Two aims

1

Prove it can be done

Value all the land in England and Wales using public data and data-driven techniques

2

Make it visible

A website where anyone can see what a land value tax would mean for them

What is the land under your home worth?











THE PROPERTY PRICE

£298,000

?	?
The building	The land

The building model: a building's value, anywhere

Train

on homes where land is worth almost nothing, so the price is almost all building

Learn

a building value from its type and size, using public data

Apply

everywhere: a like-for-like building has the same value in Burnley and in Camden

The land model: the price, minus the building

Sale price

what was actually paid

−

Building value

from the building model

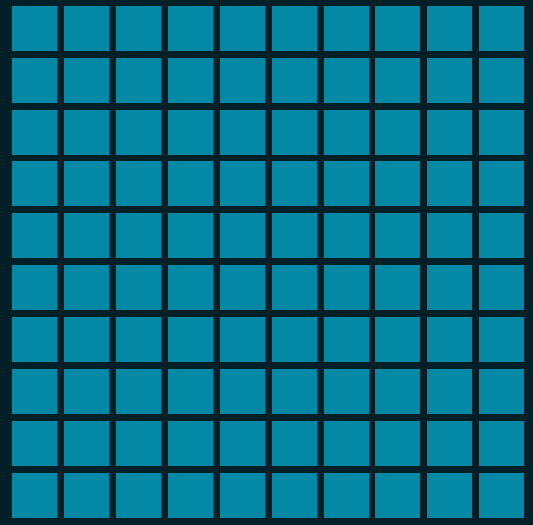
=

Land value

the residual

Land values from every sale, plus their location, train a model that estimates land value across the whole country

Challenge 1: land value depends on plot size



100 plots of 1 m²

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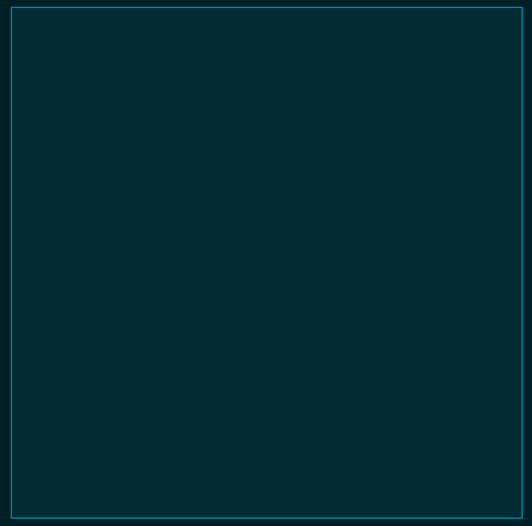


1 plot of 100 m²

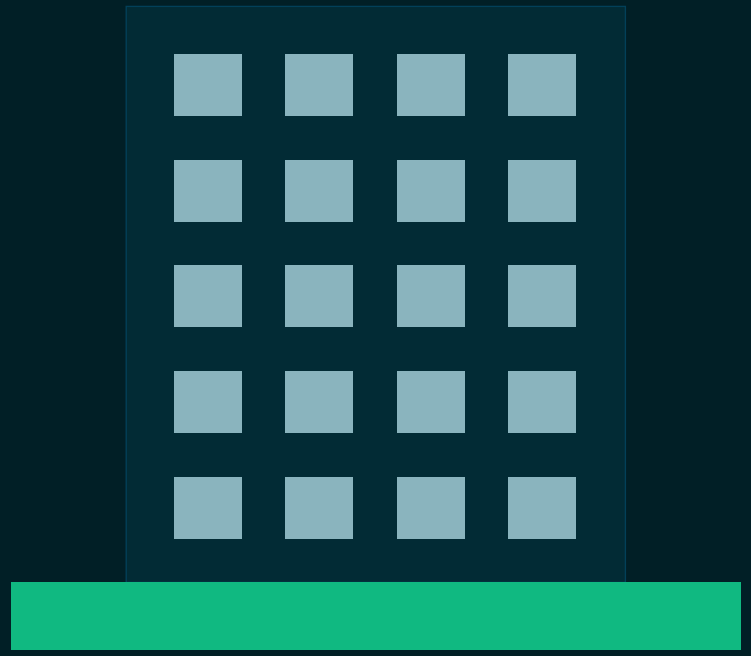
Solution

Every location gets a land value for a standard 150 m² plot

plus a gradient for how that value scales with plot size

applied to the real area of each registered plot

Challenge 2: whose land is it under a block of flats?



