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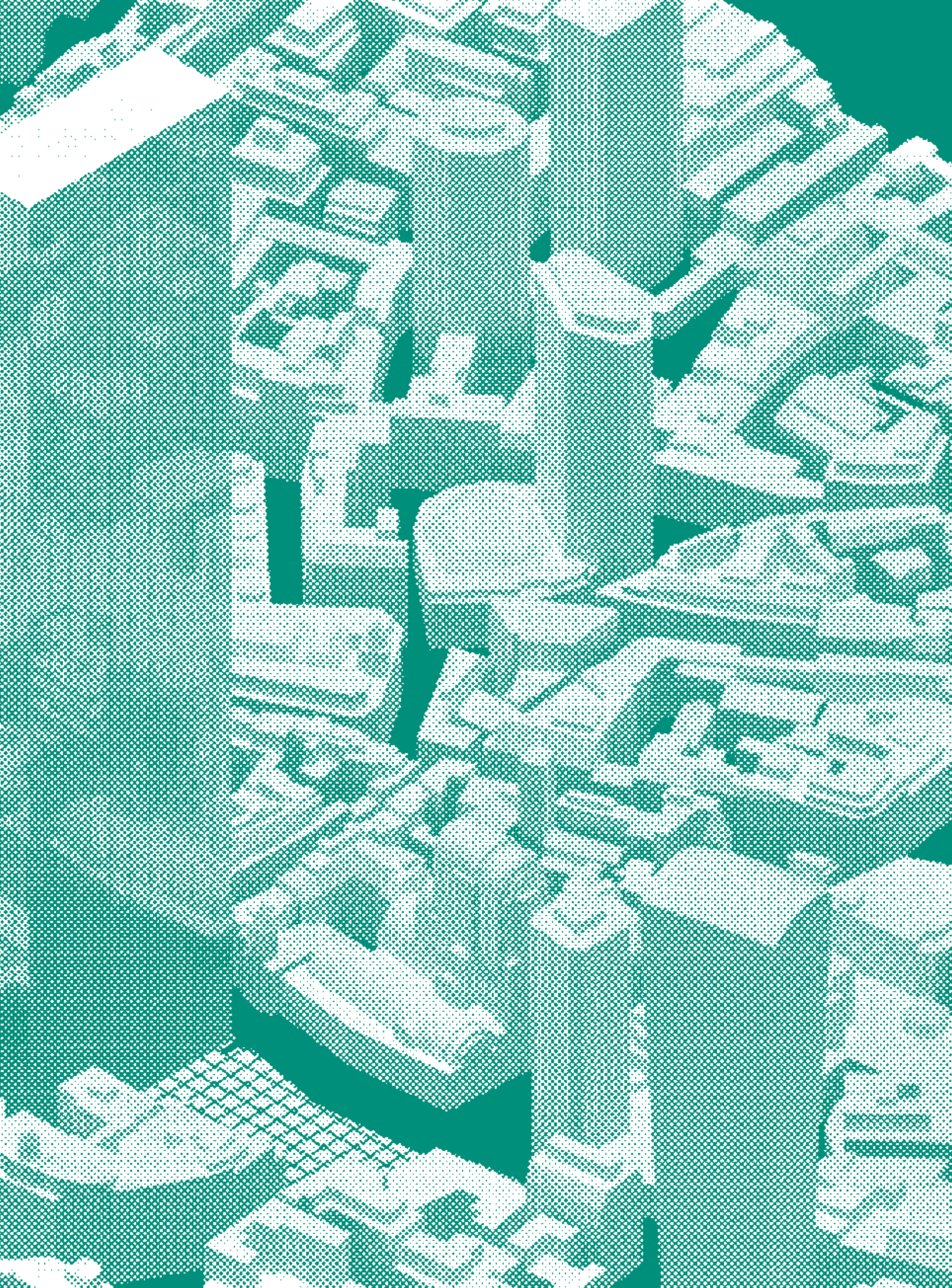
The Ingot

A housing solution worth its weight in gold

By Jack Self



“Even hardcore neoliberals recognise that macroeconomic growth depends on low-paid workers living close to their places of work, and maximising their disposable income for increased consumption.”

