If you build it will they come? The boom in purpose-built student accommodation in central Liverpool: destudentification, studentification and the future of the city

Abstract. The wave of UK higher education expansion and the commodification of the student experience have reshaped many towns and cities not least in the development of large swathes of private purpose-built student accommodation (PBSA). A growing body of research has explored the role of PBSA in the processes of studentification and destudentification of neighbourhoods. This study explores the huge and rapid development of PBSA in Liverpool and, for the first time, raises questions not just about its impacts but about its sustainability. The model upon which many of Liverpool's PBSA projects are based generates hidden risks and carries a momentum that neglects wider market conditions. We conclude that there will be a disorderly end to Liverpool's PBSA boom and consider the likely implications for a range of stakeholders.

Introduction

There is an emergent literature on student accommodation that has come on stream in the last fifteen or so years. This work has addressed the impact of changing student populations on cities in a systematic way for the first time (Munro et al, 2009). Such scholarship is important because it is increasingly apparent that students are altering the physical and social fabric of cities in new ways (Chatterton, 2010).

There are several strands to this research. Initially, interest centered on what Smith (2002; 2005) termed 'studentification': the concentration of student residents in particular urban locales. Munro et al (2009) demonstrated that students had become a significant and segregated presence in British cities and noted the disruptive impact of student enclaves on settled populations in local neighbourhoods. The problems students collectively impose on their neighbours include noise nuisances; worries over rising crime (as students are, for example, more vulnerable to burglary); aggravations associated with parking; poorly-managed refuse disposal; the summer disruption of multiple moving and student housing refurbishment; and the perception of overdeveloped localities as houses are extended upwards and outwards to the extent that the privacy of neighbours is compromised and they feel 'hemmed in' (Allinson,

2006; Hubbard, 2008; Kenyon,1997; Macintyre, 2003; Sage et al, 2012a; Sage et al, 2012b). Most often characterized in the literature as a generator of multiple negative externalities, studentification has also been more broadly interpreted as a form of gentrification that marginalizes and excludes non-student groups therefore undermining policy preferences for the development of 'balanced communities' (Chatterton, 1999; Smith, 2008; Smith and Holt, 2007).

Although discussions of studentification mostly adopt a pejorative tone some researchers have noted that the process also has positive aspects. For example, resilient student spending can provide a fillip to local demand and underpin the provision of cultural infrastructure (Hubbard, 2008; Kenyon, 1997). The possibility that studentification has a more nuanced impact on local neighbourhoods raises questions about its potential role in progressive urban policy (Ruiu, 2017; Smith, 2008). This also applies in the case of *de*studentification, where student populations decant from localities raising important questions for housing markets in particular areas (Kinton et al, 2016).

A final strand of literature considers the development of substantial swathes of purpose-built student accommodation (PBSA) in urban centres. Given the scale of investment in many British cities, PBSA has become an asset class in its own right (Barnes and Tostevin, 2014; Hale, 2018; Smith and Hubbard, 2014), though there have been some general concerns about the sustainablility of the market (Wilmot, 2013; Curry 2017). PBSA has potentially profound implications for the economic, social and cultural futures of towns and cities and raises issues of social segregation and the search for a recipe for balanced communities in a new context (Hubbard, 2009; Sage et al, 2013; Smith and Hubbard, 2014).

The present paper is an attempt to contribute to this literature through an exploration of the issues thrown up by the extraordinary growth of PBSA in central Liverpool, much of which has been engineered by speculative and sometimes innovative forms of private investment. Over a short space of time Liverpool has experienced destudentification of some of its traditional areas of student settlement and the rapid PBSA-based studentification of the city centre. We consider some of the impacts of this shift. An urgent question, which we raise for the first time, concerns the *sustainability* of the avalanche of PBSA investment in Liverpool. Our research

suggests that the volume of PBSA coming on stream in Liverpool over the next few years amounts to a clear excess supply. This would be the case even if the local student population stabilized around its current levels. Worryingly, however, should the English university 'boom' begin to falter – and we think there are reasonable grounds to assume that it cannot continue into the medium term – a sharp check to demand for student accommodation in Liverpool raises some worrying questions about the city's economy and its physical, social and cultural health. Our work is based on semi-structured interviews with a range of stakeholders in this market: university accommodation professionals, PBSA investors and developers, local property market professionals, university administrators, local politicians and activists. We have also used a range of documentary evidence and compiled data from publicly-available sources.

On a memorable visit to the London School of Economics after the financial crisis, the Queen asked of academics *why did none of you see this coming?* We do not compare the unwinding of a speculative bubble in one city to that global catastrophe but this is something we think *is* coming.

The paper is organized into the following sections. We begin with a discussion of the polity and economy of Liverpool as a context for our work. This is followed by a brief overview of recent developments in English higher education which have in part fueled the boom in PBSA. We then turn to explore and explain the continuing waves of studentification and destudentification that have washed over Liverpool in recent years. In conclusion we argue that Liverpool's PBSA boom is likely to come to a disorderly end and we consider policy measures that may be taken to soften the landing.

Liverpool: policy and progress

The long-term decline and more recent recovery of Liverpool has been extensively documented. The evaporation of port-related activity as a source of employment in the decades after the Second World War left the city struggling to find a place in the Fordist international division of labour (Cocks, 2016; Lane, 1987; Meegan et al, 2014). Dock work was sacrificed on the twin alters of EU membership – which made Liverpool's Atlantic orientation problematic – and containerization (North, 2017). Regional policy provided what proved to be a short-term solution. Manufacturing plants of major

multinationals were attracted to Merseyside in the 1960s and were an important source of jobs. But the end of the postwar boom, the crisis of Fordism, and the deep economic and social abrasions of monetarism swiftly wrecked this model of development; manufacturing employment in Liverpool and the wider region sharply contracted and the city endured an ordeal of extended economic and political upheaval (Glyn and Harrison, 1980; Parkinson, 1985). The resources necessary to underpin a new local economic recovery were made available from the mid-1990s after Merseyside's designation as an EU Objective 1 area significantly lagging behind other regions in terms of income and unemployment (Evans, 2002).

