

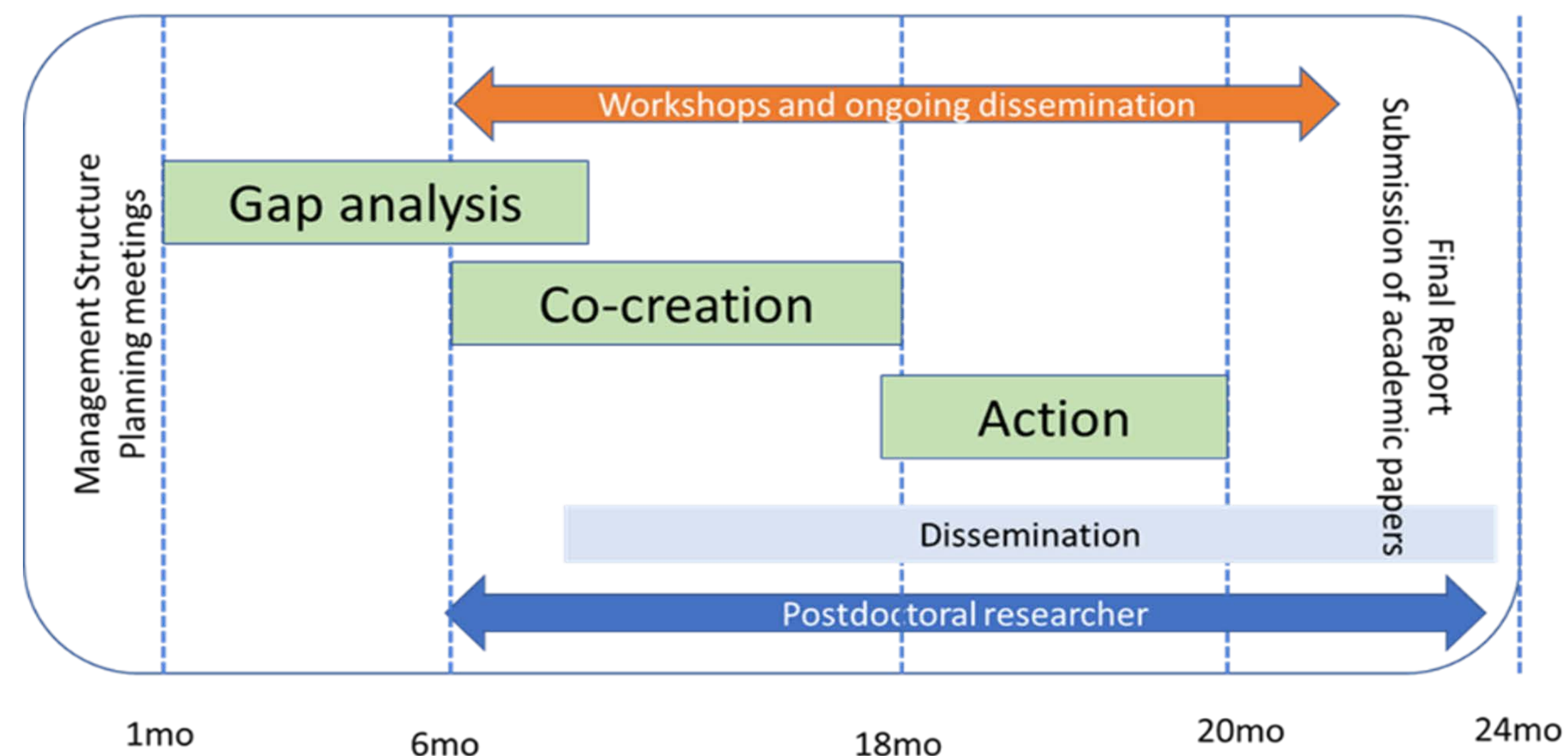
# Mapping Green Dublin

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## Project overview

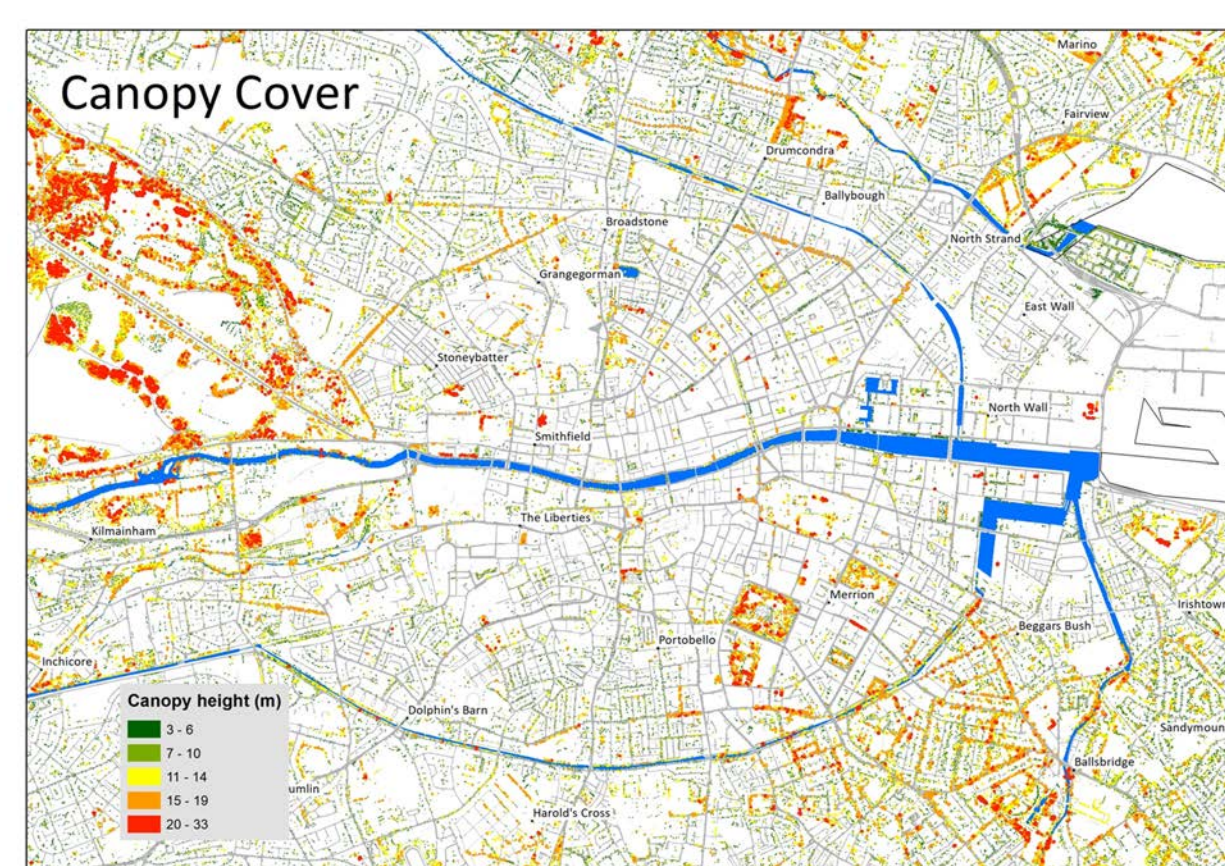
