

Project Process Journal

Urban Ecology Service for Human Well-being

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LENS

Original HMW

HMW: help people maintain ecology improvement after the lockdown ends?

COVID-19 and visible ecology improvement

During the pandemic of COVID-19, our cities are stopped. People disappeared from the streets, animals and plants are taking back. Air and waters are obviously improved. This has been breaking news for that time, people have shown their desire and yearn towards better ecology and environment. I used to be obsessed with reading the news and pictures of lovely animals in our cities and thinking about maintaining this ecology improvement after the lockdown ends. From that point, I chose to study urban ecology to see if there's any chance that I can create a service to repair the urban ecology and make it serve us better.

Untouched ecology and human-wellbeing

I started with reading the related news about animals showing up in towns and the reasons behind. As I read more and more news analysing on this time's ecology improvement and reasoning it as the result of the sudden break of industries and traffics (Henriques. 2020)¹, I realised that this is just a temporary change on the layer of the surface. Urbanization, as a process which is highly involved with industries and traffics, brought huge benefits to human society, and we are actually enjoying it whether consciously or not. If the industries and traffics shut down remain, the economy will bankrupt and people will lose their job, this is definitely against people's well-being.

So I believe that it is not proper to kill industries and traffics in order to give this earth back to the great nature. Meanwhile, I can see that our urbanization pattern for so many years is unsustainable because it obviously broke the ecosystem and wiped off countless species from the lands which later turned into our concrete jungles and we have to rely on more energy to maintain a comfortable living condition. Based on this mind, I decided to work on the balance between ecology and human-wellbeing and started to look into the area of urban sustainability.

Untouched ecology



Urbanization

Industries  Traffics

Human well-being

¹ Henriques, M. (2020, April 23). How has coronavirus helped the environment? Www.Bbc.Com. <https://www.bbc.com/future/article/20200422-how-has-coronavirus-helped-the-environment>

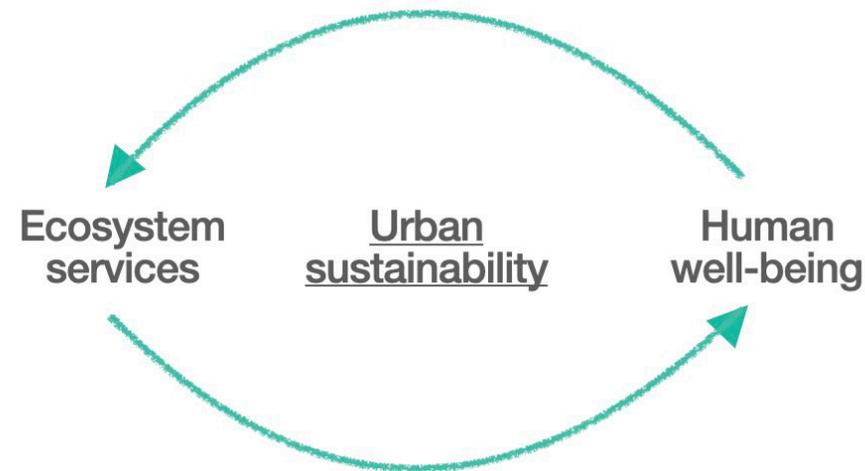
THESIS READING

Urban sustainability and urban ecology

I started my thesis reading from urban sustainability. In the beginning, I suppose it would tell about how should the infrastructures be changed in order to repair the urban ecology.

I found urban sustainability is developed from urban ecology, and their perspectives have been developing. During the early stage of the 1940s, they were focusing on the ecology in cities, and they study the cities as trashed or damaged area; after 20 years of developing, they started studying the ecology of cities, and their suppose changed from cities as ecosystems to cities as socio-economic systems; after 2000 they started focusing on urban sustainability, and suppose the cities as socio-ecological systems. Their path really helped me to re-navigate my vision because I used to stare at the loss of species, but actually there is no need to insist on repairing the urban ecology since the urban itself is not only an ecosystem but also a socio-economic system, that means people's interest must be considered at the same weight as the flora and fauna.

Urban sustainability is defined as an adaptive process of facilitating and maintaining a virtuous cycle between ecosystem services and human well-being through concerted ecological, economic, and social actions in response to changes within and beyond the urban landscape. Human well-being now is the primary focus of urban sustainability projects (Wu, 2014)². In an urban landscape, ecosystem services, biodiversity, ecosystem processes and human-wellbeing is effecting on each other any time.



Urban ecosystem services

According to Millennium Ecosystem Assessment & AI (2005)³, ecosystem services are the benefits people obtain from ecosystems. It contains four main aspects, which are provisioning services (e.g., food and water), regulating services (e.g., purification of air and water, regulation of climate, floods, diseases, hazard, and noise), supporting services (e.g., soil formation, primary production, and nutrient cycling) and cultural services (e.g., recreational, spiritual, religious and other nonmaterial benefits). From the examples, we can tell that the regulating services and cultural services are already adapted in the design and planning in most of our modern cities.

² Wu, J. (2014). Urban ecology and sustainability: The state-of-the-science and future directions. *Landscape and Urban Planning*, 125, 209–221.

³ Millennium Ecosystem Assessment, & AI, E. (2005). *Ecosystems and human well-being : health synthesis : a report of the Millennium Ecosystem Assessment*. Who.

Urban green spaces as a vital module of urban ecology services

So how exactly does the ecosystem serve our city? A large number of studies have documented that urban green (vegetation) and blue (water) spaces provide various ecological, environmental, economic, and socio-cultural benefits. Depending on their design and management, urban green spaces can purify air and water, moderate local climate, sequester CO₂, reduce soil erosion, alleviate noise pollution, provide habitats for plants and animals, increase real estate values, improve the neighbourhood and landscape esthetics, and enhance human psychological well-being (Wu, 2014)⁴.



Kain et al. (2016)⁵ suggest adding more detailed characteristics of land use through the introduction of Service Providing Elements (SPEs). SPEs are spatial units or design elements of different sizes that are sources of urban ecosystem services, such as green roofs, allotment gardens and greenhouses. The SPEs can function as spatially defined, concrete meeting points between land use and supply of ecosystem services. Within the urban context, the SPEs add a layer of integration between ecology and the built environment, mirroring movements in urban planning and architecture to merge aspects of built artefacts and living nature.

These proposals clearly led me to look at urban ecosystem services units and the urban green and blue method. Since I was deeply impressed by a deer shown up on Buchanan Street during the lockdown (Heart Scottish News, 2020)⁶, I chose Glasgow as my target city without a doubt.

