clydeside Expressway severs links to riverfront

Urban grid disrupted by former Anderston Centre and big hotels

Large underdeveloped spaces used as car parks

- Busy car road
- Calm car road
- Missing link
- Pedestrianised area
- Bus route
- Subway station
- Train station
- Parking garage
- Overground car park



## Current: disrupted traffic network Analysis mobility system





# (Y)our updated mobility Overview mobility projects

- Major mobility improvements include:
- Reduced allocation of space for cars in the city street grid.
  - Create hierarchy of street functions in 'tartan' street grid.
  - This frees up space in key streets by allowing local car traffic only (eg. West George St).
  - Enhanced pedestrian and cycle priority routes and streets.
  - Create efficient edge of city centre car parking along M8 corridor, combined with consolidated on-street parking.
  - Updated stations and surrounding areas at Charing Cross and Anderston Stations.
  - Smarter, more comfortable and cleaner bus system.

Updated stations and surroundings

Avenue enhancements on Sauchiehall Street, Argyle Street and St Vincent Street

Improved pedestrian network

Better bike network and facilities

Updated Station and surroundings

Repair broken links and create shortcuts

City parking

- Important buildings for mobility system
- Pedestrian link
- Bus corridor
- Boundary between car zone, blocking through traffic
- Big city car parks
- Car road
- Shared space



# (Y)our updated mobility

## Bigger context: shift to more sustainable mobility

Glasgow needs to shift away from its strong dependency on cars. Cars use space inefficiently, they pollute and make streets unattractive and unsafe. The city of Glasgow has three great assets:

- The rail and subway infrastructure is a legacy of Glasgow's Victorian Heritage when the city had almost twice the number of inhabitants
- Most streets are wide so there is enough space to introduce lanes for cyclists and widen footways.
- A range of options will be explored as part of the City Centre Motorway Strategy, including those related to overall connectivity and accommodation of local and regional traffic across the M8 and M74-M73 corridors. However, any proposals would need to be tested and aligned with regional strategy and agreed with Transport Scotland.
- Glasgow should use these three assets to change its 'modal split' to more sustainable modes of transport. By intelligently moving the car to the periphery of the city centre, and by creating a seamlessly integrated public transport and cycle network, the city will become more attractive, more liveable and it will attract new investments.

- Probably the most important project of all: Work on a new ambitious transport strategy for the City of Glasgow that considers all modes of transport needs to be started as soon as possible
- A shift to more sustainable modes of transport is instrumental to make the city more liveable.

Cars are like water. If you reduce capacity in one spot they will flow via another route. That is why car circulation should only be considered at a city and regional level. Work on a new ambitious transport strategy for the City of Glasgow that considers all modes of transport needs to be started as soon as possible. Re-thinking/ coordination of the bus system is crucial. Intense collaboration with Transport Scotland and other national agencies is crucial.

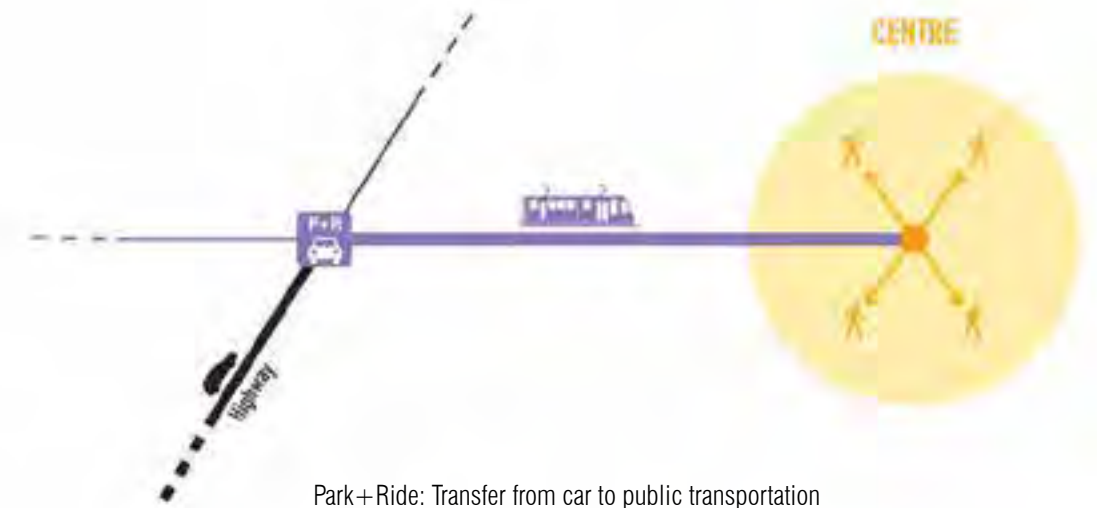
Location: Glasgow city region.



Downgrading of High St through the implementation of wider car loop

MEASURES CAN ONLY BE PROPERLY ACCESSED IN WIDER CITY CONTEXT

### Strategies for reducing car traffic in the city centre



Park+Ride: Transfer from car to public transportation



Park+Walk: Change motorist to pedestrian



Bike+Ride: Extend the reach of public transportation with the bike

# (Y)our updated mobility

## Ultra low emission zone



Once Low Emissions Zone is in place, monitor impacts and assess benefit / scope for change to achieve Ultra Low Emissions Zones targets. Many consultees referred to perceiving poor air quality in central Glasgow. Many highlighted benefit of electric only buses in city centre, and of reducing road traffic as desirable.

- Low emissions zone can help to improve air quality with limited public investment and within relatively short amount of time

Location: City centre and surroundings.





# (Y)our updated mobility

## Traffic-calmed Blythswood



A complete re-thinking of the car circulation in the city centre is needed. The city centre largely has an orthogonal grid; this makes system changes fairly simple. Historically the car circulation in the city centre was straightforward: parallel streets with alternating directions.

One proposal is to revert to that system, utilising the wider capacity across the M8 + East End Regeneration Route / Clyde Gateway. This simple change turns the city centre into a zone for local traffic only. Through-traffic is limited to some hundreds of vehicles per day. This is a system that is used in many comparable cities.

The key public spaces would form the logical divide between the zones: The 'golden Z' (Sauchiehall St, Buchanan St, Argyle St) and the river. This means that these public spaces become almost free of traffic. Crossing directly from one zone to the other will remain possible for service vehicles and buses.

- Only the cars that need to be there enter the city centre. Other cars drive around
- The reduced amount of cars increases the quality of the city centre
- These measures stimulate the city's economy rather than limiting it

Further study as integrated part of a refreshed City Centre Transport Strategy is crucial.

Location: Glasgow city region



Possible concept for the city centre circulation system

### Current situation

Key public streets are full of cars

Busy motorway cut through city fabric

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### Proposed situation

Calmed streets toward city centre

Through car traffic between zones is not allowed

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MEASURES CAN ONLY BE PROPERLY ACCESSED IN WIDER CITY CONTEXT



# (Y)our updated mobility

## Specialisation in streets (Tartan)



This project deals with a couple of challenges and opportunities:

- Glasgow's urban grid is fantastic but analysis of the streets supports the view of many stakeholders that there is a lack of variety which makes wayfinding and navigation difficult. This is compounded by the one-way system which confuses many pedestrians and drivers. There is potential for more variation and quality streets to enhance street hierarchy and assist intuitive navigation.
- The tendency to allow all users to use almost all streets undermines the potential of the grid to achieve optimal connectivity. There are cars, taxis, buses, cyclists and pedestrians in most of the streets, competing for a finite amount of space. The Glaswegian urban block is more compact than many other cities and therefore there is a higher ratio of street to building footprint, nevertheless smarter optimisation of the available street space is necessary.
- At the moment cycling, walking or commuting by bus is very unattractive. To make these modes of transport a serious alternative (over the car), routes/networks need to be faster, more intuitive, comfortable and safe.
- With the proposed reduction of car traffic in the city centre (no more through traffic, less street parking, better public transport) street space becomes abundant. You can start to think about alternative uses for the city centre streets.

- Makes a more attractive city
- Stimulates more sustainable and healthy mobility
- With the width of Glaswegian streets there is enough space available
- This project deals with the mobility aspects of the streets. See '(Y)our great streets and spaces' for the spatial aspects.

The proposal is to dedicate the freed-up space to specific users; creating streets with a particular functional profile: dedicated bus streets, cycle highways, pedestrian boulevards or just green calm neighbourhood streets. This is combined with a strict regime of continuous (straight) cycle- and bus routes from the suburbs right into the heart of the city centre. Resembling a Tartan pattern. As a result each street gets its own spatial character as well.

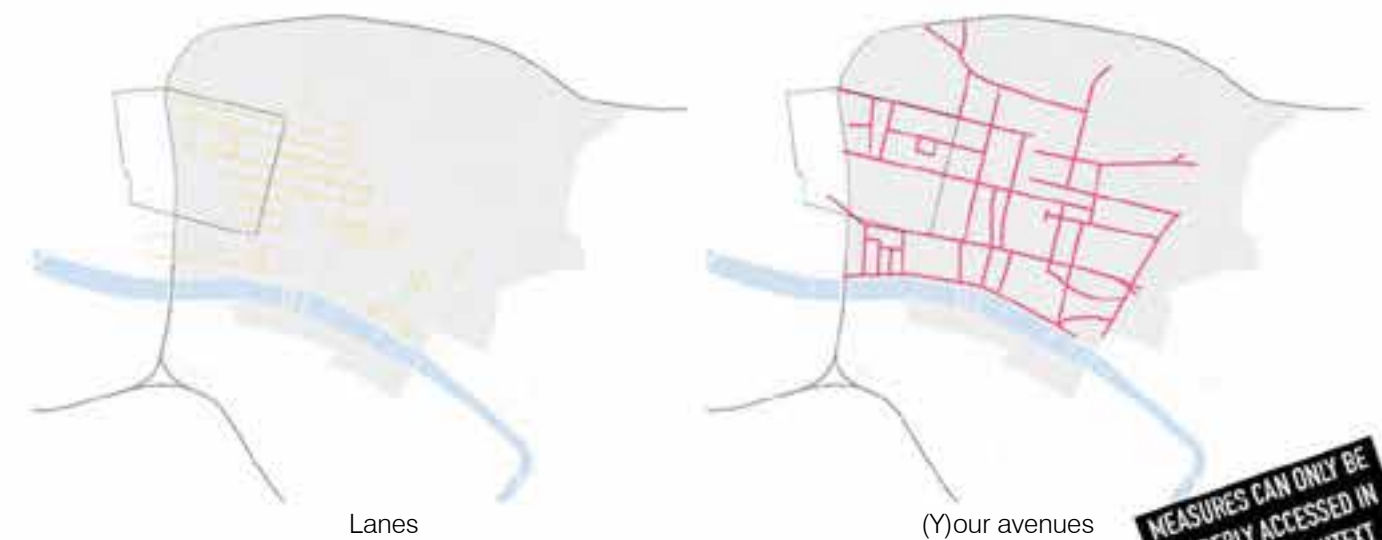
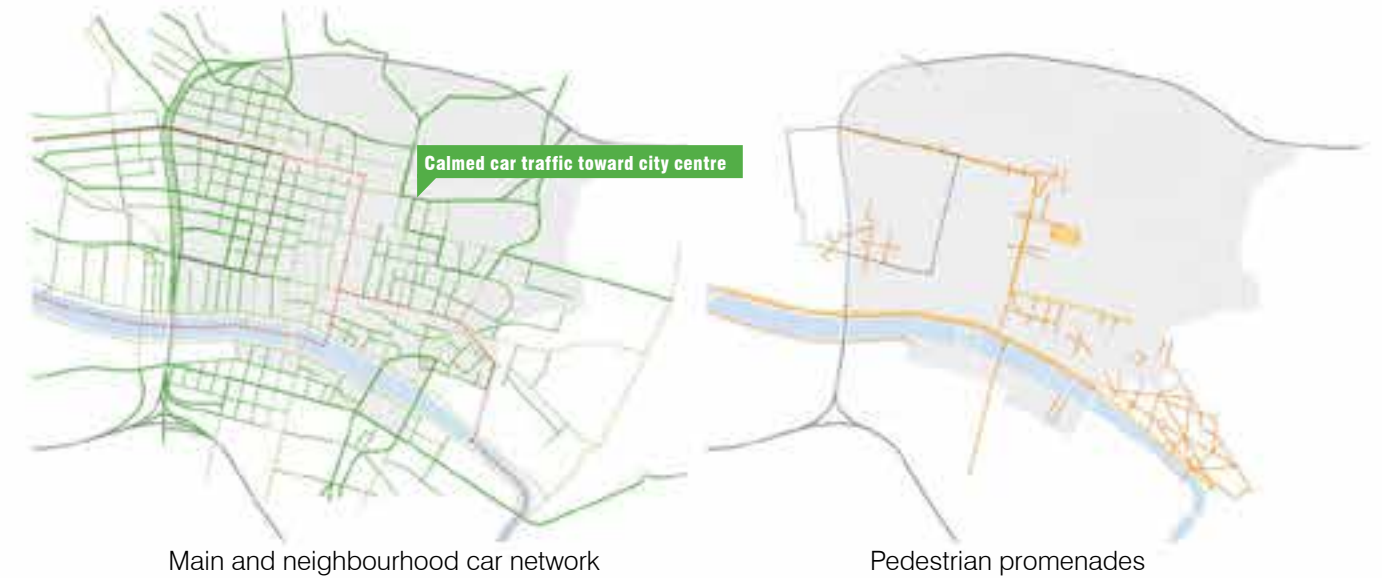
Busy access streets will remain. But they will become less of an issue; there are parallel routes for bus and bike and there is always a quiet green street around the corner. The concept cannot be rigid. At some bottlenecks, different users will need to be combined.