One plot. How many flats?

Public data doesn't record how many flats share a building, so a flat's sale price can't be split into building and land

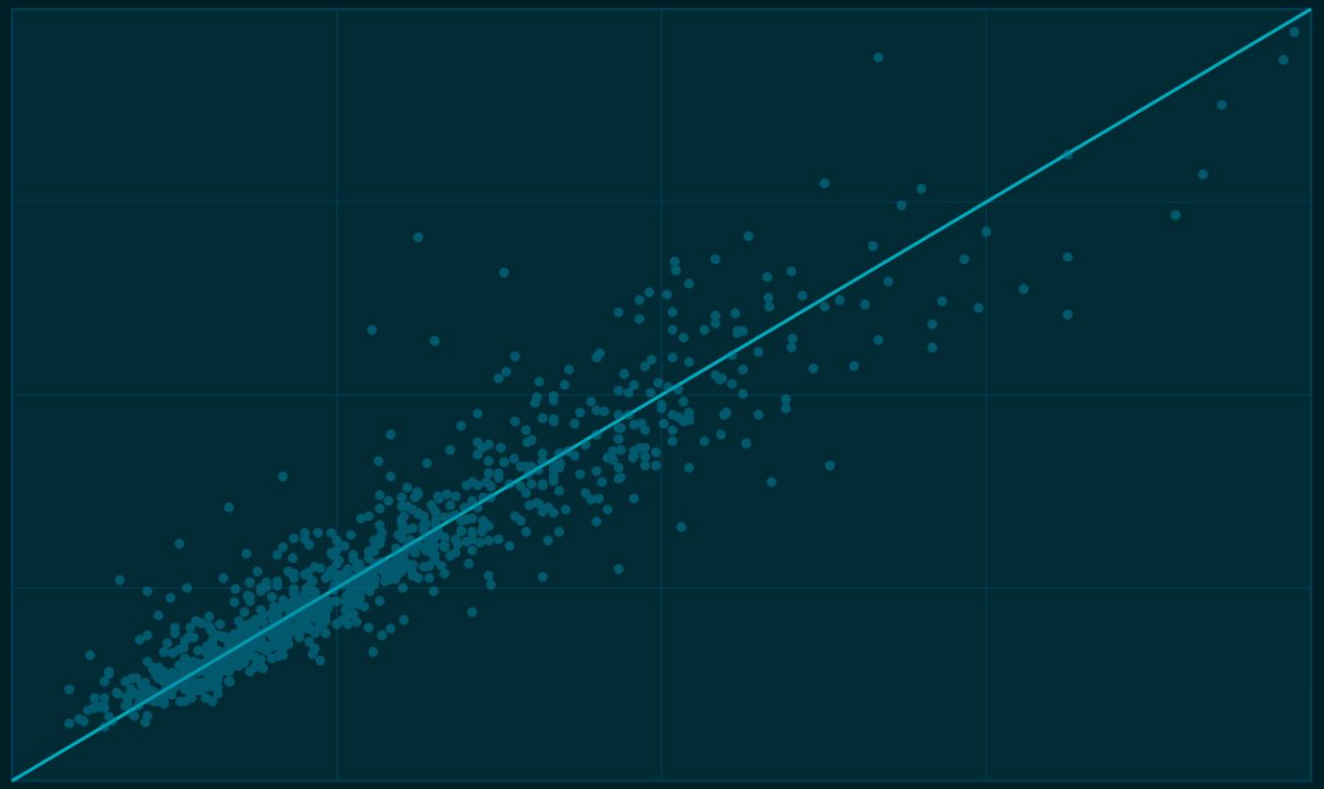
