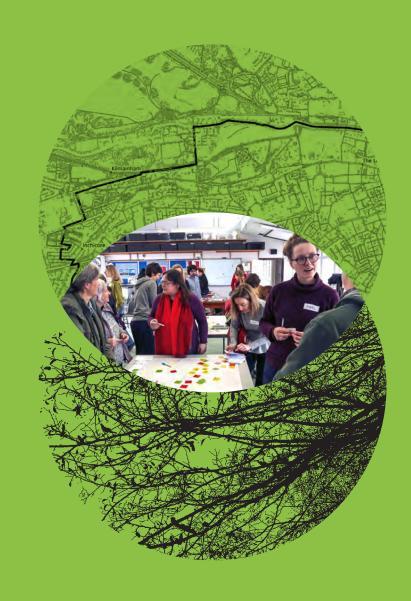


Strategic pathways to community-led greening

A collaborative research project across Dublin 8



Mapping Green Dublin (MGD) is a collaborative action research project led by UCD's School of Geography in collaboration with arts organisation Common Ground, artist Seoidín O'Sullivan and Connect the Dots. The project was funded by the Environmental Protection Agency for a two year period, 2019–2021.

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Please see the final page for contributors and credits thanking individuals, organisations, and designers involved in producing this strategy.

This strategy can be downloaded for use as a reference. Any reference to this document must be properly cited as follows.

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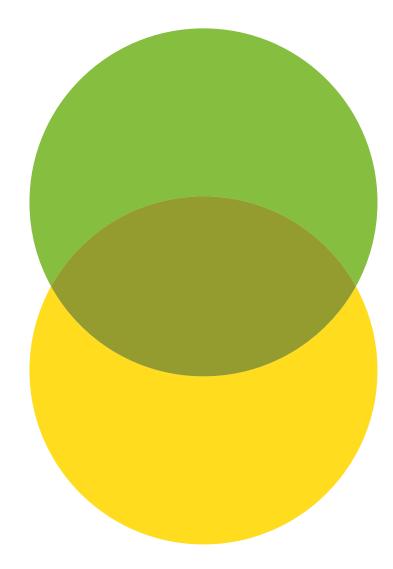
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Disclaimer: While every effort has been made to ensure that the information contained in this document is accurate at the time of publication (April 2021), some details will inevitably change over time.

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Introducing Mapping Green Dublin

Mapping Green Dublin is a collaborative action research project led by the School of Geography, University College Dublin, in collaboration with the arts organisation Common Ground, artist Seoidín O'Sullivan and Connect the Dots.

The project was undertaken across Dublin 8 from 2019–2021 and was funded by the Irish Environmental Protection Agency.

Mapping Green Dublin (MGD) deliberately adopted a community-led approach to the development of a greening strategy for the neighbourhood. The value in adopting this approach lies in the ability to collaboratively:

- identify existing community green assets
- consider neighbourhood scale deficits and identify potential greening interventions that are responsive to neighbourhood needs
- ensure proposed interventions have high social and cultural value within the community
- maximise opportunities for urban wellbeing at a scale that has the most potential impact on liveability and health

This document highlights the value of a co-created approach to greening strategy-making that is grounded in the community, collaboration and broader ideas of social and environmental justice. It is our aim that this strategy will be of benefit to communities, practitioners and policy makers, within and beyond our study area, in creating greener neighbourhoods where people are activated and empowered to lead on local greening projects. Our goal is that communities around the country would work with the ideas herein to develop their own greening approaches.

We would like to thank everyone involved, especially the Mapping Green Dublin neighbourhood greening forum, without whom this project could not have been successfully completed.

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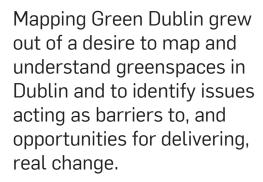
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The Mapping Green Dublin Story

We are geographers, artists, activists and residents of Dublin.



Drawing from our idea that tiny seeds can produce huge trees we began at the scale of a particular neighbourhood with the goal of drawing lessons from the reallife or lived experiences of inner-urban communities that could help shape a new approach to greening.

Though based in one neighbourhood initially, the project has the potential to inform and support other neighbourhoods and communities across Dublin and beyond.

Mapping Green Dublin is grounded in the ideas of inclusion and collaboration, and adopted a co-creative approach to developing a just greening strategy for one Dublin neighbourhood;







Mapping Green Dublin identified the broad range of groups – residents, sporting, community development, agencies, institutions – with a stake in greening in the Dublin 8 area;

Mapping Green Dublin created new and used existing data on trees and greenspaces in Dublin to empower residents and the broader community to understand the current status of, and potential for, more just greening in this area;

Mapping Green Dublin identified how people use/value trees and greenspace; what their concerns are; what's done well and what can be done differently;

Mapping Green Dublin curated a programme of open events to map out different themes and concerns and sentiments around trees and greenspaces;

Mapping Green Dublin aims to empower local communities to action greening projects in their own neighbourhoods, inform more socially just urban greening policy and practice, and demonstrate how community-based strategy-making can make a significant contribution to addressing climate action, liveability and wellbeing objectives.

Background

While there are significant large scale greenspaces across Dublin such as the Phoenix Park, St Stephen's Green and Merrion Square, the geography of greenspace is highly uneven.

Trees, and associated amenities are unequally distributed and there is a particular lack of green amenity within the area encompassed by the two canals. Attempts have been made to address this unevenness for example through the 2015 Liberties Greening Strategy (Dublin City Council, 2015), which served as a guiding tool to improve accessibility and quality of existing greenspaces, as well as creating new parks in the neighbourhood of the Liberties.

In other parts of Dublin 8, particularly around the Kilmainham and Inchicore villages, a report commissioned by the Department of Housing, Planning and Local Government (2019) highlights local concerns about the visible appearance of the area, the lack of greenspace, persistent inter-generational social problems

and a sense of being left behind in terms of social and environmental infrastructure.

A key difficulty is the complexity of decisionmaking and fragmented governance of green infrastructure and amenities within Dublin. Although a range of excellent individual plans and people work on aspects of greening across the city council, its area offices and other agencies, implementation is difficult because of the lack of an identifiable office or unit responsible for coordinating greening in all of its elements. This also makes it exceptionally difficult for communities, and particular vulnerable communities who may need these amenities most, to engage with greening at the local level and to navigate the necessary institutional structures required to make their voices and experiences heard. Additionally, the technocratic nature of the development planmaking process, land use zoning approaches, and site-based design of the urban built environment complicate the transition to a holistic approach to greening which needs to be considered by those responsible for housing, transport, and crime. All of these impact on how greenspaces are provided, used and their impact on community health and wellbeing.

In this strategy we introduce a new approach to greening strategy-making that is grounded in the community, collaboration and broader ideas of social and environmental justice. It demonstrates how greening strategies can be built from the bottom-up, drawing on and responding to grassroots concerns and aspirations. The strategy focuses on Dublin 8 broadly encompassing Inchicore, Kilmainham, Rialto and the Liberties.



Introduction

The Study Site

Local context is central to creating an authentic and relevant community-based greening strategy that engages on a strategic level with policy makers and practitioners. Dublin 8 is a district that has been undergoing sustained transformation over a period of more than twenty years, driven in large part by central and local government initiatives and incentives.

While initially felt most acutely in the Liberties, the dramatic transformations are now extending throughout the area with particular pressures on the large scale housing complexes in the district.

Significant development pressures in parts of Dublin 8 are inducing rapid demographic change. These development pressures are many and varied including the loss of public housing through large scale housing regeneration initiatives, an intensive drive towards tourism, business and cultural development in recent planning decisions

(SICCDA, 2019), a rapid increase in construction of student accommodation within the area, all resulting in a loss of public greenspace in direct conflict with wider efforts at city level to improve green infrastructure and amenity.

The area is the focus of a number of Strategic Development and Regeneration Areas (SDRA's). Large development projects include the construction of the nationally-significant 12 acre New Children's Hospital (NCH); the regeneration of the St. Teresa's Gardens, Oliver Bond, Dolphin

House and St. Michael's (Emmet Rd.) housing complexes; the redevelopment of the Players Wills site on the South Circular Road in Rialto for new apartment and co-living developments; and the iconic Guinness brewery – Ireland's most-visited paid visitor attraction, which continues to attract investment from parent company Diageo. The Digital Hub, set up by the Government of Ireland in 2003, is a cluster of digital content and technology enterprises and is a significant landholder in the area.



Figure 1: The study site boundary.

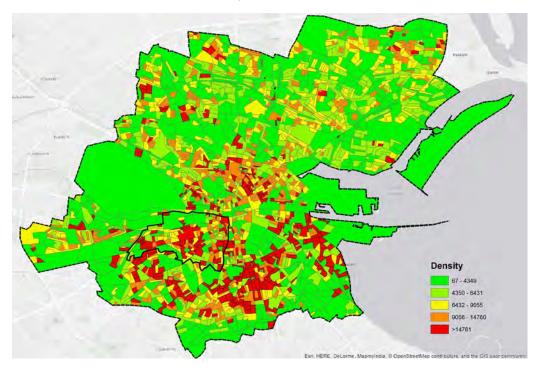


Figure 2: Population density within the study area (persons per square kilometre) (Census, 2016).

Introduction

The study area for Mapping Green Dublin was defined initially through a mapping exercise that covered all of Dublin City. It was defined as being one of the most under-served parts of the city in terms of green infrastructure. The exact boundaries were defined by census boundaries and the geographical remit of project partners Common Ground (based in Inchicore). It is an area in transition both in terms of the demographic structure and built form and in many respects, it represents a microcosm of Dublin city

centre: relatively dense, a new relatively young population (20–30s), apartment living, renters, new and small accommodation, and relatively few children (Census, 2016). Alongside this transformation, there are however remnants of 'old Dublin' including older housing stock and residents that have lived in the area often for many generations.

The area is occupied both day and night by workers and residents and as figure 4 below shows:

- the area carries a heavy traffic burden, particularly to the east
- the east side of the study area also has more people and paving.

Figure 3 shows the health status of those living in the area.

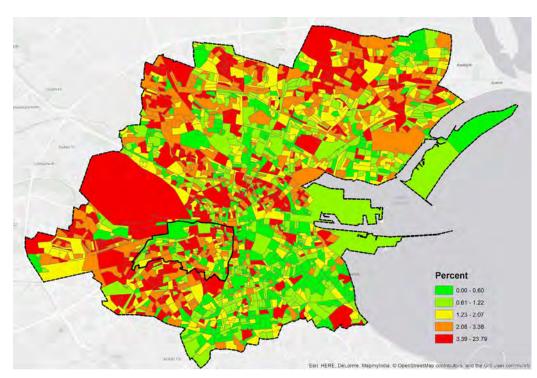


Figure 3: Self Reported Health: percentage indicating their health is bad or very bad (including hospitals) (Census, 2016).



Figure 4: Traffic flow: Average hourly vehicle number.

Introduction

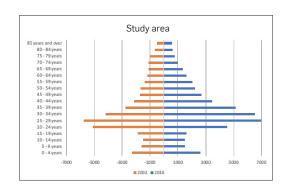
According to the 2016 census, the population of the study area is 44,761. A total of 59.78% reside in flats/ apartments.

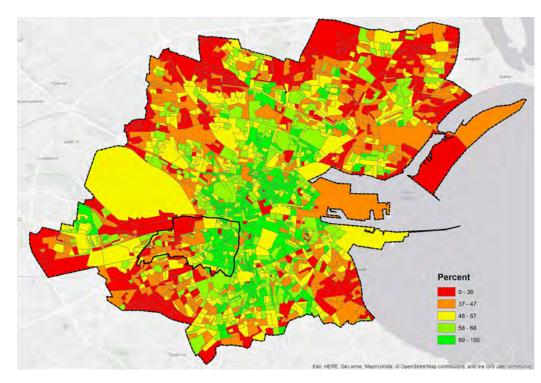
Almost one-quarter (23.77%) of the housing stock was built in the decade from 2001–2010, indicating an increase in new apartment building and dwelling (See Figure 5) during this period but also the scale of the transformation of this area that took place during the so-called Celtic Tiger boom.

A total of 43.82% of properties in the area are rented from private landlords. Within the entire area, 56.32% of the population are in the 20–44

age group compared to 45.32 in Dublin city. The maps show the percentage of individuals who walk and cycle to work (Figure 6). It can be concluded that a large percentage of the commuter traffic in the area comes from those outside the study site.

Figure 7 shown opposite: Population by age category for the study area for 2002 and 2016.







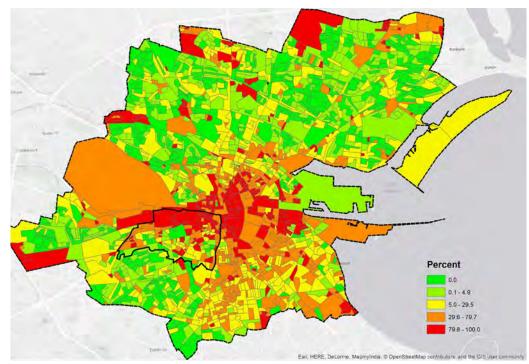


Figure 6: Percentage of individuals who walk and bike to work.

Introduction

How to use this Strategy



The data mapping section includes the mapping work that was then presented to the communities within the study area. These maps may also be of use to other communities involved in greening activities.

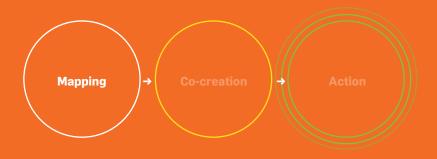
The co-creation stage includes a number of participatory exercises that were created to support the communities to articulate their greening needs. This stage also includes collaborations with artists to help reconfigure perspectives on greening, ecology and local microgeographies.

The action stage includes details of the greening forum, our urban prototyping workshop and recommendations from policy and practitioner stakeholders.

The strategy culminates in a final set of action points for the future of greening in the area. The work demonstrates the capabilities within the community to work with scientific information about the built and natural environment and to become involved in integrated, strategic greening work in the area.

Stage 1

Mapping



The mapping stage contains the data and mapping work that was presented to the communities within the study area in stage 2. The maps contained within this section may also be of use to other communities involved in greening activities.



Mapping

Stage 1

In stage 1 of the project, the Mapping Green Dublin (MGD) team brought together a variety of geographic information related to urban greening.

Some of these are publicly open datasets such as the Census of Population whereas others are more specialist softwares and datasets for use in a Geographic Information System. The datasets used to map green cover across the Dublin City local authority (DCC) were:

- 1. Ordnance Survey (OSi) Prime 2 dataset which has geographic information on building footprints, plots, road network, parks, etc.
- 2. BlueSky data purchased in July 2018 by the School of Geography, University College Dublin:
 - a. A high resolution (12cm) aerial image (Red, Green, Blue and Near Infrared)
 - b. A Digital Elevation Model (DEM) at a resolution of 1m.

- 3. The 2016 Household Census data available from CSO.ie
- 4. Other publicly available data on traffic.

 Tree cover was mapped using dataset 2a, which is sufficiently precise to enable the identification of tree canopies. After some experimentation to extract canopies using automatic image processing, it was decided to manually digitise the locations of all trees across the city. Over a period of six months (March–October, 2019) a number of volunteers digitised the location (using ArcMap) of each tree based on the centre of the tree canopy (Figures 8a and 8b).

The overall purpose of mapping tree cover was to be able to create the first map of this type for Dublin City and thereby identify patterns of tree distribution, green strengths and green deficits.



Figure 8a

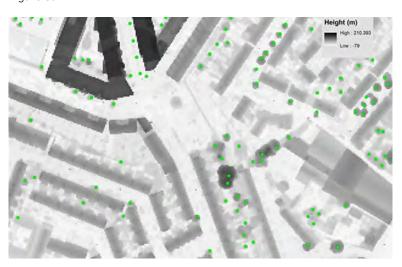


Figure 8b

Figure 8. The creation of the tree database. Figure 8a. shows a portion of the BlueSky high-resolution (12cm) image which allows easy recognition of tree canopies. The centrepoint of each canopy was digitised (green dots). Figure 8b shows these tree locations superimposed on the DEM (Digital Elevation Model) which was used to extract height.