Also, Kabisch et al. (2016)⁷ suggest that to be able to properly understand the emerging differences we need to learn about the ecological conditions, at present and historically, the spatial settings and political priorities, as well as inhabitants' preferences and cultural background. I decided to follow this method.

⁴Wu, J. (2014). Urban ecology and sustainability: The state-of-the-science and future directions. *Landscape and Urban Planning*, 125, 209–221.

⁵Kain, J.-H., Larondelle, N., Haase, D., & Kaczorowska, A. (2016). Exploring local consequences of two land-use alternatives for the supply of urban ecosystem services in Stockholm year 2050. *Ecological Indicators*, 70, 615–629.

⁶Heart Scottish News. (2020, May 16). <https://twitter.com/heartscotnews/status/1261583731590148096>. Twitter. <https://twitter.com/HeartScotNews/status/1261583731590148096>

⁷Kabisch, N., Strohbach, M., Haase, D., & Kronenberg, J. (2016). Urban green space availability in European cities. *Ecological Indicators*, 70, 586–596. <https://doi.org/10.1016/j.ecolind.2016.02.029>

GENERAL CONTEXT

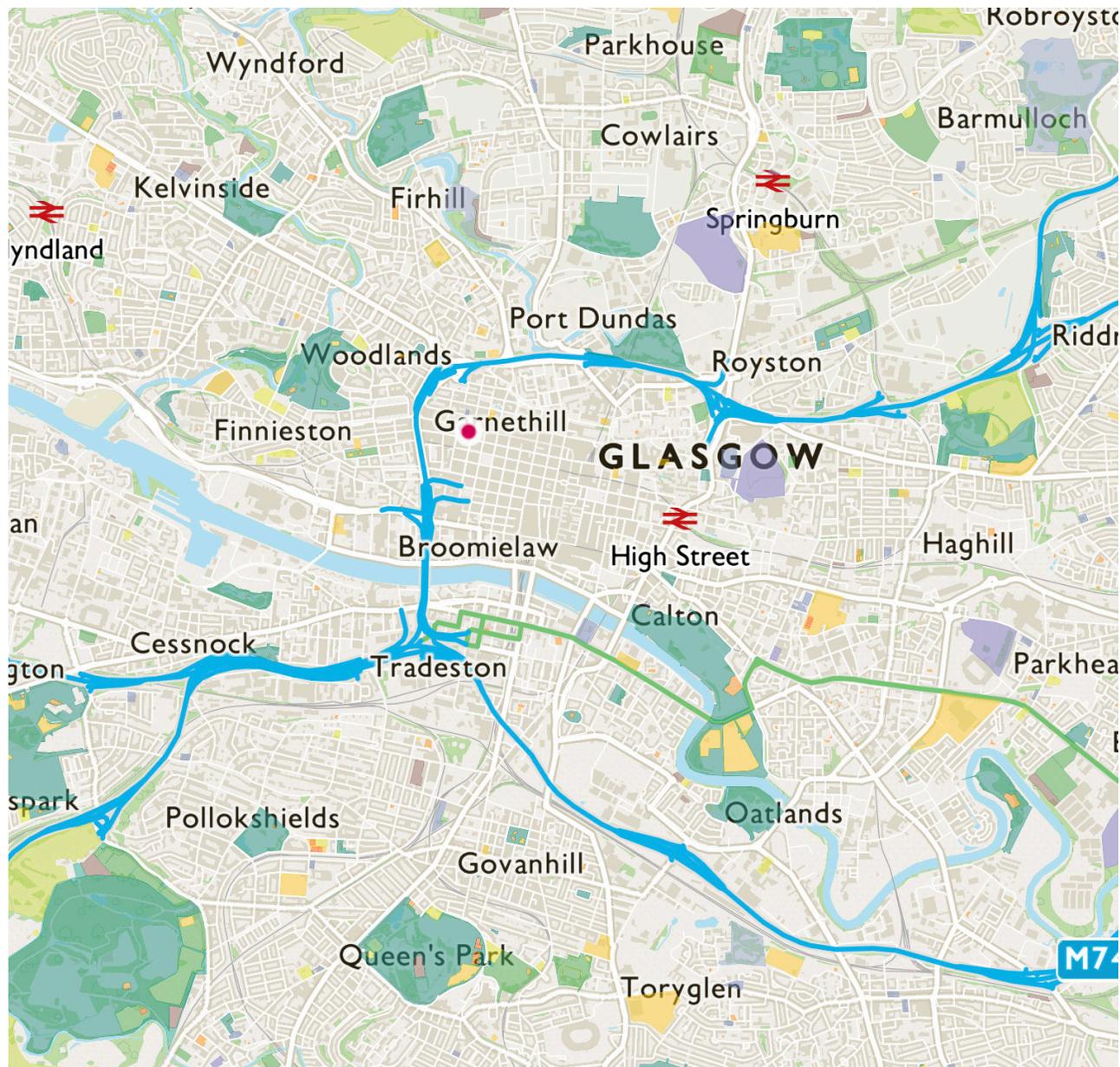
Green spaces in Scotland

When I first tried to know about the local situation of greens, I found an organisation called Greenspace Scotland. They are an organisation studying green spaces situation in Scotland and providing green spaces design services. They have many successful projects across Scotland, some of them look really community-engaged, and they are applying the placemaking method to encourage people designing their own green spaces and public spaces. But none of them happened in Glasgow.

On their homepage, they have shown one of their investigations. The data tells that 90% of urban Scots say it's important to have green space in their area, and 1 in 4 say the quality of their green space has declined in the last 5 years. Both reflecting the urgent need of greenspace in Scotland.

