Broomhill Community Council

Response to introduction of Residents Parking Zone (RPZ)

Submission to Glasgow City Council and Residents of Broomhill

DRAFT

7th April 2022

Summary

- Broomhill CC welcomes the introduction of footway parking ban. The blocking of pavements in the area affects many in our society especially older and disabled people as well as those pushing prams etc. Many in our community do not own cars and many (if not all) make use of the pavements on a daily basis.

- Pavement parking ban will reduce number of spaces. Broomhill CC would welcome an RPZ to reduce number of cars parking in the area

- Reducing number of cars parking in street will make roads wider and could encourage faster car speed - we would like to see mitigation.

    - Modal filters to stop through traffic on Randolph Road.
    - Give way on blind summit on Randolph Road.
    - Alternating blocks of car parking bays along streets to force 'lane shifts' and more careful driving.
    - Pavement buildouts and continuous footways to highlight transport hierarchy and make easier and safer for everyone to get around.
    - SUDS / tree planting to narrow street and also stop flooding in area.

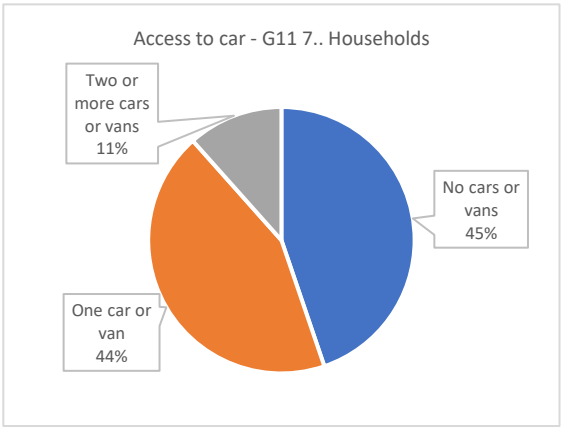
Please see the next few pages for more information.

1. Background Information

Not all residents in Broomhill are a car owner. Everyone is a pedestrian when walking to the shops or the bus or train or the park. The improvement of our streets can affect all residents in Broomhill. Not just those who own a car. Parking in the area takes up a large amount of space, this is space which could better serve the local community as a whole rather than just drivers.

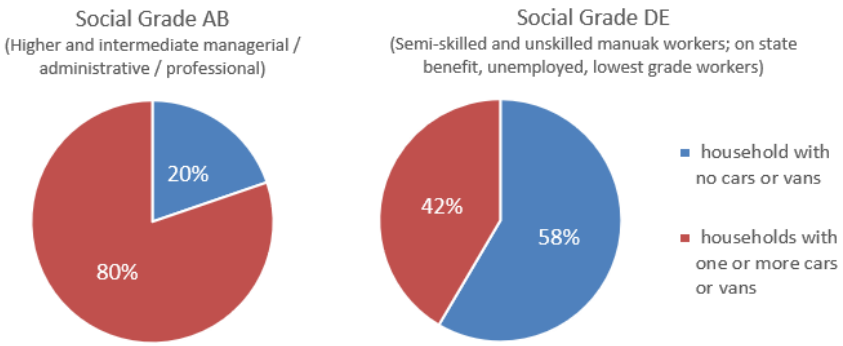
But everyone in Broomhill wants more parking spaces …

It may be commonly thought that everyone in Broomhill drives and that we should therefore prioritise increasing the number of parking spaces and remove cycle and bus lanes to make it more convenient to drive however only 45% of households in G11 7… have no access to a car. This postcode area is used as it is the smallest area of census data which is available to the public and includes Thornwood. When the Resident Parking Zone (RPZ) is introduced, it will likely cover both Broomhill and Thornwood.



(left) G11 7… Boundary Map. (right) chart of household access to cars

Examining this further there is a social inequality dimension to who benefits from public space being given to private vehicle storage:

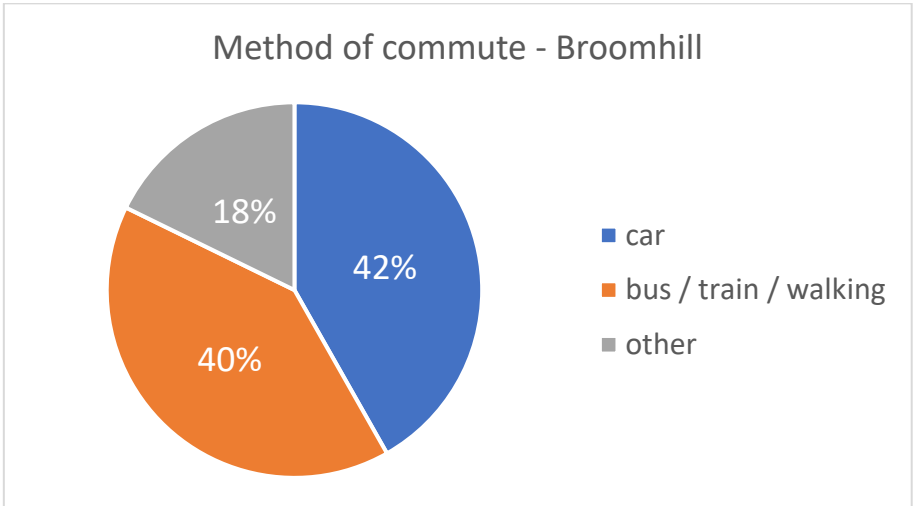


Only 20% of highest social grouping have no access to a car wheras 60% of lowest social grouping have no access to a car (in G11 7.. area). Studies have shown that not only do lower income households not own cars but they are the section of the population most affected by noise and air pollution.