The Ingot
A housing solution worth its weight in gold

By Jack Self

Architect and writer Jack Self sees the potential of the architect to impact meaningful social change in a reconfiguration of the relations between finance and social function – and a gold-plated tower in the centre of London.

When volumes of mortgages are traded on the markets, the entity being bought and sold is not strictly speaking property. Rather it is a financial abstraction with no intrinsic worth, whose value is derived from estimating the asset value of the underlying real estate. This is possible because market agents "trust" that the institutions issuing the loans have carried out due diligence in minimising the risk of default. Of course it's not faith alone that permits this; there are diverse regulatory requirements and other means of independently calculating the integrity of the mortgages.

The power of abstracting property loans into revenue streams is namely this: the separation of creditor (investor) and debtor (homeowner) by some managing institution liberates the anonymised occupant from

Jack Self

Jack Self is an architect and writer based in London. He is Director of the REAL foundation and Editor-in-Chief of the *Real Review*. In 2016, Self co-curated the British Pavilion at the Venice Architecture Biennale.

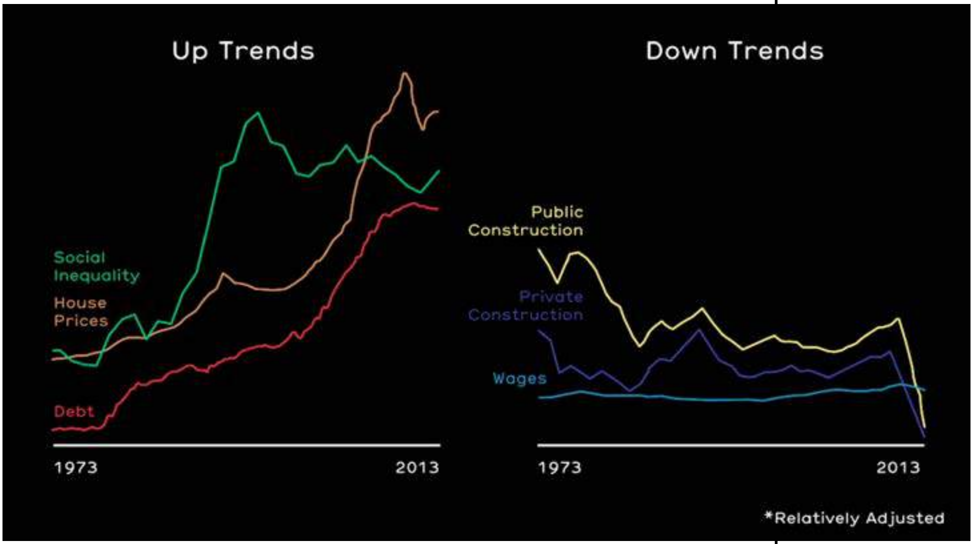
Previous and this page: still from *Real Estates*, a 5-minute animation made in 2013 of the Ingot project: a gold-plated tower of social housing in the City of London. © Jack Self certain ethical assessments. The investor has no interest, or say in the aesthetic qualities of the home, its manner of occupancy or the lifestyle of its inhabitants. Their only concern is fiscal: that a given sum be paid throughout a given period. The moral dimension of debt is instead the concern of the financial institution, which like a capitalist Ammut – the Ancient Egyptian demoness of judgement – is charged with weighing the debtor's heart against a feather. The source of agency in the perpetuation of neoliberal power relations is almost exclusively the financial institution. This is what makes the architect so impotent a figure of social change; they do not even negotiate the terms of debt directly with the source of the capital, but through tiers of bankers, developers and other corporate bureaucrats.

"Regaining leverage at this level demands a bypassing of the entire development profession."

In order for architects to exercise the kind of agency required to intervene in this process, they must directly mediate between *end-user* (occupant / client) and *investor* (free market equity) – they must leverage the power of property in such a way as to become both the monetary fixer of debt and its moral evaluator. This vision does not at all correspond with that of the *architect-as-developer.* Quite the contrary, regaining leverage at this level demands a bypassing of the entire development profession – eliminating its greed and monopoly and operating in parallel. This is the image of the *architect-as-financier.* The Ingot, a project for a tower in the City of London, might be considered a first attempt at this prospective "derivative architecture", characterised by a total separation between financial form and social function.

