UNIVERSITY OF CAMBRIDGE: NORTH WEST CAMBRIDGE DEVELOPMENT

A new urban district on former green belt land
Summary

This case study demonstrates how universities can be proactive in engaging with local planning authorities to bring forward new development which delivers sustainable housing provision and social infrastructure within the context of an urban extension. The 150ha NorthWest development forms part of an expansion plan for Cambridge designed to accommodate its growing economy and population, particularly in the science and technology sector. The University is recognized as central to that economy, as a leading global research institution, but its very success has highlighted the need to address issues around affordable housing and transport. Construction commenced in 2014 and the first phase, comprising university and market housing and a community centre, is due for completion by Spring 2017. Later phases will deliver additional housing and potentially academic research and translation facilities. The project is supported by a masterplan developed by Aecom, and will feature a range of work by different architects working together in teams across a number of sites. Design quality has been central to the development agenda, and is underpinned by Code 5 for Sustainable Homes and the BREEAM Excellent standard, in a bid to create a national flagship for sustainable development.
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### Key issues and learning points

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Introduction

‘An urban extension with a proper sense of community’
Jonathan Nicholls, Registrary, 2014

The University of Cambridge’s North West Cambridge development, currently in the early stages of site preparation and construction, is not a typical urban regeneration scenario. Controversially it involved taking land out of the Green Belt, designated since the 1950s, but the university has successfully argued that its presence and continued international competitiveness is essential not only to its own future, but also to the city and region's economic health through the coming decades. The new development, located on a 150-hectare area of university farmland between the M11, Madingley Road and Huntingdon Road, will provide some additional academic and research space, but primarily much-needed affordable housing for university staff and students. This is recognised as essential to the university’s ability to attract and recruit the best from around the world. It will also offer housing on the open market which has been in desperately short supply as a result of the ‘Cambridge phenomenon’ (the boom in science and technology-based industries based in the city), along with new social amenities. It has therefore been welcomed by the city council as an opportunity to promote a ‘flagship development’ which might raise the bar for other developers, especially in relation to sustainability criteria. As a local planning officer explains, ‘universities are seen as being able to push boundaries’ and ‘there’s motivation on both sides to have something that looks good in the long term’ (planning officer 2014).

Historical and policy contexts

‘Colleges provide an environment where academics live and work closely together, which is important to inspire and enhance creative thinking. The University wants to ensure that this productive academic environment is replicated at North West Cambridge, whilst being conscious of the need to create a wider community amongst all of the residents and workers on the site’
Working with You (University of Cambridge 2011:18)

The North West Cambridge project has necessitated a shift of perspective on the historic college-based structure of the University’s institutional and social organisation which is not completely suited to the direction of future growth focused on research and translation activity and increasing numbers of research staff in the higher education sector. It demonstrates an interesting endeavour to balance that model with a more explicitly urban approach which accommodates both housing and academic activity within a university-orientated environment, and avoids the pitfalls of the segregated campus-style approach to university growth which have been manifested, and criticised, at other sites such as West Cambridge (masterplan 1995) and, even earlier, in the Cambridge Science Park (1970).

Collegiate v. campus organisation

During its eight centuries in existence, the University of Cambridge has continuously developed a collegiate model of university teaching and living, dispersed through the city. Over time, new colleges have been created through particular endowments and taken root at increasing distances from the city centre where the oldest are concentrated, in more
suburban residential areas; while other colleges have developed additional residential annexes in various locations to house their students, particularly at postgraduate level. In tandem with that process, faculty buildings have developed on particular concentrated sites distributed around the city, and in recent years the University has taken steps to utilise its extensive land holdings in order to add to the capacity of those sites with significant new ones, notably at West Cambridge, and the old Addenbrookes Hospital site to the south of the city.

The net result of these accretive development processes over time has been a thorough physical intermixing of university and city amenities, in contrast to the campus model of higher education provision. Yet at the same time town and gown have not been exactly integrated, and tensions have persisted in the historical relationship between the two – as noted by the Cambridge Evening News: ‘From mutilations to murder, the university’s 799-year history is marked by a whole host of riots and atrocities between the “Town” and the scholars, or “Gown”’ (Brigham 2008). The collegiate model of courtyard development, secluded from the street and largely closed to public access, has ensured a significant degree of introversion and self-enclosure on the part of the university, which has also helped to shore up its perceived and real privileges.