Census Data on Comuting patterns.

This above matches the data from the census collected in 2011 about commuting patterns. Pre-pandemic the majority of journeys were commuting to and from work. While working from home will reduce this it will still drive a large number of journeys.

While Car driving makes up the largest single segment of method of travelling to work at 41%. There is an equally large proportion (40%) who walk for at least part of their journey to work (adding bus and train users to those who walk).

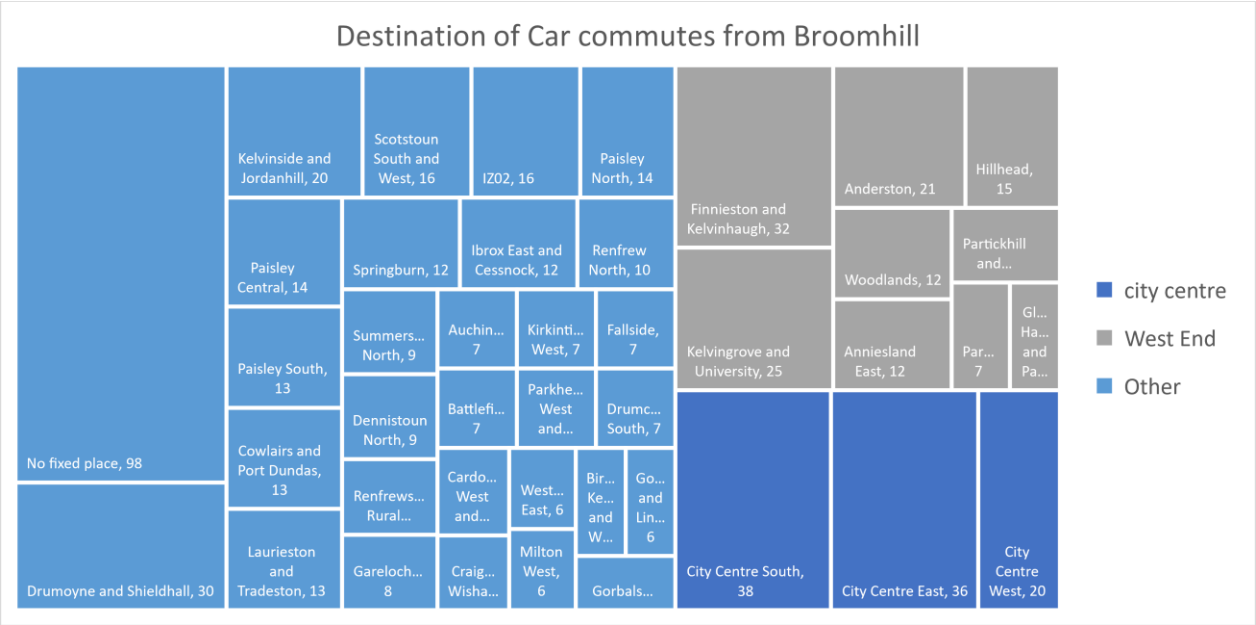


Changing Habits

There are a number of wider trends which will affect car use: addressing the climate emergency and flexible working.

Flexible working- The Coronavirus pandemic has changed many peoples commuting habits with an increase in flexible working and working from home. These changes may make residents reconsider their need for a car if they are not using it for the daily commute and affect demand on car parking spaces in the future.

Climate Emerency - It should be noted that there is a desire from Scottish Government to reduce car miles by 20% (references needed) and a more ambitious target of 30% by 2030 from Glasgow City Council. From the census data 1 out of 3 car commutes are to the city centre or another part of the west end. These are all areas which also rate highly in number of people travelling by train which suggests there is a good alternative to car use. Over the coming years we are likely to see more policies to disincentivise driving. Again this may make residents re-consider car ownership and shift to using a shared car or cutting down from owning two cars in a household to one.