There is a general consensus that the initiatives and strategies arising from Objective 1 funding greatly improved the economic prospects of the region (Anderton, 2017; Meegan, 2003; North, 2017; Nurse and Fulton, 2017). Objective 1 directly supported several flagship projects including transformational improvements to the waterfront, airport and rail infrastructure but more importantly – alongside Liverpool's successful bid to be the European Capital of Culture in 2008 – it helped to positively condition private sector perceptions of Merseyside (Garcia et al, 2010). Tangible results include a £1bn remaking of central Liverpool as 'Liverpool One' by the Grosvenor Group. Opened in 2008, this huge investment in retailing, leisure activities and pedestrian connectivity has itself spawned substantial new residential and other developments around its fringe (Nurse, 2017). A second privately-led initiative is the Peel Group's 'Atlantic Gateway', a £14bn project which has its western hinge on the lower Mersey (Atlantic Gateway, 2012; Harrison, 2014). The economic progress of Merseyside has been so notable that Objective 1 status is no longer justified given that local GDP levels have closed on the EU average. In the EU's terminology, the locality needs to now think about strategies to consolidate growth rather than engender recovery (Nurse and Fulton, 2017). For North (2017, 212), this has at last left Liverpool looking like a 'normal' city. It should be noted however that Merseyside's recent renaissance does not necessarily embrace every section of the local population (Boland, 2010; North, 2017; Dembski et al, 2017); nor is the policy framework that helped to produce it unproblematic (Boland, 2007).

The contemporary outlook for Liverpool and the wider region must be set against a set of new interrelated developments and challenges. These include the continuing uncertainties surrounding Brexit, the ramifications of the austerity strategy

implemented by UK governments since 2010, and the less-than-stable policy and institutional landscape of local economic development. Liverpool has levered its way to normalization with the help of EU resources. Were it not for Brexit these would be still accessible in the future, albeit at a reduced level given the city's improved economic position. So an open question is whether UK government resources might compensate for what will be lost from Europe (Nurse and Fulton, 2017). On the other hand, Objective 1 has left the locality with a legacy of collective knowledge, experience and institutional forms allowing it to maturely respond to austerity (North, 2017). Unfortunately, the local policy and institutional framework has itself been serially and disruptively re-engineered by central government (Anderton, 2017). In 2010 Regional Development Agencies gave way to a kaleidoscope of Local Enterprise Partnerships (LEPs) that are considered in relative and absolute terms inadequately resourced (Harrison, 2012; Rees and Lord, 2013). More recently LEPs have in places like Merseyside been complemented by the designation of City Regions with directly elected executive mayors to run them. An early question for these institutions concerns the balance between their devolved responsibilities and ambitions on the one hand and the resources they are granted on the other. They may become vehicles – and scapegoats – for austerity imposed from central government but refracted locally (Nurse, 2015).

It seems that the institutional contours of state-sponsored local economic development have been in recent years both noisy and increasingly resource constrained. Two final contextual issues for this paper result. First, entrepreneurial cities able to articulate their selling points in international competition may be best positioned to offset the pressures of austerity (Nurse and Fulton, 2017; Parkinson et al, 2016). Second, future economic development strategies that are 'place based' may be increasingly resourced and implemented by private actors in the manner of the noted Grosvenor and Peel Group examples (Harrison, 2014).

Against this background the seemingly inexorable expansion of PBSA raises some initial questions. Is such investment in the infrastructure of higher education simply to be welcomed? It endorses the view of Liverpool as an attractive post-industrial city, it chimes with local development aspirations to build a knowledge economy (Parkinson et al, 2016), and it offers a notable stream of private-sector activity that the city needs as it grapples with nearly a decade of austerity (Harrison, 2014; Meegan et al, 2014).

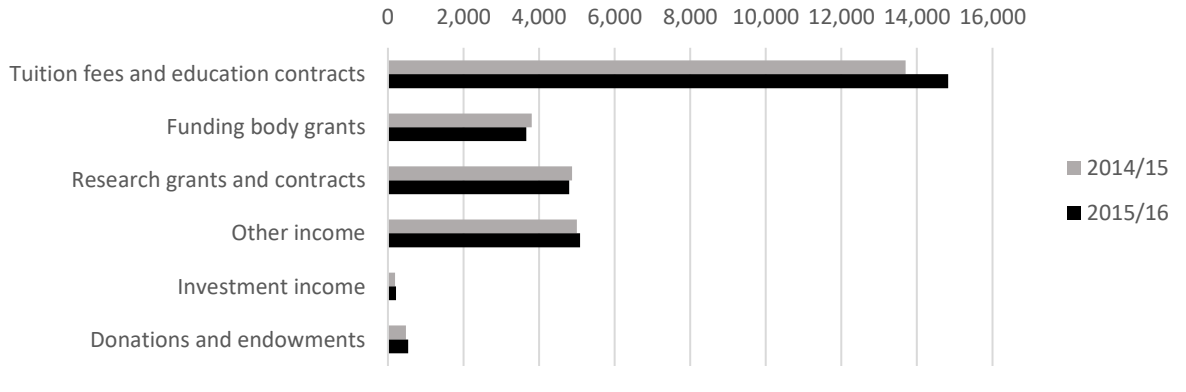
However, if this property boom comes to a disorderly end as, historically, they tend to do (Akerlof and Schiller, 2009), what dangers lurk in physical decay, public liabilities and reputational damage for a rejuvenated city?