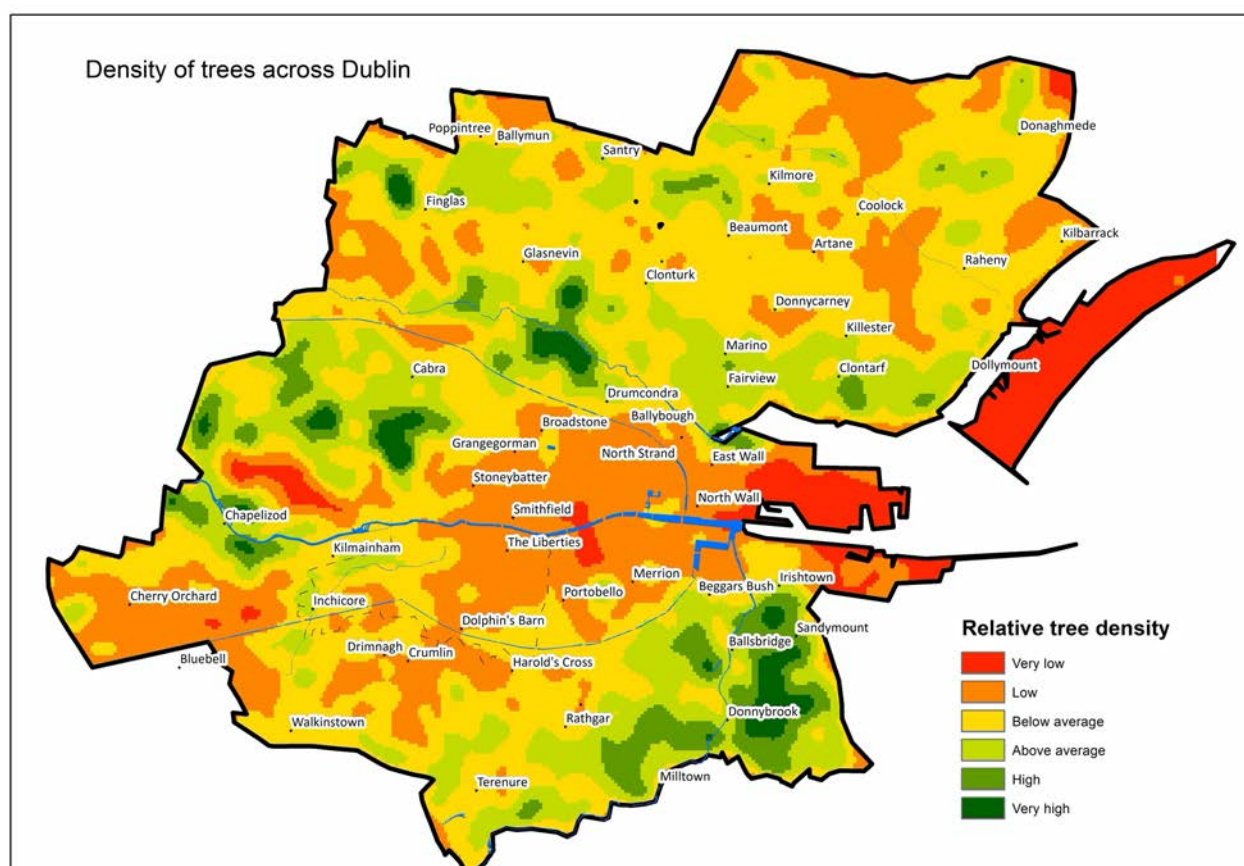
The structure of Mapping Green Dublin (MGD) is shown below. MGD has three components: mapping the tree cover to identify gaps; working with a neighbourhood to co-create a green plan and; trying to enact all or parts of that plan. The project began in March 2019 and will be completed in March 2021.