This approach is consistent with a Smart Grid / Superblocks concept with local car access between EIPR / Avenues. Refer to (Y)our Great Streets and Spaces chapter.

Location: City centre and surroundings.



The tartan concept proposes higher quality streets: more specialised in function and more specific in spatial character.





# (Y)our updated mobility

## Smarter cleaner bus network



The bus system in Glasgow is sub-optimal and performs inefficiently.

- Regional bus routes traverse the city centre, often in places where they needn't and shouldn't be.
- Bus routes / stops which are duplicated for different operators are scattered throughout the city.
- Buses exacerbate congestion and pollution.
- Many bus routes are slow / unreliable and they do not connect efficiently to other modes of public transport.
- Allegedly several bus routes have become unprofitable.

This project aims to re-think and coordinate the bus system for a more efficient, intuitive, clean bus system and a more attractive city centre

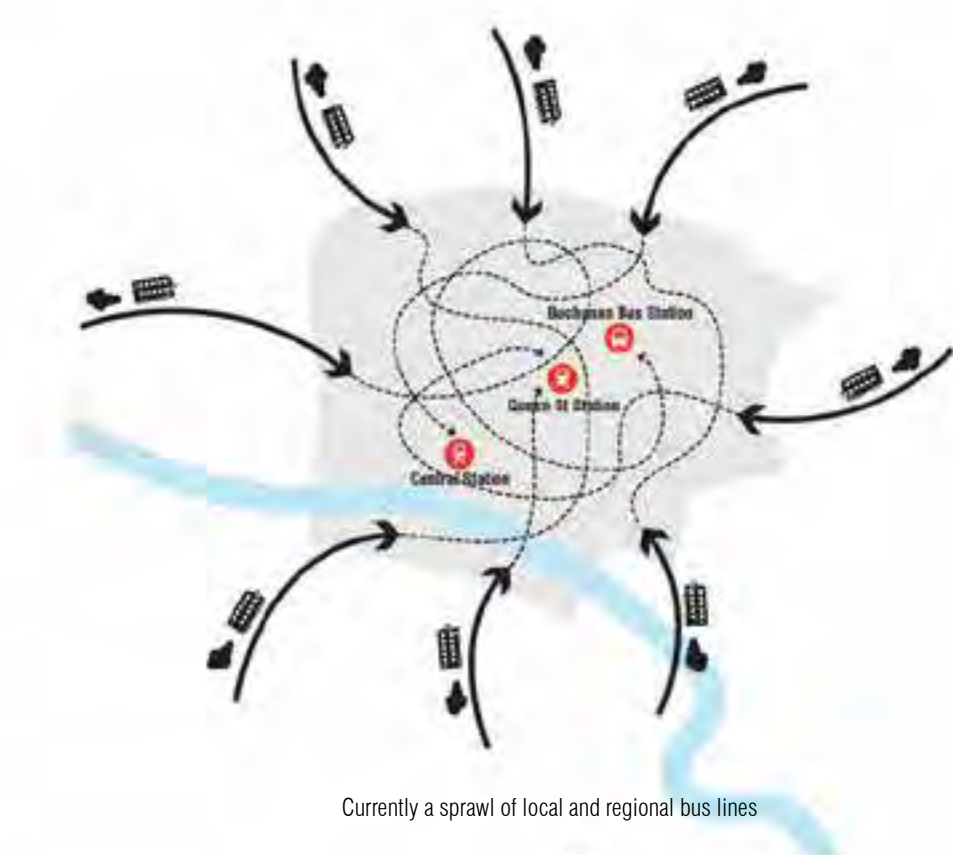
- Consider restricting regional bus access through all city centre neighbourhoods, and instead concentrate them through dedicated bus corridors.
- Local buses have a finer-grained network, are smaller and electric.

The effect will be a more efficient, intuitive, clean and reliable bus system serving a more attractive city centre.

This project aims to re-think and coordinate the bus system and cope with these issues.

- Fluent connections to the main train stations

Location: Glasgow city region.



Currently a sprawl of local and regional bus lines



A first concept for a more effective and less disruptive bus system

MEASURES CAN ONLY BE PROPERLY ACCESSED IN WIDER CITY CONTEXT



# (Y)our updated mobility

## Smarter parking in Blythswood



Investigating the possibility to consolidate and concentrate large multi-storey car parking (MSCP) on the edge of the city centre in line with current strategies would;

- Serve the city centre, feeding directly to the shopping, leisure and cultural centre of Glasgow city region.
- Reduce traffic/parking load on the city centre by catching incoming traffic directly at the city edge.
- Release sites currently accommodating car parking for other development elsewhere in the city centre.
- Take parking from the streets.
- Drive visitor footfall creating economic opportunities.

Larger MSCP have major economic / efficiency benefits over multiple smaller car parks. New MSCP should encourage electric car usage and be designed so they can be retrofitted and re-purposed if/when parking demand reduces due to automated vehicles parking / re-charging outwith the city centre.

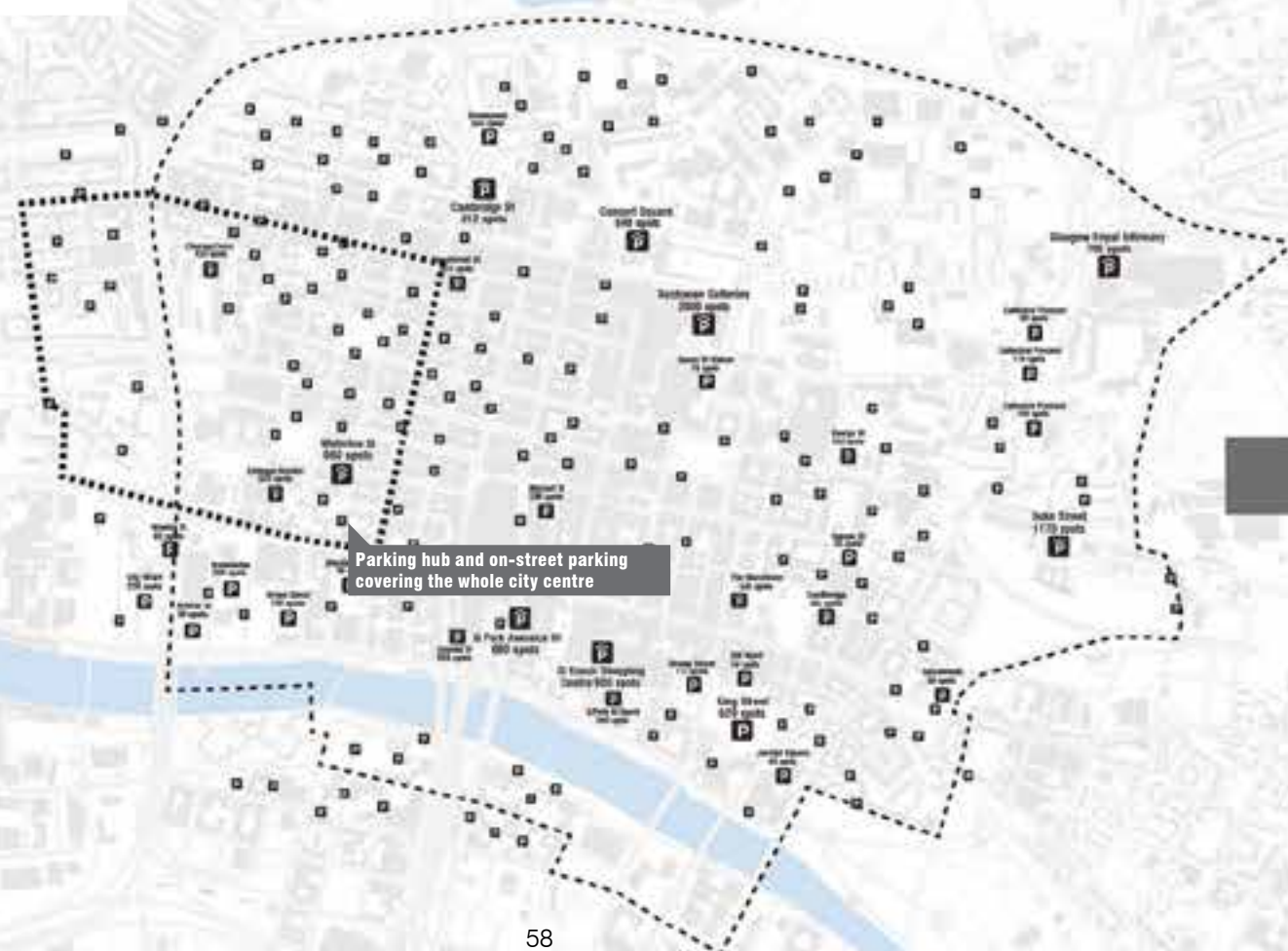
Candidate sites for large scale edge of city centre MSCP could include:

- Adjacent to Anderston Station off the M8 and Clydeside Expressway would serve the city centre, Anderston Station and SEC/Hydro.
- An MSCP over the M8 just North of Sauchiehall Street would serve the western branch of the 'Golden Z'.

