

# Valuing Ealing's Urban Forest

By Dale Mortimer, Tree Service Manager at LB Ealing

Project Partners:



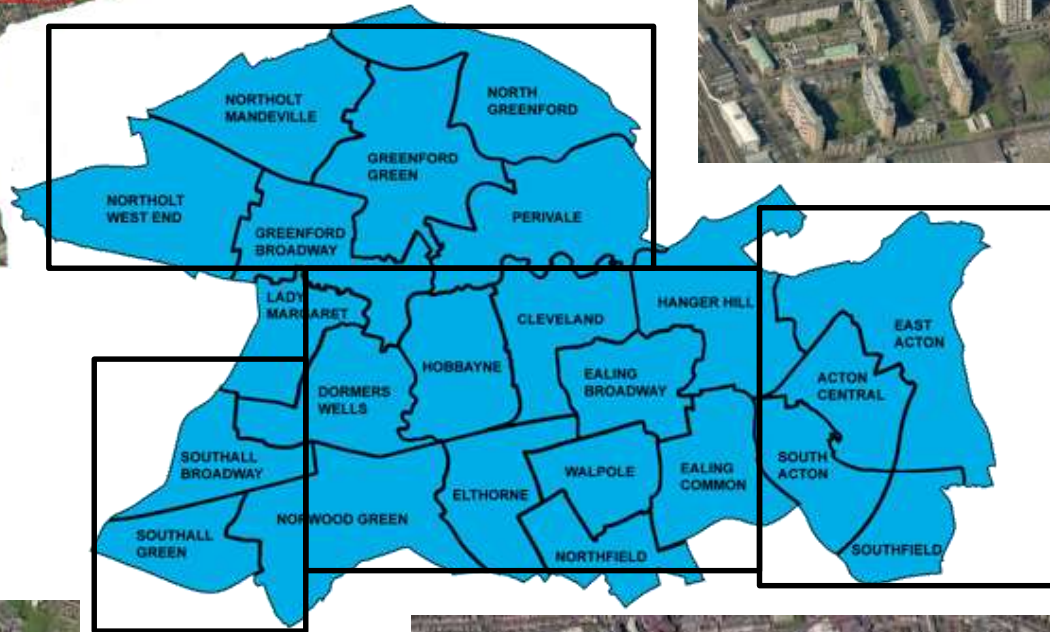
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# Ealing's Urban Forest

- 26,000 street trees
- 60,000 park trees spread over 147 sites (ex woodland)
- 6,000 trees on housing land





# The Project



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**Project Aim:** To develop a strategic, evidence-based approach to urban forest management for local authorities and community groups to adopt.