1. The tree mapping was mostly completed by December 2019 and since then we have worked with others (including Dublin City Council) to add details on the species and health of trees.
2. The co-creation work has been ongoing since October 2019. The project is centred on Inchicore in Dublin City and works in partnership with Common Ground and the artist-in-residence, Seoidin O'Sullivan and Connect the Dots. This stage of the project is nearing completion and will result in a community-based greening plan for the local area.
3. The final component of MGD involves a set of recommendations and actions to deliver the community green plan.



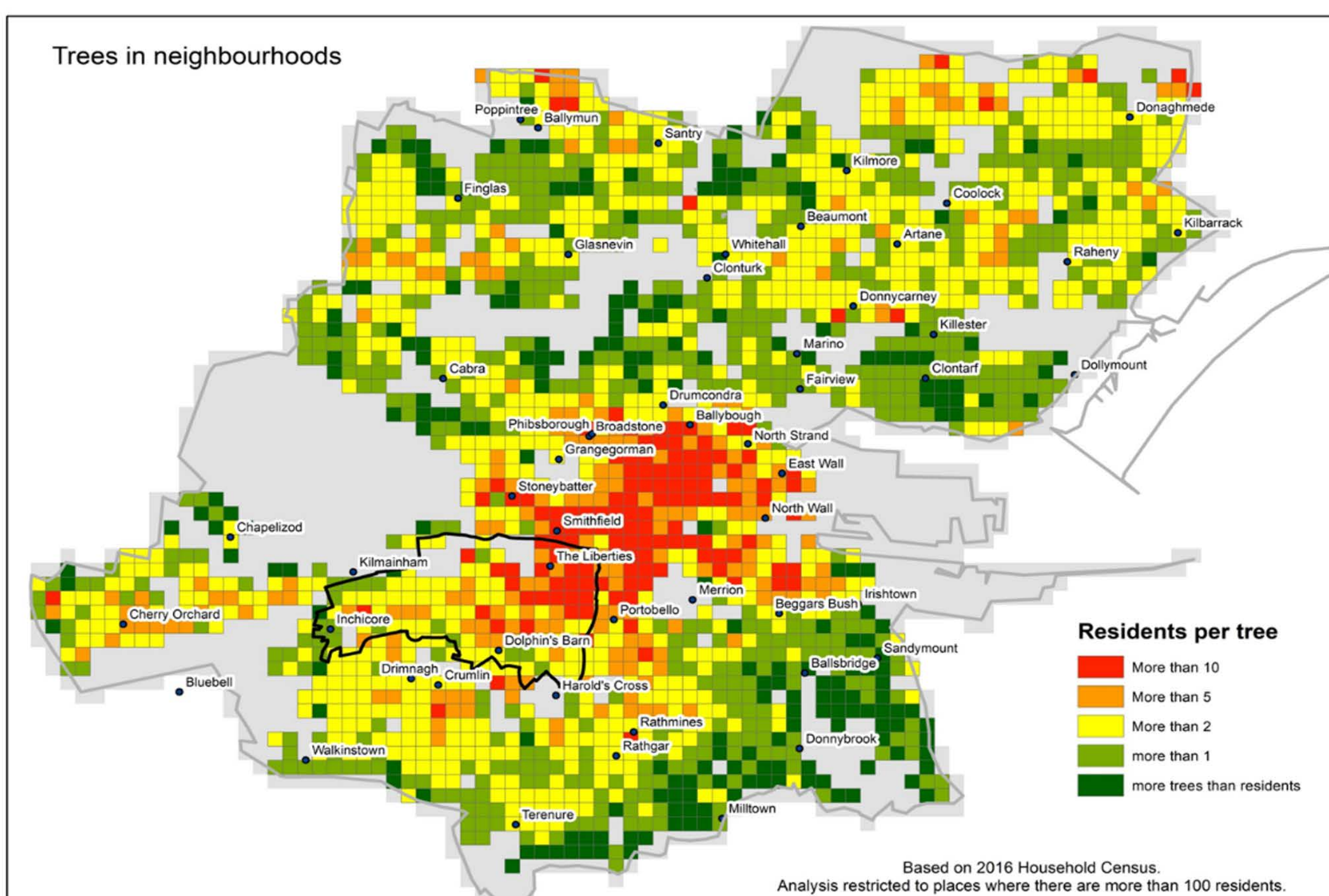
## Mapping tree cover

The project has taken the opportunity to map the locations of all the trees in the Dublin City Council (DCC) area. This was done using a detailed aerial image of DCC and manual digitising of tree locations by Tine Ningal, Gerald Mills and a number of student volunteers. Subsequently, these data were combined with other datasets including: a Digital Elevation Model (to estimate height); Ordnance Survey (OSi) data to estimate locations and; Census information to evaluate trees per person.



We located over 300,000 trees across the DCC area of which one-third are small (<5 m) and nearly 60% are medium sized (5-15 m high). We estimated the locations of trees by comparing the location of the tree dots with road networks, parks and properties. Trees close to roads and parks accounted for 24% and 18% of trees, respectively but nearly half are located in private gardens (Table 1). These results indicate that the owners of private gardens have an important role to play in managing the ecosystem services provided by trees in Dublin.

