

CRAG METALS IN URBAN SOILS FROM CORK CITY

SFI RESEARCH CENTRE IN APPLIED GEOSCIENCES

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#### IMPACT ON SOCIETY

Parks and urban green areas offer valuable amenities to towns and cities. **Previous European topsoil** 

## METHODS

**Triplicate analysis with the** Handheld X-ray fluorescence analysers as a faster and cheaper alternative to the industry standard (ICP-MS).

surveys (FOREGS and LUCAS) predict the presence of heavy metals in the topsoil of Irish soils (As, Cd, Cr, Cu, Hg, Pb, Zn, Sb, Co and Ni).

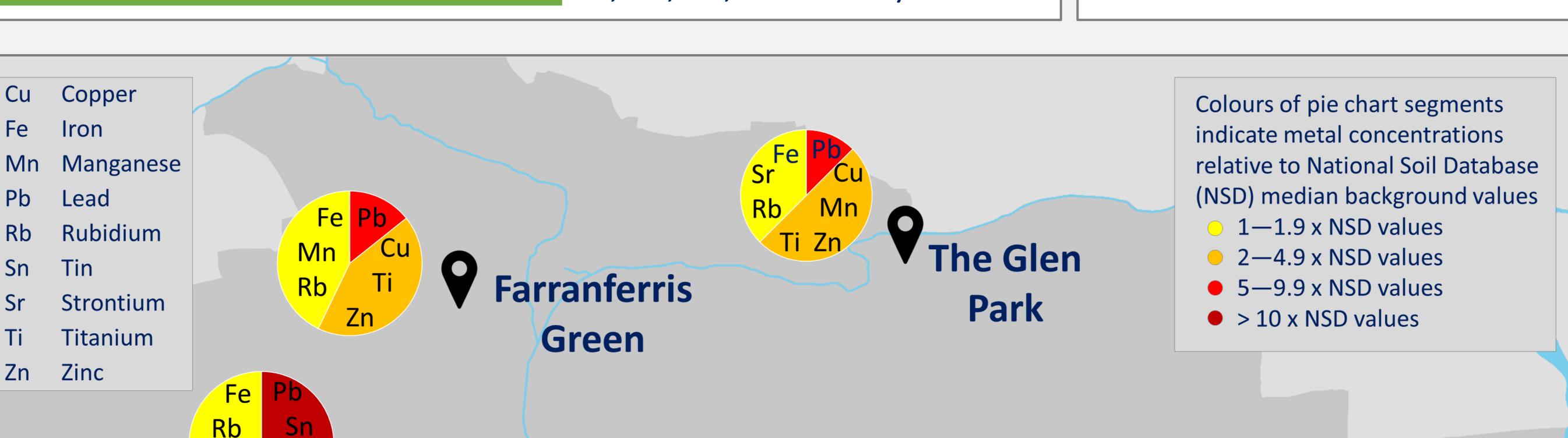
 $\sqrt{10}$  parks in Cork city

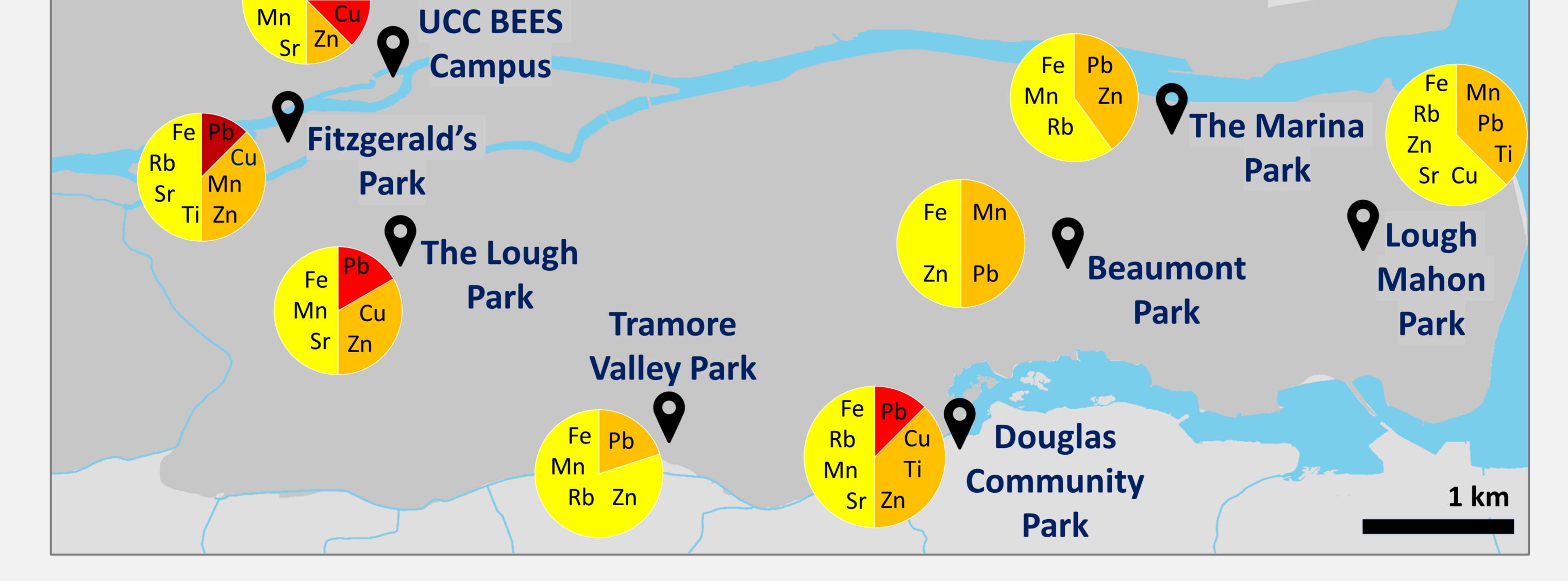
 $\sqrt{15}$  sample sites per park

 $\sqrt{1,350}$  individual XRF readings



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## **KEY RESULTS**

# HOW IS THIS RESEARCH

**Result 1:** All sites exceed Irish background levels (NSD) for 4 – 8 metals.

**Result 2:** Lead (Pb), Iron (Fe), Manganese (Mn) and Zinc (Zn) exceed the Irish background levels (NSD) at all sites.

**Result 3:** Metal concentrations are systematically higher at city centre relative to suburban sites.

#### "MAKING A DIFFERENCE"?

**Urban soils lack regulation**: there is currently no EU law/regulation and no Irish law/regulation that sets out thresholds for urban soil contamination. This research informs local city and county councils, the GSI and DECC on the status of urban soils in Cork city and helps inform future policy.

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