The boom in English higher education: an exception to austerity

In 1997 when the then newly-elected prime minister, Tony Blair, had the opportunity to make good on his electoral commitment to invest in British education as a means to fuel long-term economic growth there were a little over one million students in full-time higher education (ONS, 2016). Since then student numbers have almost doubled with a high of 1.9 million in 2011/12. In 2016, a record 32.5 per cent of school leavers entered higher education in England (UCAS, 2016).

The rapid expansion of universities was funded primarily by fee-paying students. Traditionally, university education in the UK had been provided at zero-user prices. First introduced by a Labour government in 1998 at £1,000 per year, annual fees for undergraduate programmes in England are presently capped at £9,250. There are few signs of a functioning competitive market in university education with all universities charging up to the cap. The differential fees anticipated in the literature – see, for example, Chatterton (2010) – have yet to appear and the market functions as an informal cartel. The overwhelming dependence of English universities on fee income is demonstrated in Figure 1. Fees outweigh all other income categories put together.

Figure 1. Income of English HE providers by source 2014/15 and 2015/16 (£m)



Source: HESA

The politically and socially contentious issue of fees is particularly noteworthy when thinking about the explosion in student numbers as it was this new income stream that effectively insulated universities from austerity. The 2010 Spending Review (see HM Treasury, 2010) announced average government departmental cuts of 19 per cent but argued that, for universities, new fee income would offset reductions in the direct teaching grant income received from the state. Research suggests fees have actually *more than* compensated universities for the loss of teaching grant income, leaving them better resourced than before (Chowdry et al, 2012). The Spending Review also announced a new system of 'graduate contributions' – student loans – to 'ensure that students will only pay once they have graduated and can afford to do so' (p.53). Most of the direct costs of higher education to students were to be deferred into the future: an incentive to prospective students to attend university.

The remarkable expansion of UK universities raised the question of how the much bigger numbers of students were to be residentially accommodated. Not all the extra students needed a place to live while at university: a post financial crisis slow-growing economy and the entry of more students from poorer backgrounds have probably been responsible for the increase in the proportion of students choosing to attend a local university and live in the family home (for a Liverpool-focused discussion see Holdsworth, 2008). In 2016 about a fifth of undergraduates lived at home compared to 13 per cent in 2008 (Sodexo, 2016). Nevertheless, universities and the cities in which they are located have had to come to terms with demand for thousands, or tens of thousands extra beds in a relatively short space of time.

The changing geography of student living in Liverpool

Liverpool's four universities (Liverpool; Liverpool John Moores; Liverpool Hope; and the Liverpool Institute of Performing Arts (LIPA)) collectively host around 50,000 students. The two oldest and largest universities – Liverpool and Liverpool John Moores – have around 21,000 students each. Liverpool Hope has 6,000 students and LIPA less than a thousand. As of 2016, Liverpool's total population was estimated at just under 500,000. Students are a major feature of the city and the universities are major generators of local jobs and incomes.

Historically, Liverpool's student population was concentrated in three particular districts to the south of the city centre:

- L7 (Picton and Kensington and Fairfield);
- L15 (Wavertree);
- L17 (Greenbank and St Michaels).

In 2000, 66 per cent of students lived in these areas and were housed primarily in homes in multiple occupation (HMOs), or halls owned by Liverpool University (Liverpool Mayoral Review, 2015). In the last fifteen or so years there have been some spectacular changes in patterns of student settlement. The most startling of these is the continuing development of PBSA in the centre of Liverpool where, from an almost standing start, there are presently approaching 20,000 private PBSA beds available for rent. Major thoroughfares in the city are in the process of complete transformation with, for example, Lime Street hosting two developments that will alone provide an additional 1,500 beds. The plan for this site involved the fiercely-contested demolition of a pre-first world war cinema frontage and neighbouring buildings also of architectural interest (SAVE Britain's Heritage, 2016). Such has been the influx of students that the city council's Central ward saw its population grow by 81 per cent between 2005 and 2015 (Liverpool City Council, 2017a). Over the same period, the city's population grew by about 7 per cent. Part of the rationale for the creation of this ward in the early 2000s was the surge in its student population (authors' interview; Boundary Committee for England, 2003). The new student population in central Liverpool has also been the focus of political attention with the city's mayor launching a review into *The future of student accommodation in Liverpool* in 2015.

At the same time as the centre of Liverpool has experienced studentification some – as yet more muted – reciprocal changes have occurred in the city's traditional student districts. Commensurate with some modest growth in student numbers in Liverpool, demand for HMO accommodation has remained relatively stable in L7 and L15, though there is some evidence of oversupply, especially for median-rent properties (authors' interview). It is also apparent that HMO providers in these areas are somewhat nervous of the implications of the student migration to the centre for the future of the market in which they compete (Liverpool Mayoral Review, 2015, appendix 1, representation 12). Ward population estimates for 2016 indicate that these districts

continue to host roughly double the proportion of 16-39 year-olds than do wards where students typically do not live (Liverpool City Council, 2017b). Tellingly, perhaps, Central ward has a fivefold proportion in this age bracket compared to the city average. On the other hand, the student population in L17 has fallen by around two thirds (Liverpool Mayoral Review, 2015; authors' interview). The 2016 ward population estimate for St Michael's indicates that this former student area now has a population age profile similar to most of the rest of the wards in the city.

In summary Liverpool has experienced some major changes in its pattern of student settlement. The focus of student living has dramatically shifted to the city centre. What needs to be explained is why. This is the task of the next section.