Mapping

Stage 1

Through the digitisation process approximately 300,000 trees were identified across Dublin City.

Figure 9 shows the distribution of trees and public greenspaces across the city. This map shows the concentration of trees along certain streets and in public parks, especially Phoenix Park. It highlights a general pattern of increasing green infrastructure the further one moves from the city centre but also demonstrates some areas where green and blue (canals/rivers) infrastructure is complementary.

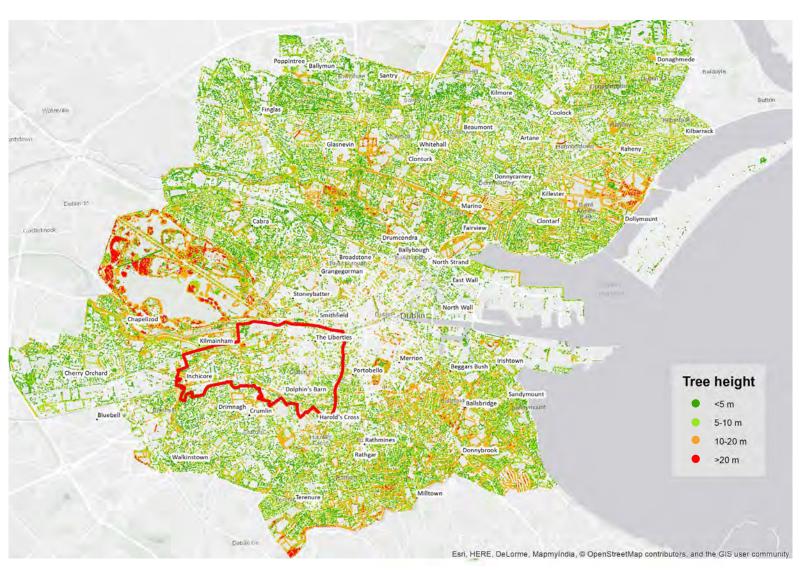


Figure 9: Green Cover. Green cover across the city with the study area outlined in red.

Mapping

Tree Density

The uneven distribution of tree cover is evident in Figure 10.

This shows the tree density (trees per hectare) divided into six categories and ranked. Low and very-low values are found where the landscape is mostly paved or where there are extensive areas of grass. The former is associated with the city centre extending from the port towards Cherry Orchard in a west-east orientation with a small north-south area from O'Connell Street towards Grafton Street. The grassland areas are in the Phoenix Park and Bull Island. Along the north fringe of the city, there are significant areas of low tree cover around Donaghmede, Baldoyle and around Dublin Airport. The areas of highest tree density are in the southeast (Donnybrook), around Phoenix park and some suburban parks and residential areas.

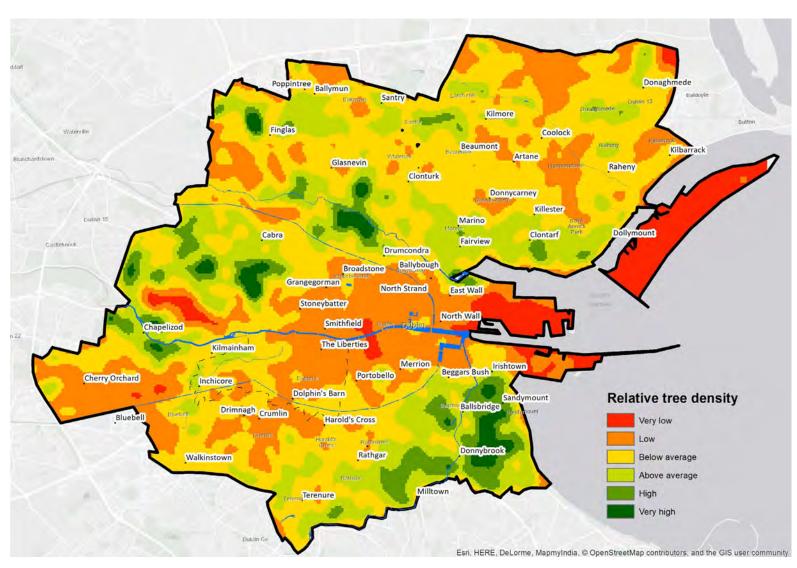


Figure 10: Tree density within Dublin city (trees per hectare).

Tree Distribution

Trees close to roads and parks accounted for 24% and 18% of trees respectively, but nearly half are located in private gardens (Table 1).

The trees in parks are the largest in the city and those in gardens tend to be the smallest overall. 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.

The distribution of trees by population is a more useful measure of neighbourhood greening as it can remove the effect of large unoccupied areas, such as large greenspaces and warehouse areas. To compare parts of the city in a consistent way, the DCC area was divided into equal sized grid cells (200m on a side). This grid was superimposed on the census areas and population was estimated for each cell based on the 2016 Census of Population.

The largest, most mature, trees are clustered in the main parks and along some streets. Table 1 shows the distribution of trees by estimated height categories. The majority of the trees are between 5 and 15m tall (57%) and 10% are taller. The very largest trees (>25 m) represent about 0.5% of trees in DCC. The locations of trees were categorised according to road, park,

garden and other. These are estimates only based on proximity to the road network (road), location within a park or within a plot of a given size garden. The 'other' category includes golf courses, school grounds and larger private estates.

| | | Estimated tree height % | | | |
|--------|--------|-------------------------|------------|-------------|------|
| Where | Total | <5m | 5 – 15m | 15 – 25m | >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 |

Table 1. Estimated distribution of trees by type of location and by size.



Mapping

Trees in Neighbourhoods

Figure 11 illustrates the number of residents per tree for all cells with a population of over 100 persons.

The pattern that emerges emphasises the relative absence of trees in the city centre and some suburbs in the north of the Dublin City Council area; by comparison neighbourhoods along the coast, especially in the south-east are relatively well served.

The Dublin 8 (D8) case study neighbourhood (shown in black outline of Figure 11) spans an area of 'very low' to 'moderate' tree cover, which reflects the level of greening.

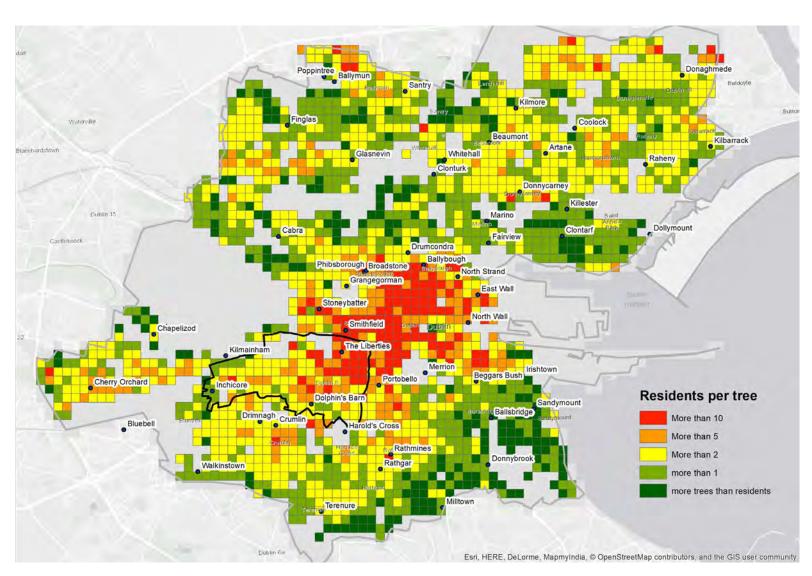


Figure 11: The ratio of trees to residents for populated areas of DCC.

Mapping

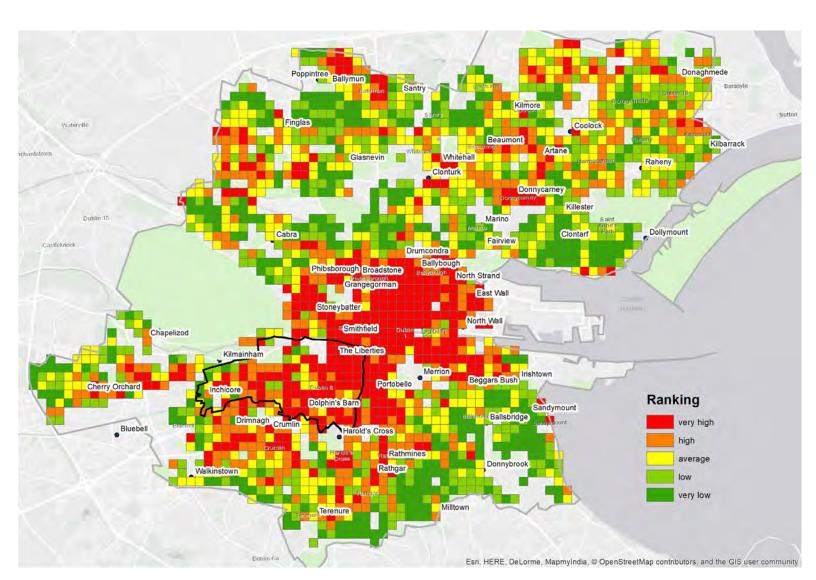
Urban Ranking

A simple measure of neighbourhood urban ranking for trees is presented in Figure 12 based on population density, tree cover and traffic intensity.

Ranking is based on population size, average traffic number and tree cover in each grid cell. High rank is associated with high population, high traffic flow and low tree count.

Useful comparative statistics:

- The population density of the area is 894 persons per hectare (pph) compared with 628 pph in the surrounding area.
- The tree density is 200 trees per hectare, compared to 273 in the surrounding populated area. The number of trees per person (0.22) is about half of that for the rest of the city.
- The average hourly traffic in D8 is 295 vehicles compared with 191 elsewhere.



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Figure 12: The rank of urban neighbourhoods.

Biodiversity

Trees contribute to biodiversity, rainfall management and air quality. The latter describes the ability to remove pollutants (including carbon dioxide) from the air, which primarily come from vehicles and households. To evaluate how trees do this, the critical tree information that is needed is species type and diameter at breast height (DBH).

The species indicates the growth rate of the plant, its canopy structure and height at maturity. As the tree grows its canopy size increases (more leaf area to which pollutants can stick), stores more and more carbon in its trunk, branches and roots and thereby sequesters more carbon on an annual basis. The DBH is a measure of these ecosystem services. The basic dataset of tree locations has been published as a publicly available dataset at Link and will be improved over time as more data is added. UCD School of Geography are

working with Dublin City Council to add species information to this database using the Curio mobile phone App Link.



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.





Trees are an especially important component of the urban green infrastructure as they can be co-located with roads and sources of traffic emissions. However, urban trees need to be resilient. Note tree on the right damaged by passing bus.

Tree Canopy

Figure 13 shows the estimated tree canopy height in the study area.

Tree height is a useful estimate of the maturity of trees and canopy size (depending on species) and their capacity for providing ecosystem services, including sequestering and storing Carbon Dioxide and other pollutants. In the D8 study area, most of the trees in residential areas are relatively small and the largest trees are located in parklands close to the Liffey.

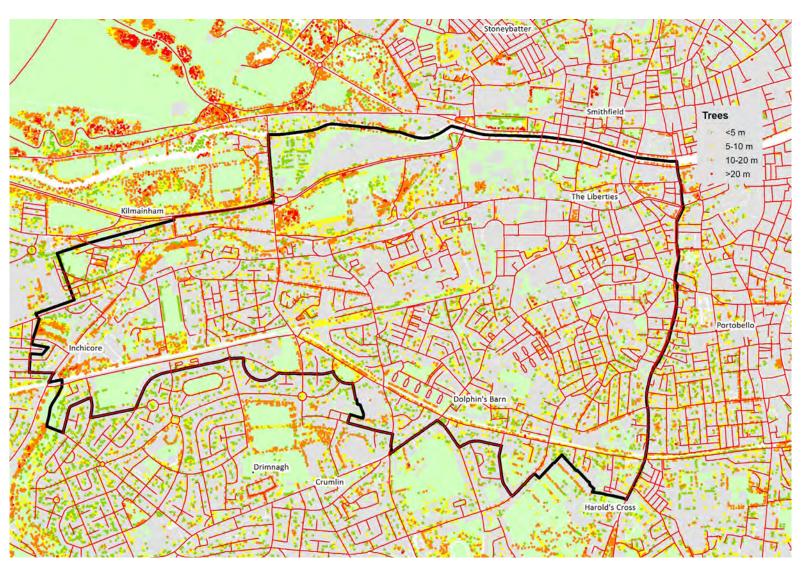
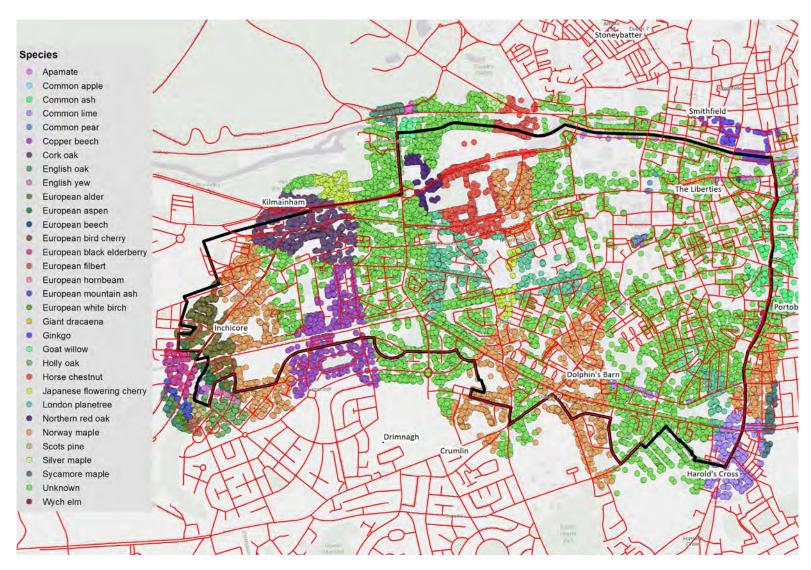


Figure 13: Estimated canopy height in the study area.

Tree Species within the Study Area

The Dublin 8 (D8) study area:

There are approximately 14,000 trees in D8. Of these we have species data on 7635 from two academic research sources (Ningal, 2012; Cullivan, 2020) and citizen data acquired from the Curio app. Figure 14 shows the distribution of trees by species in the D8 area and Table 2 lists the most common types.



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Figure 14: Distribution of trees by species in the study area.

Mapping

Assessment of the Dublin 8 Urban Forest



Understanding an urban forest's structure, function and value can promote management decisions that will improve human health, wellbeing and environmental quality.

An assessment of the vegetation structure, function, and value of the Dublin 8 urban forest was conducted during 2020. Data from 7635 trees located throughout the study area were analyzed using the i-Tree Eco model developed by the U.S. Forest Service, Northern Research Station.



- Number of trees: 7.635
- Tree Cover: 83.26 acres
- Most common species of trees: Norway maple, Cork oak, London plane tree
- Percentage of trees less than 6" (15.2 cm) diameter: 31.8%
- Pollution Removal: 1918 pounds/year
 (€63.2 thousand/year)
- Carbon Storage: 3.361 thousand tons (€490 thousand)
- Carbon Sequestration: 97.79 tons (€14.3 thousand/year)
- Oxygen Production: 260.8 tons/year
- Avoided Runoff: 162.9 thousand cubic feet/ year (€8.78 thousand/year)

| Species (common name) | i_tree | Number | Percent of total trees | Percent of species |
|---------------------------|--------|--------|------------------------|--------------------|
| Norway maple | ACPL | 2129 | 15.4 | 27.88 |
| Cork oak | QUSU | 789 | 5.7 | 10.33 |
| London planetree | PLAC1 | 748 | 5.4 | 9.80 |
| Horse chestnut | AEHI | 588 | 4.3 | 7.70 |
| Copper beech | FASYPU | 561 | 4.1 | 7.35 |
| European alder | ALGL | 511 | 3.7 | 6.69 |
| Common ash | FREX1 | 425 | 3.1 | 5.57 |
| Common lime | TIEU1 | 386 | 2.8 | 5.06 |
| Japanese flowering cherry | PRSE2 | 280 | 2.0 | 3.67 |
| European black elderberry | SANI4 | 144 | 1.0 | 1.89 |
| English oak | QURO | 132 | 1.0 | 1.73 |
| Other* | | 942 | 6.4 | 12.3 |
| Unknown | | 6162 | 44.7 | |
| Total | | 13797 | | |

^{*}Other identified species in the study area include: Holly oak, Northern red oak, Goat willow, Ginkgo, European mountain ash, Sycamore maple, European aspen, Scots pine, European white birch, Common pear, Silver maple, European filbert, Apamate, English yew, European bird cherry.