Solution

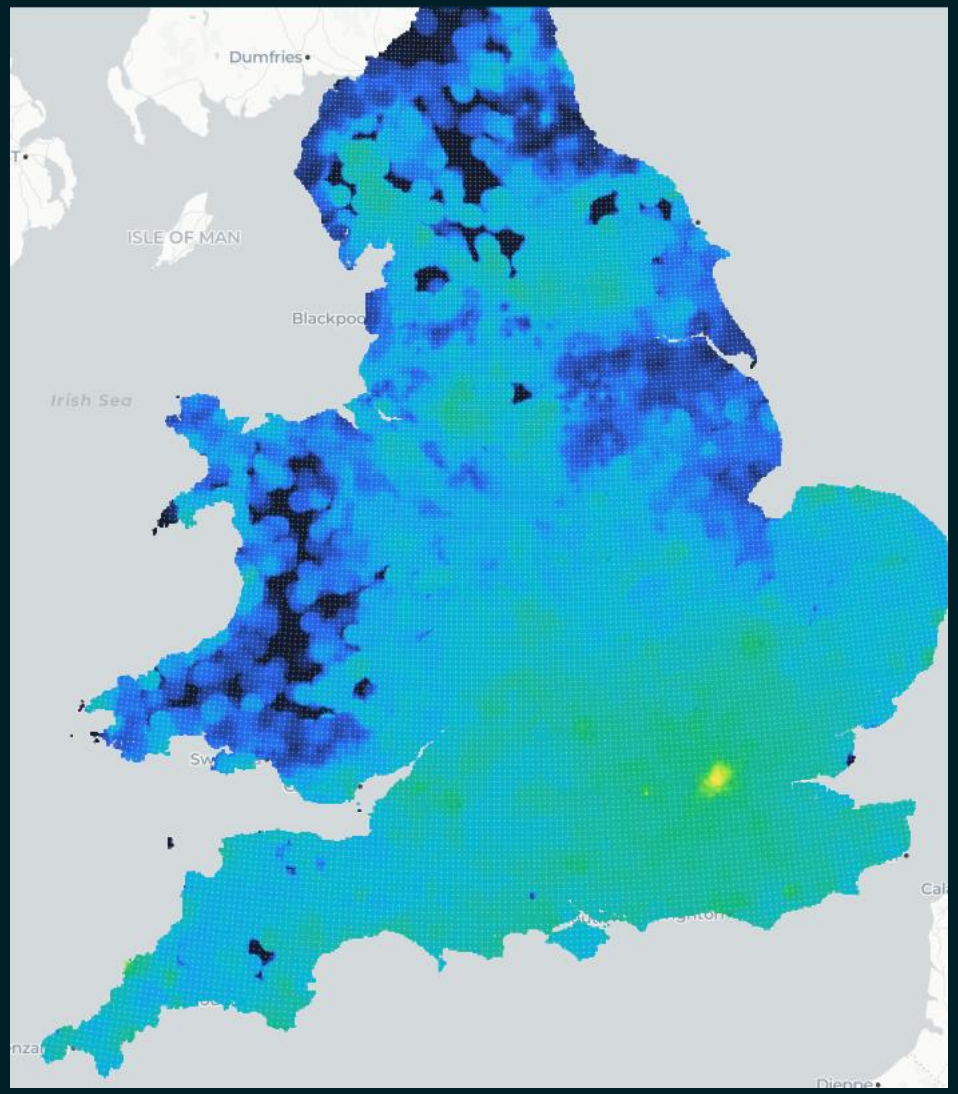
Build the model on freehold houses only

One home, one plot, one sale price

Ability to predict real transaction values?