Explaining the PBSA-based studentification of central Liverpool

Our research suggests the boom in PBSA in central Liverpool has been generated by a number of mutually-supportive general and local factors. Significant investment in PBSA is not unique to Liverpool meaning some broader influences must be at work at the national level. These include, first, the growing maturity of a number of established providers in the market with proven investment and PBSA-management models. For example, Unite Students, an initiator of the sector in the early 1990s, presently houses some 50,000 students in England and Scotland (Unite Students, 2018). The Unite Group has been listed on the London Stock Exchange since 2000 and, at the time of writing, has a market capitalization of £1.92bn. Other examples of established PBSA providers include: UPP and Liberty Living with 31,500 and 27,000 beds respectively (Savills, 2017).

A second driver of general UK PBSA is interest from international investors, with overseas real estate firms and pension funds particularly active (Cushman and Wakefield, 2017). Given the manner in which the residential property boom in many countries was punctured by the financial crisis, alternative investment opportunities that appear to offer a combination of resilient demand and high returns are clearly attractive. In 2016 the majority of activity in the market was generated by portfolio acquisitions of assets in which overseas actors were prevalent. Of the £3.1bn invested in student accommodation in that year sixty per cent came from outside the UK, with

notable interest from the US (£1bn), Singapore (£0.46bn) and the Middle East (£0.42bn) (Knight Frank, 2017).

A final general influence underpinning the demand for PBSA in the UK is the changing form of student demand alongside the evolution of the student experience. What students want from their non-academic environment is undergoing a process of change. The HMO model, particularly where housing is remote from campus, may be undermined by the perception that it engenders isolation in comparison to new conveniently-located PBSA (Hubbard, 2009).

Table 1 Student tenure types 2008-2016, per cent

	2008	**2010**	**2012**	**2014**	**2016**
Privately let	38	38	38	34	26
Family home	13	17	18	19	21
PBSA	8	7	9	9	14
University halls	21	24	22	18	21

Source: Sodexo (2016)

This said, it is important not to overstate the national shift in favour of PBSA. Table 1 shows that since 2008 although the proportion of students in privately-provided accommodation (PBSA) has sharply increased from 8 to 14 per cent this as yet remains the smallest of student tenure types in the UK as a whole.

Moving from the national level we identify two additional factors that underpin the provision of PBSA in Liverpool in particular. The first of these concerns the nature of the accommodation offers made by Liverpool's universities and the strategies that underpin them. The universities' perception is that, in a competitive environment where they choose not to compete on the price of tuition, the quality of accommodation is a major factor in students' choice of university. One of Liverpool's universities found it the third most important reason why applicants went to study elsewhere (authors' interview). Interestingly, while all four local universities promote themselves using an accommodation tag and the three largest guarantee a bed to all first-year students, only Liverpool and Liverpool Hope universities own and operate halls of residence. Liverpool John Moores has no accommodation of its own.

Liverpool John Moores divested itself of a relatively small and disparate set of halls in the early 2000s and has since managed its accommodation offer through a tendering and partnership process with a score or so of private-sector partners. The market has been healthy enough to provide an adequate stream of good quality and well managed bed spaces. This means that Liverpool John Moores first years (level 4) constitute a large and stable pool of demand for private-sector providers. Importantly, though, accommodation offers from Liverpool John Moores and its partners are wholly PBSA-based and located in central Liverpool. In other words, the university has itself been an agent in reshaping the market for the city's student accommodation. Moreover, the process is self-reinforcing given that experience of conveniently located, good quality and competitively priced PBSA at level 4 tends to retain many Liverpool John Moores students in this type of tenure at levels 5 and 6 (authors' interview).

As the other big higher education institution in the city, Liverpool University's accommodation strategy is also of interest. In an ambitious programme, which itself indicates something of the importance of accommodation offer in the recruitment process, the university has raised, from commercial sources, £260m to invest in building several brand new and imposing halls at its central campus and renovating existing stock 'back-to-brick'. As it now offers PBSA in central Liverpool where it had relatively few beds before, the university is also driving forward the physical and social restructuring of the city. This is periodically compounded when recruitment exceeds the capacity of its accommodation portfolio. For example, in 2017-18 it secured several hundred extra beds from private PBSA providers for that academic year's entry.

Insofar as Liverpool's two largest universities are agents in the process of the studentification of the city centre it might be argued that they, like private PBSA providers, are reshaping the city simply in response to changing perceptions about the student experience: that students themselves want it delivered in this form. But Liverpool's universities have responded to students' accommodation needs in one other significant and long-established way, presenting at least an alternative to the PBSA solution, albeit one students now seem to be questioning. Liverpool Student Homes (LSH) is an accommodation service collectively owned and managed on a not-for-profit basis by the city's four universities. It allows private landlords to advertise student properties subject to quality standards. The intention is "to protect students

from poor housing conditions and raise the quality of student accommodation across Liverpool" (Liverpool Student Homes, 2018).

Traditionally, LSH's 'market' has been HMO accommodation in Liverpool L7, L15 and L17 but this has become more concentrated as students have left L17 and there is, in LSH's view now an oversupply in HMOs in L7 and L15. HMOs have also become more concentrated in the hands of fewer management companies and there is some degree of turbulence with small numbers of providers leaving and entering the market on a weekly basis. A simple interrogation of the LSH properties available page gives a flavour of the HMO market and, indeed, the surge in PBSA in central Liverpool. At the time of writing the total number of beds advertised in HMO-sized accommodation (up to 9 beds per property) was 3,931, compared to the total number of beds in PBSA-sized property (which we have taken at a conservative >99 beds) which was 14,326. So even a university service which was ostensibly established to improve HMO standards for the city's students has begun to reflect the major shifts in students' living choices in favour of PBSA in central Liverpool.