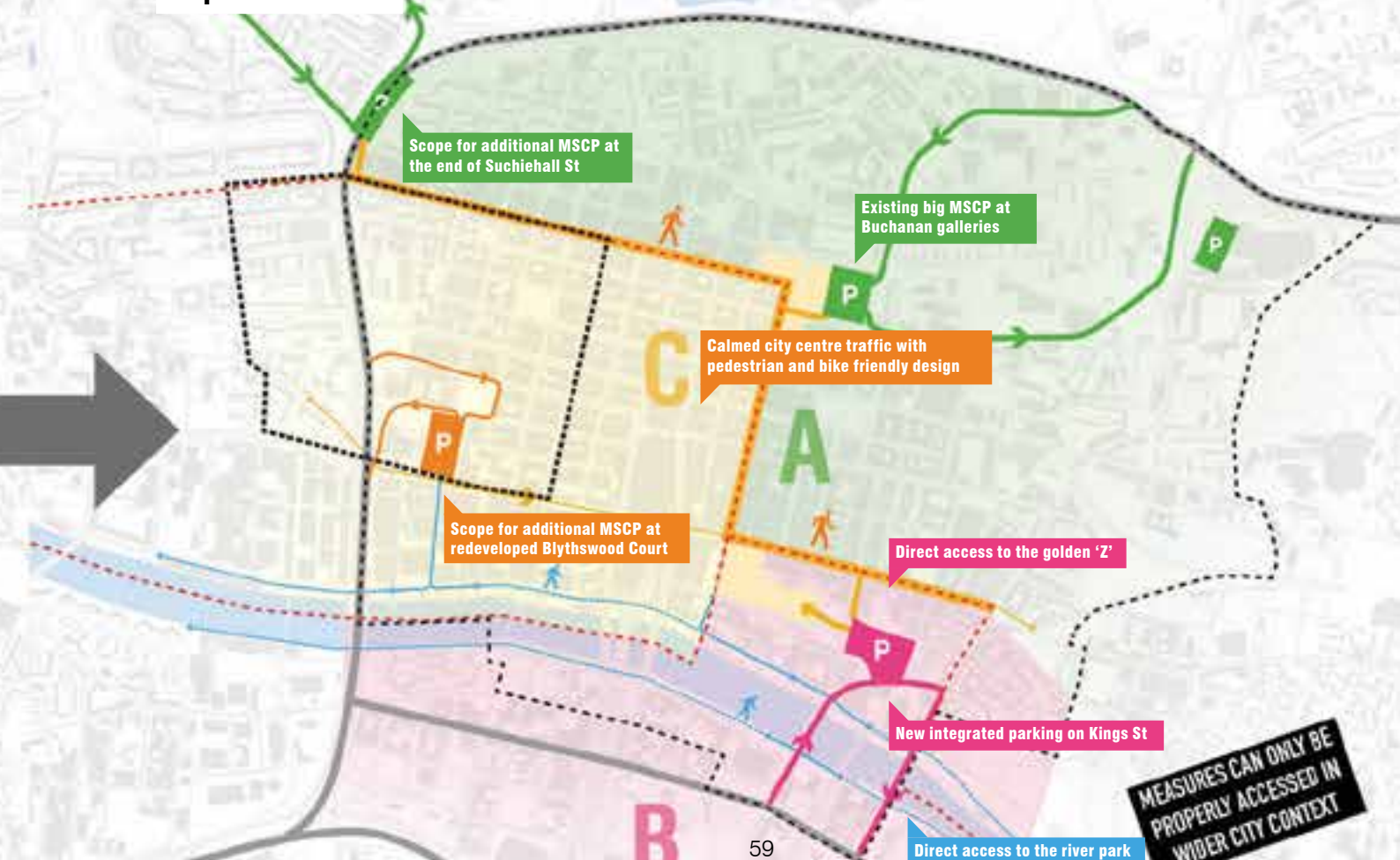
Location: Blythswood District.

- Smart placement of MSCP leads to less congestion in the city centre
- More footfall will revive the edge of the retail district
- Public spaces will be more attractive

### Current situation



### Proposed situation





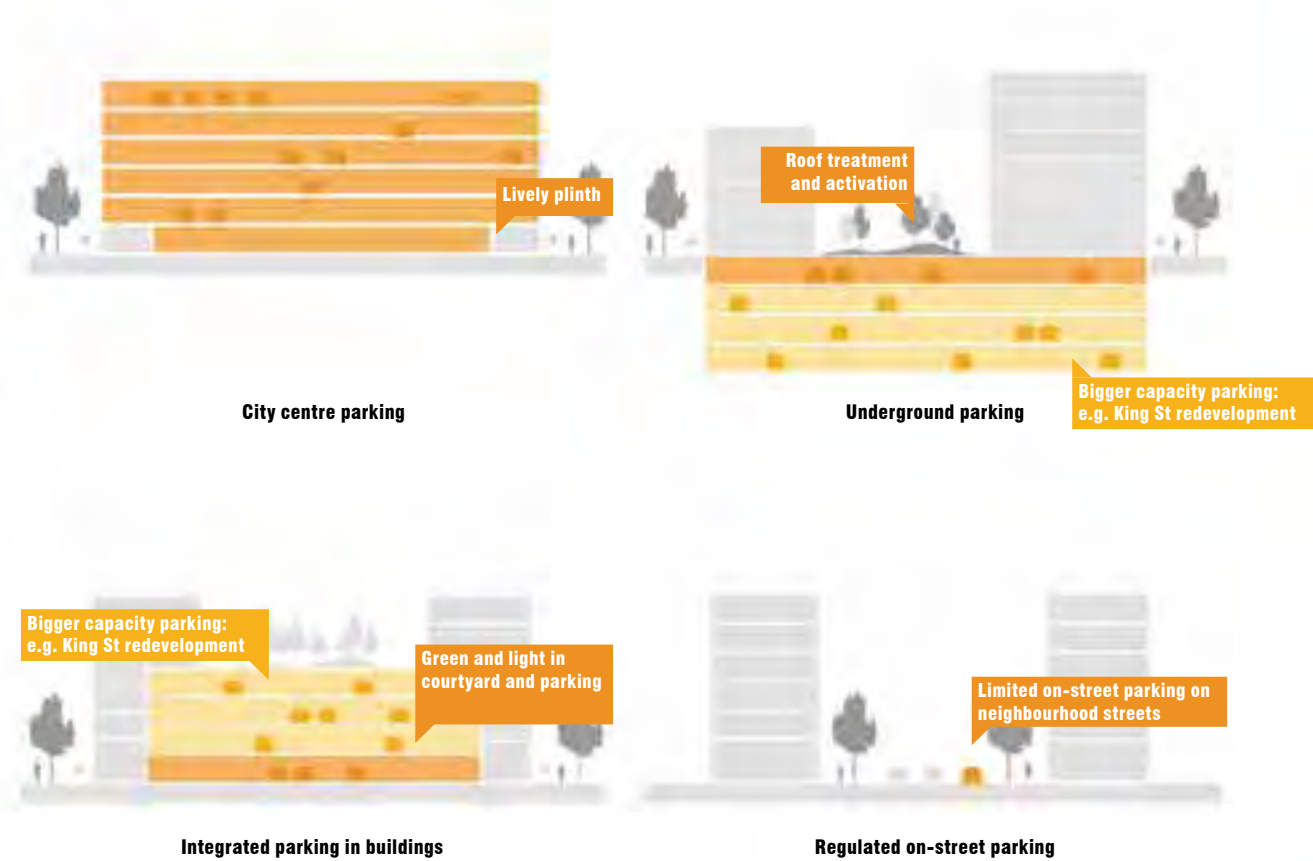
# (Y)our updated mobility

## Smarter parking in Blythswood



- The majority of parking for new developments could be accommodated, hidden from street view, inside building blocks or (half) underground.
  - Open air/surface parking should be limited to minimal on-street parking on one side of the street and preferably in parallel bays
  - Sites currently with off street surface parking should be redeveloped with buildings or turned into quality public space.
- Taking cars off the streets means more livable streets
  - Compacting in parking garages is more efficient (cheaper) and frees up space for development

Location: Blythswood





# (Y)our updated mobility

## Updated railway stations

There are two stations within the Blythswood District that need an urgent upgrade: Charing Cross Station and Anderston Station. See the Broomielaw DRF for the Anderston Station project.

This project proposes improvements to Charing Cross Station and surroundings (incl. redevelopment of the urban block / adjacent buildings / MSCP site) acknowledging constraints, notably rail tunnel alignment under existing surface car park on Elmbank Crescent