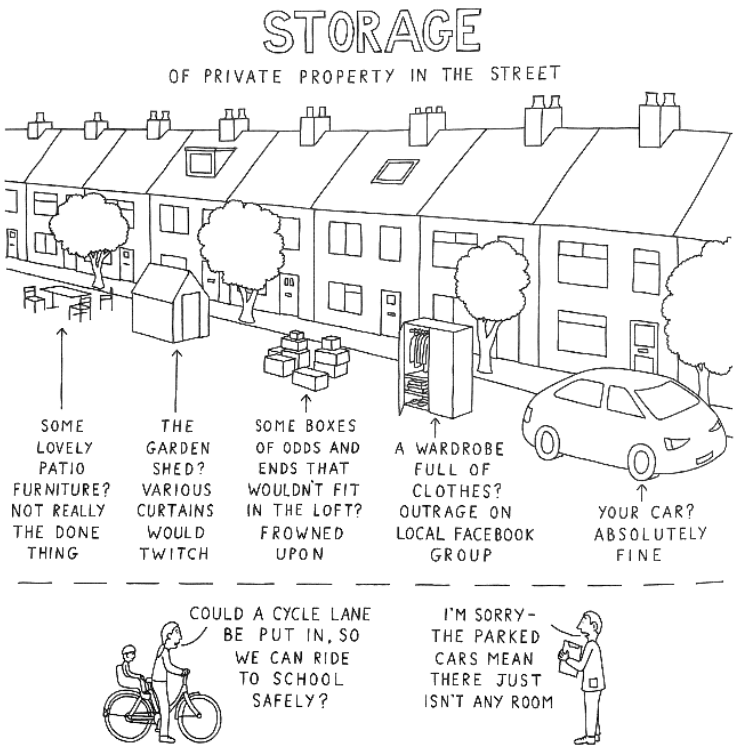
Space taken up by cars:

Bicycles, cars, public transport and walking all help us move around. Unfortunately, one of these modes comes at an extra price – cars take up a substantial amount of room when not in use.

In rural areas and leafy suburbs, parked cars can live in garages, on spare land and in small town shoppers' car parks. In [cities] cars are parked either on the street – or on the street – or on the street – or occasionally on a frowned-upon hard standing in a front garden.

- From an Islington council report on car parking

As an indication of how much space is taken up by on street parking. 2432 car parking spaces of 6mx2m takes up **4.5x** the space of Naesby Park. Considering most cars sit parked for 96% of the day – Could we make better use of this space ?



2. Scottish Law on footway parking:

Images of Pavement Parking around Broomhill

A new law has been introduced in Scotland to tackle footway (pavement) parking. The enforcement of this is due to start imminently.

To help understand why the ban on pavement parking is being introduced, the following is from Living Streets website (one of the main campaigning organisations):

> *"73% People aged 65 and over polled for Living Streets in 2014 who said pavement parking was a problem for them in their local area.*
>
> *Vehicles parked on the pavements force people onto the road. This is dangerous for everyone, but is a particular problem for blind and partially-sighted people, parents with pushchairs and young children, wheelchair users and others who use mobility aids.*
>
> *Living Streets is campaigning with allies such as Guide Dogs and British Parking Association for nationwide bans on pavement parking.*
>
> *Scotland made a ban law in 2019 - and is now waiting to implement."*

Example images of effect of Pavement parking

3. Resident Parking Zone

This image shows the streets analysed with streets in red losing spaces and those in green gaining space. The blue line represents the boundary of Broomhill Community Council.

Glasgow City Council have expressed a desire to introduce a residents Parking Zone in Broomhill and Thornwood. When introducing the RPZ the council is unlikely to paint parking bays where footway parking currently occurs as the street is too narrow. Due to this it is likely that there will be a 4% decrease in bays in the Broomhill area shown above. From **2527 spaces** to **2432 spaces**. (working contained in Appendix B)

Not all spaces are currently occupied – even in areas of pavement parking the streets are not full

RPZ will reduce number of spaces due to removal of 'footway parking' spaces but RPZ will also reduce the demand as commuter's cars, abandoned cars or cars from other areas with parking controls will dissapear.

Parking studies in Hyndland before and after an RPZ was introduced in neighbouring Partick showed there was an increase of 85 cars parked in Hyndland, these were specifically on the outskirts of the existing Partick RPZ. If it is assumed that there was a similar migration of cars from Hyndland to Broomhill due to RPZ introduction, then this is not far off the 95 cars reduction necessary to see no impact from removing 'pavement parking' bays.

In some specific areas there may be slightly more difficulty obtaining a space but this may not be true if more than 4% of cars are removed due to the introduction of the RPZ.

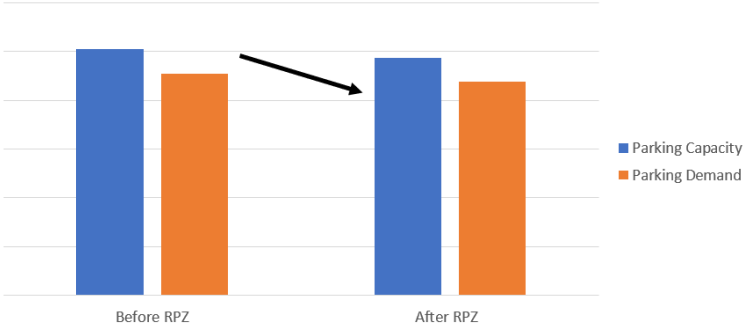


Illustration of reduction in both suply and demand for parking bays after introduction of RPZ

4. Increasing Road Safety

Removing cars from the footway will increase width of roads in several areas which could increase speed of cars in the area and we would want to tackle this.

