

POP-UP HOUSING

A LONDON SOLUTION



ANDREW BOFF
GLA CONSERVATIVES
GREATER LONDON AUTHORITY

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INTRODUCTION

London has an identified need to build around 50,000 new homes a year¹ in order to meet soaring demand and to tackle rising house prices and rents. This report will look at how 'Pop-Up' housing could be successful in meeting some of the urgent housing needs of Londoners in a cost-effective and timely way. This type of housing, which has the potential to rapidly increase the supply of quality new homes at an affordable cost, could benefit many different types of housing tenures including private renters and self-builders. It could also help bring into use vacant and under-utilised sites across London, either on a temporary or permanent basis.

WHAT IS POP-UP HOUSING AND WHO COULD BENEFIT?

Pop-up housing, also called modular housing, is a method of housebuilding that manufactures new homes in a factory to be assembled on-site. It can be built faster and cheaper than if traditional methods were used, and as the finished structure can be easily dismantled it could be re-used over a number of years in different locations. Since the majority of the construction process is completed within a factory setting, projects can be completed as quickly as a week and at much lower cost than traditional building methods.

Although this type of housing has been around for decades, it has evolved dramatically since the era of the post-war 'prefabricated' homes, especially in recent years. Today's designs are of exceptional quality, highly sustainable and meet or exceed the same rigorous standards as traditional housing. The design is flexible and can be altered complement any housing style – from modern contemporary to classic traditional designs. Energy costs for occupiers are typically very low, potentially saving several hundreds of pounds on energy bills.

According to an independent research report, commissioned by the Royal Institute of Chartered Surveyors (RICS),² into the future of UK housebuilding, traditional building methods must make room for more cost-effective and sustainable designs if the UK's worsening housing crisis is to be alleviated³. Chris Goodier of Loughborough University, one of the RICS report's authors, says "British house-building has long been associated with expensive, time-consuming methods. More innovative, modern off-site and modular designs are not only extremely cost-effective but can be constructed with ease in a short period of time. First-time buyers could find them a highly practical way of getting onto the property ladder."⁴

Modular homes can be constructed within a street of traditionally-constructed homes and be similar enough in appearance such that you would not know the difference and are significantly cheaper to build, therefore providing a viable option for renting or home ownership for people on ordinary salaries, such as the London median of around £30,000

1. <https://www.london.gov.uk/press-releases/mayoral/mayor-publishes-strategic-plan-for-the-capital>

2. <http://www.rics.org/ukhousebuilding>

3. <http://www.selfbuildtimberframe.com/news/216-prefab-homes-could-solve-uk-housing-crisis>

4. <http://www.independent.co.uk/property/house-and-home/why-is-the-property-industry-dragging-its-feet-over-prefabs-2203861.html>

a year⁵. Given the high cost of renting in many parts of London “Pop-Up” homes could be particularly useful as an affordable solution for the private rented sector, rapidly providing much-needed new supply at lower cost. The low construction costs and timings also make it an ideal way to support self-builders in London, a goal outlined in Steve O’Connell’s AM report ‘Gap in the Market’.⁶

CASE STUDIES

CASE STUDY 1 – Y:CUBE, MITCHAM



One example of where modular housing has been successfully delivered in London is the Y:Cube housing scheme⁷ for the homeless in Mitcham, which was designed in collaboration with the YMCA London South West and part-funded by the Mayor. This 36-unit project was manufactured in a Derbyshire factory and then transported onsite. The whole process took five weeks to build, including four days on site, at an average cost of £50,000 per unit.

The current rent for each studio apartment is £148 per week, compared with the local market average of £210. Each unit comes with its own en-suite bedroom and living room with a galley kitchen and, crucially, has its own front door, giving the residents a sense of their own place, often for the first time. The scheme is certified by BOPAS (Buildoffsite Property Assurance Scheme) and guarantees a minimum design life of 60 years.