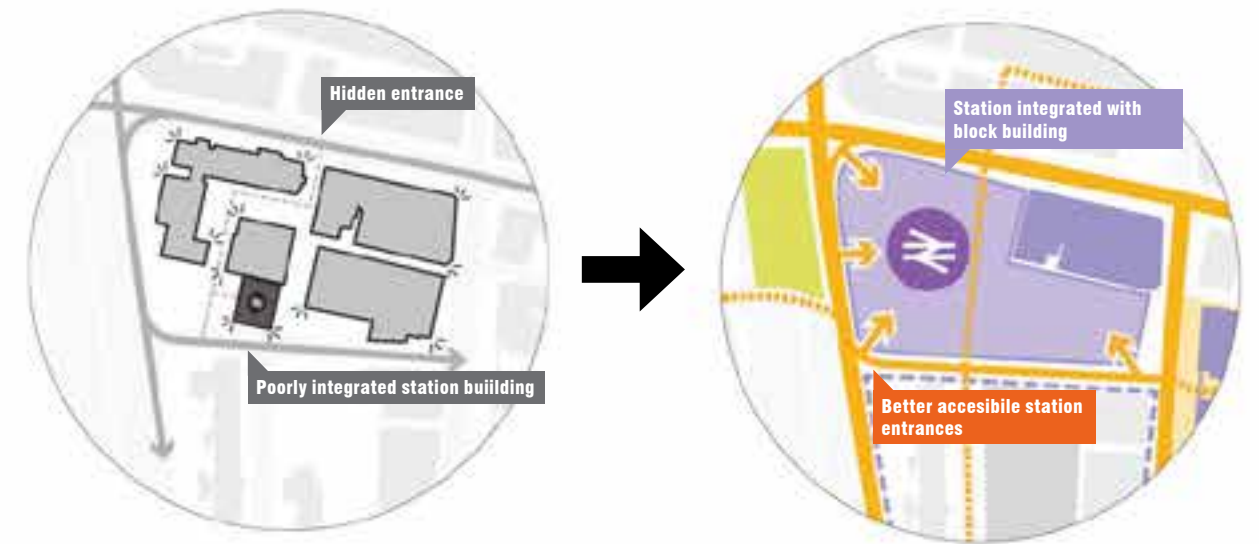
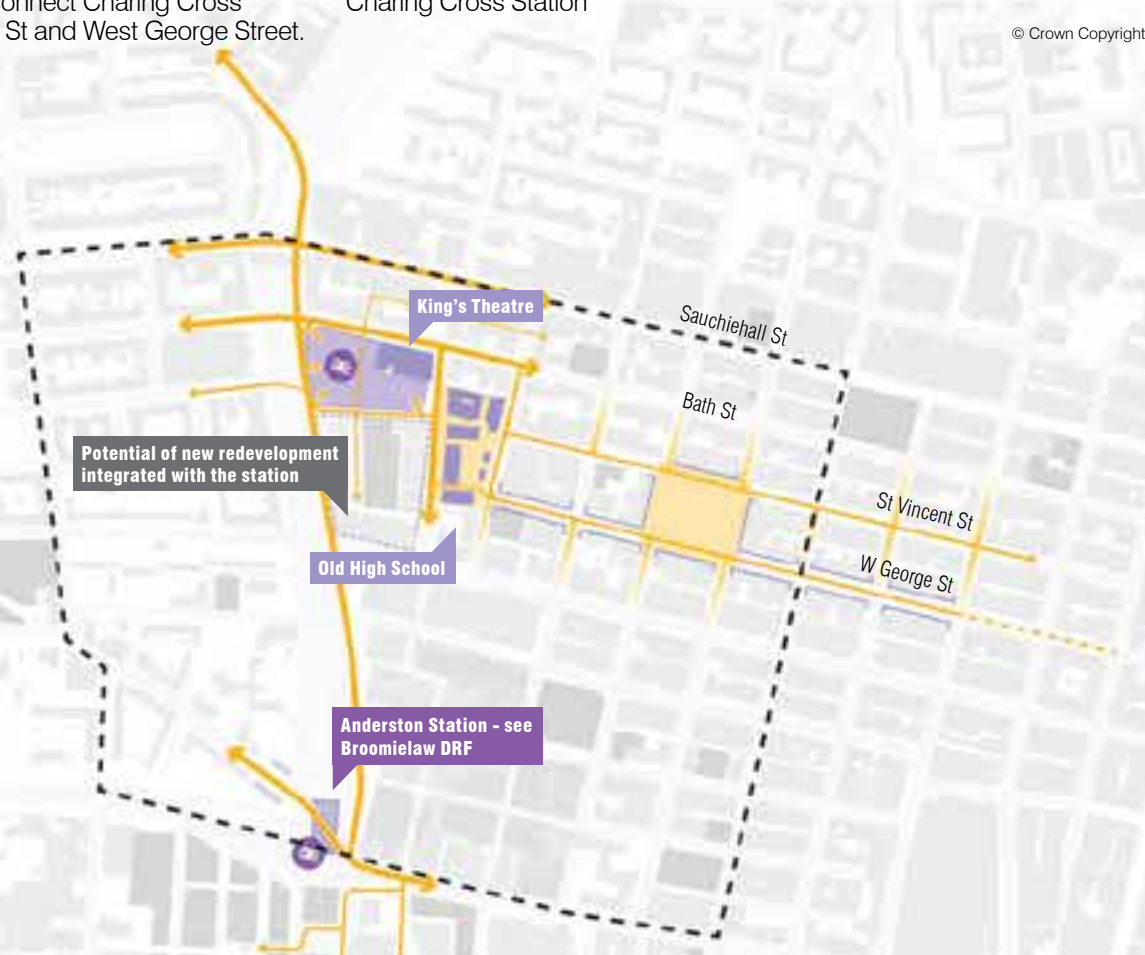
- Creating station entrances on principal streets (Bath Street, North Street, Elmbank Street) - relocate station concourse?
- Enhance station / passenger experience including increased capacity for vertical circulation to enable increased patronage of the station.
- Strengthening of North-South Connections through the M8 City boulevard to connect Charing Cross Station to Anderston Station
- Improved East-West connections through the Old High School to connect Charing Cross Station to St. Vincent St and West George Street.

- New high density mixed use development should cluster around city centre mainline stations.
- Enhanced station environments to improve passenger experience should encourage high patronage and suppress car reliance / road trip generation.
- Significant opportunity for rail station to be catalyst rather than constraint for regeneration in western city centre.

- Scope to build a new bridge that connects Elmbank Crescent to Kent Road.
- Scope to redevelop the existing multi-storey car park behind Kings Theatre as part of wider urban block redevelopment
- Opportunity for station building entrance to be landmark feature within new urban square / place at Elmbank Crescent

Location: Area around Anderston Station and Charing Cross Station

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Current Charing Cross Station

Proposed station updates





## (Y)our updated mobility Street safety and Accessibility

Streets should be designed in an intuitive and logical way, applying a 'Designing Streets' approach. This means that the design of a street, square or crossing clearly indicates to car-users, cyclists and pedestrians intuitively how to behave; where they have priority or whether they are sharing the space. This means that streets become more differentiated (see Tartan concept).

- In busy access streets / avenues like Argyle Street / Trongate cars access is maintained with a more traditional design (asphalt, footways, zebras).
- In the quieter neighbourhood streets, the car is invited to share the space with cyclists (and maybe even pedestrians). Carriageways can be narrower with setts or equivalent materials.
- Streets should be laid out to slower design speeds and encourage 'passive enforcement' of parking.

There are less/few pedestrian guardrails, longer

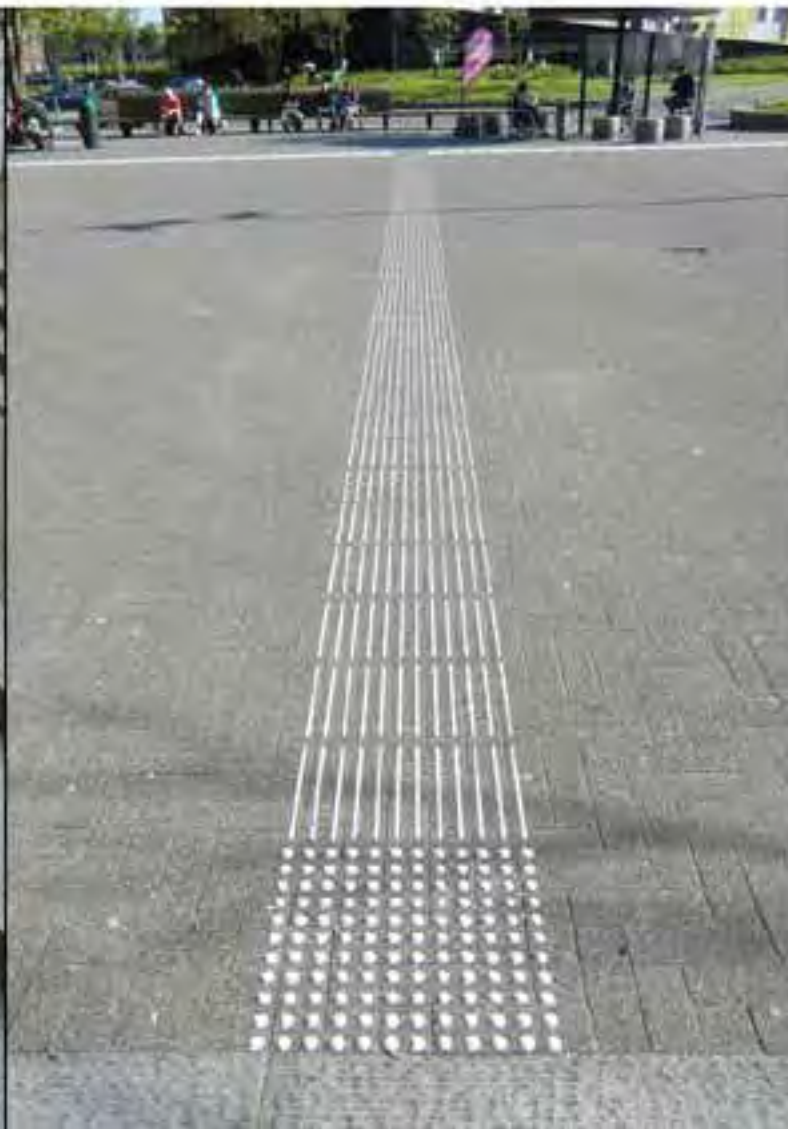
- Many current streets have a traditional layout with a lot of space for cars. More space for pedestrians and bikes and a less paternalistic layout creates more awareness and safety between different users.

'green man' periods and pedestrian priority traffic-light sequencing, less street markings and signs cluttering street-scene. This will need further detailing in GCC's 'Street Design Guidelines'.

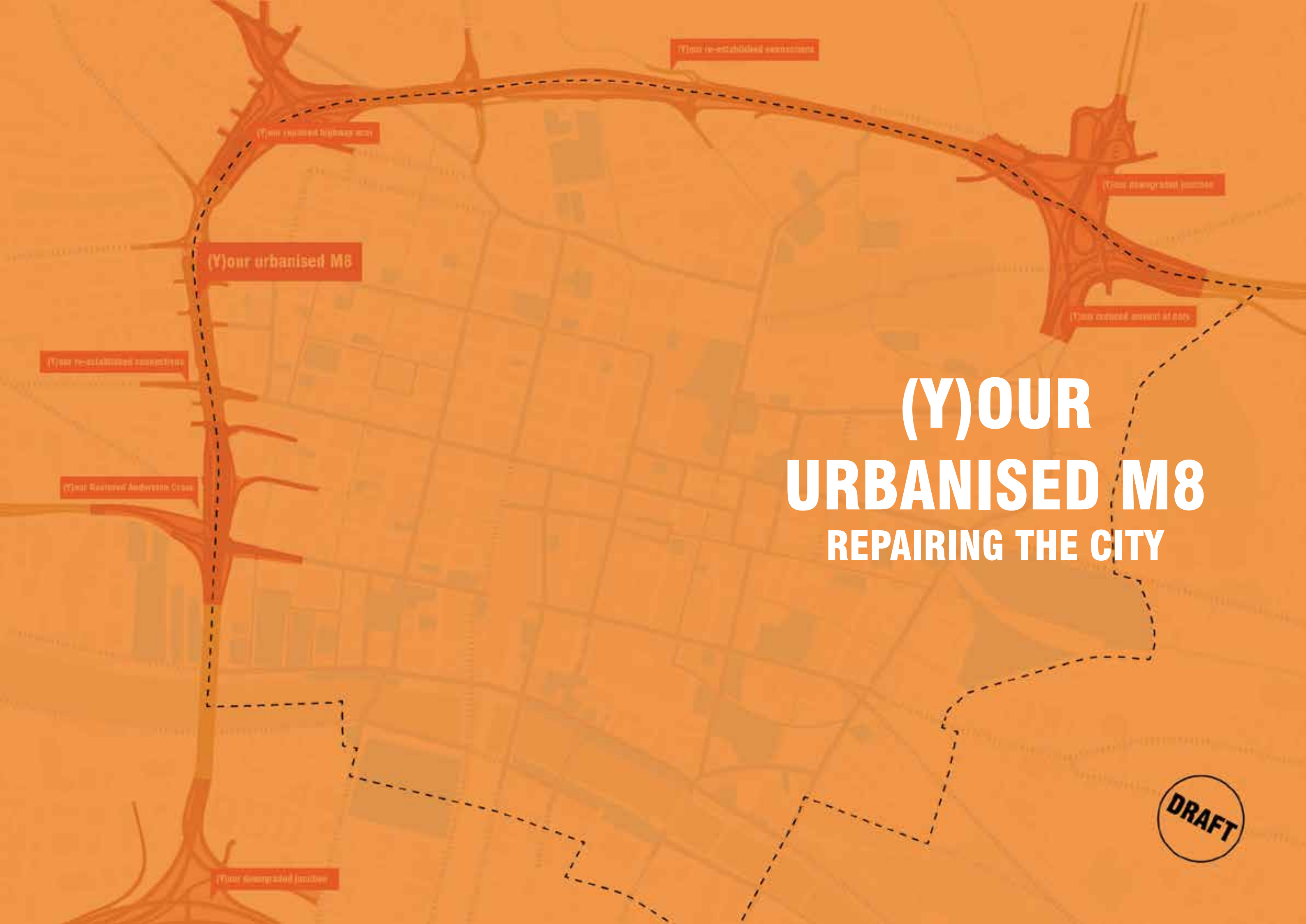
Accessibility for all users is an integral part of Building and Street Design Guidelines. Integrating inclusive design for optimum accessibility for those with mobility, sensory impairments or autism should enable better spaces for all.