There are a number of measures which can improve safety in the area which are detailed on the next few pages.

- Introduce lower speed limit across Broomhill
- Remove through Traffic
- Give way on blind summit
- trafic calming measures:
  - Alternating blocks of parking spaces.
  - Raised Junctions and corner build-out
  - Road Narrowing with tree planting and Sustainable drainage system (SuDS)

4.1 Introduce lower speed limit across Broomhill

As Broomhill is a residential area it would be appropriate to have a 20mph speed limit introduced across the area. When the RPZ was introduced in Hyndland a 20mph zone was also introduced.

The following is taken from a ROSPA guide on 20mph limits and explains the need for them:

> *"Drivers who travel at higher speeds have less time to identify and react to what is happening around them. It takes them longer to stop, and if they are involved in a collision, it is more severe, causing greater injury to any vehicle occupant, pedestrian or rider involved. The purpose of 20mph limits is to create conditions in which drivers choose to drive at no more than 20mph and so reduce the likelihood of collisions, and the severity of any that do occur.*
>
> *….*
>
> *A considerable body of evidence has demonstrated that speed significantly increases the likelihood of collisions, the chances of those collisions causing injury and the severity of those injuries, and that both 20mph zones and 20mph limits reduce the number and risk of these accidents and the casualties they cause. 20mph limits, without traffic calming measures, reduce speeds and casualties but tend not to be as effective as 20mph zones with traffic calming ."*

source

4.2 Remove through Traffic

The most effective way to increase road safety is to remove the traffic which shoukldn't be there. Residential streets shouldn't be used for through traffic, instead this should stay on the main roads. This aligns with a theme identified in the previous consultation with residents that there is a desire to stop through trafffic which is using Randolph Road as a 'rat-run' to avoid the traffic lights on Crow Road. As the residential streets are reasonably wide and free of traffic it is possible to speed along Randolph Road.

Image shows the suggested roiute for traffic from google maps at peak times. Also highlighted are the traffic lights on Crow Road.

Why is there not rat run traffic through other parts of Broomhill ?

Most of Broomhill has been split into small cells to control where traffic can go. This has been done over many years of planning and road design - they are highlighted in the below map of the area.

Image showing routes traffic can take around Broomhill. Highlighted are the cells that have been created using modal filters And inset images show these.

This problem has been mostly solved in Broomhill through the historical use of traffic filters. On the image it can be seen that traffic filter 5 stops traffic bypassing the lights at broomhill cross. 1 and 2 stop through traffic cutting into Broomhill from the exporessway. 3 and 4 stops traffic from using the south of marlborough avenue to get around.

Cells as shown in the above image are areas which cars can move within i.e. there are roads which link up all areas within the cell. It is only opossible to go from one cell to another by gioing via the main roads in the are.

As can be seen in the diagram, most cells in Broomhill have only one entrance. However where there are two entrances and a clear path between, cars can use this route to avoid congestion or traffic lights on the main road. The only remaining flow of 'rat-run' traffic is through Randolph Road. There may be some traffic which speeds in the purple section at the south so some traffic calming could be necessary.