Green spaces in Glasgow

Based on their data, Greenspace Scotland provided an online tool from their website, it is called Greenspace Map. (see next page)

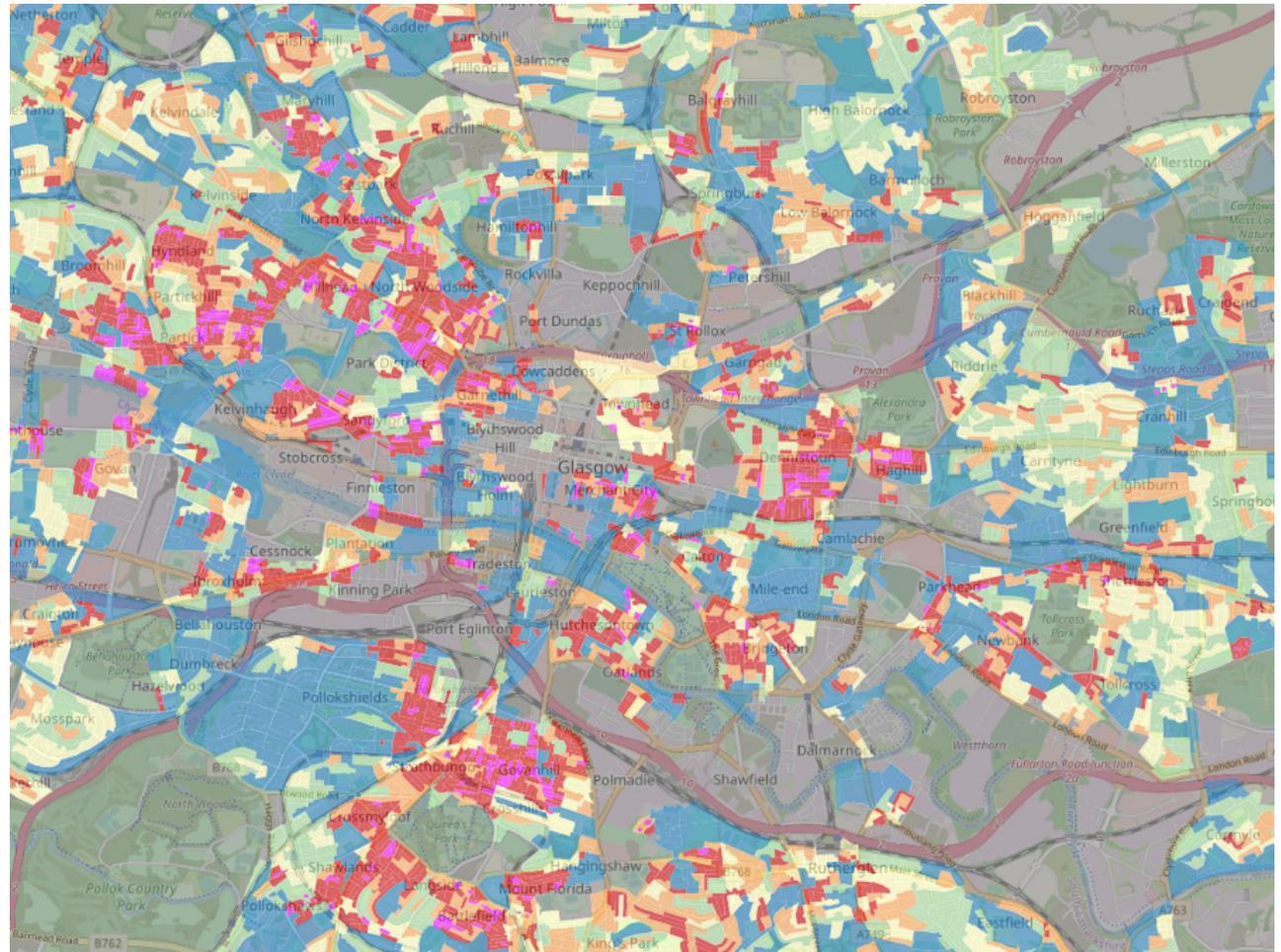


All these colourful patches are green spaces in Glasgow city, they are of different types with different functions, but definitely they all provide powerful ecosystem services. However, the city centre seems totally ignored by the whole city's green spaces layout. There is a total desert with very limited access to green spaces.

The city centre is a highly functional area, the streets look so busy day and night. If there are really that many people, there should be urgent needs for green spaces.

Population density and greenspace sharing situation

To verify the hypothesis, I turned my eyes to the population density of Glasgow city. This is the population density map from the 2011 census.



Source: Census boundary data. (2011). Census.Ukdataservice.Ac.Uk. <https://census.ukdataservice.ac.uk/get-data/boundary-data.aspx>

The map tells that there is residence in the city centre, but much less than those living in the areas where have adequate green spaces.

Combined with the Greenspace Map, we can tell that the residential condition in the city centre is not attractive compared with the outer neighbourhoods. This fact more or less contributed to the low population density in the city centre.

Historical reasons

Follow the instructions of the experts, I looked at the past pattern of Glasgow's city centre. I went to the website of Scotland National Library, where they provide massive archives of old maps from different ages.



Source: Find by place - Map images - National Library of Scotland. (n.d.). Maps.Nls.Uk. Retrieved June 14, 2020, from <https://maps.nls.uk/geo/find/#zoom=14&lat=55.85924&lon=-4.27368&layers=101&b=1&z=1&point=55.86162>

This one is from 1850s, I chose it because the layout is basically the same as what we can see today. In the age that urban ecology was not yet born, the city centre of Glasgow is totally planned for office use, government use, educational use and townhouses as the home of wealthy people. The only accessible public green space in the city was Glasgow Green. There were still meadows and trees along Sauchiehall street, which was later replaced by the buildings. Combined with the history of Glasgow, it is not hard to tell that because of the thriving economy in that age, lands are getting very limited and expensive in the city centre, so people gave up the city greens and let it sold to developers to serve the offices.

Government's determination

Such city planning issue left over from history is not likely to be ignored by the government. I went to the website of Glasgow City Council, as I expected, they already put the city's sustainability and ecosystem problems onto the political agenda. There is one document called Glasgow Climate Emergency, and two biodiversity document which are Glasgow Local Biodiversity action plan and its implementation plan. The biodiversity documents tell about the general situation of Glasgow city, which is generally good, while the situation in the city's outer areas is better than the situation in the city centre.

Although there are not many documents shown on their website, basically we can tell that the government's attitude towards this aspect is active and they are in action. Given the fact that the council needs time to consider and generate new plans, there should be more actions to be taken and documents to be released in the coming years.