Table 2: List of tree species within the study area.

Mapping

Pollution Removal

Many tree benefits equate directly to the healthy leaf surface area of the plant. Trees cover about 83.26 acres of our study area and provide 402.3 acres of leaf area.

Pollution removal by trees in the neighbourhood was estimated using field data and recent available pollution and weather data. The common urban pollutants include: ozone (O_3) , carbon monoxide (CO), nitrogen dioxide (NO₂), sulphur dioxide (SO₂) and particulate matter (PM) of diameters less than 10 micrometers (PM10) and 2.5 (PM2.5). The majority of these pollutants are described as primary as they are emitted into the near surface atmosphere through the combustion of fossil fuels. In Dublin, the major source is traffic, although domestic fires also contribute. O_3 is a secondary pollutant that forms in the atmosphere when a suite of chemicals are present. Of these pollutants NO2 and PM are of most concern in Dublin. Altogether, i-Tree estimated that the trees in Dublin 8 removed 1918 pounds of air pollution per year with an associated value of €63,200.

Urban trees also play a significant role in regulating the atmospheric concentrations of carbon dioxide (CO_2), which is the main driver of anthropogenic climate change. Limiting and reducing CO_2 emissions is a major policy goal nationally that is focused on both reducing emissions from fossil fuels and enhancing the capture of ambient CO_2 by vegetation. Urban forests can play a significant role as part of climate change strategies to both mitigate

emissions and adapt to the consequences of climate change. Trees sequester and store carbon dioxide (CO₂) in the process of photosynthesis and their capacity to do so is a function of species and age; the services provided by healthy deciduous tree, such as Maple, will increase exponentially as it matures. The gross sequestration of trees in the Dublin 8 study area is about 98 tonnes of carbon per year, which has an estimated value (based on current carbon prices) of €14,000 per year. In addition, these trees currently store 3360 tonnes of carbon, based on their size, which is has a value of about €490,000. Of the species sampled, Norway maple stores and sequesters the most carbon (approximately 21.8% of the total carbon stored and 23% of all sequestered carbon).

| Species | % | % leaf area |
|---------------------------|------|-------------|
| Norway maple | 27.9 | 30.1 |
| London plane tree | 9.8 | 12.2 |
| Cork oak | 10.3 | 9.9 |
| Horse chestnut | 7.7 | 9.9 |
| Copper beech | 7.3 | 9.2 |
| European alder | 6.7 | 6.7 |
| Common ash | 5.6 | 4.4 |
| Common lime | 5.1 | 3.9 |
| Japanese flowering cherry | 3.7 | 2.7 |
| English oak | 1.7 | 2.3 |
| English oak | 1.7 | 2.3 |

Table 3: Percentage species and species leaf area within the study area.







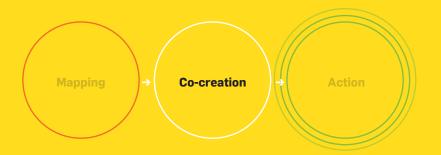


| Species | Carbon seq. (ton/yr) | Percent of total | Number of trees | Leaf area (hectares) |
|------------------------------|----------------------|------------------|-----------------|----------------------|
| Norway maple | 59.86 | 22.45 | 2,129 | 48.96 |
| Cork oak | 40.14 | 15.05 | 789 | 16.20 |
| European alder | 26.85 | 10.07 | 511 | 10.97 |
| Horse chestnut | 23.61 | 8.85 | 588 | 16.09 |
| London plane | 21.99 | 8.25 | 748 | 19.79 |
| Copper beech | 17.8 | 6.67 | 561 | 14.92 |
| Japanese flowering cherry | 11.64 | 4.37 | 280 | 4.42 |
| Common ash | 11.23 | 4.21 | 425 | 7.22 |
| English oak | 8.47 | 3.18 | 132 | 3.73 |
| Common lime | 6.85 | 2.57 | 386 | 6.39 |
| European alder | 5.38 | 2.02 | 144 | 0.71 |
| Others | 22.91 | 8.58 | 694 | 10.85 |

Table 4: Identified species in the study area listed in order of annual Carbon sequestration (ton of Carbon per year and percent of the total). The dominant species recorded was Norway Maple which had an estimated leaf area of 49 hectares.

Stage 2

Co-creation

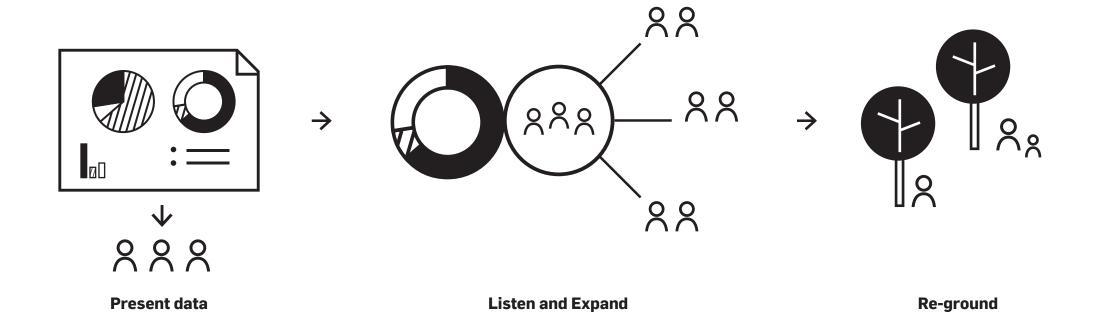


This section contains details of the co-creation stage of MGD: focus groups; participatory mapping exercises; an online MGD survey; and covid impact tools and techniques developed during the lockdown period (March–September 2020).



Co-creation

The Three Elements of the Co-creation Process



Co-creation

Present – Listen and Expand – Re-ground

Presentation of data. Data collected in stage 1 of the project was presented at three community evo

was presented at three community events (November 2019–August 2020).

These were

- 1 Two focus group events with local residents and individuals working in the area in Nov/ Dec 2019;
- 2 An open community launch event held at Inchicore College for Further Education on March 7th 2020; and
- 3 An urban prototyping workshop held on August 15th 2020.

As part of each of these events, the team presented an explanation of the scientific work involved in mapping the tree data and species (see stage one), outlined the multiple benefits of trees and greenspaces, and discussed the greening deficits in Dublin city and the study area. Further mapping and data analysis work was carried out in response to individual or community requests for maps and information associated with specific dimensions of greening such as pollution/traffic/carbon sequestration. This 're-mapping' ensured that the mapping and data work was responding appropriately to community need for timely scientific data and evidence.

Listen and expand - focus groups.

This element of the co-creation process involved two focus groups and participatory activities during our launch event. The focus group activities (listening) raised a number of issues that assisted us in planning the exercises for the launch event, expanding these themes while at the same time supporting the community to articulate their local greening needs. Participants included those from local greening practice, men's sheds, Dublin City Council BIDS; sports; housing; environmental groups; residents associations; arts practice; social prescribing; residents of social housing complexes; and local environmental activists.

The focus group activity practiced a deep mapping approach where both site specific, structural and strategic aspects of planning and greening were unpacked along with a mapping of greening strengths and deficits in the area. Greening deficits identified included: the type and form of greening; the recognition of city wide urban development pressures; issues of quality and maintenance; air quality and tree cover; knowledge deficits around trees, planting and what public spaces people could actually plant.

The specific recommendations from the focus group activities are summarised in the following pages. The maps show clearly defined areas for improvement that match with areas believed to have strong greening/ecological value for the community. The focus group findings fed into the activities designed and planned for our community launch event.









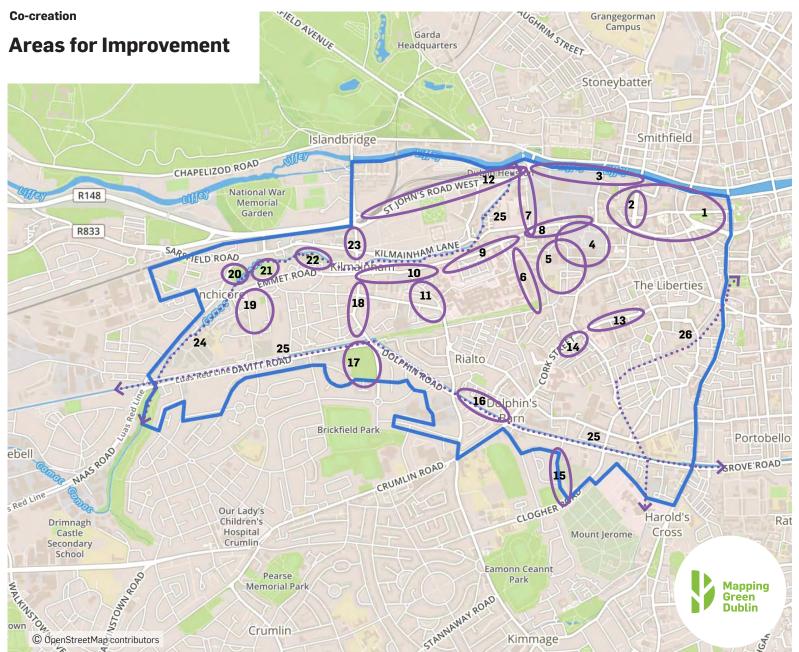
Luncheonette



- 1 Kilmainham Lane roadside vegetation/ hedgerows
- 2 Grattan Park good quality green space
- **3** Royal Hospital Kilmainham high quality historic site
- 4 Linear canal park valuable amenity
- 5 Flanagan's Field community garden
- **6** Canal Suir Rd to Blackhorse Pub (river flows underneath)
- 7 Bird Flanagan Roundabout attractive urban feature
- **8** High Street The Liberties median greening (street trees)
- 9 Thomas Street street trees
- 10 Peace Garden urban green space
- 11 Weaver Park urban green space
- 12 Grand Canal
- 13 Irish National War Memorial Gardens
- 14 Bluebell Astroturf Pitch & Community Gardens
- 15 Braithwaite Street Allotments
- 16 Oscar Square green social space
- 17 Eamonn Ceannt Park wildflower meadows
- 18 Street Trees on South Circular
- 19 Street Trees on Tyrconnell Road
- **20** Goldenbridge Cemetery trees
- 21 Camac River
- 22 Kilmainham Mill
- 23 Landsdowne Valley Park

Focus Groups: January 2020 **Mapping Green Dublin**Areas of strength





- 1 North Liberties: cars/traffic allocated too much space
- **2** Bridgefoot Street: unattractive street, potential for greening
- 3 The Quays: poor quality environment and lack of trees
- **4/5** St James' Quarter: dereliction/large redevelopment area
- **6** Luas Link: potential for walkers and cyclists to share route with Luas
- 7 Luas Link: no active frontage/overlooking
- **8** James St: air quality/busy road. Potential for tree planting & enhancement
- **9** Mount Brown: air quality/busy road. Potential for tree planting/enhancement
- 10 Old Kilmainham: air quality/busy road. Potential for tree planting. Derelict sites. Bus Connects threatens trees.
- 11 Brookfield Rd: improve tree planting
- 12 St John's Rd: high air pollution
- **13** Cork Street: derelict/improve trees, cycling and walking infrastructure
- 14 Eugene Street area: lacking greenery/potential for vertical gardens
- 15 Aughavanagh Rd: lacking trees
- **16** Dolphin House: potential for improved greening
- 17 Good Counsel GAA club: damage to green space
- 18 Suir Road: high levels of air pollution
- 19 St Michael's Estate: potential to improve greening
- 20 Grattan Park: enhance wildlife
- 21 Emmet Rd: green area not open to public
- 22 Turvey Ave: neglected space
- 23 S Circular Rd: lacking trees
- **24** River Camac: potential for environmental improvement & access
- 25 Canal: potential for environmental improvement & access
- **26** Basin Lane: Poddle watercourse uncovered/deculverted

Focus Groups: January 2020

Mapping Green Dublin

Areas for improvement



Co-creation

Listen and Expand: Participatory Mapping

A comprehensive map of trees and greenspaces, and an associated dataset that includes location, size and species of tree was created in order to inform the community of the ecosystem services¹ in their neighbourhood.

This work was presented during the community launch event, which was open to all users of greenspace in the area (i.e. those who lived/worked/moved through the study area) and held in a community location. The event included an arts workshop for families and children focusing on their favourite trees in Dublin 8; an open mapping workshop practicing participatory workshop techniques, where individuals and groups mapped the greening strengths, opportunities and deficits in the area. Participants were also encouraged to engage in 'citizen science' by using the **Curio mobile phone App Link** to log information about trees in their area.

A 'lunch dialogue' enabled participants to experience food and dining combined with

structured, facilitated conversation. This provided an opportunity to meet others from the community; map out desires for, and expectations of, a community greening strategy; consider how this could be achieved, at what scale and who needed to be involved.

The results of the open mapping exercise (155 comments) are summarised and displayed in the following pages, These maps were posted online via MGD twitter along with an online community survey to elicit further responses (170 responses).

A summary of all recommendations from stage 2 (co-creation are provided in pages 34, 38 and 42).

The work from March–June 2020 culminated in the establishment of a neighbourhood greening forum. Their focus on action is crucial to the re-grounding of the research process. The establishment of this group ensures the greening work continues into the future.





ystems to human well-being (TEEB D0).
y or indirectly our survival and quality of ty.europa.eu/topics/ecosystem-services

Above: Playing with Maps family workshop with Seoidín O'Sullivan.

Left: Social network mapping activity carried out during the lunch dialogue.

1. Ecosystem services are the direct and indirect contributions of ecosystems to human well-being (TEEB D0). They support directly or indirectly our survival and quality of life. https://biodiversity.europa.eu/topics/ecosystem-services

Open mapping activity at Inchicore College for Further Education March 7th 2020 examining nine dimensions of greening: trees; greenspace; biodiversity; sport; play; seating; walking; cycling; cars/pollution.