Where	Total	Estimated tree height (percent)			
		<5 m	5-15 m	15-25 m	>25m
road	58725	24.28	70.25	5.45	0.01
park	69092	18.20	55.36	24.17	2.27
garden	99403	49.78	47.84	2.36	0.02
other	76834	27.52	62.11	10.22	0.15
all	304054	32.05	57.48	9.90	0.56



The distribution of trees in Dublin in terms of relative density is shown in the adjacent map. The average is about 2.5 trees per hectare in DCC (top). The distribution of trees per resident is based on 2016 Census (bottom); population was decomposed into cells 200m on a side and only cells with populations >100 were included. Note the low values in the city centre especially extending from south-west to the north-east. Low values are also found in the centre of Phoenix Park and Bull Island, which are mostly grass. The distribution of trees by population is a more useful description if where trees are located in neighbourhoods (along streets, in gardens and school grounds, etc.). This perspective removes the issue of large unoccupied areas, which includes green spaces and warehouse areas (e.g. around Bluebell in the south-east). The pattern that emerges emphasises the relative absence of trees in the city centre and some suburbs in the north of DCC; by comparison neighbourhoods along the coasts, especially in the south-west are relatively well served.

Next steps: The basic dataset of tree locations has been published as a publicly available dataset at <https://zenodo.org/record/3813792.Xyk7syKhPZ>. This is version one, which will be improved over time as more data is added. We are working with DCC to add species information to this database using the Curio mobile phone App (<https://www.curio.xyz/about>). Curio allows citizens to enter information on trees in their locality. Mapping Green Dublin has provided all of the tree data presented above to Curio in support of a DCC initiative 'Dublin Tree Map', a Citizen Science engagement project (see <http://www.dublincity.ie/dublin-tree-map>). We have started a process of field survey of trees in the Dublin 8 area, which will be used to evaluate the quality of the data.

This project is funded under the EPA Research Programme 2014-2020. The EPA Research Programme is a Government of Ireland initiative funded by the Department of Environment, Climate and Communications. It is administered by the Environmental Protection Agency, which has the statutory function of co-ordinating and promoting environmental research.