r^2 : 70.5%
MdAPE : 10.12%



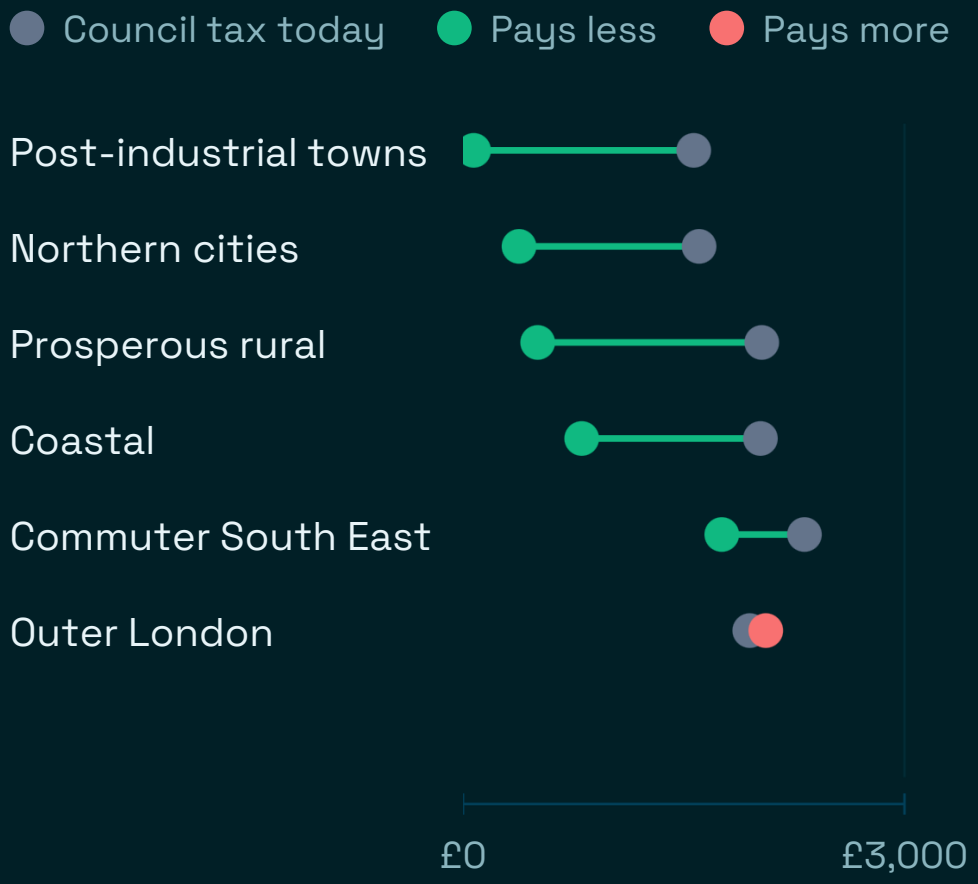


A land value for every hectare of England and Wales.