It is proposed to have a Pedestrian and Accessibility Champion to advocate and secure improved accessibility for all. (Refer to the transforming (Y)our City Centre companion document)

Location: Blythswood District.







# (Y)OUR URBANISED M8 REPAIRING THE CITY

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## Current: disrupting highway Potential to be upgraded and reconnected

The part of the M8 in Blythswood district is mostly in a cutting (albeit sweeping up over the Charing Cross rail tunnel). At grade / street-level bridges span the motorway connecting the city centre to Anderston and the West End.

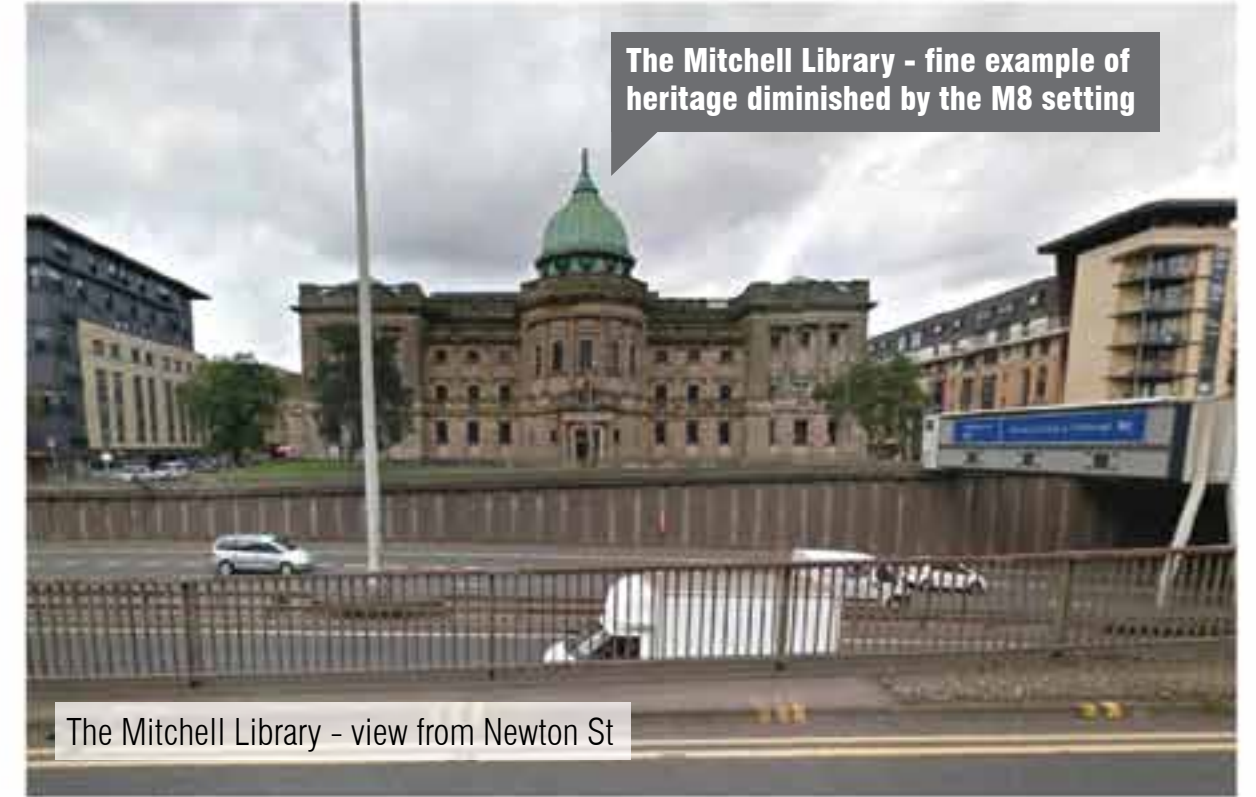
Whilst these east-west connections are better than those existing in the Broomielaw DRF area, there is widespread agreement that there needs to be improvement of these vital connecting routes, especially for pedestrians and cyclists. Far better integration with surrounding built environment, as well as a better use of the massive amount of leftover space around the M8, presents a great opportunity to vastly improve this part of the city.

There is scope to reduce the frequency of motorway junctions thereby reducing spatial impact and improving the efficiency of the motorway. Potential remedial action could take place over and/or along the sunken stretch of M8, albeit the greatest impact would be from a significant reduction of traffic and ultimately the removal of the city centre motorway altogether.

- Available for development (vacant land)
- Leftover space (low quality)
- Demolished buildings
- Streets that disappeared



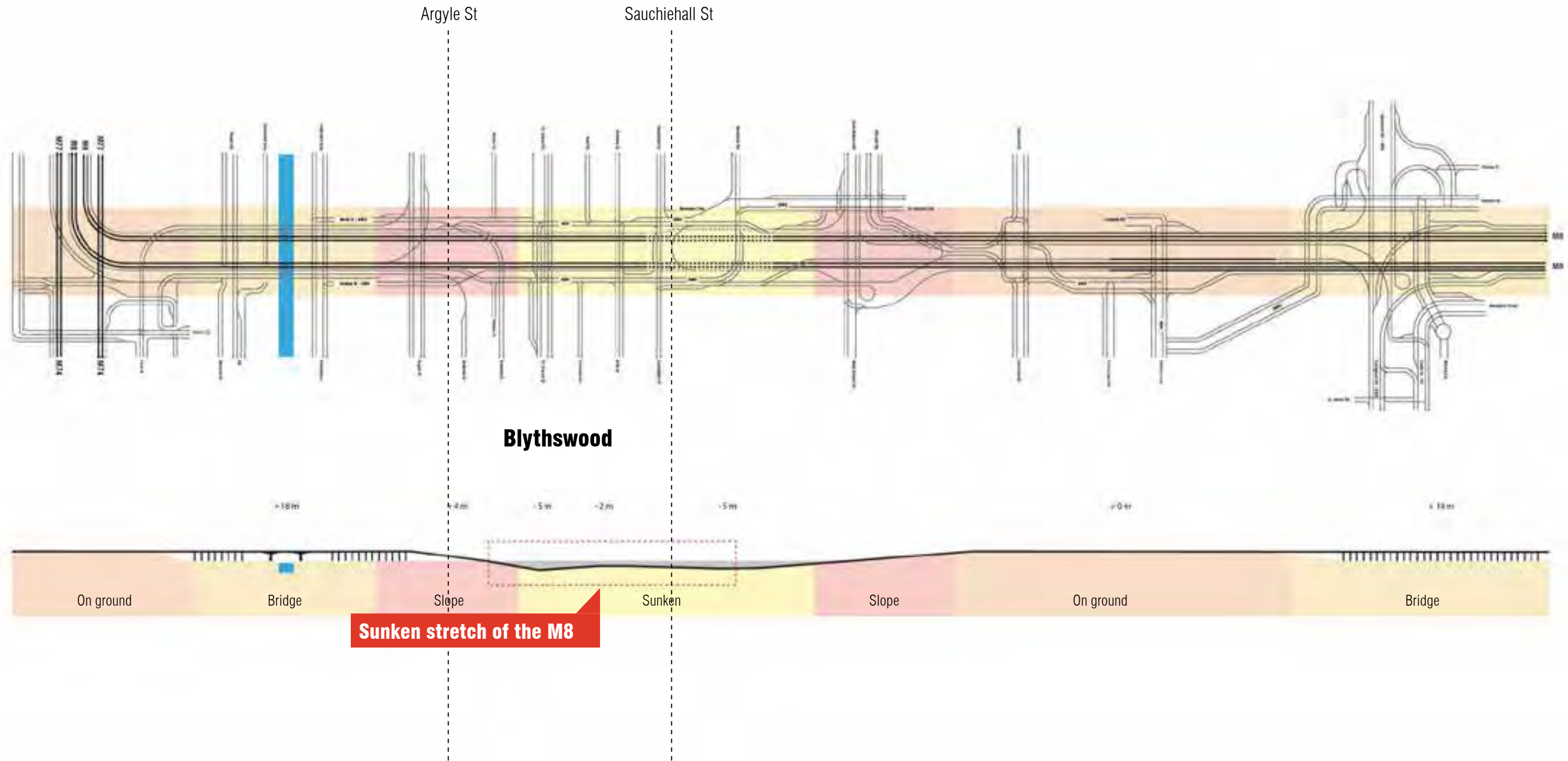
## Current: disrupted, low quality public space Analysis of the M8 impact on public space