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## Co-creation stage

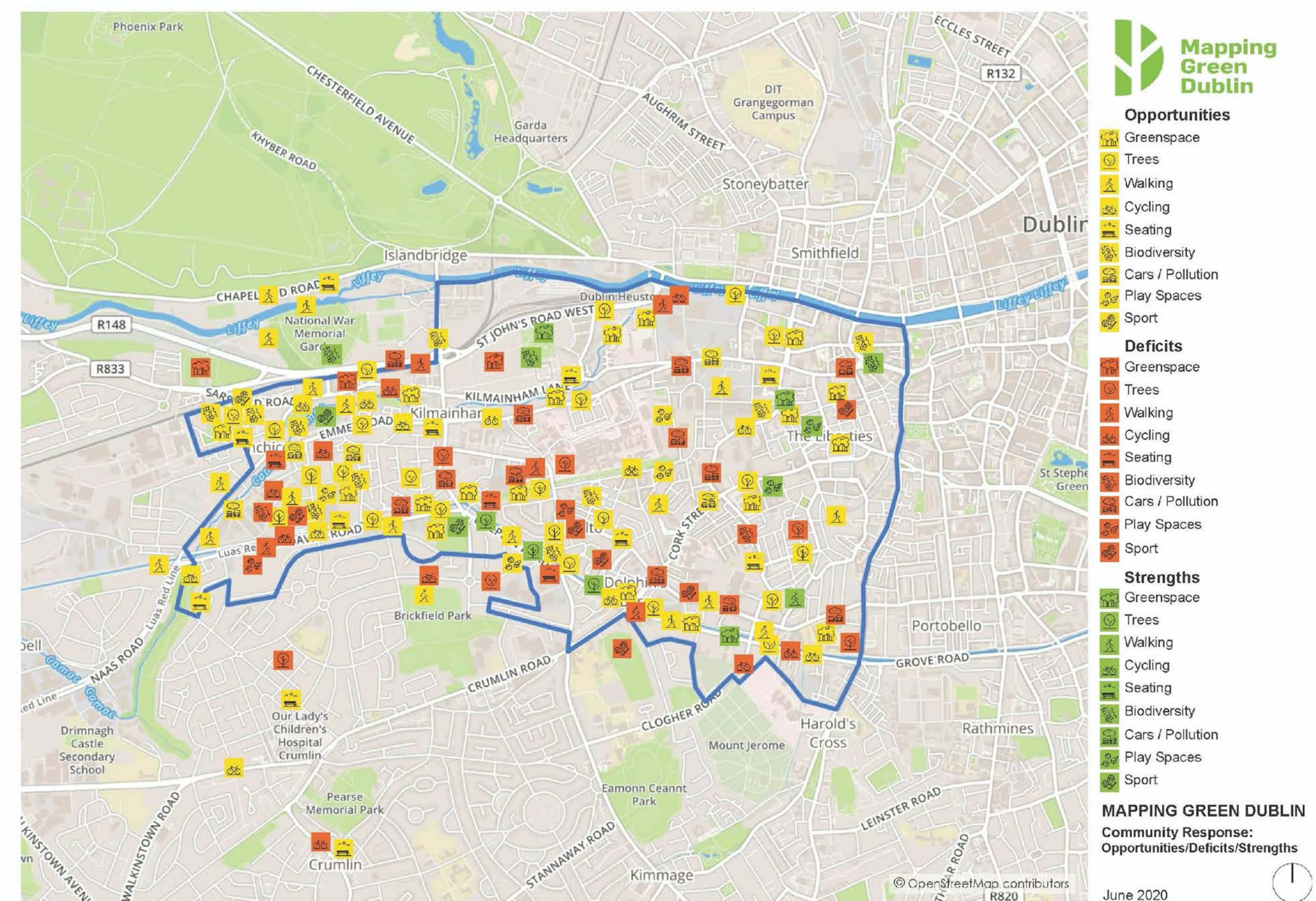


The co-creation stage of MGD was divided into five parts:

1. Identify a focus area for empirical work and complete a detailed social/ demographic/ green profile
2. Present mapping data to the community to recognize greening deficits
3. Build a greening community for a co-creation process that could be the basis for an ongoing greening forum
4. Co-create recommendations and actions for a greener neighbourhood
5. Document the co-creation process and outcomes

The study area selected for MGD is located in the Dublin 8 area, centred on Inchicore, drawing on the extensive contacts of our project partner Common Ground. The community engagement stage began in October 2019 with a number of deep mapping focus groups. The MGD launch was held at Inchicore College for Further Education on March 7<sup>th</sup> 2020. Activities included: a presentation on the existing green cover and greening deficits; a tree workshop for young people developed by project partner Seoidin O'Sullivan; a participatory mapping workshop led by Dr. Alma Clavin and Connect the Dots, entitled Pathways to Greening; and a facilitated lunch discussion. A community survey tool was posted online to gather further input on greening strengths; opportunities and deficits in the area.

## Pathways to Greening: participatory mapping



## Covid Impact: mapping microgeographies

During the COVID 19 lockdown, when face-to-face meetings were restricted, artist Seoidin O'Sullivan in partnership with UCD Geography developed the PLOTS project. The aim of this work was to map the various microgeographies (2km radius) during the Covid-19 lockdown with a view to creating a community atlas. PLOTS was a substitute for a programme of walking activities that were to take place during this period, but were cancelled due to Covid-19 restrictions. Individual PLOTS maps were displayed during a three day programme of events at the Goldenbridge Cemetery in August 2020.