Y:Cube has been designed so that capital grant is not necessarily required. However, for permanent schemes, development grant can be secured. Schemes can be funded by bank

5. <http://www.standard.co.uk/news/london/revealed-staggering-salary-londoners-must-earn-to-buy-average-flat-in-the-capital-a3111251.html>

6. <http://glaconservatives.co.uk/news/new-disused-site-action-plan-deliver-10k-london-homes-10-years>

7. <http://www.ymca.org.uk/latest-news/ymca-and-rshps-innovative-factory-built-affordable-housing-scheme->

finance, reserves, private and corporate investors, or social investment by a charitable trust foundation. All capital costs can be recovered from the rental stream with a payback period on average between 10 to 15 years.

CASE STUDY 2 – LADYWELL CENTRE, LEWISHAM

The 'Ladywell Pop-Up Village'⁸ scheme has been devised in collaboration with internationally-renowned architecture practice Rogers Stirk Harbour + Partners. Temporary housing and community space units will be moving onto the site of a former leisure centre for occupation in March 2016, to form the UK's first 'Pop-up village', providing temporary homes for 24 families registered homeless with the Council, as well as ground-floor space for community and enterprise use. The intention is for the structure to remain on the Ladywell site for no more than four years, after which it will be deconstructed, moved and reconstructed elsewhere in the borough. The cost of the scheme is-£4.3 million.

CASE STUDY 3 – HEIJMANS ONE SCHEME, AMSTERDAM



The Heijmans⁹ ONE project proposes a solution for two problems: the issue of unattractive urban sites and the shortage of affordable homes for graduates, who often earn too much to qualify for social housing but too little to afford rental prices in cities like Amsterdam. The proposed solution is a series of modular wooden homes that can be moved easily from place to place to create homes on empty plots. If a site needs to be cleared for construction at short notice, the house can simply be trucked to a new location. Heijmans worked with architect Tim van der Grinten of MoodBuilders to develop the design for the modular house, which accommodates just one occupant. Each two-storey building

8. <http://www.homesandproperty.co.uk/property-news/lewishams-popup-village-to-cut-bill-for-housing-families-41926.html>

9. <http://www.heijmans.nl/en/heijmans-one/>

features a generous living room, a kitchen, a separate bedroom and a bathroom, as well as an outdoor terrace.

COST AND TIME COMPARISONS – WORKED EXAMPLES

As part of this investigation, worked examples were provided to us by two developers, comparing the costs and timings of construction between modular and traditional methods.

EXAMPLE 1 – VANBRUGH MODULAR HOUSING SYSTEMS



Vanbrugh, Wolverhampton - Show home built in one day

Traditional construction method

26 x 2 bed semi detached properties - £1,760,850.00

6 x 2 bed apartments - £451,500.00

66 weeks to complete (16.5 months)

Vanbrugh Modular Housing System

26 x 2 bed semi detached properties - £1,450,150

6 x 2 bed apartments - £342,925.00

24 weeks to complete (6 months)

Price difference: £419,275.00 - Time difference: 10.5 months

EXAMPLE 2 – KOTO SYSTEM HOUSING

Scheme of 100 two-bed flats

An average two bed flat at 80m² will give us a total of 8000m² which is 86400ft², therefore

TRADITIONAL COST: £16,416,000.00 KOTO SYSTEM: £8,208,000.00

Scheme of 100 two-bed houses

An average two bed house at 120m² will give us a total of 12000m² which is 129600ft² therefore

TRADITIONAL COST: £24,624,000.00 KOTO SYSTEM: £12,312,000.00

POLICY APPROACH – PUBLIC LAND

On the 26 January 2016, the first ever comprehensive register of public land in London, revealing 40,000 sites across the Capital including the capacity to deliver a minimum of 130,000 homes, was published by the London Land Commission.¹⁰

The register, now available on City Hall’s website, details the locations of land owned by the Mayor of London, Government departments, London boroughs, Transport for London and the NHS. There are sites across every London borough, ranging from tiny parcels of land capable of sustaining the construction of a small number of homes to larger sites, which could accommodate hundreds of new homes for Londoners.

The Mayor of London, Boris Johnson MP, said: “There is an urgent need in London for more homes for our ever growing population and for far too long, land owned by public bodies has lain dormant or sold off with no benefit to the Capital. That simply must not be allowed to happen and we must build on the work done at City Hall in releasing land for development.” It will take years before many of these sites are developed - in the meantime, this provides an exciting opportunity in piloting a range of housing schemes whilst developers await long-term planning permission that would suits the needs and budgets of thousands of Londoners.