The specific goal of the Ingot project was to find a way to make high quality, generously-sized apartments affordable for living-wage workers in or close to the City of London.

Regardless of where on the political spectrum one sits, this is a desirable ambition – even hardcore neoliberals recognise that macroeconomic growth depends on low-paid workers living close to their places of work and maximising their disposable income for increased consumption. A site was selected adjacent to London Bridge, directly on top of the ruins of the ancient Roman forum.



Still from *Real Estates,* 2013.
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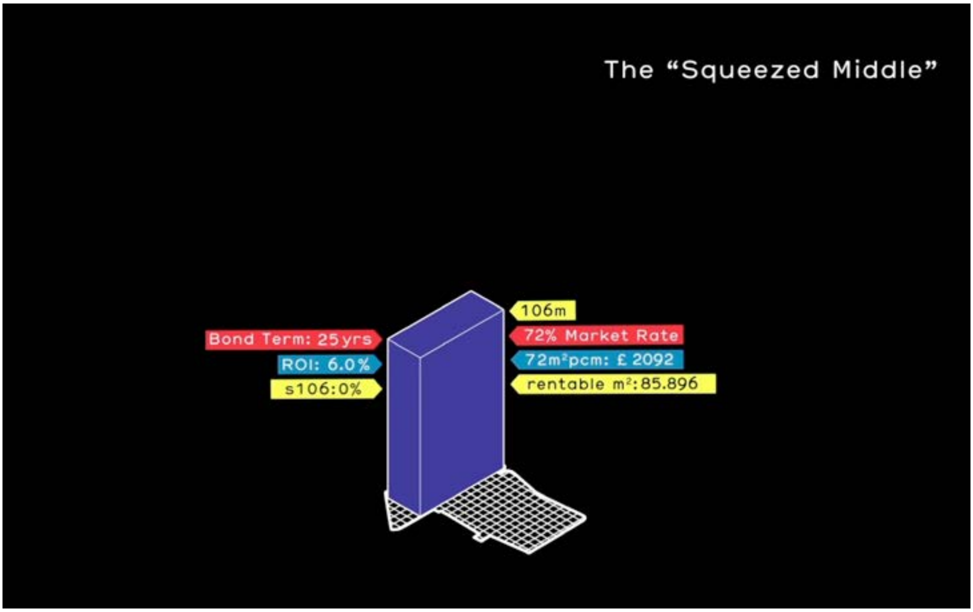
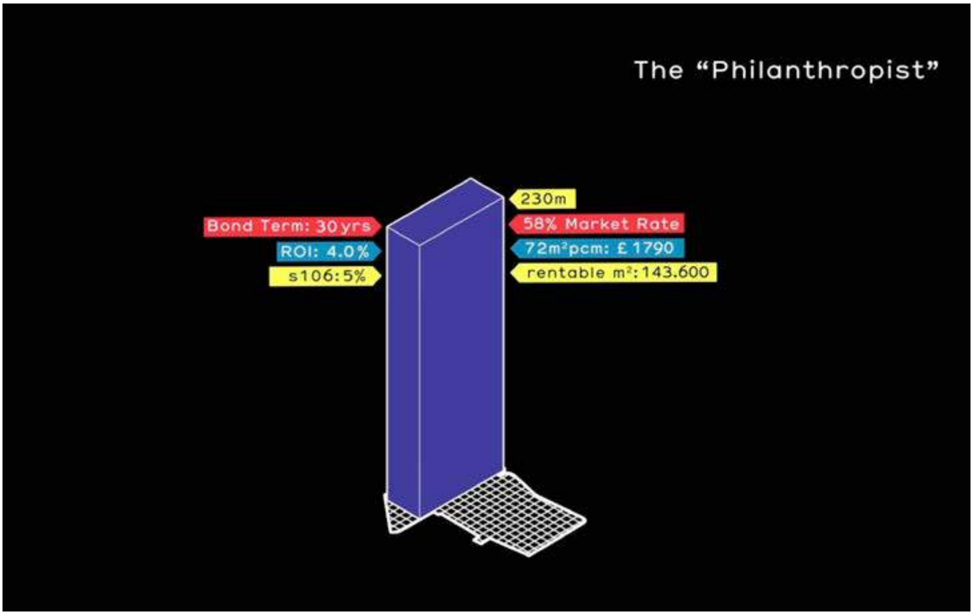