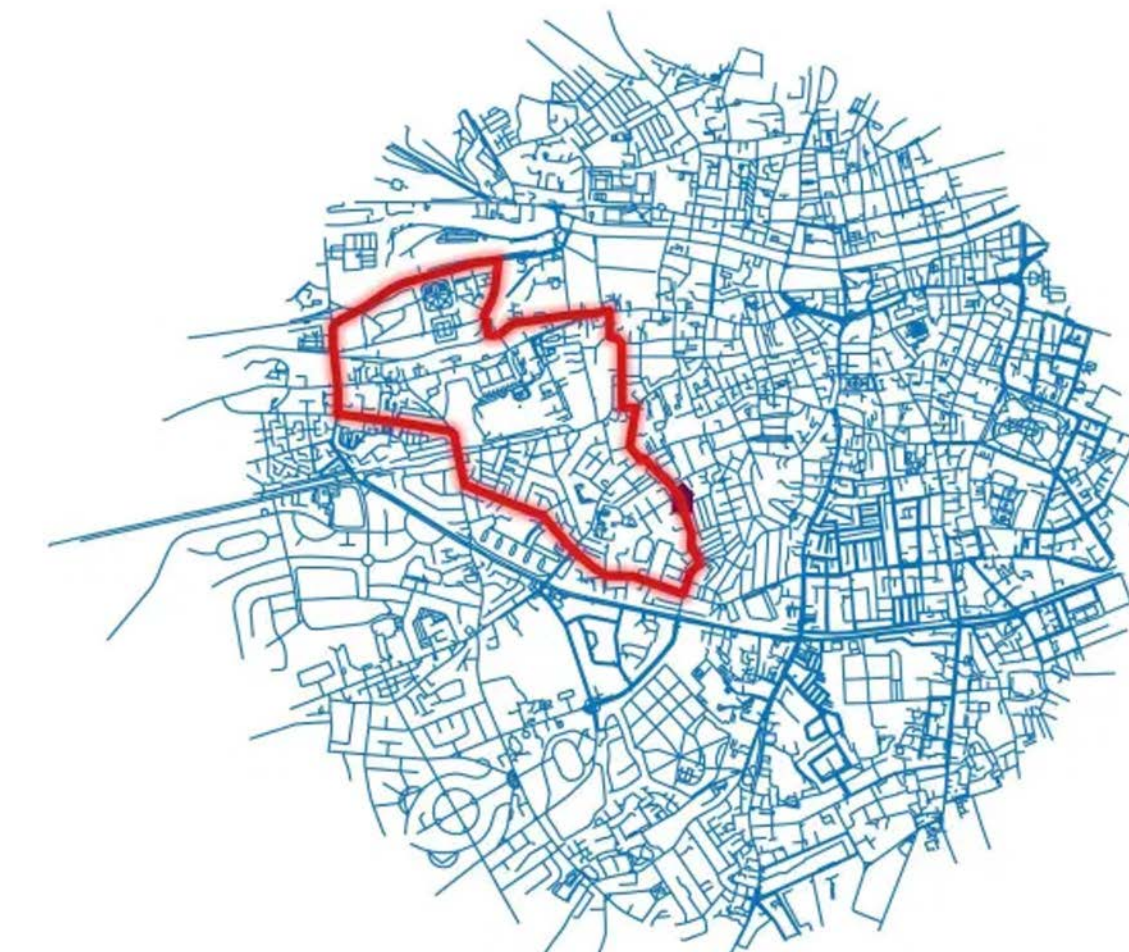
MAP YOUR CURRENT WALK OR CYCLE ROUTE.



Be part of the change in your neighbourhood. Make your daily walk, run, stroll, or cycle an exercise in plotting for Dublin's future.



You are invited to create a map of your current 2km walk or cycle route.



Credit: Seoidin O'Sullivan + Eoin O'Mahony

Issues of access to blue and greenspace were magnified during lockdown and work with Dr. Ronan Foley from Maynooth University led to the development of the Ubipix tool to examine Camac riverside access in Dublin 8. UCD Geography also carried out in-depth Covid impact interviews with community workers in high density housing complexes in the area, namely Dolphin House; Oliver Bond; Fatima; St. Michael's. These interviews provide in-depth insight into the impacts Covid-19 restrictions have had in the area; how residents currently use greenspace and what changes are required in future to ensure appropriate provision and quality is both planned for and provided. This information will inform recommendations for greening in high-density housing complexes and ensures the more vulnerable residents in the community have their voice heard and are included in the strategy.