Contemporary situations - urban pattern

Besides the documents, the council's website also has a page of supplementary guidance, where are a series of documents for urban planning. At there I found the current maps of green spaces and urban planning. (see next page)

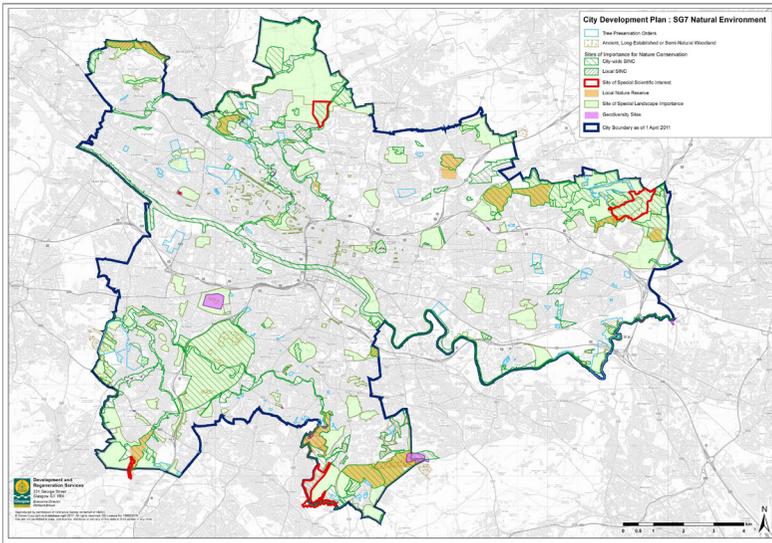
From the maps, apart from the natural environment map and greenbelts map which are basically the same as the Greenspace Map from Greenspace Scotland, we can tell that the city centre is currently highly dominated by business, commercial and official functions.



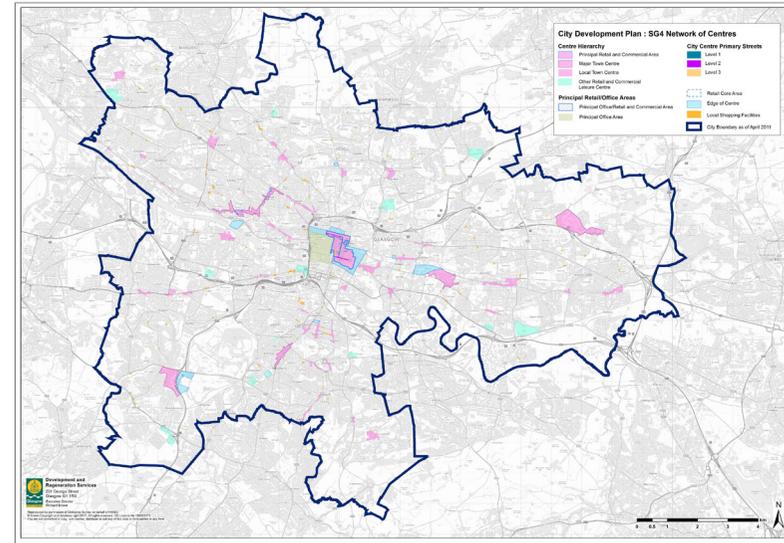
Glasgow Local Biodiveristy Action Plan
Source: 1619. (2015, November 27). Biodiversity. Www.Glasgow.Gov. Uk. <https://www.glasgow.gov.uk/biodiversity>



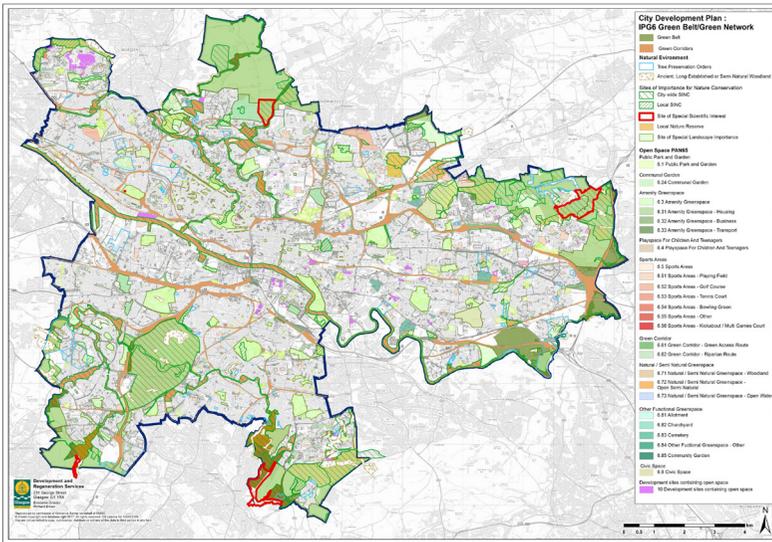
LBAP Implementation Plan
Source: 1619. (2015, November 27). Biodiversity. Www.Glasgow.Gov. Uk. <https://www.glasgow.gov.uk/biodiversity>



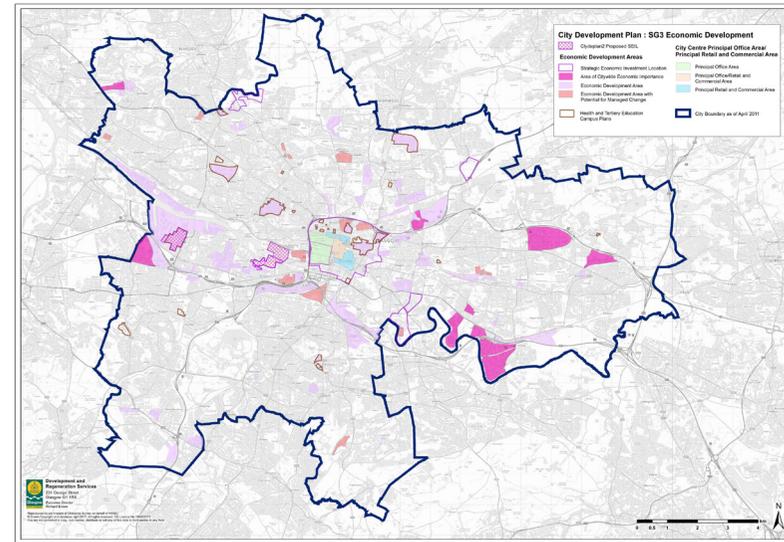
SG7 - Natural Environment



SG4 - Network of Centre



IPG6 - Green Belt/Green Network



SG3 - Economic Development

Insights from the 1st turn of research

After gathering the findings along with my research, I had a recap and made a deduction based on the current status of Glasgow's ecosystem services:

- The general status is good, but there are large differences in levels between areas.
- The city centre is an obvious weak area, since there is not planned as a residential area, and today it's hard to make thorough changes in this historical affected area.
- Given the obvious trend of global climate change, it is without a doubt that the temperature will go higher and extreme weather will be more frequent.
- The city centre as somewhere poor at ecosystem services, it has got the poor ability to self-adjust in response to changes.
- Thus, without stronger ecosystem services in this area, not only the livability but also the retailing and entertainment industries' cluster effect will be weakened, since there is no enjoyable outdoor experience any more.