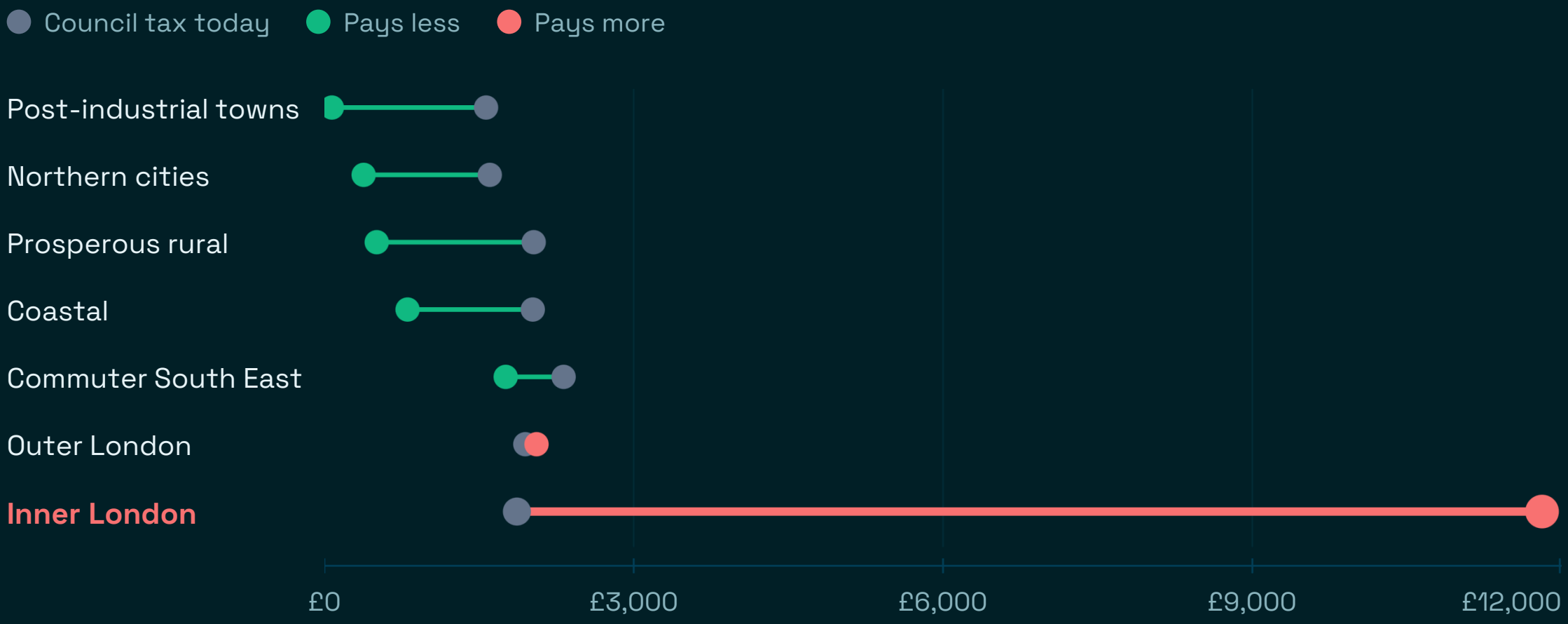
15 million squares. Every registered freehold parcel with a boundary.

Who wins and who loses from replacing council tax with a land value tax?