## **Project Objectives:**

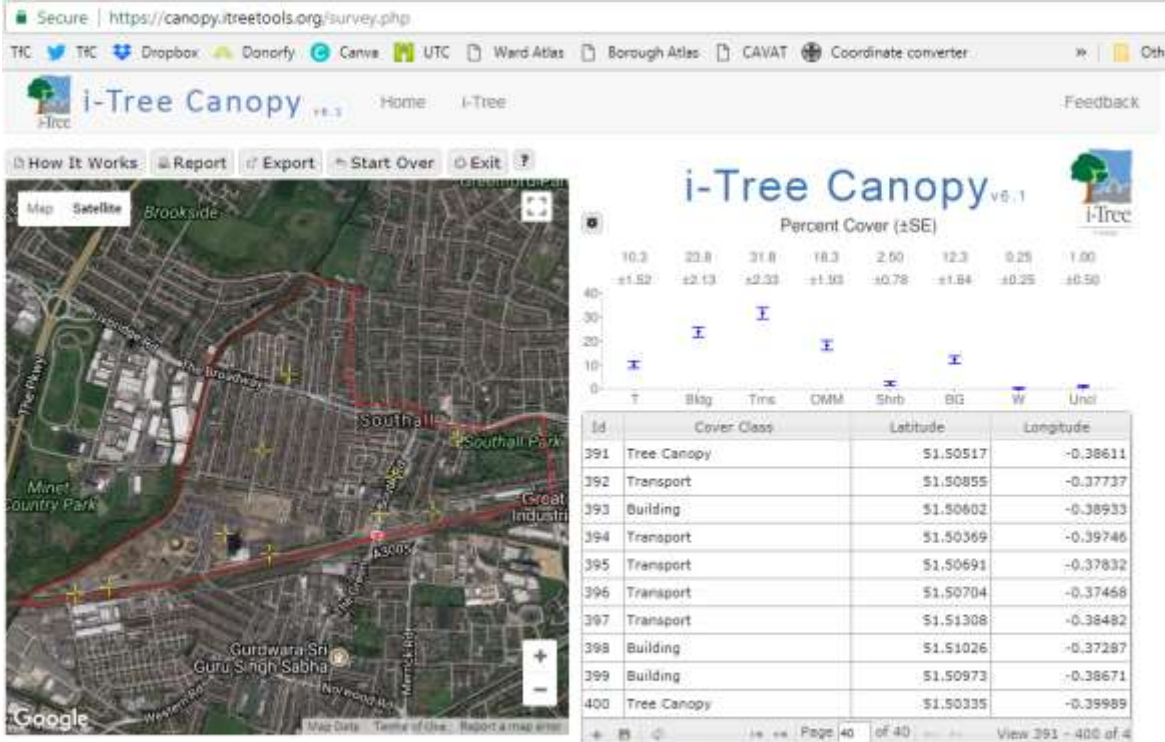
- 1) Conduct a desktop ward-level **canopy cover study**;
- 2) Deliver an **i-Tree Eco survey** with local volunteers;
- 3) Incorporate Ealing's existing **tree inventory data** into the evidence base;
- 4) Utilise i-Tree reports to co-produce a business case for Urban Forest Management in Ealing;
- 5) Co-produce a toolkit that captures the project methods and disseminate to local authorities and community groups to produce their own Urban Forest Management Plans.

**Note; 3 methodologies.....**

# Methodology #1

## i-Tree Canopy

500 - 700 random sample points were classified per ward, or until a standard error of <2% is reached = 11,174 points in total



The screenshot displays the i-Tree Canopy v.1.1 software interface. On the left, a Google Map shows a red-outlined study area in Southall, with various landmarks like Southall Park and Gurdwara Sri Guru Singh Sabha. The right side features a bar chart titled 'i-Tree Canopy v.1.1 Percent Cover (±SE)' with data points for different cover classes. Below the chart is a table of survey data.

id	Cover Class	Latitude	Longitude
391	Tree Canopy	51.50517	-0.38611
392	Transport	51.50855	-0.37737
393	Building	51.50602	-0.38933
394	Transport	51.50369	-0.39746
395	Transport	51.50691	-0.37832
396	Transport	51.50704	-0.37468
397	Transport	51.51308	-0.38482
398	Building	51.51026	-0.37287
399	Building	51.50973	-0.38671
400	Tree Canopy	51.50335	-0.39989

Remember, the more points you survey, the lower your Standard Error, and the more precise your sampling will be. More points surveyed provide for a better estimation of Land Cover across your study area.

**Save Your Data**  
Save Data Save Early Save Often. Don't lose your project data!

# Methodology #2

## i-Tree Eco (Random Sample)



# Methodology #3

## i-Tree Eco (Ealing Inventory)

ezytreeev



i-Tree Canopy

i-Tree Eco  
(Random Sample)

i-Tree Eco (Ealing  
Inventory)

- Accounts for all trees; public and private

- Ward level ecosystem service data

- Public / Private split

- Accounts for what is actively managed by the Ealing

**So what?**



## Most Common Trees: Oak, Ash and Elm

The council owns just **35%** of borough land, this land supports **45%** of the tree cover

Number of Trees  
**234,000**

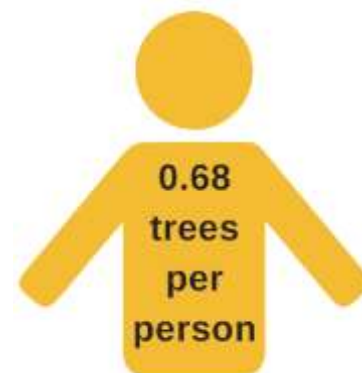
**16.9%**  
Tree Cover

**270**  
Tree Species

**42**  
Trees per hectare



of carbon stored in  
Ealing's trees - worth  
£18.5 million



of carbon removed from  
the atmosphere every  
year - worth £527,000



46 tonnes  
of air pollution removed  
per year. Worth more  
than **£1.5m** of social  
damage costs



the filtration of Sulphur Dioxide alone is equivalent  
to the emissions of 15,000 cars every year.