In addition, Pop-up housing is an ideal solution for building on small sites. The report ‘Gap in the Market’¹¹ demonstrated the potential for building thousands of new homes on small disused spaces on housing estates. London boroughs and housing associations provided data for the report which indicated that there were 3,025 empty garages in many areas of London, and the figure does not take into account other types of empty or redundant spaces such as warehouses and unused car parks. The report identified 4,552 disused spaces and sites, across 13 boroughs, which estimated that 10,000 homes could be built on disused sites within ten years. The regeneration of these disused spaces would have the added benefit of improving the local environment as well as removing hotspots of crime and anti-social behaviour.

10. <https://www.london.gov.uk/press-releases/mayoral/city-hall-produces-first-register-of-public-land>

11. <http://glaconservatives.co.uk/news/new-disused-site-action-plan-deliver-10k-london-homes-10-years>

FINANCE AND BUILDING STANDARDS

There are a variety of options for raising finance for Pop-up Housing using the modular method of construction, such as grants, planning obligations from other developments (Section 106 contributions), or partnering with a housing association or another developer. Local Housing Revenue Accounts reforms mean that Local Authorities now have greater flexibility in raising finance using their own council housing assets and future rent levels, which many types of council are using to build new council homes. Additionally, if some of the new homes are sold on the open market, a scheme could pay for itself or even generate additional revenue for the council.

High standards for the safety and quality of Pop-up homes have been developed through the Buildoffsite Property Assurance Scheme (BOPAS)¹². Properties that pass this rigorous standard have a guaranteed durability of at least 60 years, although in practice many developments are designed to last much longer. Many developers meet additional standards, such as ISO 9001, to ensure consistent and high quality manufacturing. One of the developers we met, Vanbrugh Modular Housing Systems, is also in the advanced stages of seeking LABC (Local Authority Building Control) certification, a more common form of certification for new-build properties¹³. In addition to this, all new properties must of course meet Building Regulations standards to ensure that their construction is safe for occupation.

These standards help to provide the necessary confidence for mortgage lenders and insurers, to ensure that potential buyers and self-builders have sufficient access to finance for new Pop-Up homes.

CONCLUSION

This report demonstrates that there is an imaginative new way of tackling London's housing shortage in order to deliver quality homes at high speed and low cost, which the average householder could afford and where land is available. It also shows the viability of Pop Up housing as an option in bringing vacant, disused or surplus sites into use in the medium term, and how thousands of new homes could be built using modular construction where sites are available. This would provide a solution to Londoners on a typical salary, who would then be able to afford a decent roof over their heads. At the same time, it provides an opportunity to those on below average incomes to be able to rent or buy their own homes without necessarily being subsidised by the taxpayer.

12. <http://www.bopas.org/about>

13. <http://www.labcwarranty.co.uk/about-us>

RECOMMENDATIONS

RECOMMENDATION #1 - The Mayor should work with local authorities in collaboration with housing associations, planners, architects, cultural entrepreneurs and developers in assessing the viability of Pop up Housing schemes on redundant spaces and sites across London.

RECOMMENDATION #2 - The Mayor should spearhead Pop-up housing schemes to suit private renters, students and self-builders on a pan-London scale whilst vacant sites await long-term development. This should include establishing a database of suitable stalled development sites and establishing pilot projects.

RECOMMENDATION #3 - The Mayor should ensure that the advantages of modular housing are fully recognised in future versions of the Housing Strategy and London Plan as a cost-effective and sustainable solution to London's housing needs.

RECOMMENDATION #4 - The Mayor should encourage boroughs to consider modular housing options when building new homes through their Housing Revenue Accounts, Right to Buy replacements, or estate regeneration schemes.

RECOMMENDATION #5 - The Mayor should consider establishing a repayable grant scheme to assist in financing new modular housing developments.



FEEDBACK

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Email: assembly.tories@gmail.com



ANDREW BOFF
LONDON ASSEMBLY
Greater London Authority
City Hall, The
Queen's Walk
London SE1 2AA