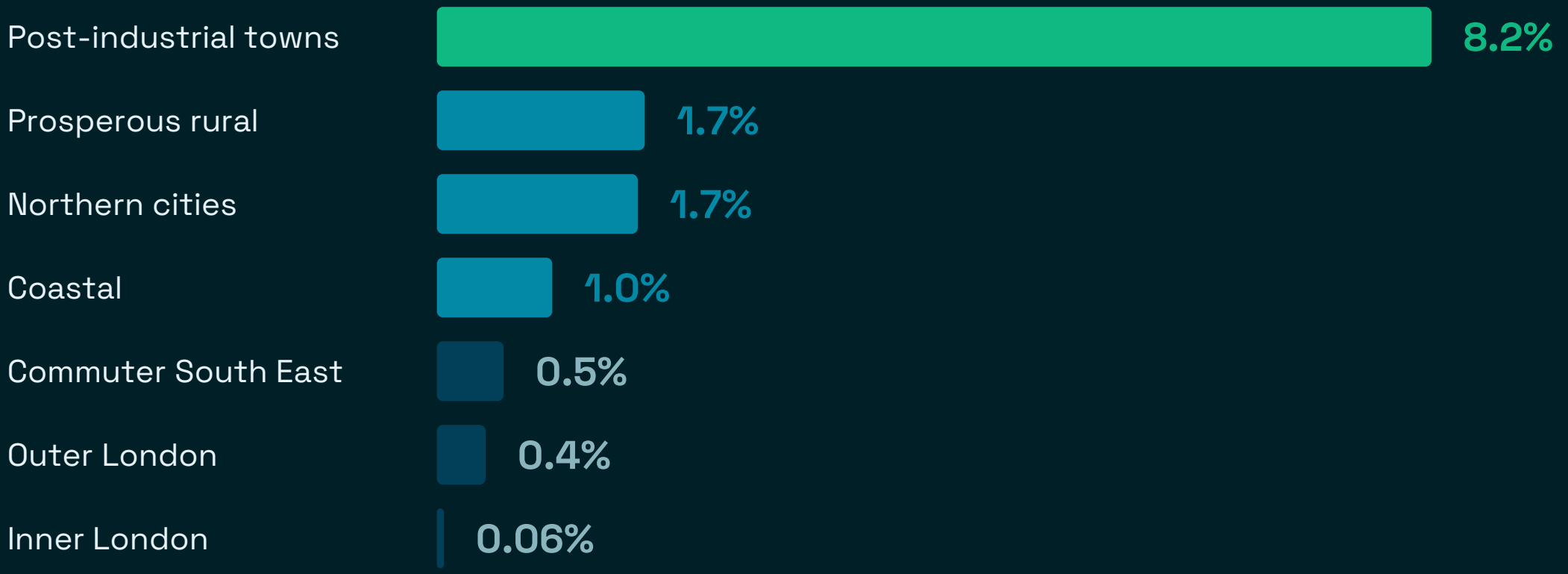
Nearly everywhere pays less



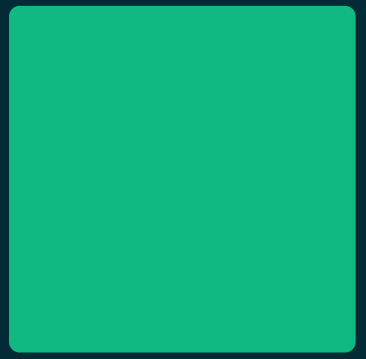
£1,870 becomes £11,814



Council tax paid, against the value of the land it sits on



It isn’t a garden tax



Cotswold

290 m² of land

£940



Westminster

96 m² of land