# Current: disrupted, low quality public space

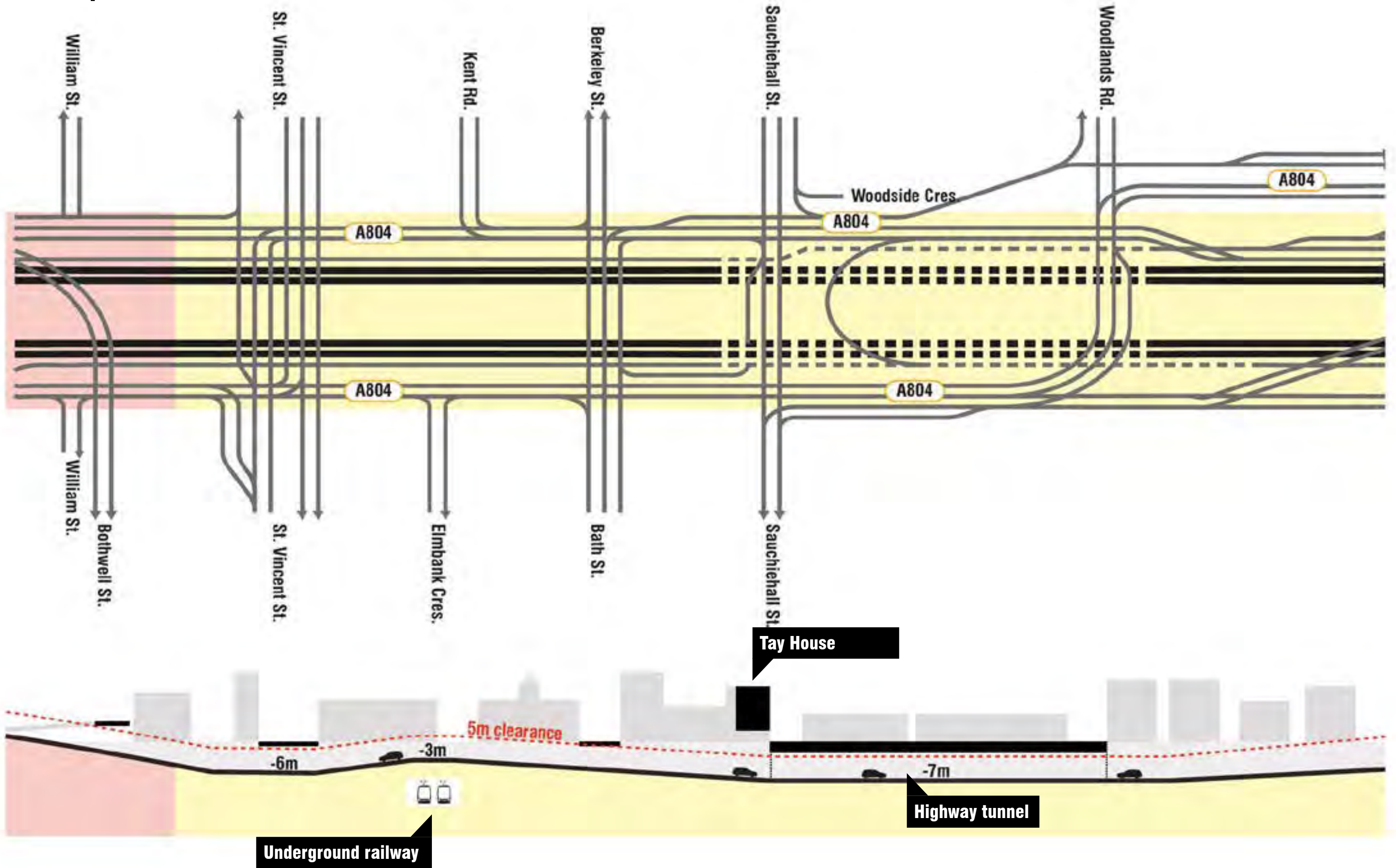
## A complicated spaghetti of ramps and flyovers





# Current: disrupted, low quality public space

## Sunken part of the M8



Underground railway

Tay House

Highway tunnel

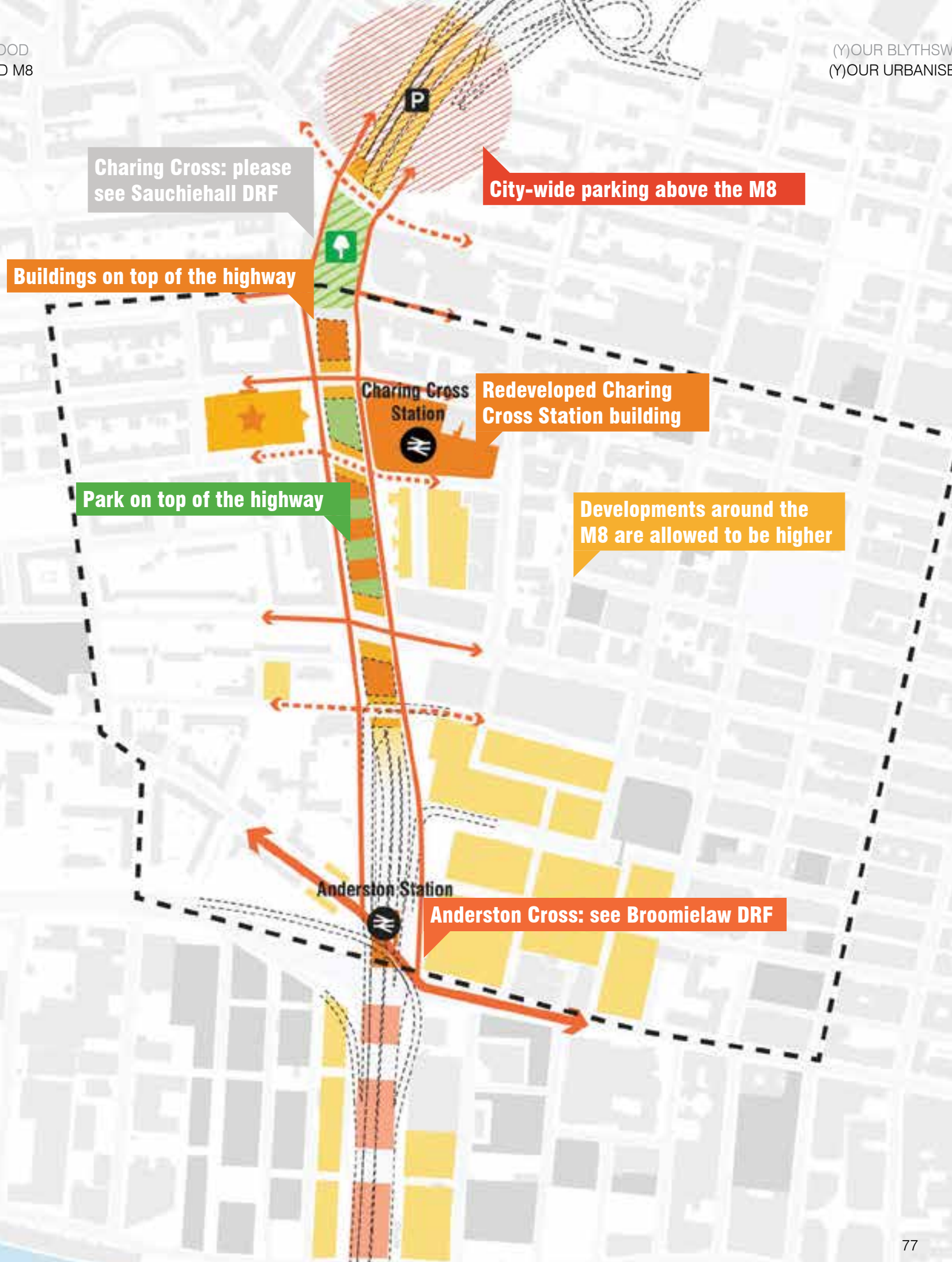


# (Y)our Urbanised M8

## Overview M8 projects

Glasgow's city centre seems to be dominated by the car. Cars take up a disproportionate amount of public space with wide carriageways and parking almost everywhere. This oversized car infrastructure can be seen as a big opportunity: the current car space can be used more efficiently, freeing up space for more sustainable models of transport like cycling and walking.

The M8 is the most extreme example. Perhaps there are ways to make the motorway more urban and enable sites along the motorway corridor to be developed. Zooming out and making more efficient use of the new M74-M73 corridor will be crucial to make this happen. Re-routing national trips away from Glasgow city centre will improve air quality, reduce city centre traffic congestion and ultimately demonstrate that we do not need to rely on having a city centre motorway in the long term.



- Existing connection
- Proposed connection
- Problematic building blocks
- Extending bridge
- Potential park above M8
- Potential building above M8
- Existing park
- Proposed city parking



# (Y)our Urbanised M8

## Bigger context: future city boulevard

(Y)our Urbanised M8 is about the better integration of the M8 into the city:

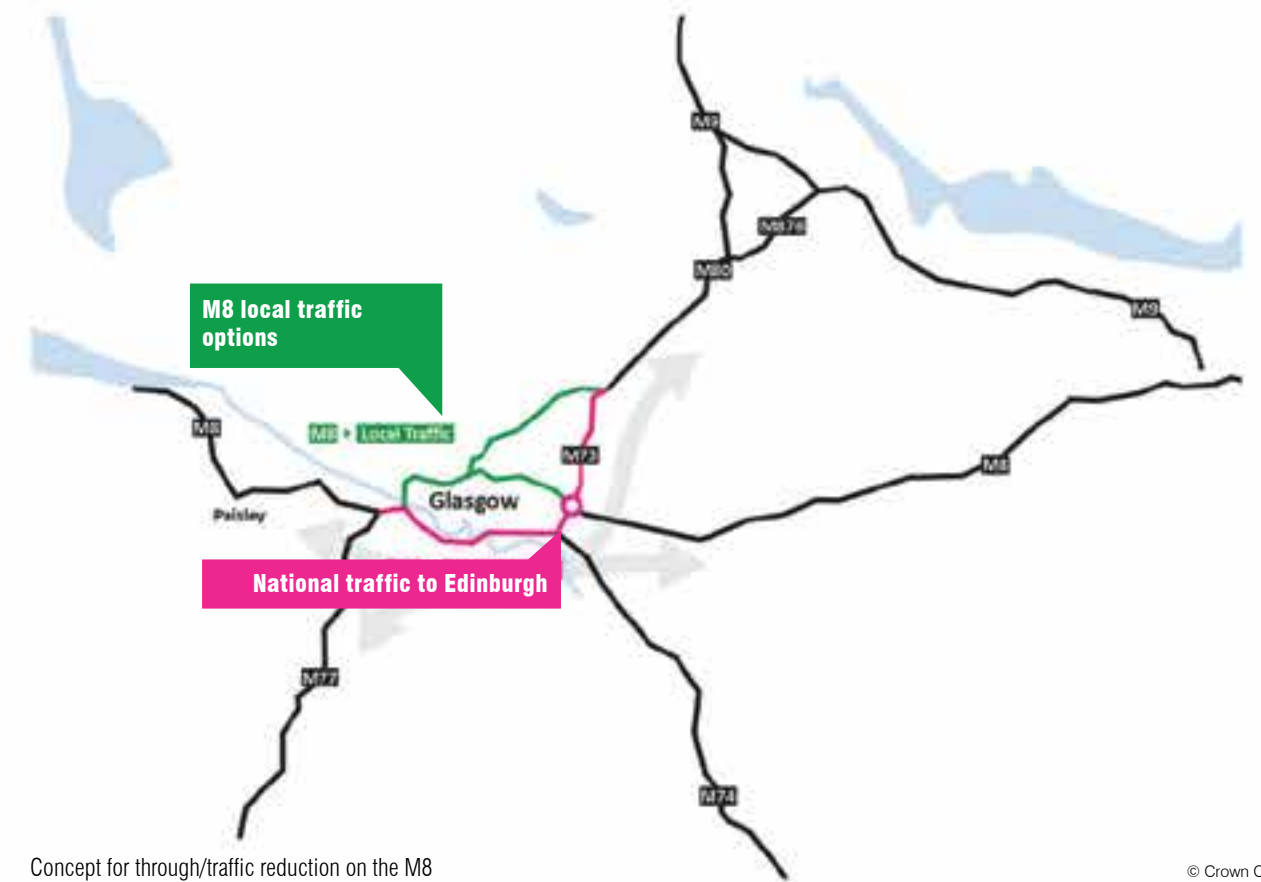
- Reducing the barrier created by the motorway by adding or improving street / pedestrian connections between the city centre and the West End / North of Glasgow (with quality underpasses and overbridging the M8).
- Lowering traffic densities by making more efficient use of the new M74-M73 corridor
- Initial focus on assessing modification between M80 and M77 merge, using smart signage / restriction to route national trips / HGVs away from city centre.
- Simplifying and reconfiguring the M8 junctions, in combination with an increased capacity of bottlenecks on the network, to create a more urban, place-making led approach to city centre motorway junction.
- Create 'City Gates' rather than 'traffic machines'
- Reducing the environmental impact of the M8

• Rethinking the function of the motorway is crucial for a better city centre: better accessible, more attractive, healthier, more sustainable

will allow the areas around the motorway to be redeveloped. Reduce noise pollution with sound barriers. Reduce air pollution with less congestions and green 'low emissions zones' restricting polluting cars.