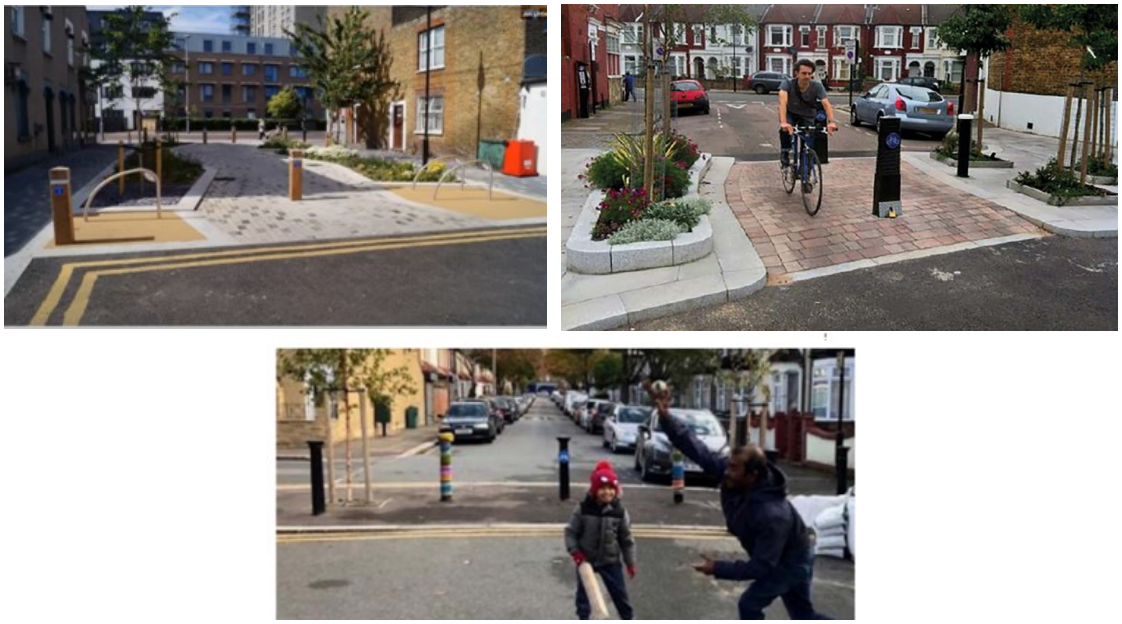
Solution

To combat through traffic using Randolph Road, the introduction of Modal Filters and the creation of two new traffic cells will stop through traffic avoiding the traffic lights. Research has shown that only closing streets near the main road and there is still a 'leak path' between cells will not have the desired effect and willl just move the rat-run traffic to another road. Anything short of splitting into two cells will result in traffic migration rather than evaporation.

Shown are the new modal filters to create the two cells. Also shown are the predicted new paths for vehicles which will stay on the main road.

- Split area in two to stop drivers trying to stop ability to bypass the traffic lights on crow road – also stops the passage of east / west traffic near the school.
- Cars will be kept on main road rather than using residential streets to avoid traffic lights.
- For East side it adds two traffic lights for access to A739. However, the benefit of this intervention likely to be best felt in this area so may be willing to accept the trade-off

This should be implimented with temporary materials and the residents surveyed after a period to determine the benefits and decide if permanent Modal filters should be introduced.

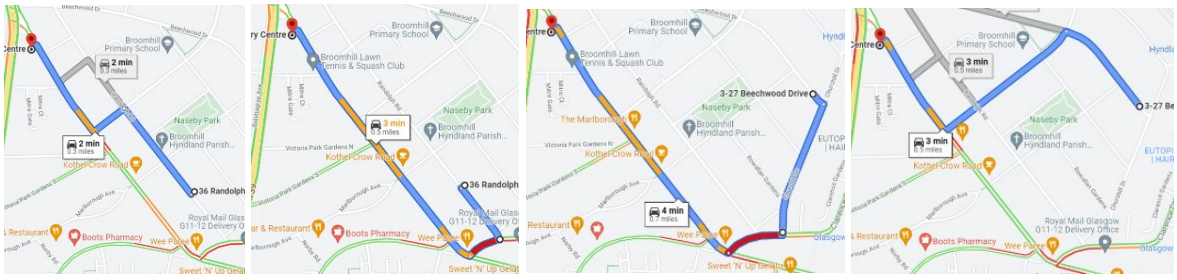


Examples of attractive modal filter designs

<u>This may seem excessive - but works well in other parts of the West End</u>. – see Appendix A which contains a case study about the Woodlands area.

<u>Effect on travel time</u>

This will likely have a small effect on resident's journey times….



Google maps output (left) effect on journeys from Randolph Rd (right) Beechwood drive. Each pair of images show route before and after RPZ.

Based on an analysis of Google maps at peak travel times, from Randolph Road, there is likely to be a 1 minute increase in journey times to destinations North / west of Broomhill. From Beechwood Drive, there is also likely to be a 1 minute increase in journey times to destinations North / west of Broomhill.

This needs to be weighed against the decrease in noise from cars on street and increase in safety for residents. The largest percentage increases in journey time will be for shorter journeys. These are likely to be journeys that could be replaced by a form of active travel.

4.3 Give way on blind summit

During consultation with residents of broomhill, the blind summit on Randolph Road was identified as an area of concern.

Images of the blind summit on Randolph Road

Randolph Road, between its junctions with Churchill Drive and Beechwood Drive, and assumed for ease of reference to lie in a N-S orientation.

This section of Randolph Road, which carries '2-way' traffic, rises southwards along a moderately steep gradient, from the junction with Churchill Drive to a crest about half way along this section of road, then falls towards the junction with Beechwood Drive. At the crest, and on the west side if this section of road is the access to a lane linking to Crow Road further to the west. Footway and conventional parking both occur to varying degrees on both sides of this section of Randolph Road.