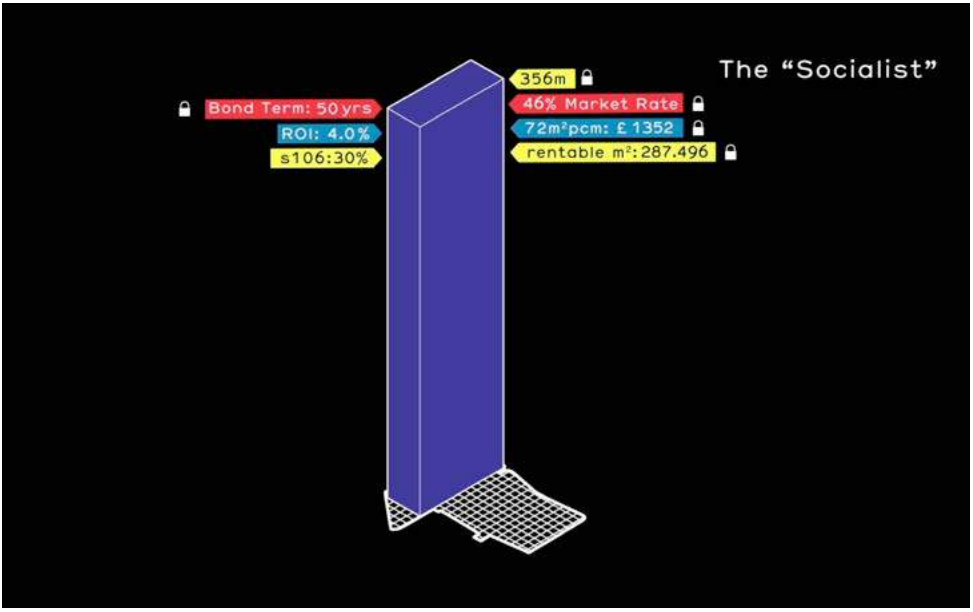
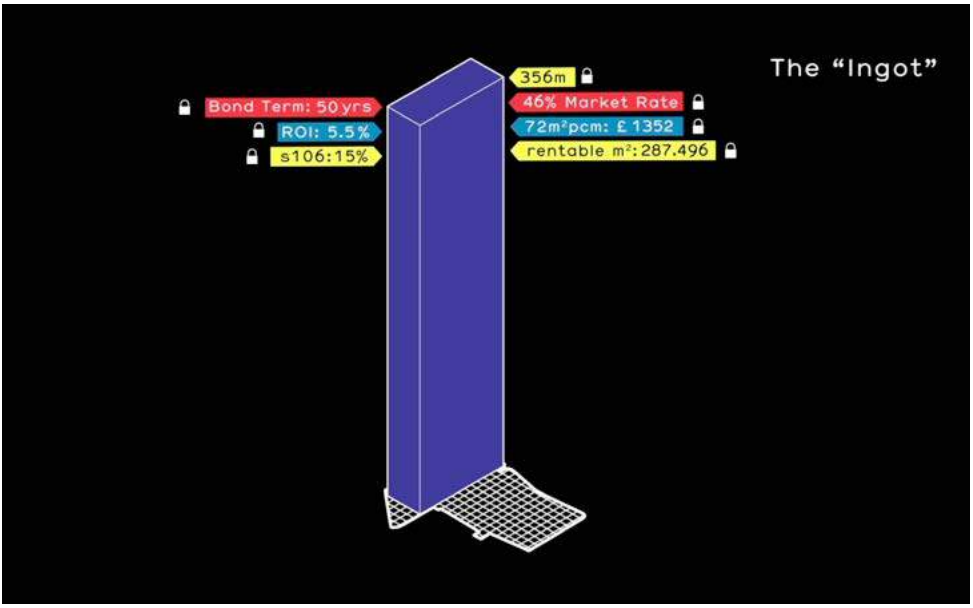
Subversion of a system first requires mastering an understanding of how it works. For this reason the starting point had to be an imitation of how a standard developer would approach the project: by conducting a *surplus land value assessment* to determine the potential profit on a building at market rate. This process is not so dissimilar to calculating the surplus equity in a normal home – add up all the costs (price of the land, demolition and construction) then subtract this from the maximum value of a potential structure. Unless developers can extract 20 per cent profit, they rarely bother and sites go undeveloped.