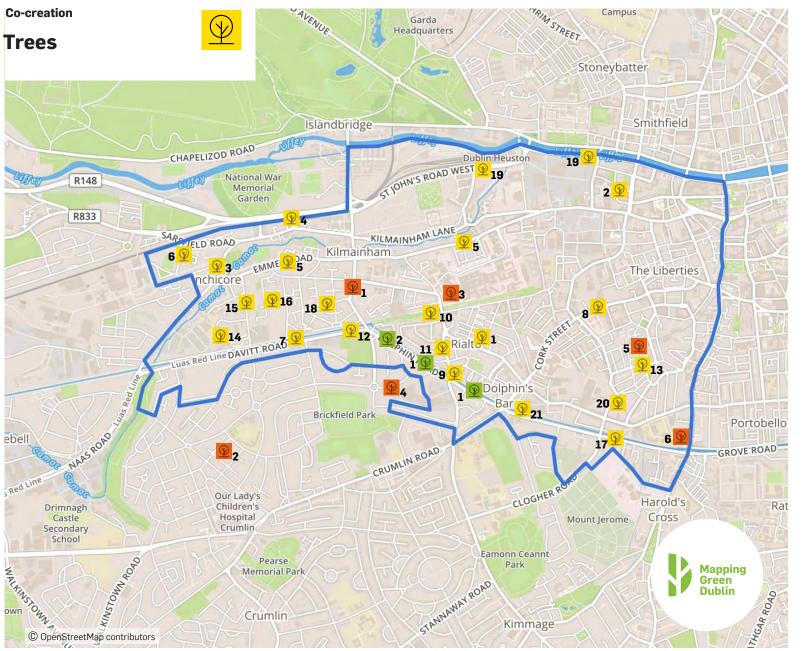




This tree makes my room dark







Opportunities



- 1 Our Lady of Fatima Church, SCrd Rialto: some trees, but need more
- 2 Bridgefoot St: community garden is a great opportunity (uninviting, fortress-like fencing).
- 3 Grattan Crescent: more trees
- 4 Con Colbert Road: more trees
- 5 Emmet Rd & James St: more trees
- **6** Inchicore Works Square: more trees. More shade to soften atmosphere and wildflowers
- 7 Goldenbridge: good potential along canal line but need better connectivity with Inchicore and more trees
- 8 Cork Street: some trees along the road but there is room for more
- **9** Herberton Bridge Wood (Dolphin House): needs maintenance and biodiverse plants
- **10** Linear Park: trees are a nice break from concrete –maintain and increase
- 11 Rialto Village: more trees
- 12 Canal at Suir Road: more trees along canal
- 13 O'Donovan Road: more trees
- **14** Emmet Crescent: lack of trees, whole area to be redeveloped
- 15 St Vincents St West: more trees
- **16** Richmond Barracks: could be walled garden with fruit trees
- 17 Canal: wildlife habitat but could be improved for running and cycling. Needs enforcement and more public transport
- 18 Goldenbridge Ave: tree planting needed
- 19 St John's Rd West & Victoria Quay: more trees
- **20** White Swan Ind Estate: more trees
- 21 White Heather: long blank wall needs trees

Deficits



- 1 South Circular: trees being hit by buses
- 2 Curlew Road: no trees
- 3 New Children's Hospital: many large trees chopped down
- 4 Galtymore Road: very few/no street trees
- **5** Geoffrey Keating & O'Curry Rd: no trees O'Curry Ave (intesection) large paved space
- 6 Clanbrassil Upper: trees being removed
- 7 Parnell Rd/Canal: Variable tree cover

Strengths



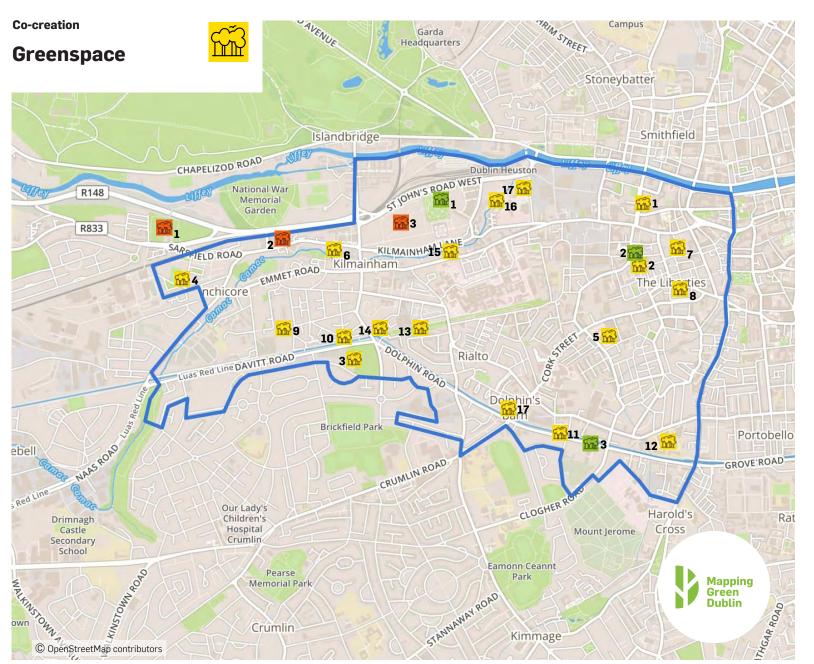
- 1 Canal banks: maintain and protect large and old trees (circa 100yr old)
- 2 Canal: nice trees and stretch of green

Open Mapping: June 2020

Mapping Green Dublin

Response: Trees





Opportunities



- **1** Bridgefoot St: This park has potential
- 2 Top of Pimlico Ln: Little bit of green very exposed. Can it be more greened (larger trees) so that it feels more like a haven/place to linger
- 3 Drimnagh: More trees in vast greenspaces
- 4 Inchicore Works Square: More planting/shrubs
- 5 Cork Street: Potential for two parks in Brú Chaoimhín
- 6 Poddle River: Potential for Poddle Park
- 7 Vicar St: Create new park on soccer court
- 8 Corner Meath St/The Coombe: Create pocket park, opportunity for tranquil green space
- **9** St Michael's Estate: Redesign to include significant nature elements, not just housing with 'open space'
- 10 Kickham Rd Pitch: Planting to improve biodiversity or new playground for children
- 11 Parnell Rd Canal: Create small woodlands in urban areas, using native woodland scheme
- 12 Griffith College: Open up campus with more greening
- 13 Linear Park Mountshannon: Retain Wildness and established mature trees in the plans for the linear park
- 14 Suir Rd Canal basin: new kayak access
- 15 Camac James St: new amenity space
- **16** St Pat's Hospital: new green space on Camac for hospital use
- 17 Canal bridge: amenity space north bank

Deficits



- 1 Liffey Gaels GAA: The Pitch is bumpy and needs to be cleaner
- 2 Inchicore Rd: Planting around Belfry ruins Inchicore Road
- 3 Gardens at Royal Hospital Kilmainham: Nice green area that should be taken care of better after concerts and festivals

Strengths



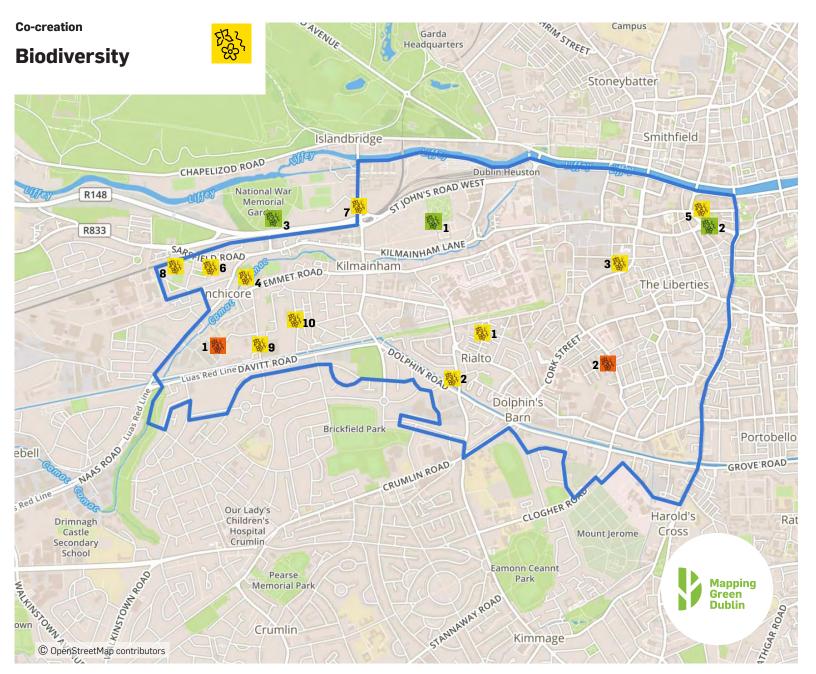
- 1 IMMA Gardens: Beautiful and well used by public and bees
- 2 Summer St Flats: Good pocket park (by DCC) hopefully will remain long term
- 3 Parnell Rd: Dense corridor of trees along canal, lovely canopy

Open Mapping: June 2020

Mapping Green Dublin

Response: Greenspace





Opportunities



- 1 Rialto Cottages: reinstate and upgrade communal gardens with biodiversity planting
- 2 Herberton Bridge wood: needs maintenance and planting of biodiversity plants
- **3** Pimlico: new (biodiverse) park and library on DCC housing land as part of their redevelopment
- 4 Grattan Crescent Park: Great resource, needs to be maintained and better integrated with the Camac and any potential new Greenway along the river
- 5 St. Audoen's Church Park: a lovely green space but the climb and the lack of other green make it an island in a cement desert (more accessible green space needed here)
- 6 Inchicore Square: We have an orchard but would like some wildlife. Would like wildflower meadow
- 7 Con Colbert Rd/SCR: Potential for more biodiversity
- **8** CIE Works: Lots of open space begging to be diversified help us bring in the bees
- **9** Our Lady of Lourdes National School: more trees and plant life in this area would be great
- **10** Richmond Barracks: fruit and vegetable garden

Deficite



- 1 Mercy Secondary School: needs biodiversity
- 2 St. Theresa's Gardens: needs biodiversity and wildlife

Strengths



- 1 Irish Museum of Modern Art (IMMA): gardens are beautiful and well used by public and bees
- 2 St Audoen's Park: great new park with diverse planting
- 3 Irish National War Memorial Gardens (INWMG): wonderful gardens

Open Mapping: June 2020 **Mapping Green Dublin** Response: Biodiversity



Co-creation

Community
Recommendations.
Summary: Green Environment.

Summary of recommendations and associated themes relating to environment (trees; greenspace; biodiversity) arising from focus groups; participatory mapping exercises and the online MGD survey). For more detail and the full range of recommendations on green mobility, please see: Link

Connectivity and Access

Improve the connectivity, accessibility and quality of existing greenspaces

Protect green and blue corridors and identify new potential corridors

Enhanced data on the volume, location and accessibility of current greenspace

Care and Maintenance

Empower the community through training and education to play a greater role in green caring

Recognise the importance of wilding, biodiversity and plant management and create a programme of maintenance

Review tree planting, felling and develop a strategic and coherent tree management approach

Governance

Support the development of greening partnerships between the public sector, private landowners and civil society

Clarify and streamline the governance and regulation of greening and green infrastructure

Provide access to resources, financial and other, to enable community based greening initiatives

Environment

Green

Safety and Security

Enhance youth involvement in greening to build positive engagement with the wider environment

Challenge perceptions of the area through greening initiatives

More trees, communication of information of seed procurement and species and the integration of green and blue infrastructure to enhance climate proofing and security.

Health and Wellbeing

Learn from the experiences of other projects and cities

Enhance planting of trees and other green spaces particularly in the highest density areas through innovation (e.g. green roofs)

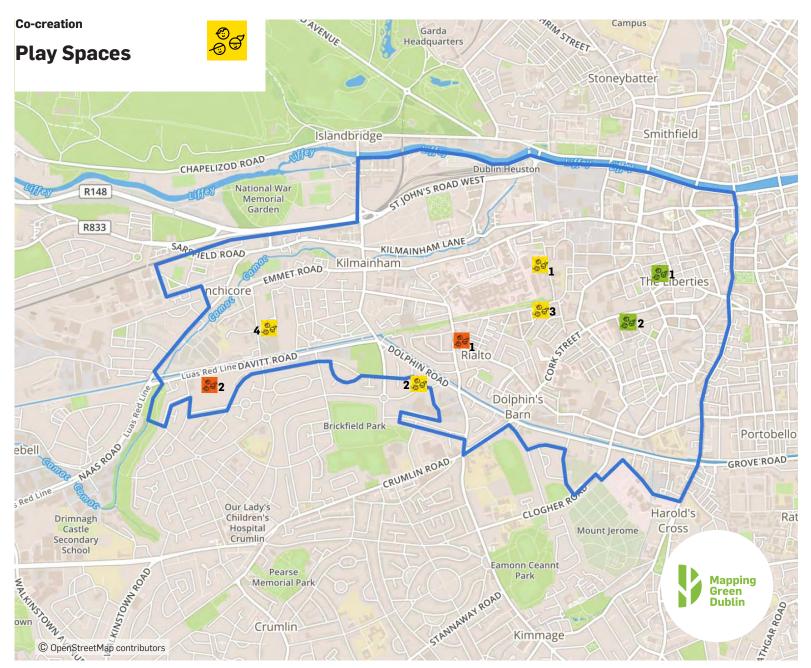
Connect blue-green corridors as urban sanctuaries and places to reconnect with nature and other people

Development Pressures

Identify and map particular hot spots for development and require a greening response within planning proposals

Create multi-functional greenspaces and creatively adapt existing land e.g. green roundabouts)

Use nature-based solutions to support more sustainable development



Opportunities



- Basin Street: more play areas needed with schools on the street
- 2 Dolphin Road Green: used for football, has trees, but could do with a kids playground
- **3** St. James' Walk: open green area with some trees, but could provide more seating or area for children
- 4 St Michael's estate: I feel very strongly that the open field should not be entirely housing – one third at least should be kept for green space/garden space/play space. The local children don't want it to be entirely built upon

Deficits



- Rialto: very few age appropriate green places for children to play in Rialto
- 2 St. John Bosco Youth Centre: playground needed

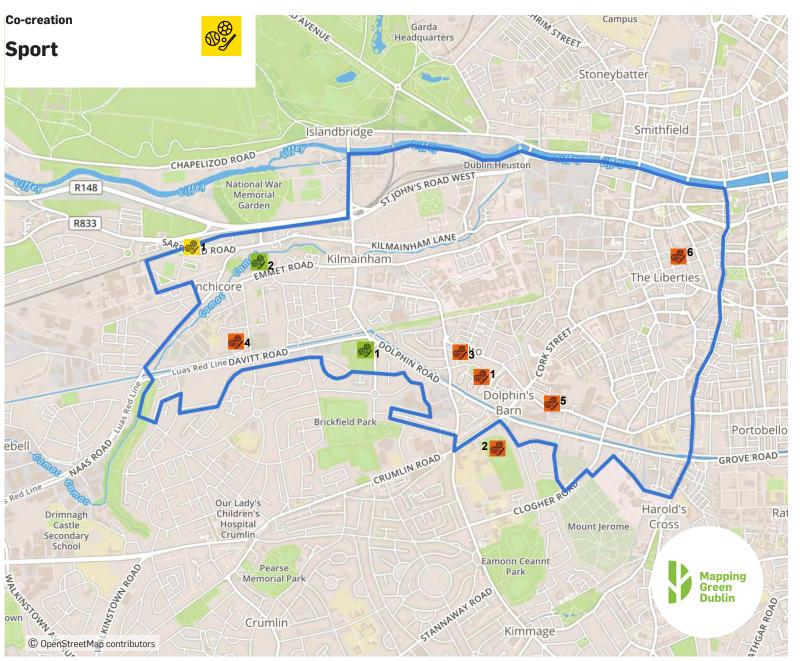
Strengths



- 1 Reginald Street, Liberties: the residents use traffic cones to cordon off the street for a safe play zone – its great seeing your neighbours in the street – this should be expanded. They have a basketball hoop in the street
- 2 Weaver Park: great new space for people, play areas, skating, and nice planting

Open Mapping: June 2020 **Mapping Green Dublin** Response: Play Spaces





Opportunities



 CIE Works Inchicore: sport and social club has potential – just needs some work and some wildlife

Deficits



- Dolphin House: communal football pitch will be removed, being built on as part of regeneration plans
- **2** GAA Templeogue Synge St: sale of GAA ground for housing
- 3 Rialto: very few green places for children to play in only th linear park, which is currently restricted due to NCH building site
- 4. Mercy Secondary School: needs better sports facilities
- **5** SCR (behind John Player & Sons): few sports amenities, and need more
- **6** Vicar Street: neglected football pitch. This is the only freely accessible pitch in the area