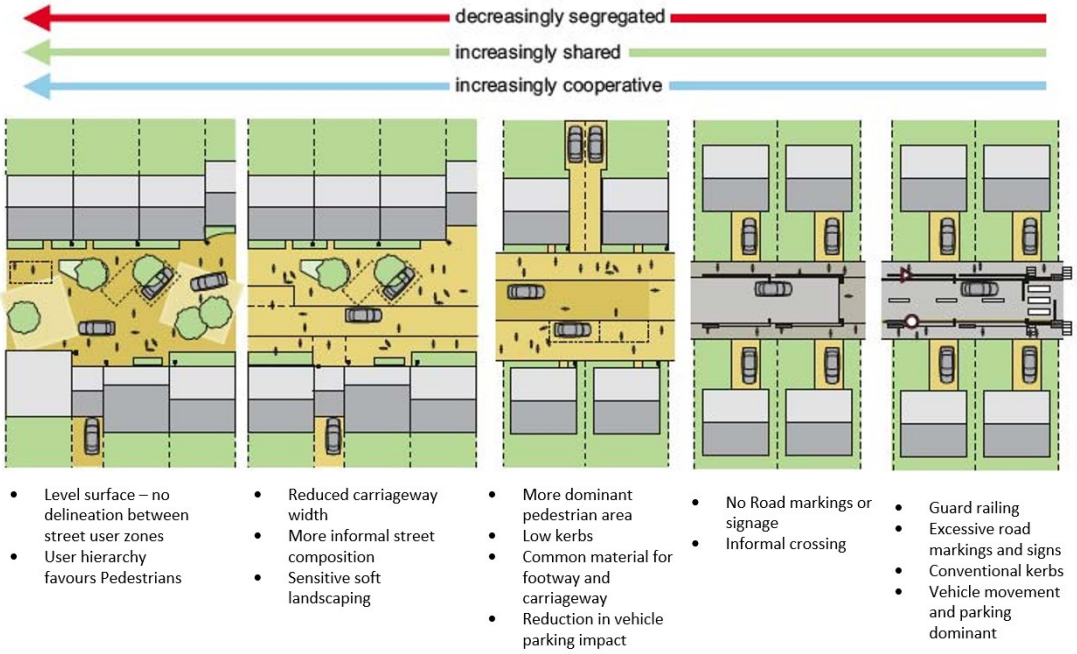
It is suggested that the existing '2-way' travel through this section of Randolph Road is maintained, with:

a- Vehicles being conventionally parking next to the west footway of Randolph Road, between its junction with Churchill Drive and the lane access, and,

b- Vehicles being conventionally parked next to the east footway of Randolph Road, between the crest and the junction with Beechwood Drive, with the lane access on the west side providing a 'passing place' where northbound traffic can give-way to oncoming southbound traffic approaching from the other side of the crest.

Introduction of trafic calming measures:

Reducing the speed limit without re-designing the street is unlikely to reduce the speed of cars especially if there is a low level of enforcement. It is important that the low speed environment of the street is self-explanatory and self-enforcing. This will ensure that these conditions are maintained as the use of the street varies throughout the day.



Graphic from 'designing streets' to show how traffic calming measures can be combined to create great places to live

Traffic calming mesures which could be appropriate in Broomhill are:

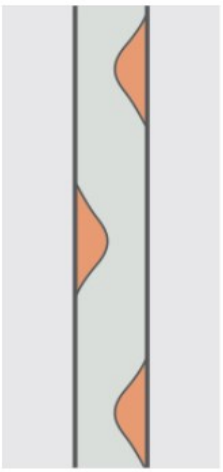
- Alternating blocks of parking spaces.
- Raised Junctions and corner build-out
- Road Narrowing with tree planting and Sustainable drainage system (SuDS)

Scottish government guidance states in Designing Streets, 2010 that:

> "Designers should aim to create streets that control vehicle speeds naturally by well-crafted design from the outset rather than through unsympathetic traffic-calming measures added at the end of the design process"
>
> "Evidence from traffic calming schemes suggests that speed controlling features are needed at intervals of around 60-80 m to achieve speeds of 20 mph or less. Straight and uninterrupted links should therefore be limited to this range to help ensure that the arrangement has a natural traffic-calming effect".

4.4 Alternating blocks of parking spaces.

On streets which will only have space for a single row of parked cars, e.g. Marlborough Avenue outside Naesby Park, the parking bays should be alternated. Lane shifts using alternating parking form an S-shaped path of travel which lowers vehicle speeds.



Again an example of this can be seen in the woodlands area – this parking strategy has been used to create lane shifts and reduce speed on the section of road which is one-way when travelling from East to West.

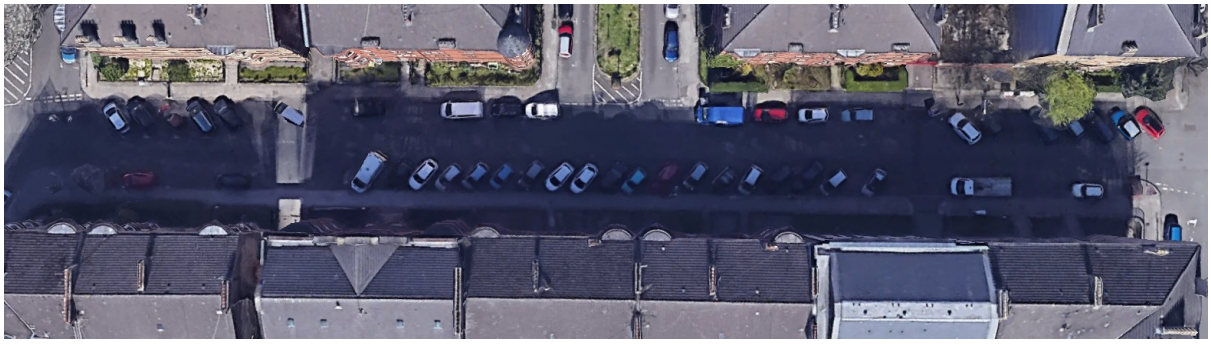


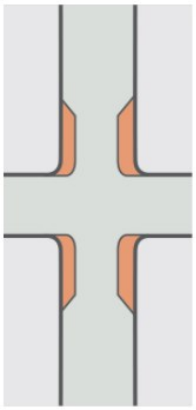
Image of alternating parking on West Princes Street