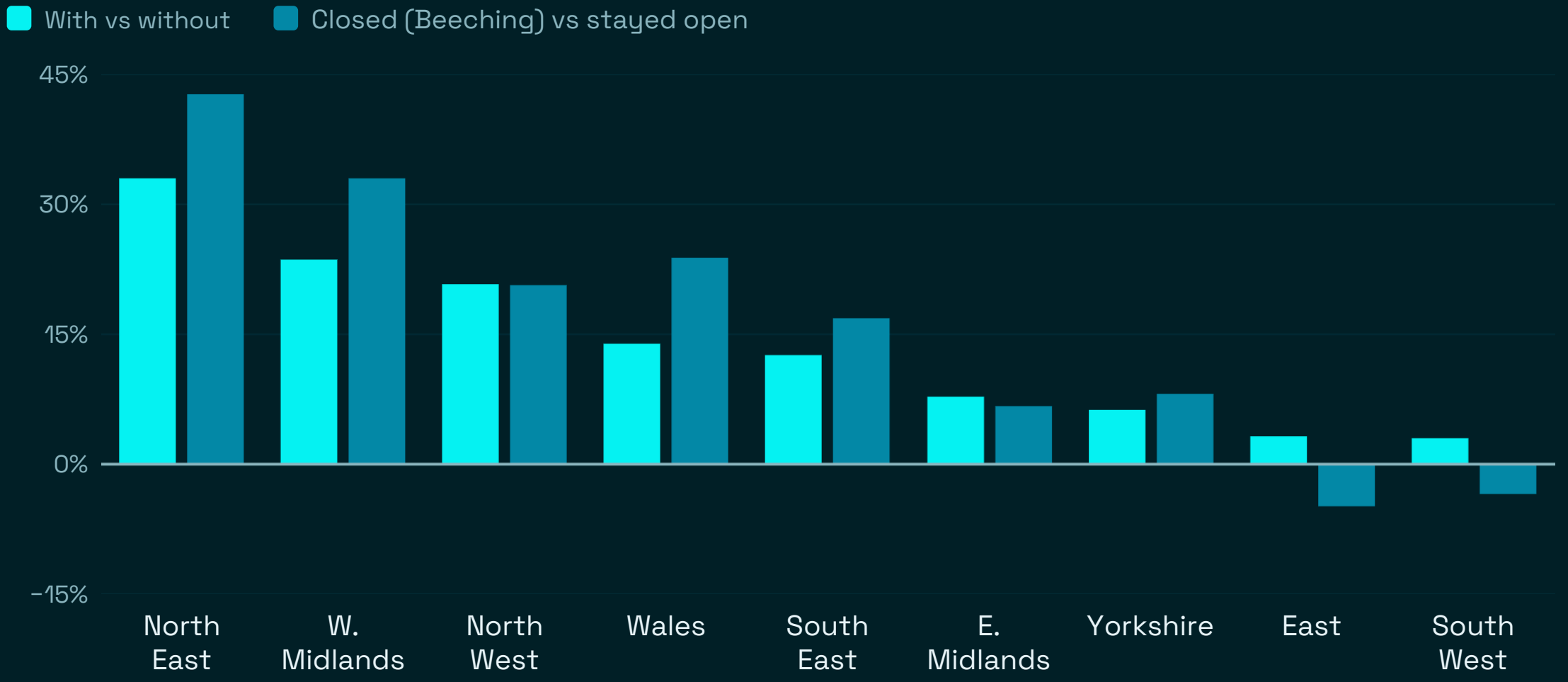
£13,160

Three times the garden. A fourteenth of the bill.

95% of prosperous rural homes pay less — a median saving of £1,531 a year

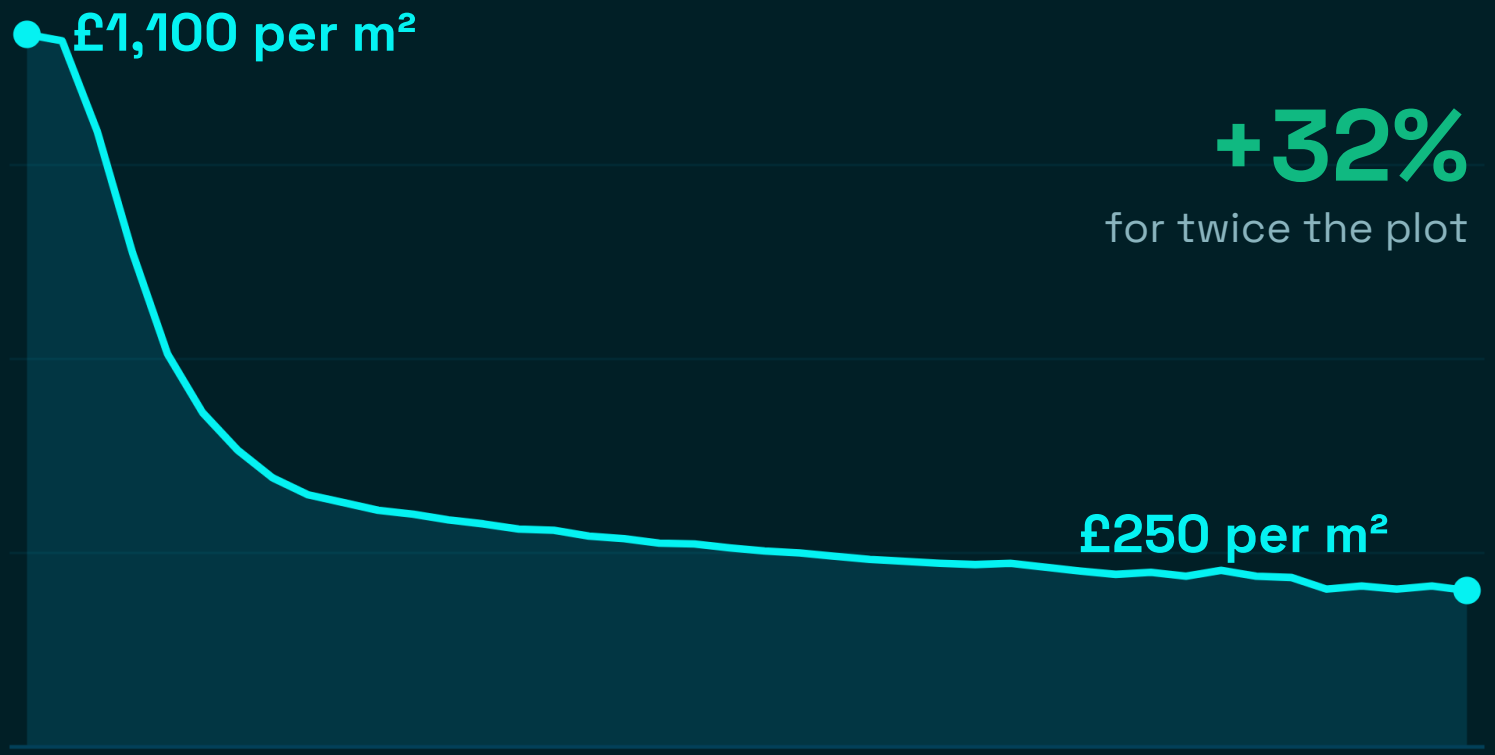
Does having a train station in a town increase land values?