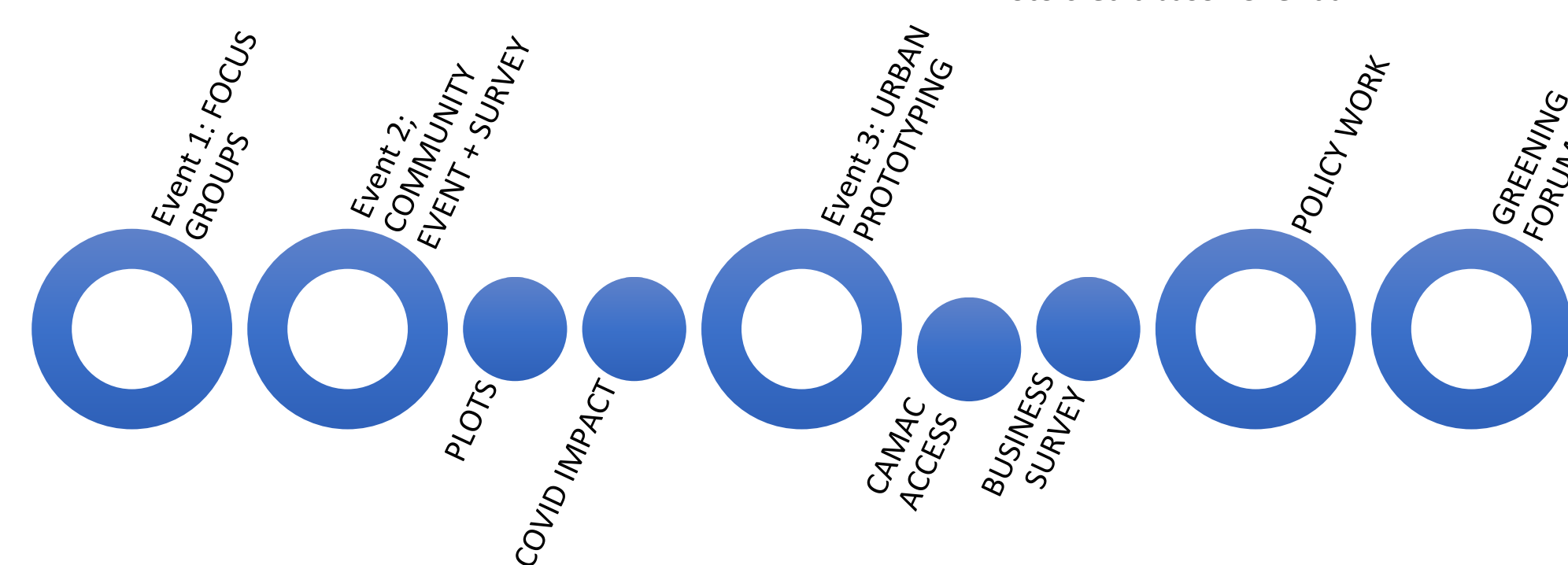
## Urban Prototyping

Currently there are 24 people in the Dublin 8 greening forum, twelve of which are active members. Team members of the greening forum have met both online and offline and contributed to urban prototyping workshops. The aim of these urban prototyping workshops is to bring the members of the greening forum together to prototype and further develop their project ideas for action in the next stage of the project.

In addition to the project academic advisory panel, a built environment panel has been set up to advise on potential projects for action. This panel includes architects, landscape architects and planners from DCC and independent practice.



Photo credit: Jason Sheridan



## Greening Policy and Action

The final stage of the project involves identifying sites for action and taking recommendations from the co-creation phase to relevant stakeholders. A number of interviews will be carried out in November 2020 with policy and practitioner stakeholders, which will inform the policy section of the greening strategy. The Dublin 8 greening strategy and associated tools for use by other communities will be available in Spring 2021. For more information see [www.mappinggreendublin.com](http://www.mappinggreendublin.com) and @DublinGreening.