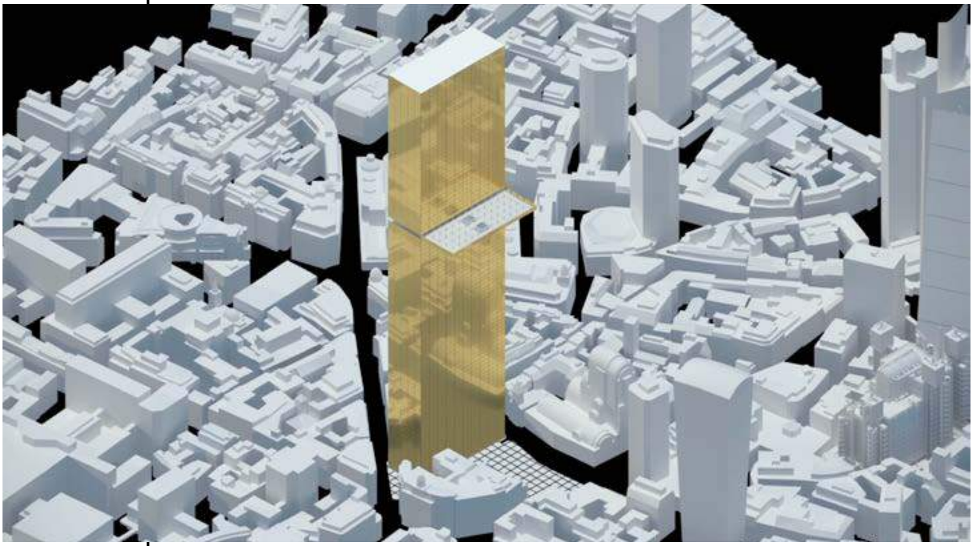

The "Squeezed Middle"
Bond Term: 25yrs
ROI: 6.0%
s106:0%
106m
72% Market Rate
72m²pcm: £ 2092
rentable m²:85.896


The "Philanthropist"
Bond Term: 30yrs
ROI: 4.0%
s106:5%
230m
58% Market Rate
72m²pcm: £ 1790
rentable m²:143.600


The “Socialist”
356m
Bond Term: 50yrs
46% Market Rate
ROI: 4.0%
72m²pcm: £1352
s106:30%
rentable m²: 287.496