Analysis of the Councils ezytreev database highlights the ecosystem services that are provided by Council owned trees:

Ealing Inventory - Headline Figures		
Total Number of Trees Measured	43,963	
Tree Canopy Cover	147.71 hectares (2.6%)	
Most Common Species	Prunus, Tilia x europaea, Fraxinus excelsior	
Replacement Cost	£65,215,000.00	
Species Recorded	277	
Amounts and Values		
Pollution Removal (trees)	6 tons	£186,200.00
Carbon Storage (for trees in year of study (2009))	16,600 tons	£1,060,000.00
Carbon Sequestration (trees)	446 tons	£28,500.00
Avoided Runoff (trees)	12,992m <sup>3</sup>	£19,700.00
Total Annual Benefits	£234,400.00	

# Using the Data to Inform the Management of the Urban Forest

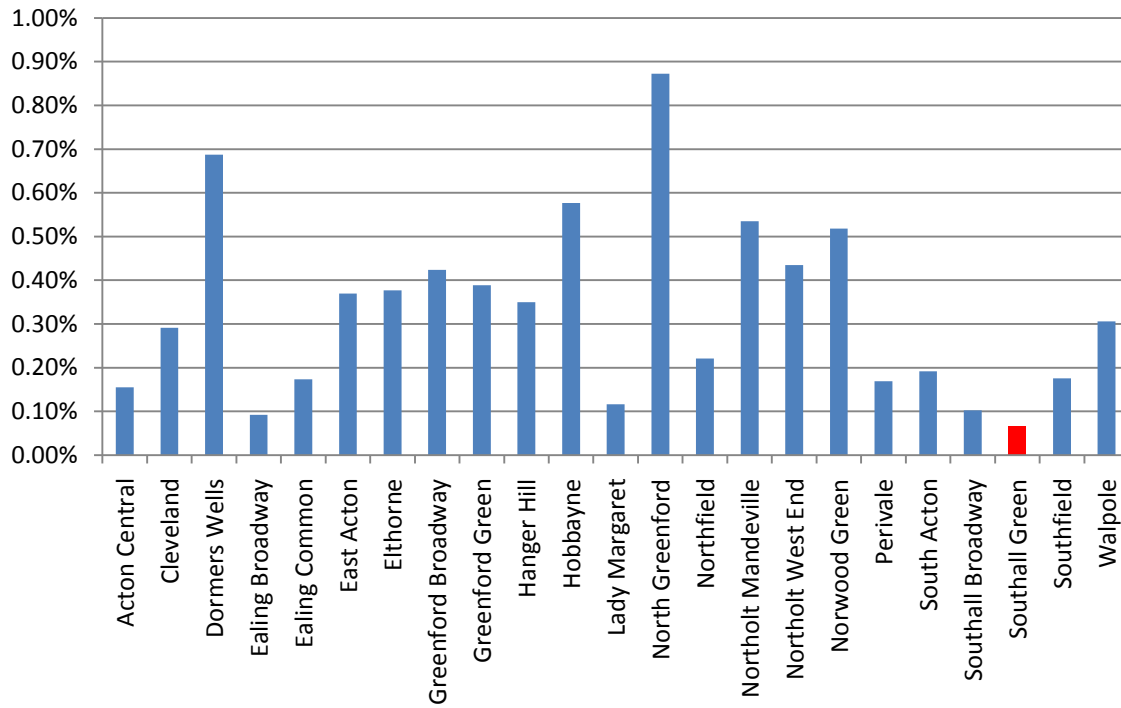
Ealing Tree Service aims that can be addressed using the project data:

1. Increase tree cover borough wide
2. Increase Pest and Disease Resilience through species and age diversity of population
3. Map potential plantable spaces
4. Increase public engagement and understanding of the urban forest and tree benefits
5. Identify and improve air pollution hot spots

# Aim 1: Using iTree Canopy Survey to Inform Future Planting and Increase Tree Cover

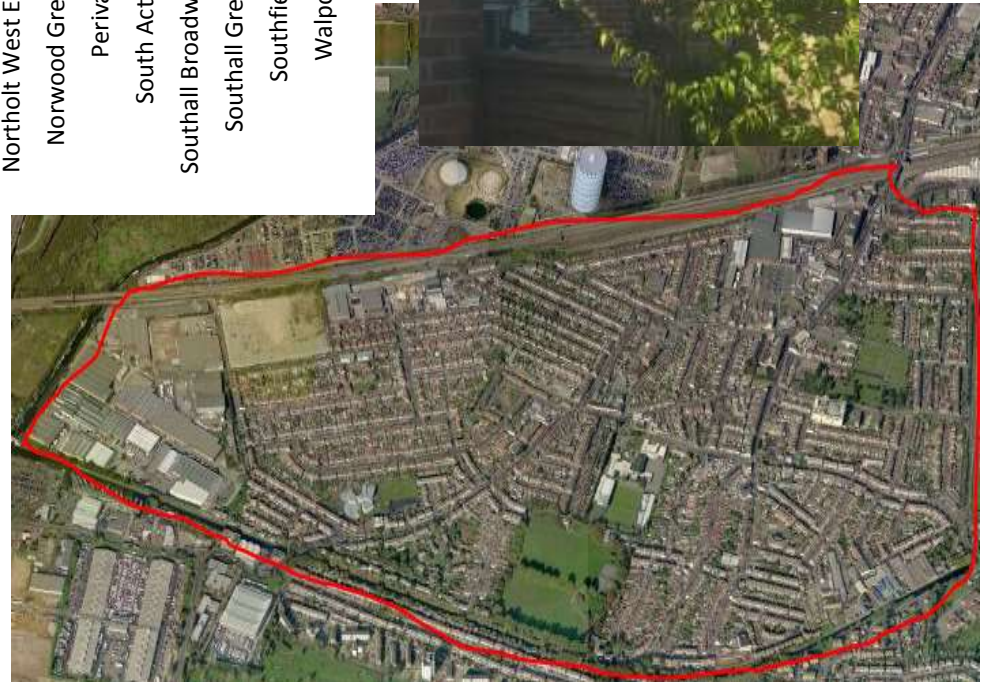
Ward	Area (ha)	i-Tree Canopy Data					
		Canopy Cover				Ealing Borough Average	Urban Target
		Canopy cover (%)	Canopy cover (ha)	Weighted ward area	Weighted canopy cover (%)		
Southall Green	158.54	6.4	10.15	2.9%	0.2	17.2	20
Lady Margaret	153.89	8.38	12.90	2.8%	0.2	17.2	20
Southall Broadway	162.23	10.3	16.71	2.9%	0.3	17.2	20
Southfield	143.29	14.4	20.63	2.6%	0.4	17.2	20
Northfield	153.45	15	23.02	2.8%	0.4	17.2	20
Ealing Broadway	185.67	12.5	23.21	3.3%	0.4	17.2	20
South Acton	171.9	16	27.50	3.1%	0.5	17.2	20
Walpole	146.6	20	29.32	2.6%	0.5	17.2	20
Acton Central	177.53	18.2	32.31	3.2%	0.6	17.2	20
Ealing Common	213.99	16.3	34.88	3.9%	0.6	17.2	20
Cleveland	223.17	18.5	41.29	4.0%	0.7	17.2	20
Elthorne	200.02	21.2	42.40	3.6%	0.8	17.2	20
Greenford Broadway	252.16	17.6	44.38	4.5%	0.8	17.2	20
Greenford Green	338.15	14	47.34	6.1%	0.9	17.2	20
Dormers Wells	225.85	22.4	50.59	4.1%	0.9	17.2	20
Hobbayne	220.78	23	50.78	4.0%	0.9	17.2	20
Perivale	336.56	15.6	52.50	6.1%	0.9	17.2	20
East Acton	427.18	13.2	56.39	7.7%	1.0	17.2	20
Northolt West End	354.8	16.2	57.48	6.4%	1.0	17.2	20
Norwood Green	379.4	15.8	59.95	6.8%	1.1	17.2	20
Northolt Mandeville	275.16	21.8	59.98	5.0%	1.1	17.2	20
Hanger Hill	327.39	22.8	74.64	5.9%	1.3	17.2	20
North Greenford	324.79	25.9	84.12	5.8%	1.5	17.2	20
Totals	5552.5	16.76	41.41187183	4.3%	17.15394961		