These measures would be appropriate for wide streets such as:

- Broomhill Terrace
- (parts of) Balshagray Avenue
- (parts of) Randolph Road

4.5 Raised Junctions and corner build-out

To increase visibility and priority of pedestrians raised junctions with continuous footways should be introduced. These junctions also make it easier for disabled residents or residents pushing prams to cross the road as the footway stays at one level. The junctions should be narrowed to match the width of parked cars. This reduces the distance pedestrians need to cross and will reduce vehicle speed.



There are a number of large over-engineeed junctions in Broomhill These leave pedestrians in a vulnerable position crossing the road for a much longer time and the large radius corners allow cars to travel across the crossing at high speed.

There are a number of such crossings shown in the below images. 15m crossing distance at clarence gardens (off clarence drive) and off Broomhill Drive. As an example of a better design, Woodcroft Avenue (off Crow road) allows two way traffic flow has a width of 5m for pedestrians to cross.

These narrow gateways to residential areas also help highlight to drivers that a slower speed is necessary.

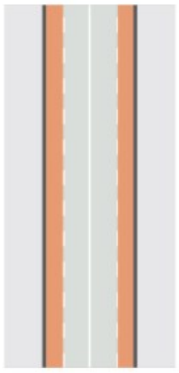
Images of large junctions in Broomhill

These measures would be appropriate for entrances to residential areas as shown in the above images:

- Randolph Road
- Clarence Drive
- Broomhill Drive

4.6 Road Narrowing with tree planting and Sustainable drainage system (SuDS)

Narrow lanes reduce speeds and minimize crashes on city streets by way of reducing the right-of-way and making drivers wary of traffic and adjacent users. The space removed from the road could be used for green infrastructure to reduce the ammount of flooding in Broomhill.



SuDS provide areas to store water in natural contours and can be used to allow water to soak (infiltrate) into the ground or evaporated from surface water. This could stop the drains becoming overwhelmed during periods of intense rainfall.

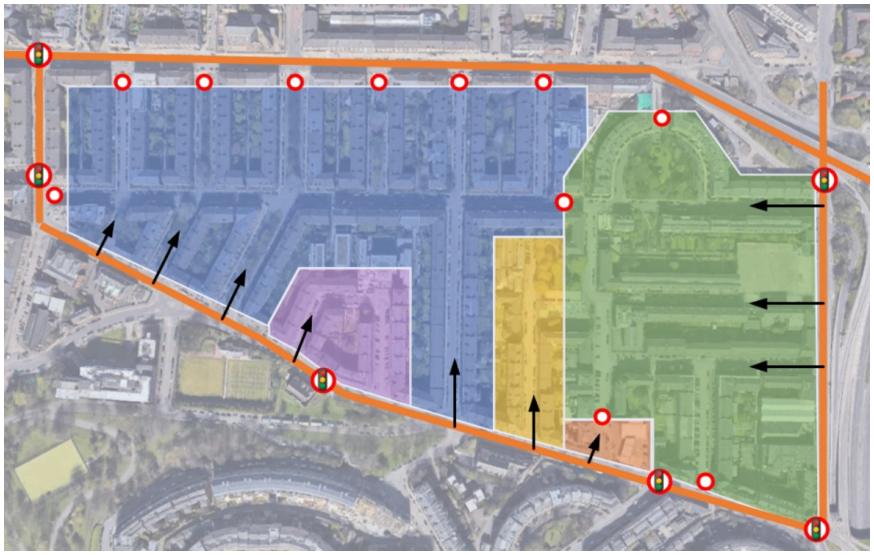
Example images of SuDS in London

These measures would be appropriate in areas which would no longer have footway parking:

- (parts of) Beechwood drive
- Edgehill Road
- Elmwood avenue
- Poplar avenue
- Marlborough avenue
- Victoria park gardens north

Appendix A: Case study - Woodlands

When re-designing Glasgow's road networks in the 1960's a number of 'modal filters' were introduced in the woodlands area. The Block is surrounded by a number of busy streets: Great Western Road to the North, M8 off ramps to the East and Woodlands Road to the South. The Modal filters stop traffic from using the residential streets to travel from one main road to another, bypassing the traffic lights.



Shown in different colours are the different cells within the woodlands block. With main roads shown in orage around the outer perimeter.

It is still possible for cars to access every part of the block, allowing residents to park and delivery vans to unload outside properties. This Design slows traffic as there is no through route for cars and so traffc using the street are starting / ending a trip and many of those using the street are the residents who live in the area.