Land value premium (after controlling for other factors)



Is a garden twice the size worth twice as much?

No. Doubling the plot typically adds about a third.



What's next?

Social infrastructure

What is a library, school or park worth to the land around it?

Industrial development

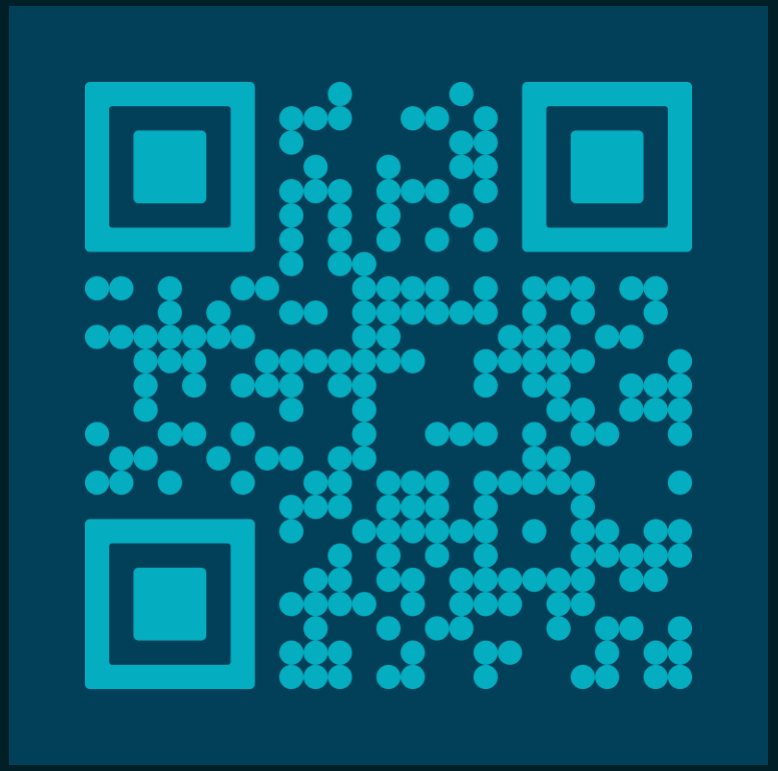
What do a new factory or new pylons do to nearby land values?

Political reform

Research to inform the reform of property taxes

Commercial research

Land value analysis for developers, policymakers, and investors



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