Redirected HMW

Target area: Glasgow city centre

HMW: improve the ecosystem services in Glasgow city centre?

Focus: regulating function and cultural function.

DETAILED SITUATION

When I was trying to know more about the government's actions, I found that there is already a group of professions dealing with any of the city pattern's disorder from a strategic level, called Glasgow City Centre Strategy (GCCS). They have many successful projects in Glasgow, applying the people-engaging approach of placemaking. This group which is attached to the city council and provide their data, analyse and solution, really helped me to keep my research going while COVID-19 pandemic is negatively affecting people engagements from most means.

At the same time, I tried to find anyone who can share their information with me and provide any opportunities for community engagement. I found the list of Glasgow city councillor, and there is a city councillor who's in charge of the city centre and focusing on ecology and greens. I sent her an email as soon as I found her page, and started to study from the Glasgow City Centre Strategy while waiting for her reply.

Green spaces and city centre regeneration

After understanding who are the GCCS and their works, I got a document from them called City Centre 2050 - Strategic Development Framework Draft, which is being considered by the city council right now. It tells the characters of different districts and opportunities in them in a comprehensive and forward-looking way.

In this document, six ambitions have been proposed in order to improve the centre:

- Reinforce the economy
- Re-populate the centre
- Reconnect with river and surrounding communities
- Reduce traffic dominance
- Green the centre and make it climate resilient
- Heritage and city character

The second one and the fifth one have clearly proposed the importance of green spaces towards them. More importantly, they told the process of green spaces to empower the city centre's regeneration. To regenerate such a city where suffered from decline, there should be more vibrant, both in economy and culture. And to bring this into truth, it should attract more people to move into, that means better living and working condition. At this point, the requirement of greens and green spaces is beyond any doubt.



Source: City Centre Team. (2019, November 25). CITY CENTRE STRATEGIC DEVELOPMENT FRAMEWORK 2050 | Glasgow City Centre Strategy. <https://www.glasgowcitycentrestrategy.com/city-centre-strategic-development-framework-2050.htm>

Vibrant city centre



Attractive city centre



Greener city centre

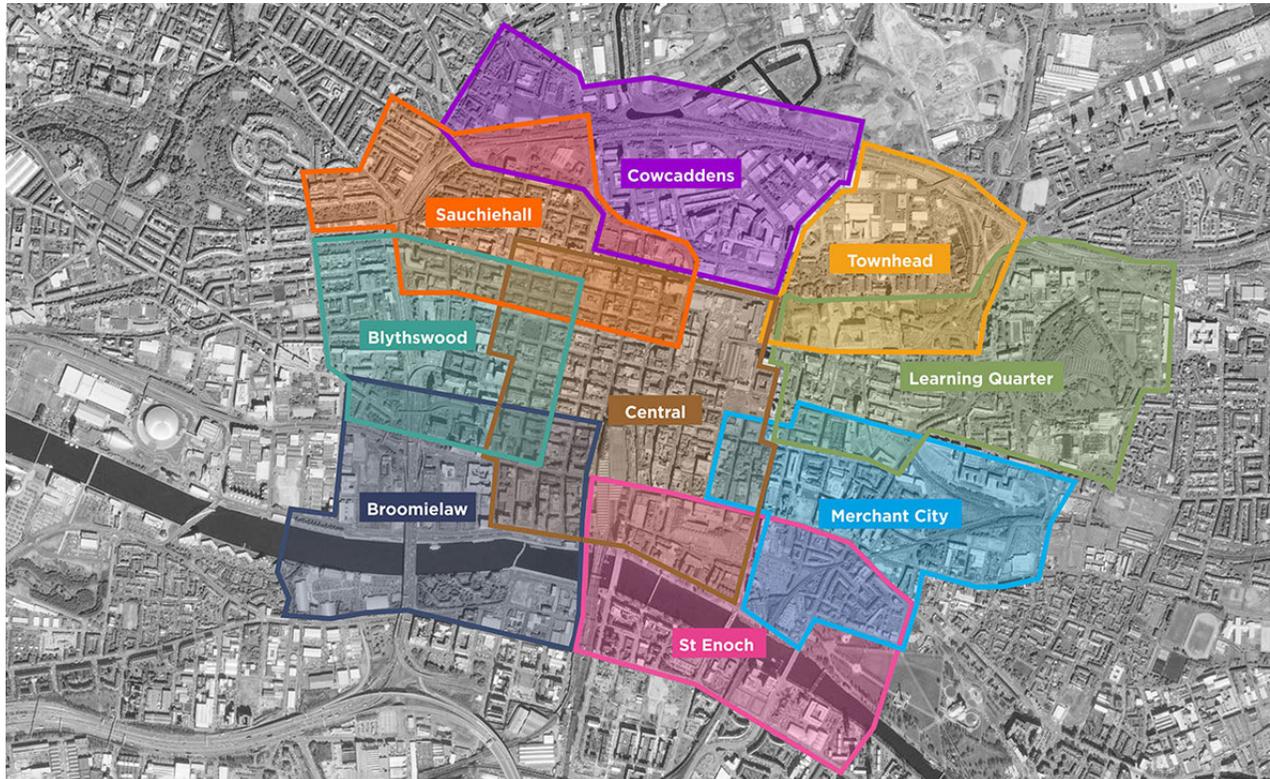
Focusing on Blythwood

According to the document, different approaches and ambitions have been set for different districts according to their characters. In Cowcaddens, Townhead and Learning Quarter, there are already fairly adequate greens; in Merchant City and St Enoch, there are already many successful city regeneration projects going on in which green spaces works are included; in the Central and Sauchiehall, the street greens projects are also going well. But in Blythwood and Broomielaw, the regeneration is more complex, there is full of unknowns, and facing a more significant change.

However, the situations and requirements of Blythwood and Broomielaw are still different. At this point, I took the opportunities in Blythwood. Because in Blythwood, there is an urgent need for green spaces. Specifically,

- There are few green spaces, and the accessibility is not good
- There is planned to be re-populated (twice in ten years)
- There has no green spaces plan in process
- There is a more tricky situation

While Broomielaw's priority is getting more supporting services like shops.