- This very big and complex project is crucial for making Broomielaw, Tradeston, Lancefield Quay and Springfield Quay (and the city centre as a whole) more liveable and for unlocking development throughout the area, in collaboration with Transport Scotland and in alignment with the emerging City Centre Transport Strategy.

Location: The M8, M74 and M73 between junctions 8 and 22 at the reconfigured motorway junctions (Incl. J19 to Anderston Cross).

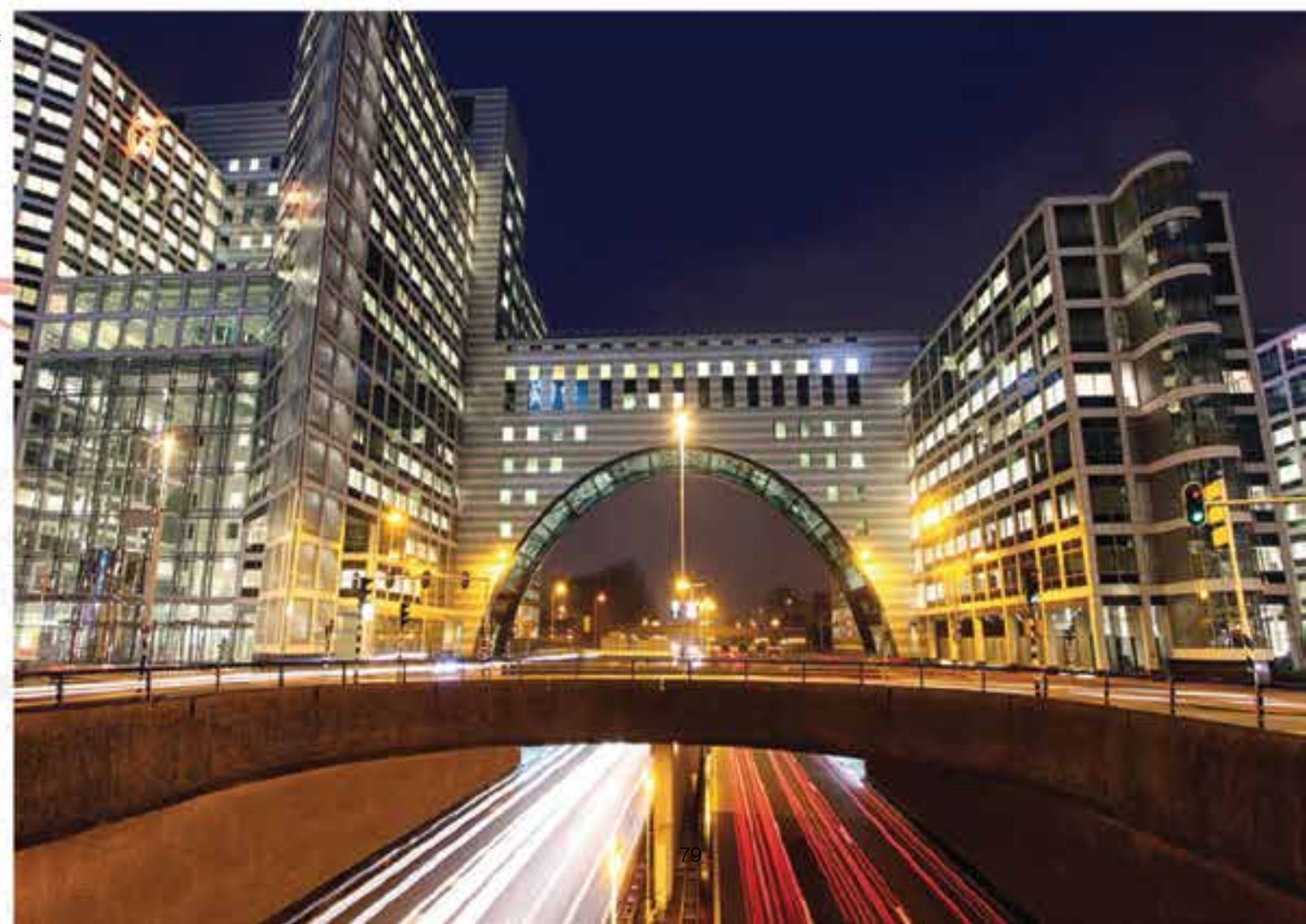


Concept for through/traffic reduction on the M8

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# (Y)our Urbanised M8

## Untangled motorway spaghetti



Currently the M8 is designed like a traffic machine. It has a negative impact on the surrounding city. The ambition is to untangle the M8 knot and reduce the negative impact of the motorway 'spaghetti'.

The M8 currently has a lot of intersections with the local network. The proposal is to reduce the amount of intersections and make the slip roads that run parallel to the M8 more important as an interface between local network and Motorway.

As part of this project the junctions 17, 18 and 19 should be considered (e.g. no fly-overs, smaller space take-up). More compact and 'human' crossings will make it easier for pedestrians and cyclists to cross the M8.

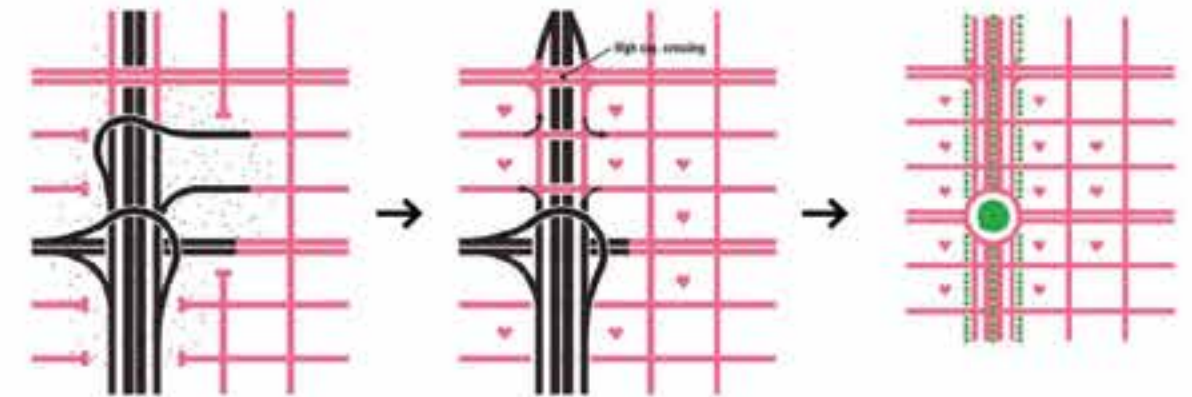
The possibility of taking out the current fly-over connecting Waterloo Street and Bothwell Street to the M8 should be explored. This would, for instance, include replacing the ramp with a simple

- Smarter junctions will allow for better cross connections and less negative spatial impact of the motorway. Improved city connections should help stimulate the redevelopment of Blythswood and Anderston

grade-level T-junction connecting Waterloo St and Bothwell Street to a sliproad along the M8 which would then connect the M8 toward the South. This could help improve the area's connectivity.

Any proposal would have to be developed in collaboration with Transport Scotland and in alignment with the emerging City Centre Transport Strategy.

Location: M8 between Anderston Cross (former Junction 19) and Woodlands Road



Concept for reconnecting Anderston and Blythswood





# (Y)our Urbanised M8 Connected East/West



- There is scope to increase the amount of crossing points along the M8 for cyclists and pedestrians.
- Due to the lack of connections the western part of the district (Anderston) has declined. It is important to consider all possible ways in which the city fabric can be reconnected.
- The possibility of reconnecting William Street and Bothwell Street will be investigated, thereby strengthening the connections between Anderston and Blythswood. This may require raising the street level on both sides of the motorway. A new bridge can be integrated with noise barriers and should be attractive, spacious and green.
- Connecting Kent Road with Elmbank Crescent is a strategic action that will ease access to the Charing Cross train station from the west and increase its usage.

- Continuous pedestrian and car routes from centre to west
- Easily accessible Charing Cross station
- Greatly enhance connections between Anderston / West End and the city centre
- Mitigate against the negative impact of the M8 with bridge crossings that temper noise pollution and present active / attractive crossing points