Strengths

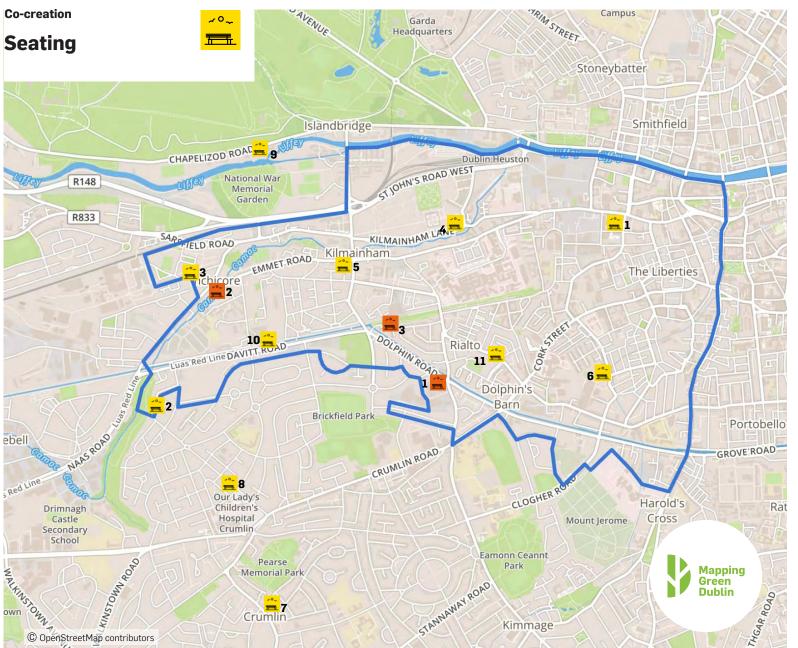


- 1 Good Counsel GAA, Davitt Rd: green space here is a great facility for children and everyone in the community and in the area
- 2 Richmond Park: St. Patrick's Athletic, a great amenity

Open Mapping: June 2020 **Mapping Green Dublin**

Response: Sport





Opportunities



- 1 St Catherine's Park/Graveyard: always locked. Is it protected? Great space, tucked away but neglected
- 2 Lansdowne Park: more picnic/dwelling space needed
- 3 Inchicore Square: more benches needed
- 4 Kilmainham Lane: potential for more benches in this area. Many tourists walk from city centre to IMMA & the Gaol
- 5 Emmet Road: small park that is fenced off with no seating could be greatly improved
- **6** Donore Ave: the park needs more benches Brú Chaoimhín HSE grounds/Cork Street has large green spaces could they be opened up?
- 7 Crumlin: more benches needed in Crumlin
- 8 Errigal Gardens: more benches needed in the park
- 9 Chapelizod Road: more lights, benches, better pathways discourage anti-social behaviour, more policing
- 10 Canal Goldenbridge: I would like to see more seats along the canal, I walk it regularly and more seating is needed
- **11** St Andrews Community Garden, Rialto: Mens Gardening Group (improve gardens with benches/trees)

Deficits



- 1 Herberton Bridge: illegal gate on public lands shutting off gate to quiet green space/ canal
- 2 Inchicore Village: needs places to sit and linger. Need more benches to sit and enjoy wildlife, relax and integrate with neighbours
- 3 Rialto: no places to sit and rest in Rialto

Strengths



No strengths identified

Open Mapping: June 2020 **Mapping Green Dublin**

Response: Seating



Community Recommendations. Summary: Green Amenity.

Summary of recommendations and associated themes relating to amenity (sport; play; seating areas) arising from community focus groups; participatory mapping exercises and the MGD community survey.

For more detail and the full range of recommendations on green mobility, please see: Link

Connectivity and Access

Enhance permeability and build connectivity for ease of everyday movement

Improve access to, and inclusive use of existing green infrastructure

Activate under-utilised green-blue infrastructure

Governance

Recognise the role of different stakeholders and interests within the area(e.g. children, sports clubs)

Identify and connect up existing green groups

Support existing community based greening projects

Care and Maintenance

Provide more public services and amenities in public spaces (e.g. bins)

Upgrade and enhance existing public space and amenity

Support community volunteer efforts at enhancing public realm (bulb planting, litter picks)

Green Amenity

Safety and Security

Improve the public realm to enhance the perception and reality of security

More effective policing to address anti-social behaviour in collaboration with local communities

Undertake a 'safety review' in the design, development and ongoing maintenance of greenspaces

Health and Wellbeing

Build physical connectivity to support social connectivity

Introduce infrastructure to support being in nature (seating, skate park, sports grounds, pocket parks)

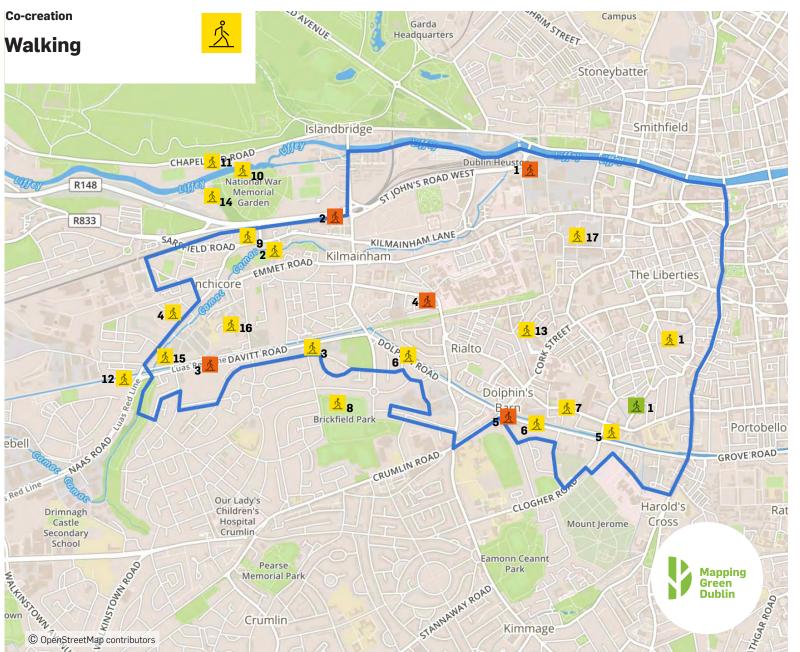
> Maximise opportunity of large-scale regeneration to diversify greenspaces and how they are used

Development Pressures

Recognise the importance of the quality, not just quantity, of greenspaces

Retain a diversity of greenspaces that are multi-functional and inter-generational

Conceptualise greenspace not just as corridors but as places to 'be'



Opportunities

类

- 1 Poddle River: potential for 'Poddle Walk'
- 2 Camac River: potential for 'Camac Walk' connect communities, promote health, take people off the road
- 3 Goldenbridge: good potential along canal but needs resurfacing, new lighting and better connectivity with Inchicore, with more trees
- 4 Oblates: need access to Oblates grounds
- 5 Sally Bridge: steps need handrails
- 6 Canal Path: potential to be make path more accessible (surfacing/handrails) and safer. Plant trees and create running/walking lanes
- 7 SCR Road: cars off paths so people can walk
- 8 Brickfield Park: paths need to be improved
- 9 Canal: connect Irish National War Memorial Gardens to canal
- 10 Liffey banks: map the Irish National War Memorial Gardens walk to Chapelizod, loop both sides of Liffey banks
- 11 Chapelizod Rd: more lighting, benches, better pathways, discourage antisocial behaviour, better policing
- 12 Canal: develop pilgrim path along canal to Clondalkin, St Brigid's well
- 13 Emerald Square: potential walk from ES to St James' Walk (old name Mountain View)
- 14 Irish National War Memorial Gardens: improve walking connections between sites. Improve access
- 15 Davitt Rd/Canal: new walkway to Camac
- 16 Emmet Cres: new link to Tyrconnell Rd
- 17 Guinness: better permeability and tree cover for tourists and locals

Deficits

- 1 Victoria Quay/ St John's Rd West: This area is very dangerous for cyclists and pedestrians
- 2 N4/Chapelizod Bypass: Flyover pedestrian crossing badly needed
- 3 Davitt Rd: Could be made safer for walkers and cyclists to share
- 4 Mountshannon: Air quality very poor smells. High volume of traffic, diesel trains
- 5 Dolphin Rd/Parnell Rd Canal walk: walkway under Dolphin's Barn bridge dangerous, poor surfaces, no pedestrian phase on crossings

Strenaths

5

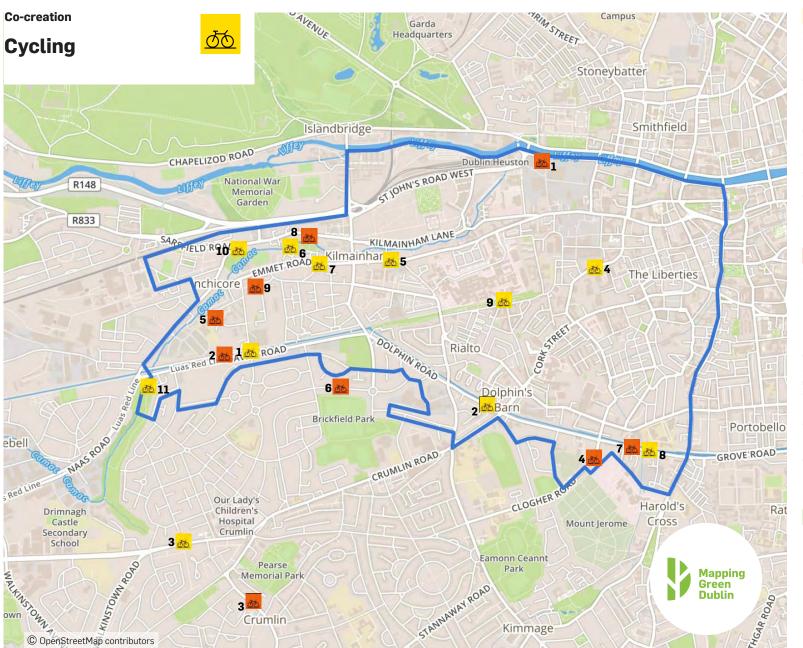
 Drufferin Ave: The tree lined streets around here are lovely to walk through – few cars, nice alternative to Clanbrassil/SCR

Open Mapping: June 2020

Mapping Green Dublin

Response: Walking





Opportunities



- 1 Grand Canal: Better infrastructure for cycles
- 2 Dolphin Rd: Greening cycleway improvements
- 3 Drimnagh: Dublin bike station needed here
- 4 Marrowbone Lane: Improved cycling (facilities)
- 5 Old Kilmainham Rd: Dedicated cycle lane required. Less traffic. Cars continuously speeding is unsafe for pedestrians and cyclists.
- **6** Camac River: Develop into walking/cycling path. Connect communities, promote health
- 7 Emmet Road: Cycle lanes needed
- 8 Parnell Rd (Griffith College): There could be a better cycle route along the canal
- **9** James' Walk: Cycle track to continue full length of James' Walk
- 10 Grattan Cres/Sarsfield: Dublin Bike Station
- 11 Blackhorse: Dublin Bike Station

Deficits



- 11 Victoria Quay/ St John's Rd West: This area is very dangerous for cyclists and pedestrians
- 2 Davitt Road: Could be made safer for walkers and cyclists to share
- **3** Crumlin: No cycle lanes in Crumlin there is a need for segregated cycle lanes
- 4 Clogher Road: No cycle lane
- **5** Mercy Secondary School: Needs cycle lane
- 6 Mourne Road: Dangerous for cycling
- **7** South Circular Road (near Griffith College): Desperate need for fewer cars and safe cycling
- 8 Inchicore Road: Cycle lane changes sides multiple times on this stretch. Shared road with buses that do not always share the road
- **9** Inchicore: Create cycling paths throughout Inchicore. So dangerous at present.
- 10 Junction Emmet Rd & SCR: Dublin Bike stop needed here

Strengths

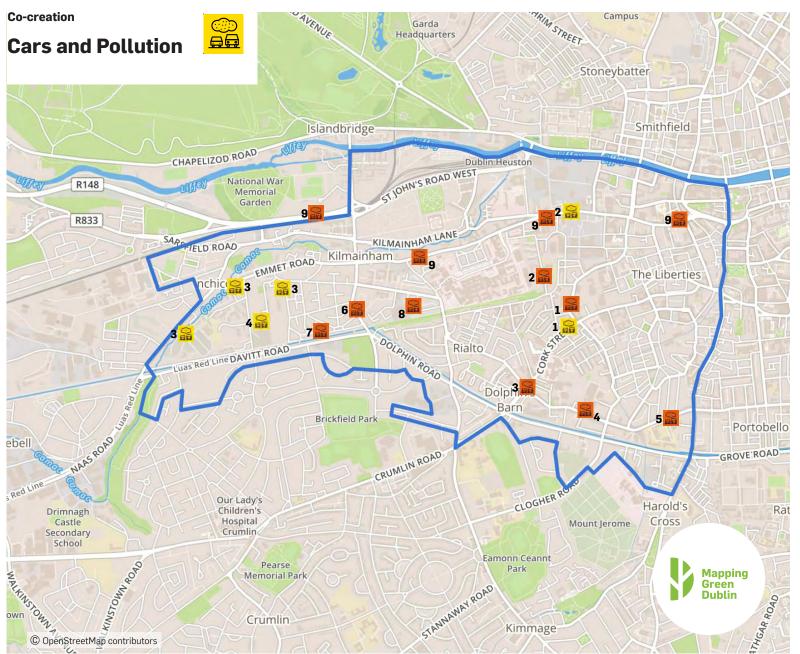


No strengths identified

Open Mapping: June 2020 **Mapping Green Dublin**

Response: Cycling





Opportunities



- Cork Street: less pollution from traffic if electric cars and buses used Cork Street
- 2 Thomas Street: very polluted from traffic could it be tree lined like N. Circular, all the way to Trinity College
- **3** Inchicore & Kilmainham: install electric vehicle charging points
- **4.** St. Michael's Estate: design of new estate redevelopment to be car-free and greened

Deficits



- Marrowbone Lane, Maryland: bad pollution along narrow roads with no greening- very oppressive – poor tree coverage on road
- 2 Basin Street: fast moving traffic along old canal doesn't make for a pleasant place
- 3 Dolphin's Barn crossroads: heavy traffic and pollution
- 4 SCR by John Player: we desperately need fewer cars and safer cycling
- 5 SCR by Griffith College: we desperately need fewer cars and safer cycling
- 6 Suir Road: pollution on Suir Road
- 7 Devoy Road: no more pollution in the canal and canal to be cleaned – more bins needed – no littering and no swimming
- 8 Mountshannon: air quality terrible at this point. High volume of traffic and diesel trains from Rialto to Con Colbert while walking children to school
- **9** Con Colbert Road, James' Street, Cornmarket, Liberties: heavy pollution from vehicles

Strengths



No strengths identified

Open Mapping: June 2020 **Mapping Green Dublin**Response: Cars and pollution



Community Recommendations. Summary: Green Mobility.

Summary of recommendations and associated themes relating to mobility (walking; cycling; cars/pollution) arising from focus groups; participatory mapping exercises and the MGD community survey.

For more detail and the full range of recommendations on green mobility, please see: Link

Connectivity and Access

Work with national and local stakeholders on realising a local cycling and walking plan

Create green mobility corridors and better harness existing green-blue corridors

Enhance permeability and build connectivity for ease of pedestrian and cycling movement

Care and Maintenance

Improve public services and amenities in public spaces (e.g. bins)

Develop a regular maintenance programme for green and blue space and communicate it to local stakeholders

Green Mobility

Safety and Security

Governance

Use and collaboratively generate

new data to enhance awareness

of transport-based pollution

Build collaborative.

cross departmental approaches

Harness the knowledge and skills of

local people in a structured way

Improve the public realm to enhance the perception and reality of security

More effective policing to address anti-social behaviour

Health and Wellbeing

Promote walking routes and enhance walking infrastructure

Develop deterrents for car based mobility

Promote green prescriptions and a focus on the quality of the everyday living environment

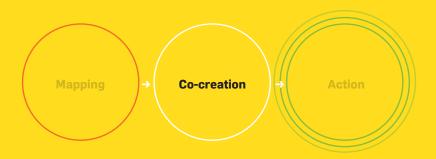
Development Pressures

Develop integrated approaches to land management and development that foreground greening

Adopt a more people-centred approach to development and future planning

Review the impact of construction and parking on the local environment

Plus⁺ Projects: the geographies closest-in



The projects presented in this section are a response to the community recommendations around access to nature and greenspace. They provide a timely examination of how the coronavirus pandemic has impacted on use and experiences of nature and greenspace in the area.