Source: City Centre Districts | Glasgow City Centre Strategy. (n.d.). <https://www.glasgowcitycentrestrategy.com/city-centre-districts>

Failed contact with the council

I supposed the city councillor whom I sent an email to was able to check her working email when she was working from home given the pandemic lockdown because she should be able to do it as long as she got a computer. But maybe I was wrong. She never replied. Although I believe that the official means will be more effective and make more responsible communication, I had to try some other way. So I went to twitter and tried to get in touch with her. Fortunately, I found her account, she was active with local issues and expressing her opinions frequently. I sent her message on twitter with basically the same contents as the email but shorter and easier.

She replied to me soon on the same day and suggested me to go find the Blythswood and Broomielaw Community Council (BABCC). Honestly, I hoped she would give more information because my project should be in her interest area, but she seemed doesn't want to talk much.

Following her suggestion, I went to search for the BABCC. Their website was not informative at all. There was no address, no email, no phone number. They do have one twitter account, but it doesn't take a direct message. Although it is not active, and the only tweet when there was a community meeting, I found their email address from one of their meeting poster from February. I sent an email to them asking for people's opinions and a chance for talking. They never replied.

People's attitude towards city green spaces

Although the pandemic and lockdown made it very difficult for me to do any people engagement, I didn't give it up and applied the method of online ethnography. This is a tweet which had much attention at that time. I find it very interesting and use the comments as my resource for an online ethnography. (see next page)

It is not hard to tell that people love nice gardens, and believe it will make a better living place for people. But they are not happy with the fact that many of these gardens are whether private gardens for wealthy people or not accessible to the public, both are waste.

The source tweet

I get to briefly enjoy what feels like a secret city centre oasis when I deliver to the flats at Buchanan Gardens which are entered via Bath Street and are above the shops between Buchanan Street and West Nile Street
#Glasgow



4:18 PM · Jul 4, 2020 · [Twitter for Android](#)

433 Retweets and comments 3.6K Likes

Source: <https://twitter.com/riderglasgow/status/1279434425688866818>. (n.d.). Twitter. <https://twitter.com/RiderGlasgow/status/1279434425688866818>

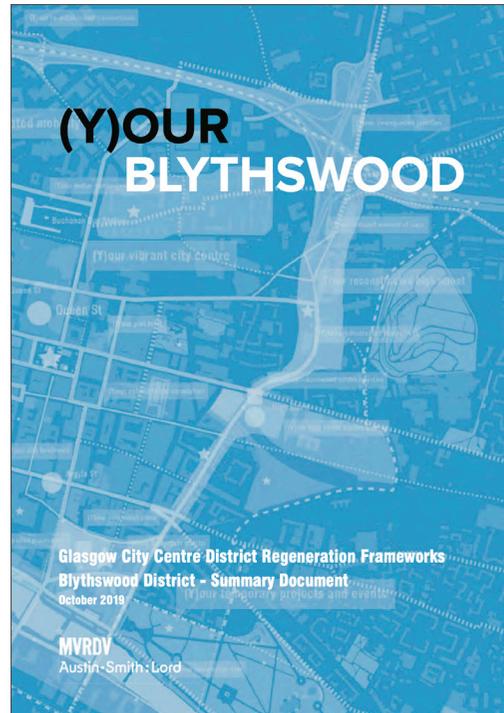
Online Ethnography

Data record	Recorded observations	Interpretation	Themes
"These flats have always been my husbands dream to live in"	A person who is married but has no chance of living in a similar place.	This person and her husband think it is a ideal place to live in.	Gardens make good places for living.
"It's insane it's up there hidden away! Want to to a visit"	A person who is curious about the garden.	This person thinks this garden shouldn't be hidden and want it to be accessible.	Gardens shouldn't be hidden and they should be accessible.
"Can see this from my office and it's always empty. Many people living up there?"	A person working in an office building at the city centre.	This person thinks such a garden should be used by people.	Gardens should be used by people.
"Millionaires use these flats as a place to stay when they have to travel into Glasgow. They are pretty much always empty."	A person who has been to more than one wasted nice living places.	This person thinks it's not the only private garden which is hardly used. And he is not happy with the fact that only the wealthy people can have nice gardens.	Everyone should be able to use nice gardens.
"It always makes me so sad that so many beautiful flats/houses in big cities are mostly laying empty because they're only used as a holiday home for rich people"	A person who is caring about living condition.	This person thinks it is a waste of big nice living places hardly used by the hosts.	Waste should be stopped.

Situations in Blythswood

Desk research

To understand the situations in Blythswood, I started from the historical situations and their current pattern by reading its Wikipedia page, where the development process and key historical facts and points have been briefly introduced. The current situation and future plan for Blythswood are described in the document City Centre 2050 and a document also from the GCCS focusing on the regeneration projects of Blythswood, which is called Glasgow City Centre District Regeneration Frameworks Blythswood District - Summary Document.



Source: City Centre Team. (2020, February 6). CENTRAL/BLYTHSWOOD DISTRICT REGENERATION FRAMEWORKS | Glasgow City Centre Strategy. [Www.Glasgowcitycentrestrategy.Com. https://www.glasgowcitycentrestrategy.com/central-blythswood-district-regeneration-frameworks.htm](https://www.glasgowcitycentrestrategy.com/central-blythswood-district-regeneration-frameworks.htm)

- History

This area is bodies with townhouses built-in 18-19 centuries and used to be a fabulous community for rich merchants. Every estate here is privately owned. And since here use to be many posh places, many buildings here are listed for conservation. According to the original layout, the Blythswood square was the only green spaces in this district, and it remains the same today.

- Today

Today's Blythswood is a mixed usage area with both residents and offices, there is a thriving independent business scene.