If Liverpool's big universities are one set of agents of change in student accommodation, the other obvious set is comprised of PBSA providers. As noted, some of these are long-established firms with interests across multiple UK cities. However, there is a second category of local provider prominent in Liverpool adding an unusual degree of dynamism and, indeed, risk to the market. The large established providers are able to generate funding for expansion from their own internal resources and the financial markets. For example, Unite has two £90m medium-term bond issues on its corporate CV. An alternative way to fund property development – including PBSA – is to use a so-called fractional investment model. This is attractive to speculative developers because it minimizes initial outlay and generates funds as part of the development process; the equivalent, when it works, of very low cost just-in-time finance.

The fractional model operates in the following way (authors' interviews; Bagaeen, 2007; Hulse et al, 2018; Lunn, 2014). A developer agrees a site purchase for a PBSA or residential flats project subject to planning permission. They pay a deposit of say 10 per cent of the purchase price with a completion date in perhaps nine months. This provides a window in which planning permission can be secured at least on an outline

basis. It also permits the developer to begin to market the scheme to potential investors, some of whom may be local but who can be reached – using sales agents – in other parts of the UK and the rest of the world. Currently, for example, there is a glossy hoardings-surrounded site in central Liverpool whose developer invites investments of £60,000 per unit with an 8.5 per cent return guaranteed for 5 years. A stunningly attractive yield in an uncertain post-financial crisis world of very low interest rates. Investors typically pay between 25 and 50 per cent on exchange of contracts providing the developer with the working capital to engage contractors to complete the project.

There are three evident risks with this model. First, will a nascent development actually be completed? There are three large PBSA projects in the city that are presently stalled and one of these failed entirely in early 2018. Failure means investors probably lose everything. Second, if a development is completed, how well built is it and how adequately will it be managed? If a project is late or poorly finished and looks likely to fail commercially the developer can abandon the special purpose vehicle in which the whole initiative is wrapped and simply walk away. Third, it is the investors who are left to try to unpick the project and they only have title to perhaps one ‘pod’, of which there are possibly hundreds in a development; what might be their exit strategy? (authors’ interview; Hulse et al, 2018). Of course, the fractional model can work successfully, but one of our interviewees suggested that the entire process is akin to ‘spinning plates’: everything has to work – with developer, planning permission, investors, contractors and students falling precisely into place at the right moment. In Liverpool, to pursue the analogy, one plate has smashed and others are wobbling. We suspect more will follow.

The implications of the changing geography of Liverpool’s student population

The first issue we address here is the potential de-studentification of Liverpool’s traditional areas of student living: L7, L15 and L17. Of these localities, only L17 has experienced the kind of population change that has refashioned its economic and social characteristics. De-studentification may sometimes be read as deleterious abandonment in the sense that students gradually desert an area to its cost. Kinton et al (2016) offer an original empirical analysis of this as a cumulative process in the

context of Loughborough in which empty beds lead to empty houses and empty houses ultimately to empty streets. What happens next in Loughborough is for now a question for further research but, regardless, it will be a matter of *reviving* a locality after demand has imploded. In L17 things have worked out rather differently; de-studentification has not been synonymous with even temporary urban decay. What seems to have happened here is that, while the students have certainly left for either HMOs in L7 and L15, or PBSA in central Liverpool, the locality has been resettled by more affluent residents. There have never been empty streets and any empty houses sell on average at 37 per cent above the level for Liverpool as a whole. Most economic and social indicators suggest an appealing neighbourhood, for example, a lower unemployment rate and lower child poverty than the city-wide averages (Liverpool City Council, 2017b). This appears to be a case of de-studentification as gentrification. The precise drivers of the social and economic reorientation of L17 are unclear but our perception is that students were effectively out-competed by new residents – owner occupiers and 'generation rent' professionals – moving to an increasingly desirable area in a period when alternative or new student accommodation was readily available elsewhere.

In L7 and L15 a nascent de-studentification is unfolding rather differently. These two areas now contain around 60 per cent of the city's student HMOs compared to only 40 per cent in 2000; but the number of HMOs has fallen across the city by a third over the same period. There is also a slackening of demand for student HMOs in L7 and L15 and therefore something of an excess supply (authors' interviews). Overall then there are fewer but more geographically concentrated student HMOs in Liverpool. The falling numbers may be partly explained by shifting student preferences in favour of PBSA but it may also have been conditioned by new forms of non-student HMO demand from migrant workers, asylum seekers and people forced to change domicile because of the 'bedroom tax' (Liverpool Mayoral Review, 2015).

One notable implication of the limited de-studentification of L7 and L15 that has so far occurred is its effect on the quality and price of HMO accommodation. In the competitive scramble to find and retain tenants, landlords have had to improve their offer.

> "In the past landlords didn't need to invest much in their properties but the market now demands that they do: most students get good accommodation and rents remain relatively low" (authors' interview).

This suggests that the market is already reacting to the threats posed by the PBSA explosion in the city centre and this may of itself put a drag on the de-studentification process in L7 and L15.

Some stakeholders in the student HMO market in L7 and L15 have real concerns about the implications of the profusion of PBSA spaces in central Liverpool for their businesses and lives. For example, in evidence to the Liverpool Mayoral Review, a representative of Wavertree [L15] landlords accepted that,

> "We must compete with what is happening in the city centre…the major impact I fear [is] the oversupply of city centre student accommodation…on my business", (Liverpool Mayoral Review, 2015, appendix 1, representation 12).