Camac Go-Along: A Walking Encounter in Blue Space

Members of the Green Forum attempted to walk the Camac from IMMA/RHK to Goldenbridge Cemetery. In many locations, access to the river has effectively been privatised by gated developments, with Turvey Park providing one of the few spaces for public access.

Using GIS and Ubipix technology, Geographer Ronan Foley and Seoidin O'Sullivan provided a walking methodology to seek out new experiences of the river as a linear site of encounter. This short graphic reflects some the findings of that 'qo-along' on August 18th, 2020.



Event findings:

In one short half-day walk, the power of an in-situ encounter provided rich material. Capturing shared local knowledge, on planning, culture, identity, restorative initiatives and even in some places, anger, were part of that method and helped establish a collective voice on the need for enhanced place care and new ways to recognise the value of open spaces in cities.



Theme: Voices

All through the walk a sense of voice – echoing between people and place – was also conveyed. Voices included the embodied responses of the participants to the place; the her- and hisstories of river, mill and park; the traces of older voices heard through the stones and din of

traffic; the local voices heard and spoken back to; elements of control and neglect, but also optimism and new lines of intimate sensings and the potential to create enabling spaces and immersive responses to and with the river.

Methods/Materials:

The event was recorded in a number of ways using photos, sound and spatial video. A number of stops were planned, though others emerged as we moved through the space. Those contingent encounters were an important part of the story.



Theme: Flows

As the walk moved along the route from east to west, flows of various forms emerged as key themes: the flow of the river itself; both blocked and free; the flow of the walk and the participants response to the river; a flow of history through the material places and spaces; a sense of 'stiflement' in that flow; and a capacity to rebuild the flow in creative ways.

Co-creation

Covid Impact

The co-creation stage of the strategy ran from Sept 2019–August 2020.

From mid-March 2020 project participation and movement were restricted due to the Covid 19 pandemic. In response to this, the team developed a number of online tools to examine the impact of the pandemic and how the community experienced greenspace during this period.

Open questions relating to experiences of greenspaces during lockdown were added to the MGD online community survey and the research team carried out interviews with community development and youth workers in the area in July 2020.

The MGD online Covid impact survey was carried out in two stages, questions posed first to capture the first wave of lockdown in Dublin (Feb–May 2020), and again to capture the second wave of lockdown (Sept–Nov 2020). Specifically, 90 survey responses provided insight into

- 1 How experiences of green and open space changed during and since the lockdown period?;
- 2 Are there greenspaces in neighbourhoods that people have recently discovered or rediscovered?

Changing perceptions of greenspace during lockdown

A number of participants stated that they now use green and open spaces more for jogging and walking during times of Covid restrictions.

Rather than stopping or sitting, people walked and cycled more frequently.

Respondents used and enjoyed the Canal more often. Less traffic in the area (Feb–May 2020) meant that people enjoyed the area. Some found the canal to be safer with the increased number of people but others felt it to be overcrowded.

Others recognised for the first time how precious local nature is, identifying a lack of connectivity between greenspaces, noticing a marked differences in the provision and quality of greenspace in the area and more widely within Dublin city.

'I've realised there are huge disparities between different sections of Dublin 8. Some are lush green oasis. Some are boring concrete roads.'

'The access to parks is not great. Compare entrances to parks in Ranelagh with Eamonn Ceannt Park, for example.'

There is a clear need for outdoor meeting spaces, where people can meet in a socially distanced way. Many wish to sit outside to read, relax and be in nature, to 'get out of the house'.

'The green space that is available is too small for the amount of people in our community. No way to keep 2 metres.'

The Canal was seen as a vital resource but there is recognition of the need for further path and tree maintenance.

Discovery and rediscovery of spaces

Many respondents discovered new small spaces in their neighbourhoods and using local spaces more such as IMMA (when open), Irish National War Memorial Gardens, Kilmainham Hospital, St. Lukes graveyard on Cork Street, Eamonn Ceannt park, St. Patricks, the Tenters and Oscar Square, Peace Park. Residents walked within sports pitches to get outdoors and get exercise.

'I have discovered the waterfall behind the Black Horse pub, which is beautiful. I can hear the waterfall because there is less noise from traffic on Tyrconnell Road.'

'I spend more time in local spaces instead of travelling to more dramatic or fun ones, e.g. – instead of going to Wicklow or Malahide, we go to the War Memorial Garden, Phoenix Park, Brickfields park'.

Many sought out local greenspaces to relieve the stresses of lockdown.

'The canal has always been important to me, but during the early stages of lockdown it became my only wild space to stretch my legs and my mind'.

While some respondents felt Weaver park was overcrowded and small, others sought refuge there.





Photographs taken during lockdown 2020. Credit: Alison O'Donohoe.

Co-creation

Covid Impact

In July 2020 the UCD team carried out in-depth interviews with community development and youth workers from Oliver Bond; Dolphin House; Fatima Groups United and St. Michael's estate. Many of the residents of these housing complexes have limited or no access to private open space.

'In Dolphin House, the 1950s housing blocks are without private external gardens or balconies. It is very difficult for the children to access somewhere safe to play. This was a real issue for families (during lockdown) ' (HC2 Dolphin House)

The pandemic magnified a number of already existing social and infrastructural problems in what are in parts already under-resourced and overcrowded spaces. Children, youth and older people are particularly impacted on by any under provision of greenspace in terms of both quantity and quality.

'For older people in the area, there is no greenspace... Younger people will go to the Phoenix Park but there is nowhere

else really to go to except walk into town. Just walking around the place, you would not really be interacting with any greenspace' (HC4 Oliver Bond).

Representatives from the youth service identified a lack of funding and resources to create projects that nurture a sense of youth ownership of green and open spaces. There are concerns around provision and maintenance of outdoor youth play/sports spaces.

'The community centre over there has an astro on the back of it. So, what happened was, they never managed that space. Initially it was part of the community centre. There are two pitches on that and that's a wasted space. It's not maintained. It's not taken care of. And for us also, like, we would love a space like that for young people because It would be constantly used' (HC1)

'I think they just want a chill out area – a space to call their own...

there is green spots at the back of the flats, but they're not used properly. They're not in a state to be used properly basically' (HC1).

'The outdoors became a way of being with people and connecting.'

(HC 3 Fatima)

'People will have to be outdoors more and we will have to address the deficiencies'. (HC2 Dolphin)



Figure 15: Map showing 400m radius (an approximate 5 minute walk) around housing complexes in the area.

Covid Impact

During the first Covid 19 lockdown, (April/May 2020) Seoidín O'Sullivan began to re-orientate the PLOTS response, to thinking about how to creatively use the Covid restrictions as a potential creative opportunity. PLOTS started to think about how the 2km and 5km radius restrictions were influencing citizens experience of their geographies closest in or their local neighbourhoods.

Who had relatively easy access to green space?

What were the quality of those spaces like?

How was wellbeing affected by the types of spaces they had access to?

Could we use this as an opportunity to enhance our local neighbourhoods and improve greening?

An open online mapping call was made inviting people to map their regular walks on google's My Maps or draw a map of their regular walk. A PDF document was designed and circulated through online social media and the submitted maps were converted into radius maps with geographer Eoin O'Mahony. Examples of PLOTS maps are displayed on pages 48 and 49.

Seoidín then worked with Eoin to map 2km radius maps of the four social housing complexes within the area: former Fatima Mansions, Dolphin House, St Michael's Estate and Oliver Bond Flats. These maps were intended to provoke discussion on inner city greening in dense housing developments and visualise access to greenspace in these areas. Greening within these public housing projects was then photographed by Jason Sheridan, a photographer working with Seoidín.

MAP YOUR CURRENT WALK OR CYCLE ROUTE.

Images below from left to right:

St. Michaels estate: under-utlised greensapce.

Oliver Bond Estate area planted by residents during lockdown 2020.

Core Youth Centre Inchicore Bench and planting carried out and maintained by young people in the area.

Flanagan's fields community garden (Fatima).



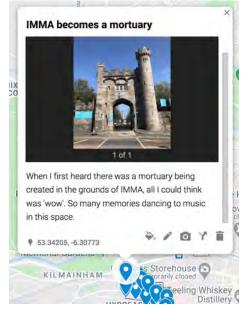


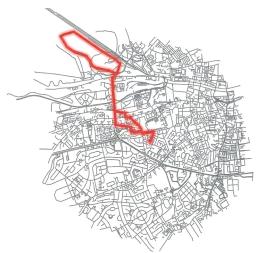


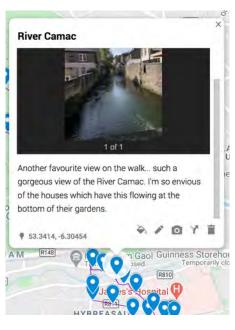


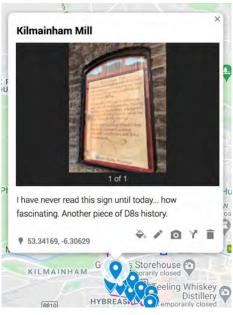


Plots

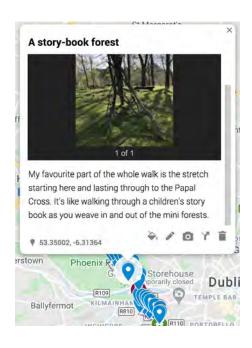




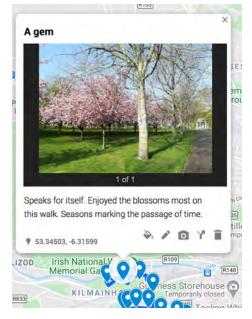


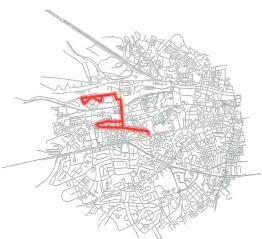


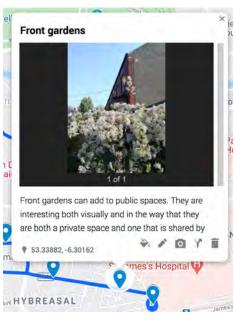




Plots

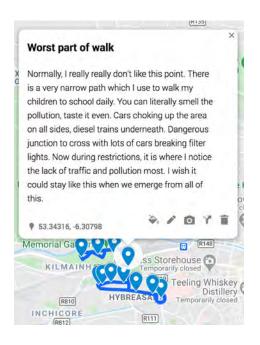










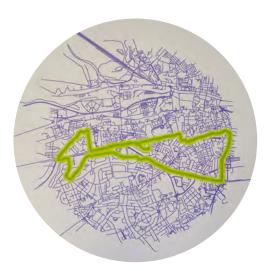


Plots Activation

The PLOTS maps were printed and exhibited as part of a community exhibition in Goldenbridge Cemetery and displayed during the urban prototyping workshop, alongside quotes on greening collected during the interviews with community development and youth workers.

19 August: A critical conversation was held in Goldenbridge Cemetery with Eoin O'Mahoney and community groups and leaders identified by Common Ground. A conversation on spatial justice and greening was held with D8 mens shed, Dolphin House community development association, Family Resource Centre Inchicore and Core Youth Service.



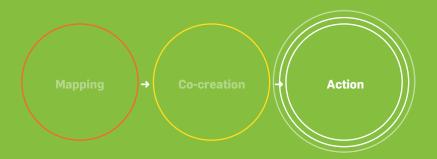






Stage 3

Action



This section contains current and continued work carried out during the action stage of MGD including synthesis maps; an urban prototyping workshop and the continued work of the D8 greening forum. This stage culminates in a response from the policy/practitioners to the community recommendations and a set of actions for the future of greening in the area.



Synthesis Mapping

Specific geographical locations identified during the co-creation stage are depicted in three synthesis maps on the following pages. They are:

Green Environment (trees; greenspace; biodiversity),

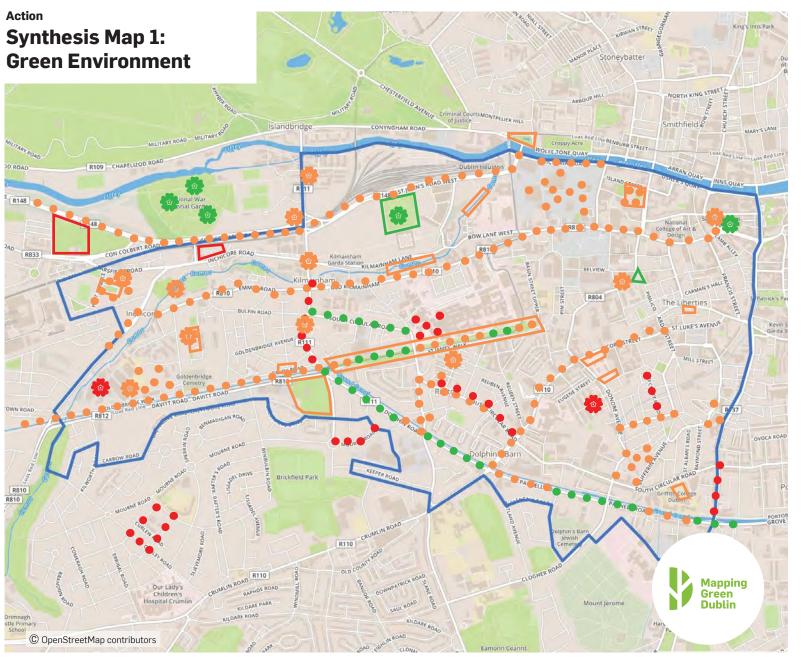
Green Amenity (sport; play; seating);

Green Mobility (walking; cycling; cars/pollution).

These maps are a summary of the community recommendations as derived from the focus groups; the MGD launch event and the MGD online survey in stage 2. All recommendations have been refined and made available to view here.

Link k





Opportunities for future greening focus strongly on the Grand Canal and Camac as green corridors and connecting the two. More access to trees and greening is needed in the large Guinness site; in the housing complexes (particularly Dolphin House (to Rialto) and St. Michael's estate) as well as along a number of streets, e.g. Cork Street and Emmet Road, Thomas St. to James's St, Clanbrassil St. Many existing parks and open spaces are highly used and regarded; however, more greenspaces are needed where people can relax, feel safe and experience nature.