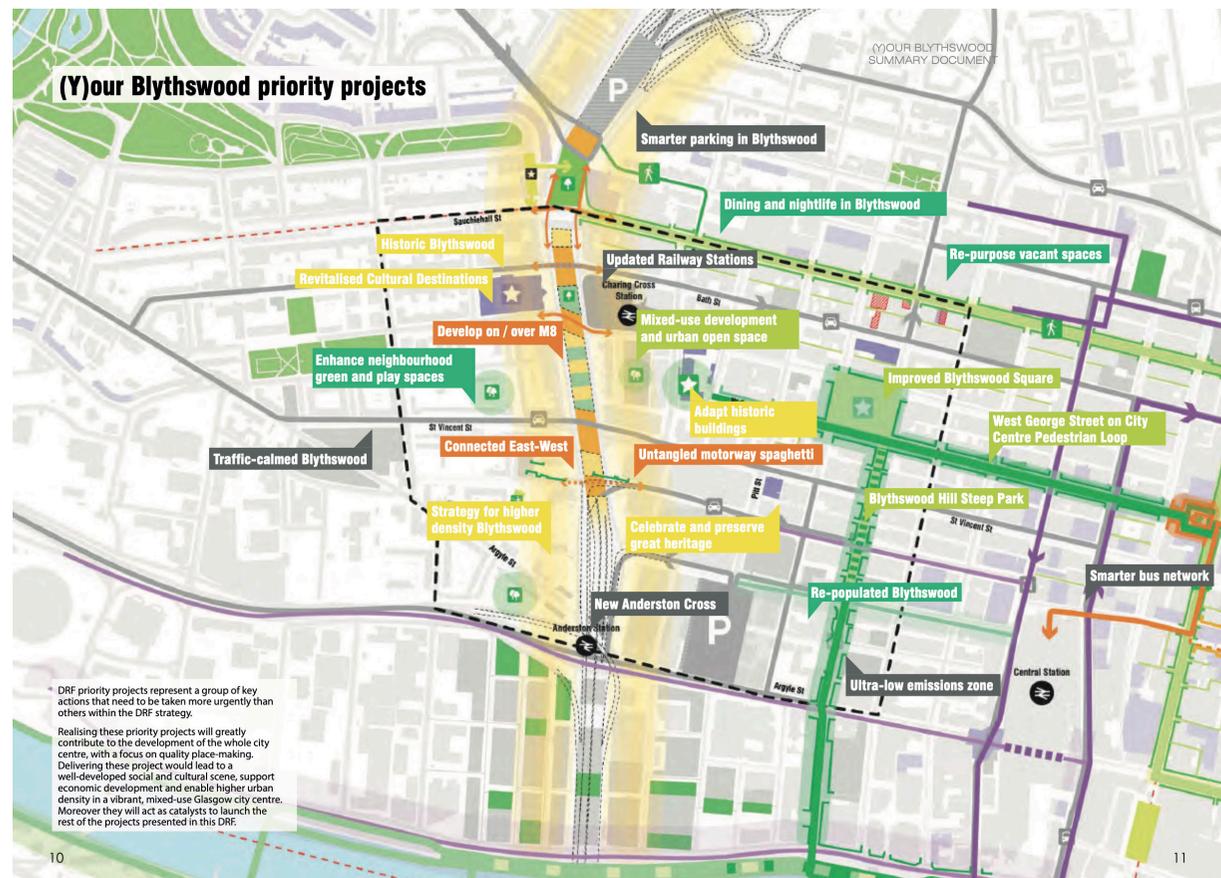
The district contains a low residential population which should be grown. The adjacent M8 motorway acts as a divisive, noisy structure. And Blythswood Square is not opening to the public, the public access to the areas only greenspace is restricted.

Besides, there are a lack of amenities for the local community and the district could benefit from having more events and activities.

- Plan for future

Blythswood is planned by the professions to be more family-friendly in order to attract more people to moving in and double the population.

Blythswood is already included in the city's avenue project. Pocket parks are going to be built on vacant land. Four playspaces for children are going to be built at the corner of Blythswood square.



Source: Glasgow City Centre District Regeneration Frameworks Blythswood District - Summary Document

Expert's help

During the process I was doing the desk research about Blythswood, I attended a lecture held by GCCS, which is called Setting the Agenda for (Y)our Future City Centre: Glasgow. It is faced with the students and academic people, I have seen their core people on it, and most importantly, I got an email address which is not shown on their website and is welcoming to the attendees' questions. I took the chance for my final struggle of talking with people, sent an email and asked for a talk. Very fortunately, Ian Elder, the project manager of Blythswood's regeneration, replied to my email and would like to give a talk via phone. I was over the moon.

Ian was very nice on the phone, he understood my intention as a student and a researcher, and treated me very patiently. They were using people engaging research method for their project, they talked with over 1600 people which include residence, companies and developers and gathered very convincing data. He generously shared their data and findings with me on the phone. I really would like to show my most sincere appreciation for his huge help. All the following contents are from our phone talking.

- Blythswood people's opinions

People living and working here want their greens back. They want public spaces to go socializing, instead of having nowhere to go and stay at home during weekends.

Due to the fairly few residents in this area, the community council is not working well as other community councils because they don't have people and a proper place.

People here want to claim back the traffic dominated streets, given their community is terribly disturbed by the M8 corridor.

However, they think it is still not the time for reopening Blythswood square. The government had some attempts to reopen it in the 1990s, but the protest against it lasted for a fairly long time, and it took a lot of effort to address it.

- Developers' requests for Blythswood

Since this area is also planned as a part of the international financial services district of Glasgow, there are many developers estimating the conditions in this area.

They want Blythswood to be more vibrant, instead of totally quiet outside.

They want here to be more attractive, rather than full of lifeless brick and mortars.

They want better supporting-services, like cafes, shops, and green spaces of course.

They want this place to be not only for working but also for life. Because the companies are the customers of these developers, they certainly want their people to have somewhere proper to have a relaxing lunch break.

- Problems making greening works difficult

Generally, the problems in Blythswood regarding greening are listed below.

The first one is the private ownership of the existing estates. If they are not going to sell the land, all we can do is talking and waiting.

The second one is a common problem in Glasgow which is the utilities. Because to dig a hole deep enough for planting a tree, all the wires and gas tubes must be adjusted at first.

The third one is a district's greening plan must take time for the council to approve it because they have to be very cautious about financial expenditure and government appropriations.

Last but not least, given the COVID-19 pandemic, the economy really needs time to recover and the government is not likely to be generous with appropriations for green spaces and public spaces.

- What we can do for green spaces

However, even though there is planned to have more trees and public spaces, there's still hardly any space for building new infrastructure. The professions and people have to green what they can green, that means taking any opportunities, even there will be only 2 or 3 square meters. Also, since the greenspaces here is, and still going to be, very limited, every piece of green should have clear purposes for people to use it.

Redirected HMW

Target area: Blythswood
HMW: improve the ecosystem services in Blythswood?

Focus: placemaking approach.

SERVICE DESIGN SOLUTION

Opportunities

- More public green spaces will be built in the coming years.
- Available spaces here are very limited, every inch of public space should be with clear purposes.
- The community council here is not working well. More engagement is required.
- This area is planned to be re-populated in the coming years, more people will move in and use this area, they need chance to take part in the community.
- There is chance for GSA to improve their relationship with the community, since the GSA Blythswood House actually contributes the neighborhood's population.