Interestingly, the same individual offered a different perspective on the alternative merits of HMO and PBSA student living.

> "We believe we can provide a holistic experience for our students that could not be [had] by living on the 9th floor of a big development, in a one room "pod" where they eat, sleep, wash and study for most of their time and venture out only to pay £3.00 for three slices of boiled ham…With so much reporting in the media of the alarming deterioration in the mental health of today's student population, no amount of luxury city centre living can compete with the…'vibe' around a local community which includes, encourages and facilitates the enrichment of student life, whilst students are learning to live as an independent adult in their own home" (Liverpool Mayoral Review, 2015, appendix 1, representation 12).

The appeal to local community is something that resonates with other stakeholders. The Dales Residents Group (DRG) in its representation to the Liverpool Mayoral Review offered a thoughtful reflection on the tensions between studentification and de-studentification. The DRG highlighted problems posed by large numbers of HMOs in a particular residential area of L15: generally the kind of negative externalities noted in the literature (see, for example, Sage et al, 2011). But while asking for a temporary stay on council licenses for landlords in this locality, the DRG's conclusion was that,

> "Despite the problems that we face, we are more interested in resolving them than we are in wanting to remove our existing student residents: we want students to have a positive experience of living in a community in our city. We are therefore unsure about the massive development of student housing in the city centre…We are also concerned about the effect that development in the centre will have on our local businesses…we know that many…depend on the student market and we would be very unhappy to see Smithdown Road have any more empty shop premises." (Liverpool Mayoral Review, 2015, appendix 1, representation 7).

Note that these sentiments chime with some of the noted positive aspects of studentification (Hubbard, 2008; Kenyon, 1997; Ruiu, 2017; Smith, 2008).

There are worries then that L7 and L15 may be areas on the cusp of de-studentification. The position on this matter taken by another major stakeholder, Liverpool City Council, is not yet fully developed. The Draft Liverpool Local Plan 2016 (Liverpool City Council, 2016), due to be formally adopted by the beginning of 2019, makes explicit reference to Liverpool's student housing provision but, perhaps unsurprisingly, the principal policy focus is on PBSA. We return to this below. What activity there is by the council in the traditional student HMO areas is associated with HMO licensing under the 2004 Housing Act, the use of the planning process to regulating HMO creation, or driven in part by the agency of local councillors (authors' interview). For example, in 2015 the city council announced a moratorium on 'To Let' and 'Let Agreed' signage in L15 which was warmly welcomed by local residents in its impact on the appearance of the area (Liverpool Mayoral Review, 2015, appendix 1, representation 7).

The future direction of travel for L7 and L15 appears for the moment to be uncertain. These are still firmly-established student areas with multiple HMOs in concentrations that do not appear in any other part of Liverpool (Liverpool City Council, 2017c). But to some extent both localities may prove vulnerable to the de-studentification process outlined by Kinton et al (2016). Much will probably turn on the contingencies generated by the boom in PBSA in central Liverpool. This is the focus of the next section.

Issues around the PBSA studentification of central Liverpool

For local residents, the studentification of particular parts of Liverpool's city centre has thrown up a mixture of familiar problems, tempered by the positive spin offs of a thriving population. For example, in the Marybone area of L3 where there is a particular concentration of PBSA serving Liverpool John Moores' students, local residents have experienced problems with noise at night, anti-social behaviour, refuse disposal and end-of-tenancy fly-tipping. More positively, the presence of several thousand students has encouraged new shops and GP surgeries to open, and life has been breathed into what was an area on the economic and social margins (Liverpool Mayoral Review, 2015, appendix 1, representation 1; authors' interview). The general perception, however, is that Marybone has become over-studentified, with an estimated 1,000 local residents sharing a relatively small space with up to 3,000 students (Liverpool City Council, 2016). None of our interviewees dissented from this view. The Mayoral Review into *The Future of Student Accommodation in Liverpool* appeared to accept that for certain locales, the pressures associated with PBSA have become too intense. One of the Review's recommendations was that,

> "The Council should introduce zones of opportunity to encourage/direct purpose built development into the most suitable areas of the City Centre. At the same time the local planning authority should seek to use its powers to discourage development in less appropriate areas of the City Centre" (Liverpool Mayoral Review, 2015, p1).

The Review had two issues in mind in making this recommendation. First, it addresses overstudentification. Presumably, no further unbalanced communities such as Marybone will be permitted to develop. Second, the Review was mindful of the potential impact on the wider potential of the city's economy,

> "Student accommodation is competing with other high value commercial interests and care needs to be exercised in ensuring City Centre sites utilized for student accommodation do not impact on the overall commercial potential of the City Centre." (Liverpool Mayoral Review, 2015, p18).

We noted earlier that the PBSA-based redevelopment of Lime Street was strongly opposed by heritage interests. The tension between PBSA developments and other stakeholders is also evident elsewhere in central Liverpool. For example, in the Baltic Triangle, a warehousing and industrial area that was mostly derelict fifteen years ago, there has been a wave of investment in the creative and digital sectors, alongside

residential and leisure-based developments. It is an exciting place, beginning to thrive. Would PBSA complement the Baltic Triangle? Not according to those in the creative community:

> "The Baltic creative is certainly the wrong location for PBSA and if developments continue it will stall and reverse the enterprise and job creation potential of the area." (Liverpool Mayoral Review, 2015, appendix 1, representation 15).

This perception is based on the perceived generation of a "slum like feel" by an earlier round of PBSA in the Baltic Triangle, deadening to enterprise.

Other objections include the potential for PBSA to undermine the aesthetics of an area that still retains a number of notable nineteenth century buildings that are slowly being brought back into use. One of the city's large presently half-built and seemingly abandoned PBSA projects stands – a bare concrete frame – in stark contrast to an imposing old brick warehouse that is about to be refurbished on the same street.