Trees

Opportunities

• • • Deficits

Strengths

Greenspace

Opportunities

____ Deficits

Strengths

Biodiversity

Opportunities

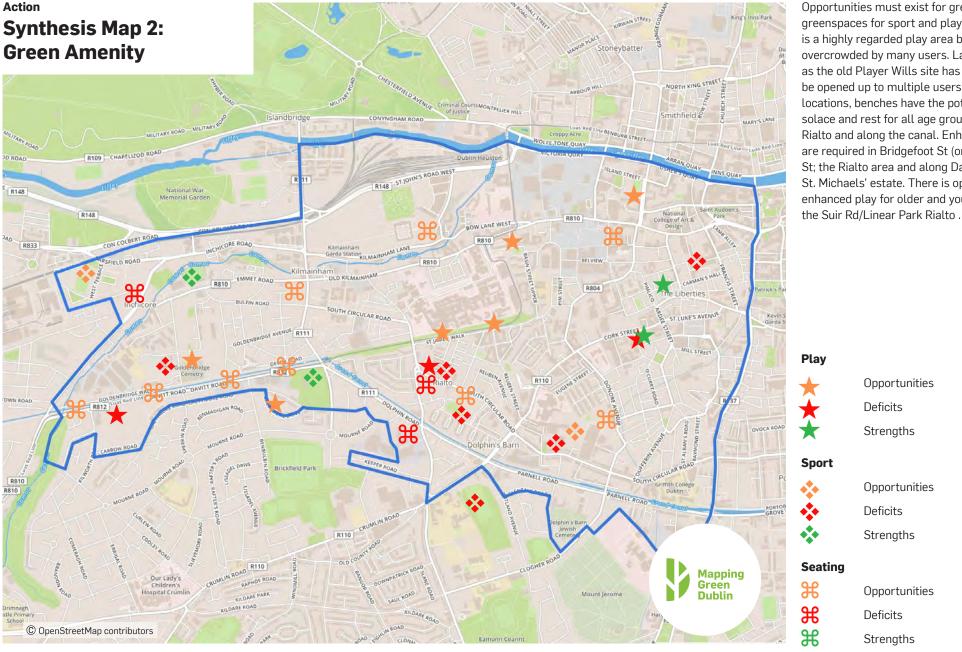


Deficits

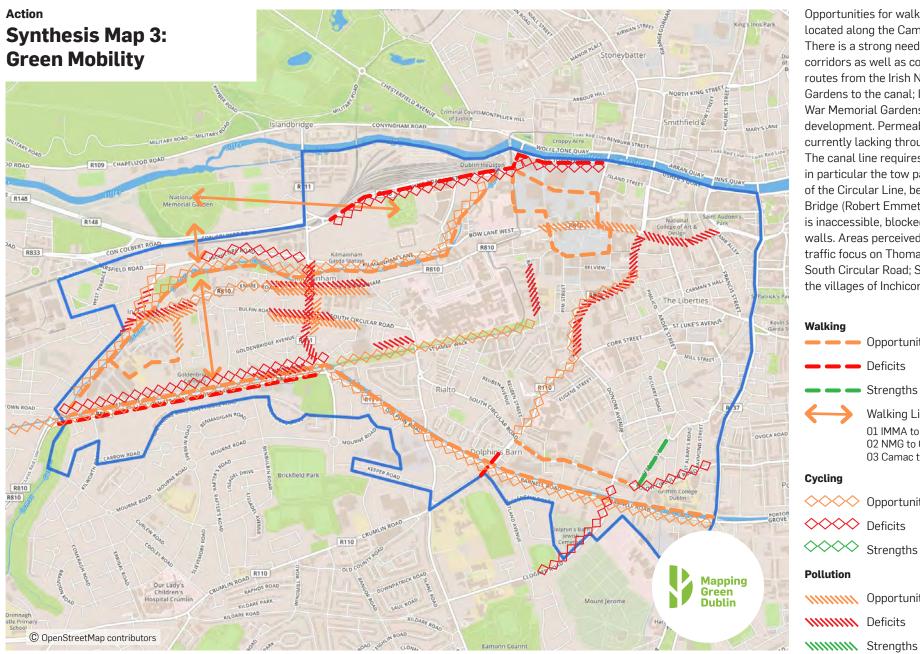


Strengths





Opportunities must exist for greater access to greenspaces for sport and play. Weaver Park is a highly regarded play area but is seen as overcrowded by many users. Large sites such as the old Player Wills site has huge potential to be opened up to multiple users. In appropriate locations, benches have the potential to provide solace and rest for all age groups, in Inchicore, Rialto and along the canal. Enhanced play areas are required in Bridgefoot St (ongoing); Reginald St; the Rialto area and along Davitt Road and St. Michaels' estate. There is opportunity for enhanced play for older and younger children in



Opportunities for walking/cycling are strongly located along the Camac and the Grand Canal. There is a strong need to link these green corridors as well as connecting up walking routes from the Irish National War Memorial Gardens to the canal: IMMA to the Irish National War Memorial Gardens and the potential development. Permeability and access is currently lacking through the Guinness site. The canal line requires maintenance in places, in particular the tow path on the north bank of the Circular Line, between Harold's Cross Bridge (Robert Emmet) and Suir Road (Griffith) is inaccessible, blocked by fences, gates and walls. Areas perceived as being polluted from traffic focus on Thomas St: Marrowbone lane. South Circular Road; Suir Road/Devoy Rd and the villages of Inchicore and Kilmainham.



Urban Prototyping



From March-August 2021, 35 people expressed interest in being part of a neighbourhood greening forum.

The purpose was to bring together a group of individuals who have specific greening projects in mind for the study area, to support these individuals in developing their ideas, and leverage relationships with other stakeholders in the area in order to action their projects.

Out of the 35 who initially expressed interest, 12 were engaged to attend an urban prototyping workshop in August 2020 to support them with developing their ideas and moving them in practical ways towards realisation. Exercises carried out during the workshop were borrowed from a range of design and community activist workshops and applied to a commonly-used design thinking process. The full process is explained in an online guide produced by and for the Mapping Green Dublin project. A series of sequential exercises are outlined and include a brief description, how they are applied and what materials are needed. The guide concludes with practical tips for setting up and running similar workshops and can be downloaded from the www.mappinggreendublin.com website. It is open access and can be freely used by and with communities in other places.

How does it work?

A prototype is a physical object that looks and feels close to 'the real thing'. In contrast, prototyping suggests a process, and specifically the testing and refinement of ideas. In our study context, urban protoyping is the framing, brainstorming, drawing out, designing, testing and refining of ideas relating to the urban environment, in this case local greening projects. Members of the greening forum developed greening ideas anew or further developed and refined pre-existing ideas and projects with support from landscape architects, architects, an ecologist and a city planner, facilitated by the Mapping Green Dublin project team.



The projects

The following pages contain 10 projects developed by members of our Dublin 8 greening forum. These are:

Inter-generational greenspaces

Community garden, Inchicore Turvey Park development Greenspace improvement on Devoy Rd Intergenerational private gardens The D8 bench project

Canal and walkway activation

FUNAFLOAT - water based activity for young people along the Grand canal Grand Canal Towpath from Sally's Bridge to

Drimnagh Luas stop

A pilgrim path – camino – a walkway in Dublin 8

Small projects with big impact

Parklets

Pocket forests

The greening forum is currently active and projects are ongoing across Dublin 8. If you wish to get in touch with the greening forum about any of these projects, please contact

mappinggreendublin@gmail.com \





Action

Intergenerational Spaces

Project 1: Community Garden in Inchicore.

Proposal for a pleasant and open greenspace, which could be used by all age groups, with the aim of bringing the young and old together. The garden should be central, open and visible, accessible for all, giving a sense of security for those using it. Within this area we would hope to provide not only areas for relaxation or play, but also for learning, and it is through this learning that we hope that all age groups could and would come together.

Community garden proposed should include but not be limited to:

- Community 'teaching' allotments
- Sensory gardens/therapy gardens
- Recreational areas with seating and picnic areas

- Play areas for younger children
- Play areas for all ages-chess, draughts, boules, etc
- A small building for teaching and community groups to congregate
- Ground proposed for this project:
 St Michael's estate, Richmond Barracks,
 Inchicore College of Further Education
 Turvey Park.

Project 2: Turvey Park Development

The park is approximately 2 acres in size, surrounded by three different residential communities and the Camac river. There are a few well established mature trees and a lot of overgrown shrubbery. It is a small park that is unknown to many residents of the Kilmainham/Inchicore area. In 2020 the park was under-

utilised, frequented only by the odd dog walker but has huge potential as a safe, green space with amenities for all to enjoy.

The following are suggestions for the park, some which are being implemented with the help of local residents:

- 1. Removal of bolted iron gate at the entrance to the park, and replaced with a more welcoming, aesthetically pleasing entrance, with park name sign (inspiration could be taken from Weaver park in Cork St.)
- 2. A Public Community fruit and vegetable garden (mobility accessible).
- A Vineyard which could be planted and developed around the front railings of the park to create a visually softer landscape.
- 4. An organic, unfenced playground area to

- include a treehouse (if possible) and seating.
- 5. Revamping the existing soccer pitch.
- 6. All-year round planting interest. Active community involvement in planting and design of flower beds.
- 7. Strategy for litter control.
- 8. Designated flower garden for senior citizens, to include benches.
- 9. Picnic tables.
- 10. Safety rail alongside the Camac river.
- 11. Foot-bridge across Camac river over to Inchicore Rd.
- 12. Annual Family Festival day (multi-cultural)
- 13. Hen Husbandry (ref. St. Anne's City Farm)
- 14. Fruit trees planted beside Vineyard.
- 15. All-weather seating area.
- 16. A fishing/amenity platform across the Camac.



Figure 16



Figure 17



Figure 18



Figure 19



Figure 20

Figure 16: Sketch of an intergenerational greening project proposing active use of green and blue (canal) spaces for young people (proposed by Zoe Obeimhen).

Figure 17: Entrance gate of Turvey Park could be removed to create a more welcoming entrance (Credit: Julie Mc Cormick + Mary Moriarty).

Figure 18: Site where the Public Community Vegetable Garden could be developed. (Credit: Julie Mc Cormick + Mary Moriarty).

Figure 19: The peaceful presence of the Camac river has great potential. A bridge and walkway has been previously proposed. Trout are present in the river, perhaps the possibility

of constructing a small fishing platform could be investigated? (Credit: Julie Mc Cormick + Mary Moriarty).

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Figure 20: A lone sunflower, displaying a small glimmer of hope of future development (Credit: Julie Mc Cormick + Mary Moriarty).

Intergenerational Spaces (continued)

Project 3: Devoy Road greenspace

Population increase in the area, means more demand for playgrounds and when parents meet each other it strengthens community bonds. This space on Devoy Road should be wheelchair accessible, for walks with grandparents in wheelchairs, or parents pushing buggies.

The project aims to activate a sterile green space as a community playground, a place for relaxation with seating near the canal for dog walkers. The improvement in this greenspace would ensure more people on the canal and enhance active surveillance. Clear stemmed trees offer clear views of children from the kitchen windows of the houses around the green square.

The utility boxes could be tidied up around the edge of the green space. Playground equipment should be hard wearing and include basics – slide, swing, climbing frame, balance bars, designed for ages 5 to 15 in particular. In the playground design there could be a large embankment slide from canal side into green space on Devoy Road. This may involve the closing off of Devoy Road to extend green space up the embankment to the canal.

Image Credits: Devoy Rd: Zoe Obeimhen.

Top right depicts a well-used seating area in
Inchicore: Mary Moriarty. Other images: Using
cut logs to create a natural seating area in
Turvey Park: Julie Mc Cormick + Mary Moriarty).

Project 4: Intergenerational sharing gardens

This concept seeks to illustrate the need for people with limited mobility to access greenspaces and suggests how very small interventions could unlock some of the extensive private gardens in Dublin.

This project links the ageing population of the area to younger residents and children. Owner occupiers in the area could work with local friends and neighbours to open up parts of their gardens to others. Some elderly residents may no longer be able to visit local parks and may find the canal difficult to access or uninviting, with few places to sit.

More elderly residents of limited mobility may have small front and rear garden that they have tended to but may no longer be able to maintain. Some residents may be able to share their gardens with friends and neighbours, to adapt front gardens with a few seats and tables, so that it is available as a small semi-private pocket park for the immediate community. Front or back gardens may also be productive, so that local children can learn to grow vegetables, with the help of horticultural students from the nearby Inchicore College.

Project 5: The D8 Bench Project

The creation of seating places to encourage particularly older people to sit, linger and spend time outside. To create an environment outside that belongs to all of us where all are welcome.

A simple seat or bench plus a table encourages more activity outside. It becomes more than a place to sit briefly and multiple activities become possible. A particular design could become unique to D8, like a modern version of the Phoenix Park bench, or each community within Dublin 8 could create their own bench. A modular design that could adapt to multiple settings and be easily identifiable as part of a D8 project would encourage people to spend time outside.









Canal + Walkways

Project 1: FUNAFLOAT – activation of water based activity for young people along the Grand canal.

The principal objective of the project is to support inpatients at the New Children's Hospital (NCH) by facilitating their involvement in a range of water-based activities on the Grand Canal. As the project evolves, the intention would be to extend the user base to communities along the canal corridor, including regeneration project residents at Dolphin House and St Theresa's Gardens.

The 1st Stage of the project entails researching the feasibility of operating a powered disabled-access craft, from a local base, and providing fun and educational trips along the Canal Circular line, an historic navigation that is easily accessible from the NCH site. Infrastructure aspects relating to access to the water need to be considered also as the craft will be transported to and from the launch site using a road trailer.

In addition to ease of access, a key advantage of this particular section of waterway is that it provides a 3 Km passage, uninterrupted by locks, linking Suir Road, Rialto with the former canal harbour at Portobello.



See map for exact locations:

Link k

Project 2: Grand Canal Towpath from Sally's Bridge to Drimnagh Luas stop

This project focuses on the towpath that runs along the Grand Canal from Sally's Bridge (Parnell Bridge) to the Drimnagh Luas stop at Goldenbridge Cemetery.

This has always been a popular walk and attracts even greater numbers now that people have begun to discover greenspaces closer to their homes. It is varied and interesting and, for most of the way, lined with trees. To make it accessible and safer for more people to enjoy it would benefit from sensitive intervention. It is important that any changes made recognise the value of the sections that have a semi wild uncultivated character. This character is so much in keeping with current concerns about biodiversity and wilding and make it a resource particularly unique in such a built-up area.

The proposed route into 4 sections:

- 1 Sally's Bridge to Camac Bridge
- 2 Camac Bridge to Herberton Bridge
- 3 Herberton Bridge to Suir Road
- 4 Suir Road to Drimnagh Luas Stop

The issues needing immediate attention include; Surface and width of path and lighting in many places; Handrails at steps; Path under Camac and Herberton bridges; Pedestrian phase at traffic lights; Filling gaps in planting on north bank for screening of unsightly buildings; Greatly improved cleaning and sanitation.











Figure 21. Sally's Bridge to Camac Bridge Apart from a couple of Lombardy Poplars, trees here are mostly Sycamore. New trees should be planted here and wild plants allowed to regenerate.

Figure 22. At Camac Bridge the walker can climb steps to street level and cross at traffic lights (no pedestrian phase). The other option is to walk on the narrow muddy track and under the bridge (Figure 22).

This space is regularly used as a toilet. It, and steps from the road adjacent are litter blackspots (Figure 23a). At this point is possible to walk on both sides of the canal. On the south bank the path is rough and uneven, similar to the previous stretch. There is a low, nicely detailed, parapet brick wall at road level that has a set of bifurcated steps down to the tow path at about the halfway point. Sadly, this is very poorly maintained (Figure 23b).

On the north bank there is a wide concrete path lined with sycamore. It is unlit. Apart from sycamore there is both London Plane and a magnificent Lombardy Poplar on the south bank (Figure 23c).

Credit: Kieran Doyle O'Brien

Canal + Walkways (continued)

Figure 3: Herberton Bridge to Suir Road (Fig: 24). There is no lighting on either path.

Figure 4: Suir Road to Drimnagh Luas Stop it is possible to cross the canal using one of the lock gates to reach the more attractive north bank. This can also be accessed by turning right just before Suir Road, going over the fine 18th century Griffith Bridge and then across the Luas track and under Suir Road Bridge itself (25, 25a).

On this side the path is surfaced and well lit all the way to Drimnagh stop. Again the trees are mostly Sycamore but there is a stand of fine London Planes just before Millview Cottages (Figure: 25b). There are significant reed beds here also (Figure: 25c).



Figures:24, 25 and 25a, clockwise from top left.



DUBLIN CANAL BLAK WALK Solders for scales and state of the state of th

Figure 26: Illustration of this section of canal. Kieran Doyle O'Brien.

Canal + Walkways (continued)

Project 3: Proposal for the creation of a pilgrim path – a camino – a walk way in the Dublin 8 area. The development of a Pilgrim Path or Pilgrim Way will seek to maximise urban well-being, offering the walker, pilgrim, visitor, city dweller, even the day-shopper, places and spaces which purposely allow for moments of respite, mindfulness and recollection within the city.

It will include spaces both indoor and outdoor which promote physical, emotional and

mental well-being. For many of us our local environment has taken on a new significance as we are confined to and compelled to reembrace, re-discover our local areas during this Pandemic.

A pilgrim path could incorporate the natural environment; the blue and green areas that already exist and which can be revitalised for the well-being of the community. Blue spaces such as those along the River Camac, the hidden Poddle, the Grand Canal and down by

the Liffey side. Greenspaces such as: parks (Weaver, Royal hospital) squares (Oscar) St Michael's Estate, shrines(Marian), grottos (Oblates), cemeteries (Goldenbridge allotments) (Flanagan's Fields), playgrounds (Cork street) could also be incorporated.