See project Above the M8 : Extended Bridges

Location: M8 between Anderston Cross (former Junction 19) and Woodlands Road



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## (Y)our Urbanised M8

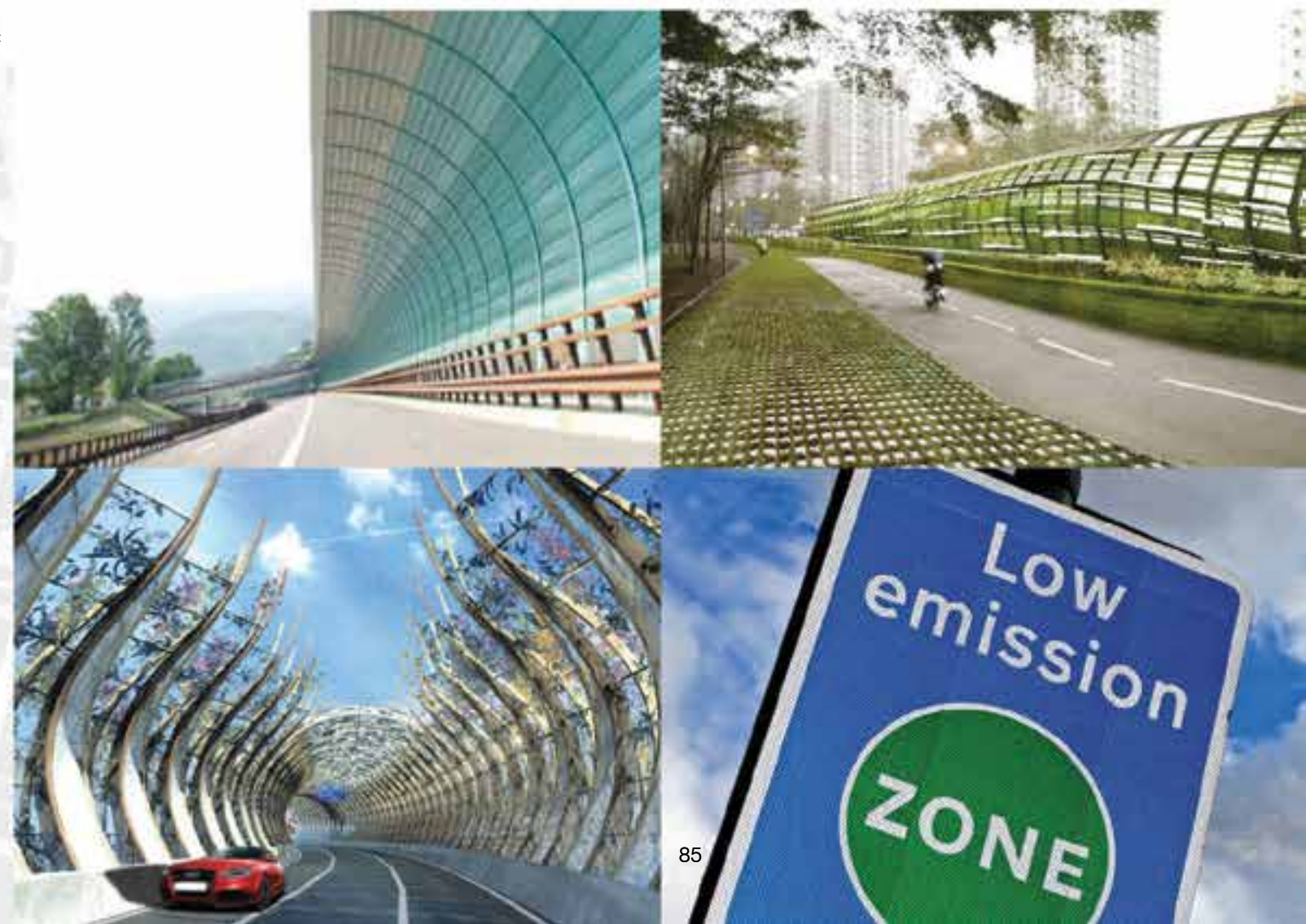
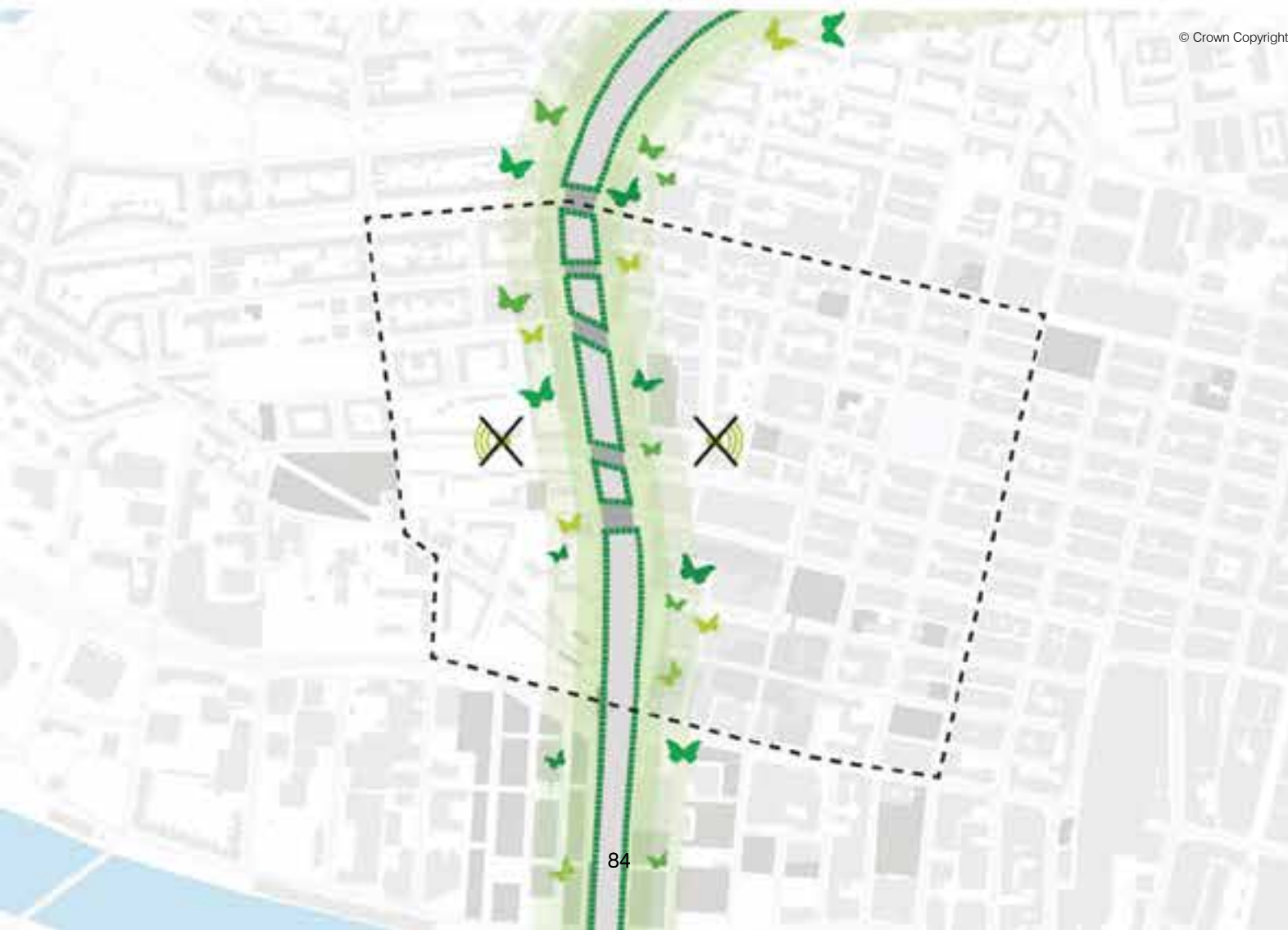
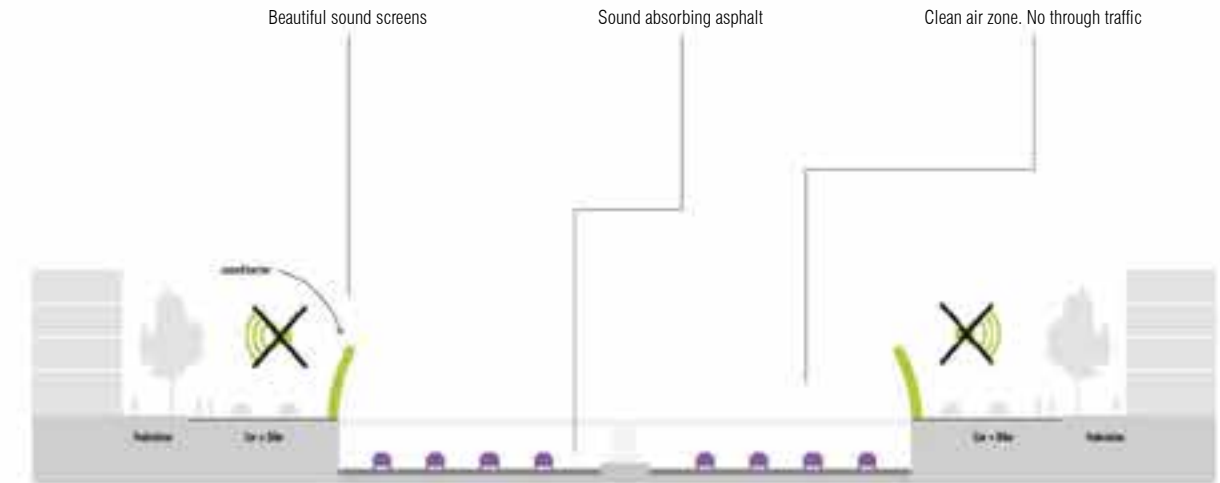
### Cleaner air, less noise

A combination of measures reducing the negative environmental impact of the M8.

- Make the city centre and direct surroundings a Low Emission Zone. This should include the M8.
- To increase liveability of the city centre, it is desirable that sound barriers are installed in the stretch of the M8 that runs through the city centre. These barriers are also elements that add functionality and visual quality to the surrounding streets.
- Other measures should include sound absorbing asphalt and other mitigation measures to reduce the traffic noise, alongside seeking to reduce the congestion on the motorway network by modal shift to public transport and active travel.

- There is a need to implement remedial steps to reduce pollution. Mitigation through reduced congestion, low emissions zones, sound barriers and other appropriate measures will be explored
- Any efficiencies made by autonomous vehicles should benefit the city / citizens (eg. reduced carriageways, more people spaces and routes)
- When properly implemented people should be hardly aware of the motorway

Location: City centre and direct surroundings





# (Y)our Urbanised M8

## Above the M8: extended bridges



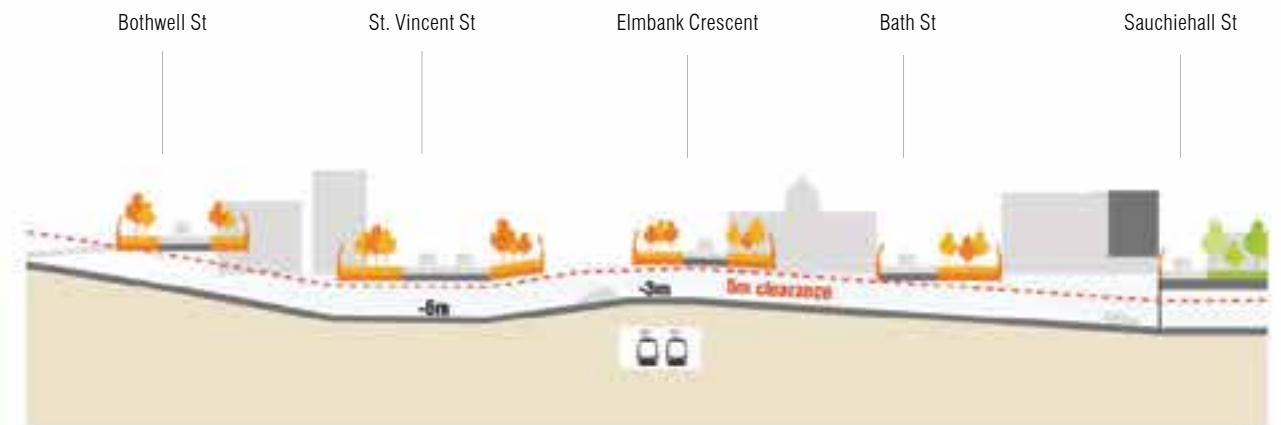
The projects 'Connected East and West' and 'Cleaner air, less noise' aim to reduce the negative impact of the M8 by taking away blockages, noise, smell and views.

- Wider bridges with green, play spaces and walls covering views of the M8 to reduce the feeling of crossing a motorway thereby removing perceived barriers

This project takes it a step further: by widening (existing) bridges it becomes possible to add green, play spaces and perhaps even pavilions onto the bridges, thus further reducing the impact of the motorway.

The idea is to deliberately spread the covering-effort over several bridges (instead of decking one part of the M8) so the effect benefits all. An added benefit is the reduced complexity and cost.

Location: Bridges between Anderston Cross (former Junction 19) and Woodlands Road





# (Y)our Urbanised M8

## Above the M8: alternative options



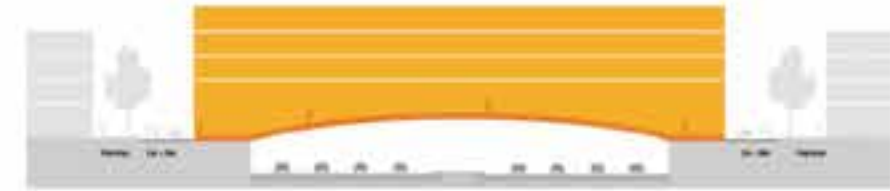
As an alternative or addition to the project 'Extended bridges', building on top of the M8 motorway can be considered.

Space in the city centre is limited. This is one of the few spaces left over for:

- Mixed use development.
- City parking (See: (Y)our updated mobility).
- Green and play spaces.

• The space above the M8 provides a great opportunity for mixed use development and solving issues like parking. Allowing more people to live, work and enjoy the city centre

Location: M8 between Anderston Cross (former Junction 19) and Woodlands Road.



Building



Car parking



Park on top of the highway