There are parts of the city centre fringe that are much less contested than the Baltic Triangle. Here, rather than being seen as generators of social problems, or impediments to regeneration of a particular form, students and studentification have become one of the drivers of urban renewal. For example, just beyond the more northerly of Liverpool John Moores' two principal campuses, there is an expanse of land mostly underdeveloped for decades and blighted by the dominating traffic-access routes to the Wallasey Tunnel. Parts of this area have already been used for substantial PBSA development and there are further projects underway. But how successful these will prove to be remains an open question. There are already signs of under-occupation of existing PBSA at this location that may be explained by its remoteness from the heart of the city (authors' interview). Will additional developments that are even more remote prove attractive? One local politician has predicted that plans for the area, "will be really transformative, or a disaster" (authors' interview). The outcome will partly turn on whether there are enough new students to match the burgeoning supply of PBSA in Liverpool and whether many of them see this particular area as a place where they want to live.

Having reviewed some issues around the studentification of central Liverpool we now consider the vital question of its sustainability.

Table 2 Student accommodation by type in Liverpool, selected years

Year	**HMO**	**Halls**	**PBSA**	**Total**
2015	8000	6300	14000	**28300**
2018	7089	6300	18000	**31389**
2020	6000	6300	27000	**39300**

Source: Liverpool City Council, City Residential, own estimates

Table 2 shows numbers of beds across three tenure types for the city as a whole. The data for 2015 were drawn from the Mayoral Review (2015). The HMO figure for 2018 was calculated from Liverpool City Council's publicly available HMO register. We have extrapolated an estimate for HMO beds for 2020. The halls figures are the combined totals for Liverpool University and Hope University. The PBSA data are drawn from the Mayoral Review, updated for completions and projects with planning permission collated by City Residential (2018).

Two things stand out from Table 2. First, the increase in student accommodation in Liverpool is driven *entirely* by PBSA. Should all accommodation in the pipeline be built out, Liverpool's private PBSA offer will have broadly doubled over about five years. Second the total supply of beds in the city – at almost 40,000 – will be some way in excess of actual needs. With the local student population relatively stable, demand for beds is estimated at 34,000 (Liverpool Mayoral Review, 2015). The Mayoral Review concluded that,

> "there is no evidence to support the introduction of a moratorium on new student accommodation schemes in the City" (p1).

This position appears now to be harder to maintain. It is possible that not all accommodation in the pipeline will be realized. The city council is sanguine on this point,

> "based upon previous experience, the view of Liverpool City Council's Planning Department is that there will almost certainly be a number of schemes which simply will not progress either because of lack of finance, failure to achieve planning permission or a change in the developer's own aspirations for the site" (Liverpool Mayoral Review, 2015 p9).

The Review also suggests that the market itself may apply a natural brake to the process as ‘saturation point approaches’. This is an interesting view made more so by the presence of different kinds of provider in Liverpool. The large, experienced firms that build, own and manage PBSA may well pause their interest in the city once their current projects are completed. But these are not in the majority. Of the twenty three PBSA projects in the pipeline at the time of writing seventeen have either unclear sources of funding or are based on the fractional model described earlier and, of these, twelve appear to be wholly fractionally funded.

The inherent problem with fractional funding lies in the potentially disparate interests of its principal parties. The developer’s priority is to successfully launch and sell a project. Once investors are in place the risk to the developer is minimal: costs incurred so far will have probably been covered and it is possible to simply abandon a scheme with too many emergent flaws – with contractors or lack of student demand, for example. For investors, risk appears weighted downstream towards issues of build quality, completion and occupation. Problems with any of these may give rise to partial or complete losses as their asset declines in value and they have no obvious exit strategy: to whom might they sell their share of a failed project and at what price? This begs questions about investors’ perceptions of risk. In the fractional model these are masked by the very high guaranteed yields noted earlier. Such returns are underpinned by including provision for yields in the purchase price of each unit which are quoted at up to twice the rate per square foot of the average for Liverpool (Liverpool Mayoral Review, 2015, appendix 1, representation 11). Small investors in other parts of the country or abroad may not be best placed to perform the due diligence that would uncover this kind of detail. Using concepts from economics, investors have an asymmetric information problem for which there are few immediately available counteracting institutions.

In the fractional model risks appear to be disproportionately borne by investors. There have been several instances in Liverpool where fractionally-financed projects have been stalled, failed or become otherwise problematic as the interests of developer and investors have diverged. In such cases investors have sometimes not seen a penny of the promised yields on units purchased for £50,000 plus (authors’ interview). Just as importantly, when things go badly wrong, the city and local residents also bear losses in the form of the blight of abandoned projects. Unfortunately, the failed skeletal seven-

level 240 unit ‘Quadrant’ development on Shaw Street stands in the immediate vicinity of a mixed residential area and the city campus of Liverpool Hope University.

In the context of the present state of Liverpool’s PBSA market, it might not be unreasonable to characterize the fractional funding model as a coming generator of failure and blight. Our argument is that the city is now at the point of PBSA saturation (see also Hearn, 2016; Savills, 2017), with the pipeline supply of beds as likely as not to tip the fractional market into meltdown as investors take fright and projects are abandoned. Importantly though, the fractional model remains viable until investors absent themselves *entirely* from the market. So long as new sources of investment can be tapped, developers, bearing relatively little risk, have an incentive to bring new projects on stream. There are echoes here of the property boom that preceded the 2008 financial crisis in the sense that market facilitators selling highly questionable mortgages were exposed to much less risk than the home buyers with whom they were dealing. The boom was sustained by this uneven risk and by the asymmetric information problem facing buyers and other investors.

