

Assessing Greenspace Accessibility at Early Years Providers in Greater London: A Spatial Analysis Approach

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INTRODUCTION

❖ Exposure to greenspace has been suggested to improve mental and physical health, wellbeing, and development in children and adolescents.

❖ Benefits includes:



Enhanced cognitive and motor skills



Increased positive emotions



Lower risk of obesity

❖ Children spend about **35 – 40 hrs weekly** at their educational institution, greenspace accessibility is essential in these institutions.

AIM: To assess the availability of open and greenspaces at Early Years Providers (EYP) (for children <5) across Barking and Dagenham Local Authority

METHODOLOGY

Data Processing

- Load EYPs location OS Points of Interest greenspace from and OS MasterMap Greenspace into ArcGIS Pro and R studio.
- Link the shapefiles for each dataset in R Studio
- Confirm if each dataset has the same Coordinate Reference System
- Convert merged shapefile data to a geodatabase

Data Selection

- Limit data files to Barking and Dagenham (B&D) Local Authority
- Merge all the B&D data

Data Analysis

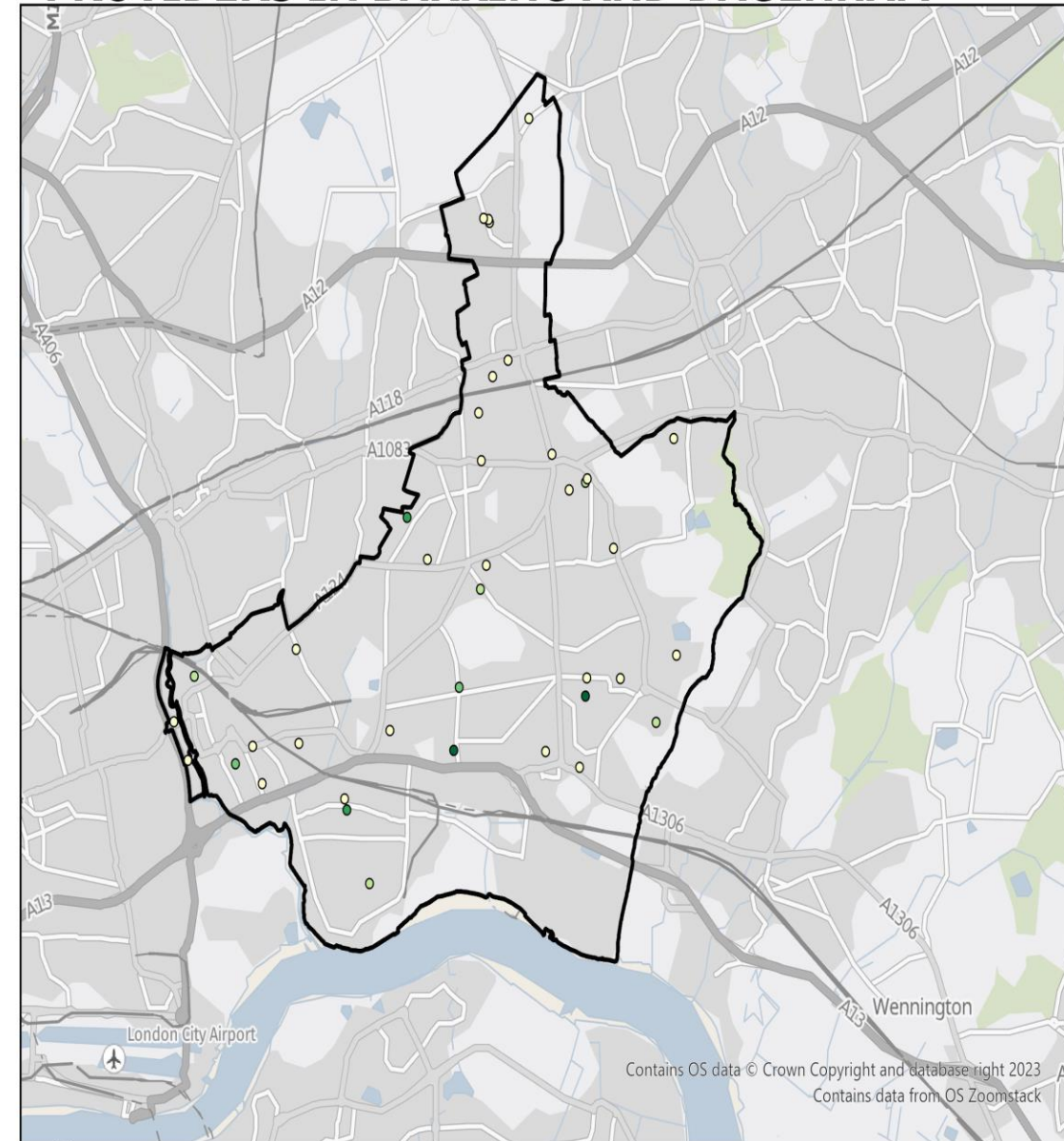
- Create a variable fid_1 that links the EYP locations to the greenspaces
- Calculate the area of the greenspaces linked to the EYP locations

REFERENCES

- Geneshka, M. et al (2021), 'Relationship between Green and Blue Spaces with Mental and Physical Health: A Systematic Review of Longitudinal Observational Studies'.
- Dadvand, P. et al. (2014), 'Risks and benefits of green spaces for children: a cross-sectional study of associations with sedentary behavior, obesity, asthma, and allergy'.

KEY FINDINGS

AVAILABLE GREENSPACE FOR EARLY YEAR PROVIDERS IN BARKING AND DAGENHAM



Shape_Area
• 0.000000 - 3302.909866
• 3302.909867 - 14306.087333
• 14306.087334 - 24059.300287
• 24059.300288 - 70691.589128
• 70691.589129 - 158569.495330

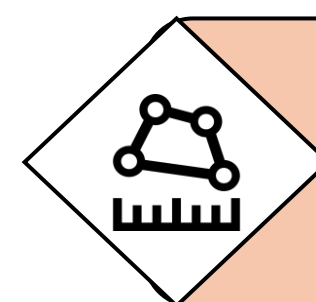
The average size of greenspaces linked directly to the EYPs were quantified. Areas with Dark green colours indicates a high area per meters square while lighter green areas indicates small green spaces per meters square. Green spaces includes natural and manmade surfaces.

Map authored by: Nkemjika Ugwa
Name: Barking Project

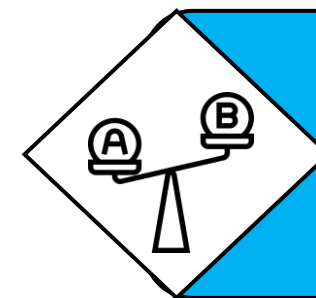
✓ The size of available greenspaces for Early Year Providers (EYPs) in Barking and Dagenham, ranges from very small areas (3.5 square meters) to much larger ones (over 55,000 square meters).

✓ Larger greenspaces (dark green) are more concentrated in specific parts of B & D, suggesting that not all areas have equal access to expansive outdoor environments.

NEXT AREAS FOR RESEARCH



Quantify area and function of greenspace per children enrolled per EYP.



Compare area and function of greenspace between state-funded and private EYP.

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