## % Public Tree Cover



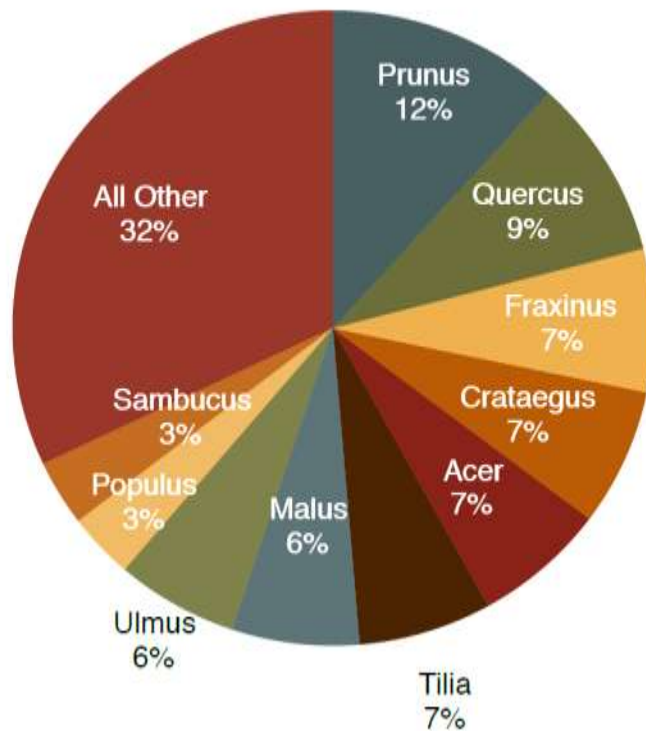
## Southall Green

- 20% public land
- 35% public tree cover

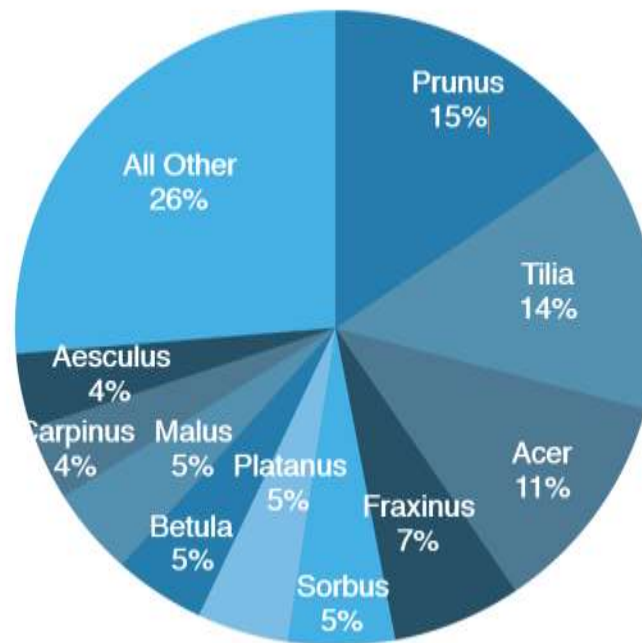


# Aim 2: Using data to Increase Species Diversity and Disease Resilience

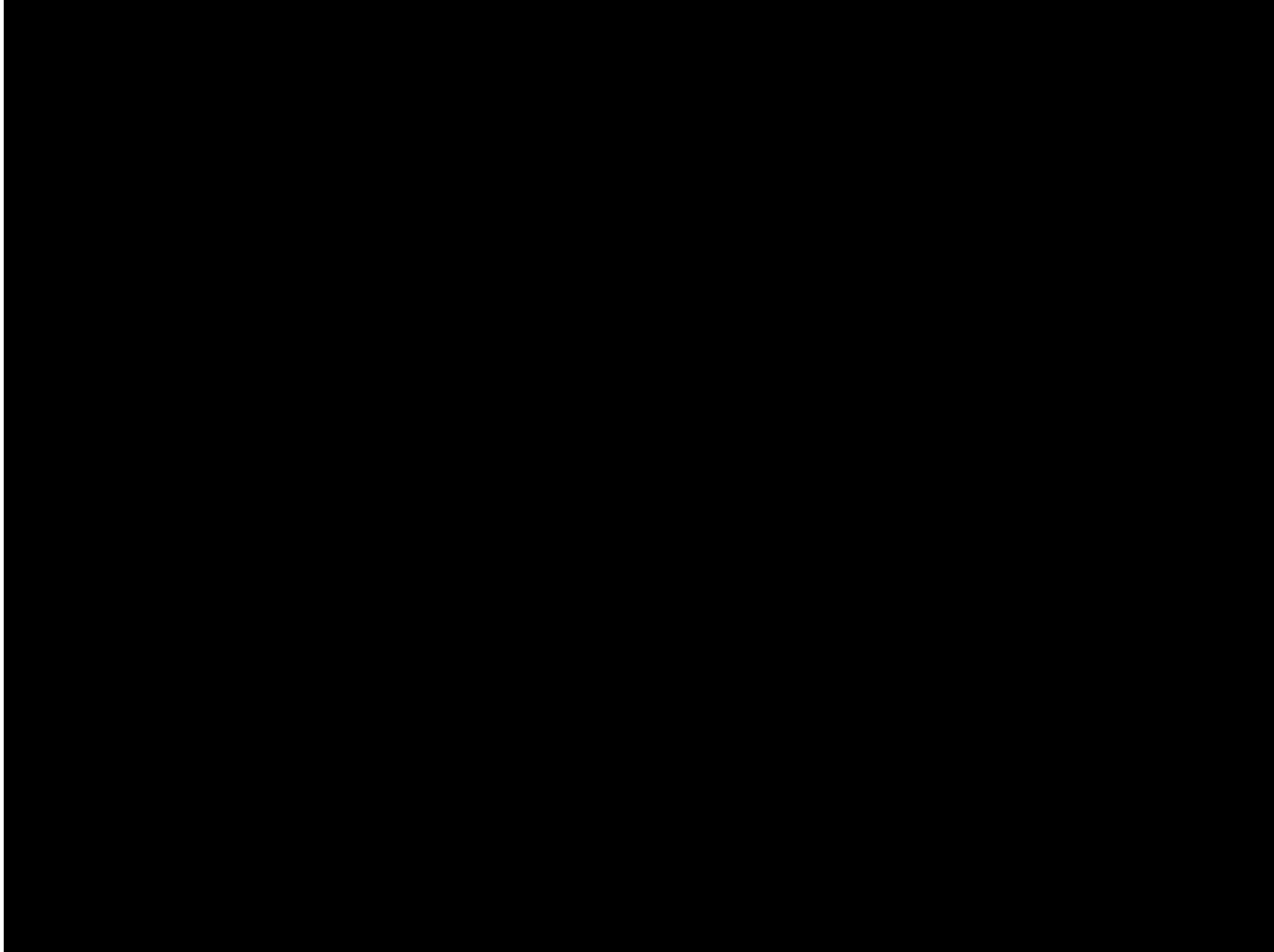
Most Common Tree Genera  
(Ealing Borough)



Most Common Tree Genera  
(Public Tree Inventory)



# **Aim 4: Using Canopy and iTree Eco Survey to Inform the Public and Promote Tree Planting Borough Wide**



# Get in touch

Treeconomics:

Kenton Rogers - [kenton@treeconomics.co.uk](mailto:kenton@treeconomics.co.uk)

<http://www.treeconomics.co.uk>

Trees for Cities:

Ellen Osborne – [ellen@treesforcities.org](mailto:ellen@treesforcities.org)

<http://treesforcities.org/>

This project is funded by:



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