This sombre reading of the market may be compounded by policy changes in higher education. To some extent the boom in PBSA is a reflection of the rapid recent expansion of universities. But there are signs that this may come to an end. Both the UK’s major political parties are contemplating changes to university funding (for example, a year-long government review of post-18 education, including how it is financed, was launched in February 2018). There are, as yet, few details but the possibilities include reduced tuition fees and the restoration of a direct grant system. It may be that more active recruitment of foreign students could offset reductions in domestic fee income. One in five UK students is now from abroad with China the biggest single source of recruitment and one that is presently growing significantly (UKCSIA, 2017). However, should their incomes come under pressure for the first time in two decades, it is probable that universities would become more conservative in their plans than hitherto and that student numbers would fall. There have been suggestions that even marginally reduced university incomes could push some institutions towards insolvency (Adams and Hall, 2018). A sudden check to the student population would be very likely to shock the fractional model element of the PBSA boom in Liverpool into collapse were it to prompt investors to leave the market.

Conclusions

Our argument that the PBSA market in Liverpool is saturated and that the fractional funding model in particular is likely to generate more failed projects before it, at some stage, implodes, gives rise to three sets of issues. First, what are the implications of this scenario for the different groups with a stake in the market; second, what might be learned in policy terms from Liverpool's PBSA boom; and third how should the boom be contextualized in post-industrial Liverpool?

The major PBSA stakeholders include: Liverpool's student accommodation providers, the universities and their students; other residents and businesses in the city and the city council. The impact of a crash on accommodation providers will be conditioned by their particular role in the market. Developers engaged in projects with fractional financing will be largely unable to continue as the model's shortcomings become more widely shared among investors. There are already signs that this is happening with, for example, warnings from local politicians about Ponzi schemes in the city and adverse publicity in some key overseas markets (see Cook, 2017; Kemp, 2018). Established PBSA providers and managers may be expected to mostly ride out any market shock though there may be a risk that some students could become disaffected with city centre living were this to become a contaminated brand locally. There is also the unknown impact of any future shifts in higher education funding and student recruitment. For HMO providers any reversal in the spread of PBSA in central Liverpool is likely to prove positive. Two traditional student areas are still firmly embedded in the city; their nascent destudentification may be arrested by the demise of a group of direct competitors.

The city's universities will almost certainly be more concerned with changes to higher education policy than with events in the PBSA market. Though accommodation is an important factor in recruitment, the bigger universities – Liverpool and John Moores – both have strategies presently in place that cater for anticipated demand over the medium term. An end to the PBSA boom will not interfere with these strategies and students will not find themselves without a wide choice of good-quality accommodation.

The more pronounced negative spillover effects of a PBSA shock centred on the plethora of fractionally funded projects in the city will probably be felt by Liverpool's

residents and businesses. The obvious direct impact is the neighbourhood dereliction and decay. We have already noted the failed and stalled PBSA projects on Shaw Street and in the Baltic Triangle. There is a further stalled PBSA initiative on the north side of Liverpool's principal train station, as well as the failed (non-student) Chinatown site that dominates a southern approach to the city centre. How these will eventually be cleaned up and who pays are open questions. In the meantime, already measured in years, they cast derelict shadows on those around them. The Chinatown site has been the subject of complaints over litter and rats from nearby residents (Houghton, 2018).

The public policy lessons of Liverpool's experience of a burgeoning PBSA market must at least in part turn on whether or not our gloomy prognosis comes to pass. When demand for a particular use for a building evaporates an obvious question is: what alternatives might there be? In its Draft Local Plan, the city council makes explicit reference to the need for buildings that can be adapted to changing market conditions,

> "Proposals should incorporate future-proofing arrangements to ensure [PBSA] is able to respond to changing market conditions, by embedding flexibility of use within the design to enable the building to readily accommodate a viable alternative use" (Liverpool City Council, 2016).

Such a policy is laudable but none of our interviewees were aware of it yet being actioned; it may also be to some extent redundant. If there is a disorderly end to Liverpool's PBSA boom the legacy will not be a tidy set of finished buildings ripe for alternative use but some finished projects and a collection of unfinished structures and abandoned sites.

The bigger question is how to engineer a softer landing for the city. There is limited room for manoeuver in already troubled PBSA and other fractional projects. It would be better not to start from here. That said, the way forward almost certainly lies with the city council in the excise of its powers of planning control and, in particular, in its partnering decisions about developers and development models. Projects with esoteric financing can succeed. There are a number in Liverpool that have achieved uncontroversial completion. The problem is that not all of them succeed and, in the context of PBSA, with a saturated market and looming review into higher education, it is entirely possible that many will fail. Future decisions need to be more informed about the market they are feeding. The city council can better seed the prospects for

Liverpool's physical, social and economic future by partnering with proven developers employing conventional funding models. That is the best way forward: to leaven a risk-laden market with projects that can be depended upon.

More generally, a disorderly end to the PBSA boom would raise wider questions about reputational damage to the city. Liverpool's economy, its physical fabric and its aspirations have all changed markedly since the millennium with the completion of a large number of flagship projects and events and the continuing integration and extension of waterfront developments north and south of the city centre. Private investment in this continuing work is underpinned by confidence in the city's polity and economy (Parkinson et al, 2016). In the context of uncertainties regarding the interplay between Brexit, austerity and the emergent City Region and other policy and political frameworks (Nurse, 2017), what the city does *not* need is to be suddenly pockmarked with unfinished projects and empty sites enclosed by ragged hoardings. In such circumstances the city might find its renaissance more difficult to consolidate.

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