A main walk way could be selected and mapped with a starting point for example at Christ Church Cathedral or St James Church (traditional starting point for the Camino de Santiago) and an ending point at the Shrine to St Bernadette in the grounds of the Oblates in Inchicore (a large public space). The walker who wished to go further could choose to either walk along the Canal to St Brigid's Holy well in Clondalkin (taking Luas back to city) or could go along the Liffey via the Irish National War Memorial Gardens out to Chapelizod – a medieval church(taking bus back).

Various specifically themed walks could branch off the main Pilgrim way.



Credit: Padraigín Clancy and Cathy Scuffil

Small Projects: Big Impact

Project 1: Parklets

Parklets repurpose part of a street into a public space for people. They are publicly accessible and open to all. As part of a greening initiative parklets can provide various forms of planting in areas that are deficient. They create a more inviting environment and entice the public to engage and linger by providing a focal point which may include seating or shelter. Strategies to add greening such as parklets have positive impacts on the environment and wellbeing of the local community. The concept is scalable and transferable.

Within the study area, parklets could be provided on commercial streets to provide a place for the public to rest and linger on the

street. This increases the attractiveness of the street for the general public and therefore has a positive impact for local businesses as well as the environment and general public. Possible locations in the South West Inner City, Meath St, Francis St. Thomas St. Cork St. Rialto, Inchicore.

In residential areas parklets can provide public space and greening in areas that are currently deficient. Examples of locations in the south west inner city Blackpitts / Saint John's St, Rialto Cottages. Collaboration between DCC, community groups, businesses is required (e.g. work of Dublin Beta) to implement parklets in the area.



Credit: Olaf Schroth (Munich)

Project 2: Pocket Forests



Pocket Forests is a social enterprise who aim to transform empty pockets of space in urban areas into havens of thriving biodiversity to benefit communities and the city as a whole.

Pocket Forests is dense planting within a small area – between 6 meters squared to 200 meters squared. All trees and plants are native species and, where possible, grown from native seed.

Each Pocket Forest is to be planned with the community that will "own" the forest. The community is involved in the soil preparation and the planting so they are educated in the

method and feel invested in the Pocket Forest. These forests are low maintenance which require as little human intervention as possible so the community can reap the benefits of nature without having to make a huge commitment.

To implement Pocket Forests we need land to plant on, community investment and involvement and funding (per project/forest). So far, Pocket Forests have planted in 3 schools – Mercy College in Inchicore, Stepaside Educate Together High School & Warrenmount and 11 x private gardens. See: www.pocketforests.ie





A garden sized pocket forest after the team have prepared the soil (which will then rest for about 12 weeks). Credit: Pocket Forests

Next Steps: Greening Policy and Practitioner Responses

Community recommendations as summarised within the three synthesis maps and displayed in pages (53–55), plus the projects developed by members of the greening forum, were presented to a range of greening stakeholders in the area.

These interviewees work directly or indirectly on greening projects, plans and initiatives in the area and represented a range of organisations: Dublin City Council (Parks and Biodiversity); Dublin City Council(Planning); Dublin City Council (South Central Area); Waterways Ireland; The Digital Hub; New Children's Hospital; Mental Health Ireland; Irish Wildlife Trust; community development workers; youth workers. A summary of how the interviewees responded to the six key themes as identified as significant to the future of greening by communities in the area is detailed below.

For more detail and the full range of recommendations on green mobility, please see: Link .

Governance

Through structured collaboration address the policy vacuum in relation to greening in this area

Streamline the range of stakeholders/ agencies engaging in greening/natural infrastructure to create coherence

Enhance and support the role of civil society in leading greening

Connectivity and Access

Green city idea as a guiding principle for planning and development

'Landscape' based approach to natural infrastructure connectivity

Strengthen physical, organisational, psychological, and social connectivity at a range of scales

Ensure greening projects are inclusive and widen accessibility

Care and Maintenance

A planned, visible and strategic maintenance programme to be developed for all natural infrastructure in the area

Collaboration, education and training will be central to effective care

Identify and undertake a quality audit on existing greenspaces and the expertise needed to sustain and enhance these.

Policy

Safety and Security

Recognise the complex relationships between community security and greenspaces to develop a common vision/approach

Through public realm enhancement and light-touch policing, address anti-social behaviour particularly along the canal

Health and Wellbeing

'Nature connectedness' as an enabler for mental health and wellbeing

Empower and enable children and young people to take ownership of their area

Enhance ecological literacy to give voice to community needs and desires

Development Pressures

Multi-functionality as a core principle in planning new developments and greenspaces

More pro-active land management, informed by data, in support of greening and the capture of land value uplift

Greater consideration of the relationship between gentrification and community gain

Policy Maker/ Practitioner Pathways to Greening Action

The following key themes were identified as pathways to greening action and change by the greening policy makers/practitioners identified.

Communications

An online, easily accessible, up-to-date programme of tree maintenance (including reasons for tree removal) would greatly enhance communications around what is perceived to be ad hoc tree felling. This could include an explanation of the right tree: right place concept, detailing difficulties around the impact of underground services on street trees. Enhance public understanding of civic structures and how decisions are made why certain places have green amenity provision and others do not. A 3D visualisation of a greener Dublin 8 including green walls and roofs and stacking vertically of greening features would aid both collaborative innovation. and communication.

Constructive Collaboration

A platform for constructive collaboration between landowning stakeholders (involving local community groups) lends itself to improved connectivity and access to greenspace for local people, and the sharing of innovative ideas around greening in high density areas. Collaborative working groups are also constructive in solving particular maintenance issues e.g. invasive species, use of glyphosate; and to produce a common approach to health and safety for trees and greenspaces across all landholders. In working with community groups and organisations, avoid greenwashing by ensuring long-term engagement and commitment.

Community and Social Infrastructure

A platform for structured collaboration for greening should include schools, hospitals, housing complexes and community organisations in the area. There is a community benefit policy/practice vacuum that can be maximised, especially in terms of green employment; green maintenance, linking to local green social enterprises. For housing

complexes in particular, funding for local youth and community work to develop greening projects will maintain and enhance social ties. A sense of ownership is key especially for young people. Co-designing and providing this sense of ownership of space to young people along with light policing and lighting are ways to improve anti-social behaviour.

Ecological Literacy

An agreed cross sectoral health and safety plan will go some way towards enhancing wilder planting and more 're-wilded' biodiverse areas. Training is needed to maintain these spaces. There are historical reasons for the lack of greening in social housing. A renewed vision for engagement and greening in the shared spaces within housing complexes would enhance individual and community wellbeing. In communicating the benefits of trees and greenspace, an emphasis not only on time spent in nature but also nature connectedness may improve understanding of the quality of the nature experience and the associated features of soil. nature sounds, access to biodiverse places.

"It is a legacy issue...for open space, tree canopy cover, sporting provision – there is an underprovision in Dublin 8 and it's acute"

Action

Leadership

Political support and leadership is required to harness the current cultural shift in greening and climate action. A Dublin city wide focus on both social justice and greening at its core is required for a transformative greening impact. Local elected representatives are voicing this green agenda, which is one way to link local community greening action and national government, however, a space for dialogue between green NGO's, civil society and public bodies needs to be opened up to capture the rich expertise that these groups bring to the greening agenda. The work of the C4O cities group and the greening agenda advocated by Parisian leaders are exemplars in this area.

Resources

More green jobs e.g. trained arborists and horticulturalists are needed to survey and protect current trees, especially mature trees throughout the area. Further resourcing for youth and community groups is needed to maintain and enhance social ties, particularly through sport and multifunctional greenspace for active and passive activities, but also on

projects along the canal to engage differently with this space.

Training for local green social enterprises on funding, costings, organisational structure along with engaging with the larger developments and landholders (in the form of community benefit) in the area would enhance their function.

Multifunctionality

Given the development legacy in the area, new innovations in nature based solutions e.g. green walls; roofs; innovations in food growing could be more effectively created and rolled out with constructive collaboration and training. Combine and maximise resources in the form of collaborative working groups to share ideas. Any new spaces developed should have multiple functions and have intergenerational use e.g. parks; sports pitches; play spaces. Multifunctionality as an ecological design principle is one way of communicating the multiple benefits of nature, and this can be practiced in the design of buildings and greenspaces.

Planning

Landscape-led planning at all nested scales of design and development would be the main driver and tool for enhanced green connectivity. The streamlining of plans from greening strategies; LEIPS, LAPS, Development Framework Plans, green infrastructure plans and the city-wide development plan would avoid policy/plan gaps and confusions. Post plan evaluations would acknowledge how and why certain projects did not go ahead. There is a need for a greater understanding of planning tools to capture land value change during the rezoning process (with resulting speculative development) along with research and development of tools to better understand the impacts of gentrification in the area.

"Many people have been living several generations in the city and don't really have a connection to greening, agriculture, rural areas... and they've lost contact with greening over the years" Actions towards implementation of the Community Greening Strategy



Actions

Private Gardens. Enhance the role of private gardens.

Private gardens can play a greater role in enhancing the green infrastructure of the city. Tree management at a city scale requires co-operation among stakeholders in the private/public realms. There are more than 300,000 trees in DCC most of which are between 5 and 15m tall. About 40% of these are found in public parks and along roads. The remainder are found in small private gardens and larger private spaces.

Traffic reduction. Consider tree planting alongside traffic reduction.

City centre neighbourhoods are a focus of transport-based emissions that far exceed the capacity of the tree ecosystem services. Tree planting should be considered alongside traffic reduction measures to create a healthier environment. One indicator of the multiple ecosystem benefits provided by trees is the CO_2 captured and stored in the tree stock. DCC's urban forest stores about 608kt of CO_2 (or 4955t CO_2 km²) that has a value of €12 m at current carbon prices (€20 per tCO_2). These benefits are unevenly distributed over the DCC area

and are mainly concentrated in the large parks. The trees in D8 store approximately $3036t\ CO_2\ km^2$ compared to an average of 3398 for DCC neighbourhoods. Traffic in D8 generates $6897t\ CO_2\ km^2$ compared to an average value for DCC neighbourhoods of $6486t\ CO_2\ km^2$.

Green roadways. Green roadways in city centre neighbourhoods.

City centre neighbourhoods have the highest population densities in terms of residents and workers and the lowest green space (and trees) per person. Where space is limited opportunities for greening along roadways should be encouraged. The distribution of trees in DCC is extremely variable. For the entire DCC area there is about 37m² and 0.55 trees per person. Excluding the parts of the city that have few residents, the ratios are highest in the suburbs and lowest in the city centre. The overall averages for residential neighbourhoods are 13.5m² and 0.41 trees and for the D8 study area the values are 9.9 m^2 and 0.22 trees.

Plan coordination. Coordinate greening plans and strategies.

Coordinate all plans and green strategies across Dublin. Spatial, temporal and cross-sectoral coordination is required and could be facilitated through landscape-led planning and a Director for Greening for the wider metropolitan area to provide strategic direction that is then championed at a local level by greening forums.

Assess impact. Assess greening impact across all plans and policies.

Assess the impact of urban development policies, plans, regulations, and practices on the green infrastructure and its social, economic and physical contribution to sustainability. Strengthen the formal links across Dublin's climate, biodiversity, transport and neighbourhood plans and ensure that all policy and plan development is cognisant of the potential of green infrastructure development. Ongoing monitoring is required and a mechanism for accountability.

Greening indicators. Further develop greening indicators at different spatial scales.

Employ green space indicators to support ongoing monitoring and evaluation by the public and private sector, and civil society. Through a shared and reflexive approach, the types of green infrastructure indicators developed through the EU-funded Enroute project (https://oppla.eu/casestudy/19264) could be expanded and made publicly available. Additional indicators might include for example, number of trees per person, quantity of greenspace per person at different spatial scales, or the ratio of greenspace in new developments. These indicators could be connected to existing smart city initiatives and platforms and coordinated at the regional level.

Actions (continued)

Shared vision. Develop a shared natural infrastructure vision.

Develop a consistent, coherent and shared natural infrastructure vision and narrative for Dublin 8. Constructive and structured collaboration is required to merge planning of blue and green infrastructure (and the wider colour palette of nature) and realise it's full and connected potential. Identifying a lead group or organisation with broad-based legitimacy would be critical.

Safety + wellbeing. Develop a cross sector community safety and wellbeing plan.

Develop a community safety and wellbeing plan to balance physical safety, mental wellbeing and access to nature. This should be a shared programme for health, safety, and community risk management across agencies including Dublin City Council, semi-state bodies, community development and grassroots groups.

Housing complexes. Integrate greening into housing complexes.

Improve greenspace quality and provision, especially in large housing complexes currently undergoing development. The multi-disciplinary approach adopted for the Emmet Road development is supporting communities to articulate their greening needs and provides a potential model for other large-scale regeneration schemes. Target ratios for greenspace provision and deeper dialogue with residents about the benefits of greening in new developments would also foster creative and critical thinking.

Community benefit. Further support community benefit projects.

Identify key development hotspots throughout Dublin 8 and collaboratively develop and implement pilot small-scale, community benefit projects to act as a model for other areas. Build on pre-existing data and evidence to identify where small-scale or infill projects can be supported at minimal cost but with significant potential to act as urban acupuncture.

Sense of ownership. Nurture a sense of community and youth ownership.

Create community projects along the canal. Engage all groups, including local youth, and create a sense of ownership, improving access and water activation. In partnership with state agencies, community youth workers, community Gardai and wider civil society, there is significant untapped potential to transform the relationship with the canal and environs. Waterways Ireland could play a lead role in facilitating this engagement.

Collaboration. Build a culture of collaboration.

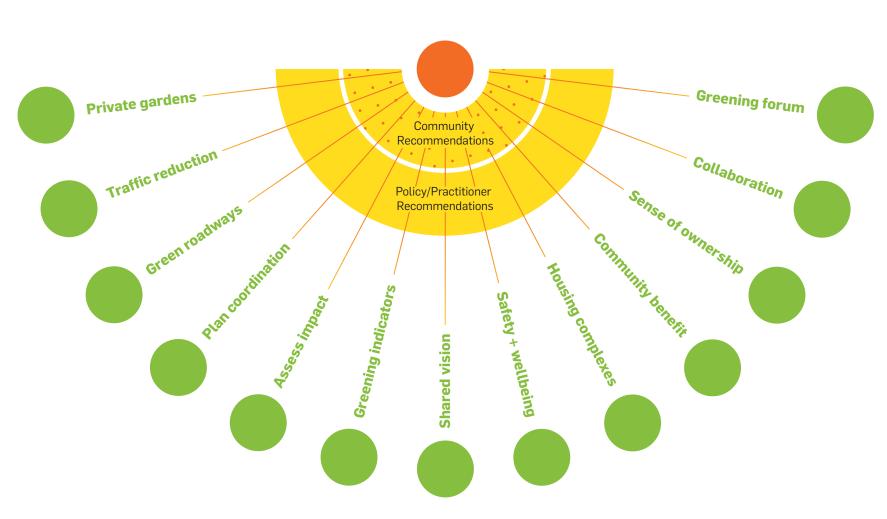
Establish inclusive, diverse and collaborative working groups to share and develop greening ideas. Collaboration is required between major landholders; between major landholders and communities; between NGO's/civic society organisations, and between major landowners and communities. The Mapping Green Dublin co-creation model and urban proto-typing techniques form ready-made methodologies that could help to establish and build trust.

Greening forum. Sustain the Dublin 8 neighbourhood greening forum as a key enabler of community-led greening.

Greening forum members have different types of expertise and needs. Future work involves building capacity of early individual projects; providing guidance on social economy structures; and providing advice on funding, costings etc. for those projects that are already established. Greening forum activity can be integrated into different spaces and streets. The support of locally based partners with community development expertise and organisations with access to broader policy-makers and funding, for example the Dublin City Council biodiversity officer, will be necessary to provide access to training, financial and organisational advice, and coordination.

Actions towards implementation of the Community Greening Strategy

Mapping Actions



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