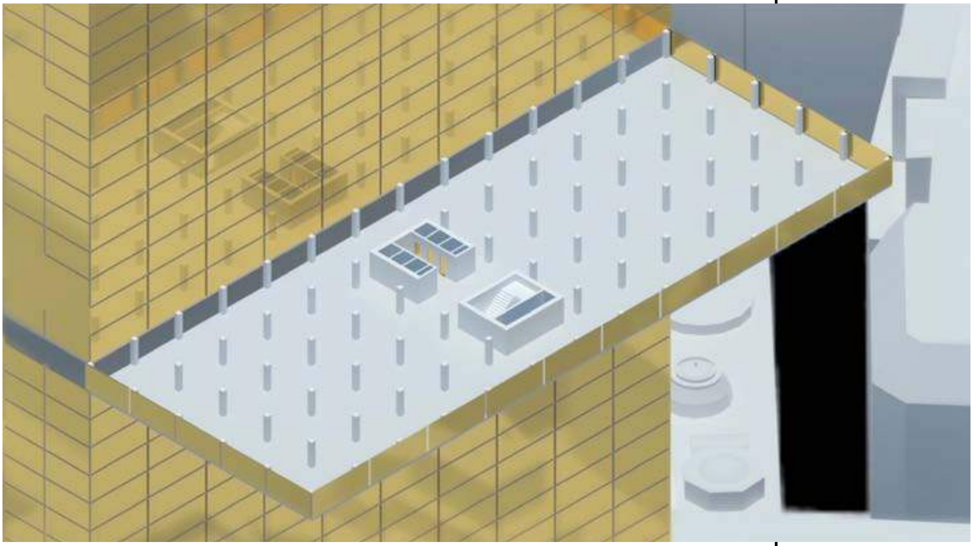

The “Ingot”
356m
Bond Term: 50yrs
46% Market Rate
ROI: 5.5%
72m²pcm: £1352
s106:15%
rentable m²: 287.496

Property development is a constant negotiation between three critical factors: time, space and money – to get closer to the required profit figure developers are always working towards the highest feasible density at the lowest possible cost in the shortest turnaround. The result of the land assessment showed that a 20 per cent profit margin was achievable, making the land viable for standard redevelopment. There was a major problem with this however: no fiddling of the factors could reduce the purchase price very much below market rates – the developer's profit precluded it – making it too expensive for workers on the living wage (who lack equity to buy in any case).



Previous, this page and opposite: Stills from *Real Estates*, 2013. © Jack Self

In order to make an impact on end price, a parametric algorithm was developed to manipulate these factors individually. One important financial precedent for the algorithm was how universities raise equity for constructing new buildings (specifically at UC Berkeley and Queens' College, Cambridge). These institutions issue long-term bonds – often 50 years or longer – to fund new student rooms or science blocks, while the interest on the bond is secured against future tuition. The university ends up paying quite a lot for the investment capital, but does so over such a long period that the repayments are manageable. Schemes like this are highly attractive to entities looking for stable and predictable returns, and investors often include insurers, banks and sovereign or pension funds. If we replace tuition with rent and student rooms with housing, the basic model holds and the developer as a source of finance becomes unnecessary.



Of course, in theory almost any company can issue a long-term bond – in practice, the rate of interest on such a bond is relative to the trust the markets have in that company. A well-respected international university has leverage where an architect certainly does not. To address this trust issue, the building itself becomes the security underwriting the bond, which can be sold at market rate if at some point the mechanism fails. The market wager then becomes whether the architect is capable of delivering the building on time and to budget.

Previous page: still from *Real Estates*, 2013 © Jack Self

"In a worse case scenario, the Ingot itself is a fungible commodity, a hedged bet against crisis, functioning outside the property market."

Security also lies in the fact that if this architect-bank were providing apartments at 46 per cent of the market rate (which is what would be necessary to make it affordable for the living-wage worker) there would have to be a 54 per cent drop in London property prices before it would become unfeasible. The worst housing slump in British history (1914–22) was caused by a combination of the First World War and the introduction of industrial manufacturing techniques in construction (oversupply in the markets), which saw prices fall by around 35 per cent. Given the current climate of unprecedented shortage, probably only a cataclysmic environmental disaster could produce such an effect. To insure against this event, we can also add security into the material of the building itself.

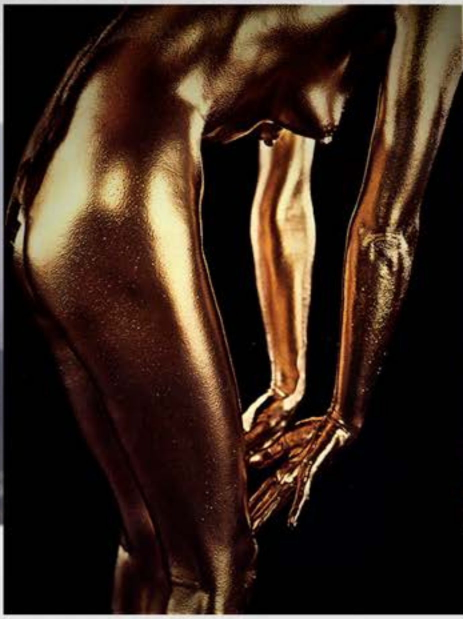
There is a direct correlation between economic instability and global gold prices, because of its perceived international fungibility – the acceptance that the equivalent value of a given amount of gold can be mutually substituted with that of other materials. The Ingot's facade would be electroplated with some 170kg of gold. In a worse case scenario, the Ingot itself therefore becomes a fungible commodity, a hedged bet against crisis, functioning outside the property market.