(Left) Continuous walkway created by blocking connection to Great Western Road. This also creates a better walking experience as there is no longer a street to cross. (Right) Modal filter on West Princes Street which stops through traffic using residential streets.

Appendix B: Expected changes in parking bays with footway parking removed

	main Road	length	width	current parking	current spaces	future parking	future spaces	difference	change
Broomhill Terrace	NO	244	11.5	double parallel	81	parallel and end on	136	-54	could increase
balshagray av (marlborough to broomhill terr	NO	250	9.1	double parallel	83	parallel and angled	117	-33	could increase
Randolph Rd (churchill to marlborough)	NO	200	8.8	double parallel	67	parallel and angled	93	-27	could increase
Rowallen gardens	NO	200	10.6	double angled	120	double angled	120	0	no change
Crow Rd (balshagray to cross)	yes	565	13.5	double parallel	188	double parallel	188	0	no change
Broomhill Drive	yes	791	12.4	double parallel	264	double parallel	264	0	no change
Crow Rd (cross to boundary)	yes	466	10.7	double parallel	155	double parallel	155	0	no change
Edgehill Rd (woodcroft to beechwood)	NO	80	8.8	double parallel	27	double parallel	27	0	no change
naesby Avenue	NO	156	7.3	double parallel	52	double parallel	52	0	no change
Randolph Rd (marlborough to elmwood)	NO	240	7.2	double parallel	80	double parallel	80	0	no change
marlborough av (oval to norby)	NO	80	7	double parallel	27	double parallel	27	0	no change
churchill drive 2 (Randolph to rowallen)	NO	50	8.5	double parallel	17	double parallel	17	0	no change
churchill drive 1 (clarence dr to rowallen)	NO	30	7.6	double parallel	10	double parallel	10	0	no change
churchill drive 3 (rowallen to station)	NO	300	7.8	double parallel	100	double parallel	100	0	no change
Woodcroft AV	NO	422	9.2	double parallel	141	double parallel	141	0	no change
churchill drive 4 (randolph to crow rd)	NO	60	6	mixed	20	mixed	20	0	no change
broomhill av	NO	111	11.8	parallel and end on	62	parallel and end on	62	0	no change
central Av	NO	25	11.3	parallel and end on	14	parallel and end on	14	0	no change
Clarence Gardens	NO	215	13.4	parallel and end on	119	parallel and end on	119	0	no change
Broomhill Gardens	NO	42	9.7	parallel and end on	23	parallel and end on	23	0	no change
Tibbermore Rd	NO	100	12	parallel and end on	56	parallel and end on	56	0	no change
balshagray av (north)	NO	55	6	single parallel	9	single parallel	9	0	no change
Beechwood drive (woodcroft to randolph)	NO	334	5.7	single parallel	56	single parallel	56	0	no change
Churchill Drive (randolph to woodcroft - north	NO	377	5.6	single parallel	63	single parallel	63	0	no change
Churchill Drive (randolph to woodcroft - south	NO	377	5.6	single parallel	63	single parallel	63	0	no change
churchill drive 5 (station to woodcroft)	NO	245	6.15	single parallel	41	single parallel	41	0	no change
Edgehill rd (naesby to marlborough)	NO	50	5.2	single parallel	8	single parallel	8	0	no change
elmwood av (north)	NO	130	6.3	single parallel	22	single parallel	22	0	no change
marlborough av (oval)	NO	272	5.6	single parallel	45	single parallel	45	0	no change
Norby Rd	NO	70	6	single parallel	12	single parallel	12	0	no change
randolph rd (elmwood to randolph gate)	NO	276	5.8	single parallel	46	single parallel	46	0	no change
Clarence Dr	yes	437	13.3	some single parallel	25	some single parallel	25	0	no change
Victoria Park Gardens South	yes	281	7.5	some single parallel	14	some single parallel	14	0	no change
Beechwood drive (crow rd to randolph rd)	NO	55	6.3	double parallel	18	single parallel	9	9	could decrease
Edgehill Rd (woodcroft to naesby)	NO	60	6.3	double parallel	20	single parallel	10	10	could decrease
elmwood av south	NO	65	5.8	double parallel	22	single parallel	11	11	could decrease
poplar av	NO	65	5.8	double parallel	22	single parallel	11	11	could decrease
marlborough av (balshagray to norby)	NO	113	6.4	double parallel	38	single parallel	19	19	could decrease
Edgehill Rd (marlborough to churchill)	NO	140	5.5	double parallel	47	single parallel	23	23	could decrease
Victoria Park Gardens North	NO	176	6	double parallel	59	single parallel	29	29	could decrease
beechwood drive (churchill to woodcroft)	NO	230	6.25	double parallel	77	single parallel	38	38	could decrease
Marlborough Av (North)	NO	350	5.6	double parallel	117	single parallel	58	58	could decrease
				Current total spaces	2527	Future total spaces	2432		
						future capacity vs current	96%		
						reduction in spaces	4%		