Requirements

- Put no threat to the historical estates
- As cheap as possible
- Easy and flexible, making the least waste
- Contribute to community identity

Solution

A service embodied with

- Placemaking event - designing community green spaces and open spaces
- People engaging
- Customising the spaces

Participants

- Residents of Blythswood
 - design the given spaces
- GSA students as event volunteers
 - help people with drawing
 - help the event crew with designing
- Decision makers
 - giving information to people
 - gathering opinions from people

Event crew

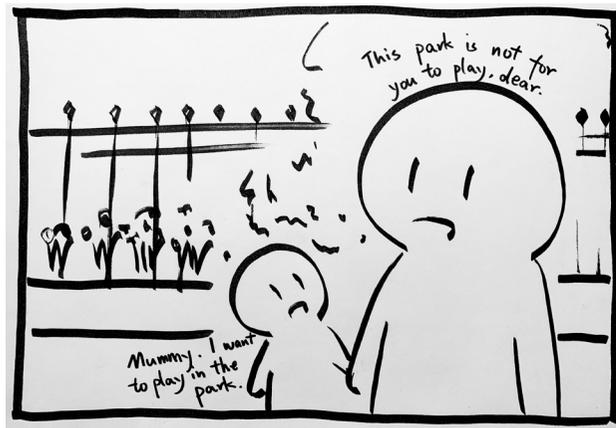
Volunteers from:

- Blythswood community
- GSA

Venue

- GSA Blythswood House

Stakeholders



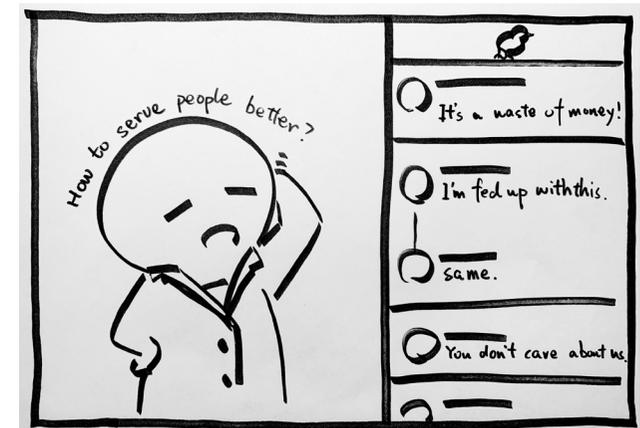
Resident of Blythwood

- having no access to green spaces and public spaces
- living in a neighbourhood that is unfriendly to families and children
- feeling low identity of the community
- want some open spaces for socialising



Student of GSA

- having no access to contribute to the community
- can't feel welcomed by the community
- feeling isolated from the community
- want a vibrant life while living in the neighbourhood



Decision maker

- having no access to gather opinions from people effectively
- not sure about are the people really satisfied with government's work
- want to help people enjoy their community better

Service bluemap



• 👤 service providing

discussing and designing

talking with people in the group

talking with the crew members and guests

looking at each others' work

perfecting the works

talking with people in the group

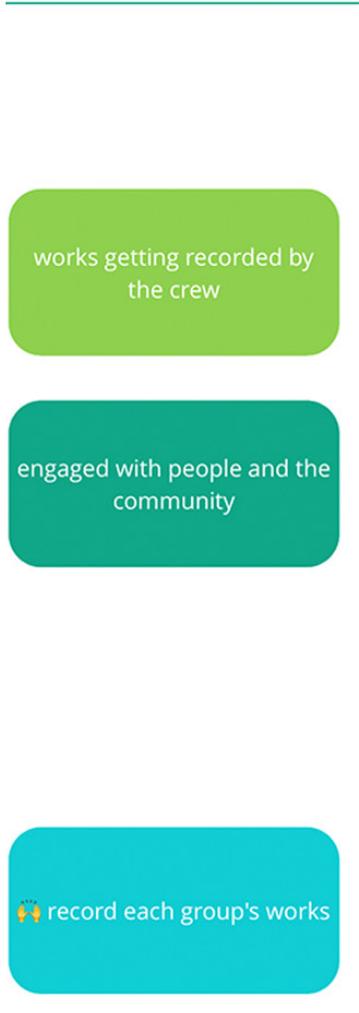
looking at each others' work

perfecting the works

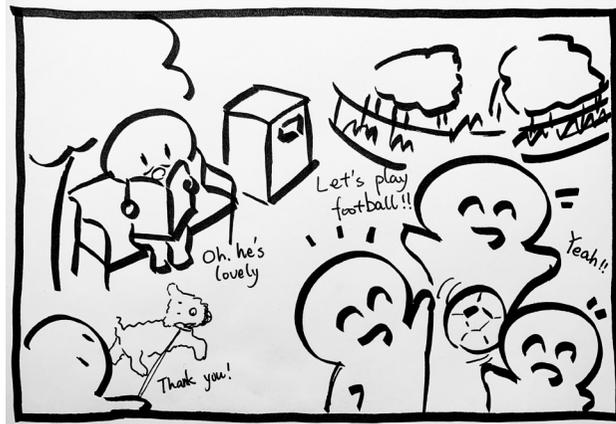
👉 providing help of drawing

👉 talking with people, provide information, gathering ideas and opinions

👉 offering help and explanation for each group

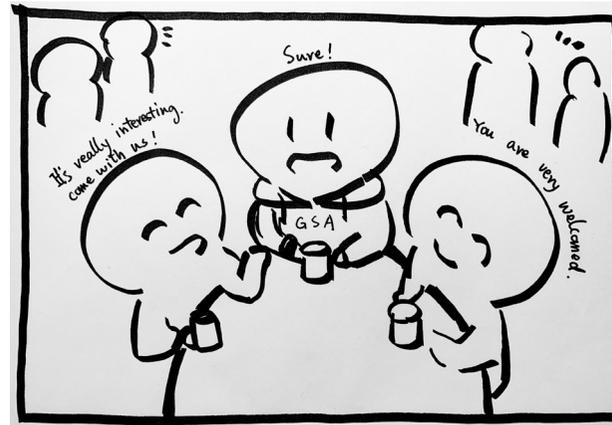


Benefits



Resident of Blythswood

- enjoying customized green spaces and open spaces
- families and children can enjoy the community
- community identity getting enhanced
- community social activities are promised



Student of GSA

- having access to make friends from the community, join the community and become a member of it
- feeling self-accomplishment by contributing to the community
- having access to do people engagement and community engagement if in need of study research
- helping making a good image of GSA students



Decision maker

- precisely knowing people's pain points and requirements
- maximise the benefits of the government's work results
- better affirmed by people

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