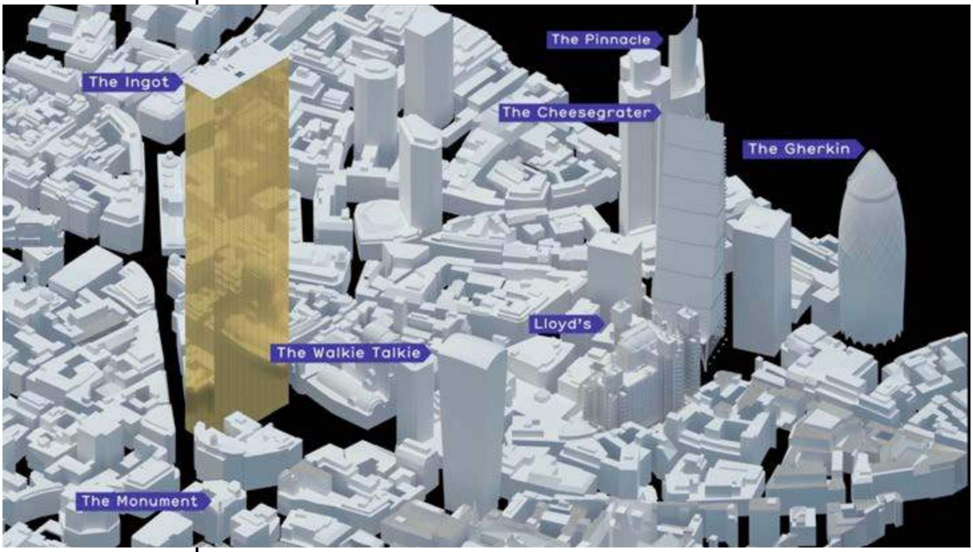
In order for the Ingot to be funded by a 50-year bond, a number of parameters have to be true. The building certainly cannot be sold within the period of the bond, which means inhabitants must accept the idea of never owning the property, but nonetheless retaining usufructuary rights – having rights to enjoy and profit from the property but not to damage or destroy it. To amortise – or pay off – the debt at the bond's maturity, the annual payment (interest plus two per cent of the principal) must be equal to or less than the income gained from rental. In other words, there is a fixed ratio between construction cost and rental revenue that will determine what the annual surplus from a living-wage apartment would be, in turn dictating the massing of the building and its total rentable space. Since the debt is issued and held by a company also responsible for the construction, maintenance, letting and management of the building, the company itself is the location of the moral dimension of the debt obligation (thereby liberating the renter). Needless to say, there are several more complex interrelations in this calculation.

Resolving these parameters required working backwards – starting at the face value of the bond and thereby determining the rate of return. This figure was estimated at 4.5 per cent per annum, which included 2.5 per cent in interest and two per cent in principal repayment. For comparison, over the last century the mean capital gain on a property was just 2.4 per cent per annum. The interest dictated how much surplus an apartment had to generate in rent each year, which fed backwards into how big it could be or how much it could cost per square metre.

This in a nutshell is how the optimised form and volume of the Ingot was arrived at and how it redeploys commonplace financial mechanisms to achieve its specific goal. It has been described as form following finance, although it might be more accurate to say that it is function following finance, where the form is not intrinsically relevant.

This is just one scenario of one particular model, motivated by what I see as a general poverty of aspiration in architecture today – a reluctance to position the





Previous page: Ingot: Life Without Debt. Protect me from what I want (gallery space) 2013. © Jack Self

This page: still from *Real Estates*, 2013. © Jack Self

architect as a figure capable of meaningful social change – as well as a lack of pragmatism: inasmuch as our utopian vision for urban x surpasses our actual political influence and economic power. If architecture is to exist as anything more than the ornamental resolution of façades or the sculptural expression of domesticity, it must clearly articulate a new position with regard to the role of property and ownership in the global economy. ■