The challenge of the North West Cambridge development has then been to balance the advantages associated with a ‘collegiate atmosphere’ for academic work and achievement ‘at the highest international levels of excellence’ (University of Cambridge 2007:11), with a desire for increased integration, diffusion and societal impact. In the words of Professor Marcial Echenique from the university’s Department of Architecture, also an international planning consultant and early advisor on the North West Cambridge site: ‘the best thing about Cambridge is the way that the University is integrated into the normal fabric of the city and the public can dip in and out, [and] it’s important to retain that’ (Marcial Echenique 2013).

### Growth of the postdoctoral research community

However it also needs to address a phenomenon specific to the contemporary development of higher education, and that is the significant growth in postdoctoral research staff on temporary contracts, who have historically been rarely affiliated to or accommodated by the colleges – unlike established teaching staff and students.

The latest estates strategy projection for growth (University of Cambridge 2007:9) in undergraduate numbers is 0.5% a year, while postgraduate students and ‘unestablished staff’ will increase by 2.0% a year. Research staff are crucial to the University’s development of its research, translation and impact activities in the future, and yet its inability to offer housing and social infrastructure provision of a high quality has become a significant problem in attracting and retaining such staff. There are many who feel that the postdoctoral community has been neglected and indeed barely recognised in the life of the University, and point out that it is high time that this issue was addressed, including some kind of pastoral framework. Since a majority of postdoctoral researchers come from overseas, they represent a significant and relatively rootless population of largely single people who may struggle to establish a social life in Cambridge outside the framework of student and staff life based around the colleges. Furthermore, since research staff are predominantly employed on fixed-term contracts, they are exposed to financial instability that prevents participation in the housing market and significantly limits their options in terms of securing appropriate accommodation within a reasonable distance of their work-place.
The need to attract and retain staff

The North West Cambridge development is then conceived as a direct response to this particular issue in relation to the university’s continuing academic reputation and status in the future. ‘To hold its competitive position against Stanford, Yale, Harvard, Cambridge needs to provide housing for postdoctoral staff … [along with] department space of various types, and a commercial research base which is related to university activity’ (masterplanner 2013).

However the city council and the public have also made it clear that they do not wish to see an introverted collegiate model of university development rolled out across the 150 ha site on the edge of the city, arguing that – paradoxically – it would produce a campus-like, institutional landscape from which the public would feel excluded: ‘you must integrate with the existing community – we don’t want this to become a university ghetto’ (University of Cambridge 2011). For the time being then, the collegiate model of higher education provision which Cambridge exemplifies – incorporating residential and teaching accommodation across a network of physical locations – is not being implemented at the site; while the more ephemeral idea of a ‘collegiate atmosphere’ is one which the project team has striven to realise through a specific approach to masterplanning and design of the proposed facilities and housing to a high quality.

The expansion of research and translation facilities

The University owns a number of other sites around Cambridge which are suitable for research growth, and this is not the immediate priority at the North West site. The outline provision of 100,000 sq m of research space includes a commitment to incorporating academic and commercial space at a ratio of 60:40, but is so far unspecified as to use or date of construction. The University Green Paper of 2010 clearly states that: ‘commercial research space will only be built when there is demand’ (Cambridge University Reporter 2010: 110–111) However, locations have been identified for such uses towards the edge of the site in close proximity to the M11, which would be particularly appropriate for the development of more commercial applications should such opportunities for collaboration with industry arise. North West Cambridge was the only possible opportunity for housing growth, and is specifically intended not to be a campus-style development like West Cambridge, the Science Park or the new Cambridge Biomedical Campus on the Addenbrookes hospital site to the south, but rather a mixed-use scheme with an emphasis on residential. However, the initiative will also offer an opportunity to develop a relationship with the research-focused West Cambridge site through its social infrastructure, as well as being instrumental in the development of a more strategic and interconnected approach to the university’s other research sites, especially through the design of new transport links between them.

Structures and processes

‘It has evolved robust governance structures to hold the responsibility of a major capital project, be accountable both up and down, and yet be able to act autonomously and effectively in the manner of an executive board … If you embark on a major capital project you need an effective client. There are lots of important constituencies and stakeholders but having an effective client is key or you won’t get anywhere’

Masterplanner 2013
The University has implemented a number of new approaches in its development of the North West Cambridge site, generated by recognition of the need for a professionalisation of its spatial development processes, including efficient and transparent systems for management and accountability, as well as the import of specific expertise in the areas of masterplanning and architectural design to ensure high quality. The decision to ring-fence the project and appoint a small dedicated management team to run it, removing it from the direct oversight of the University's Estates department, was influenced by the University Registrary Jonathan Nicholls, based on his past expertise and experience as Registrar at Warwick University through the 1990s. It may be seen as indicative of the trend towards universities taking on roles as property developers alongside, and in association with, the delivery of higher education, and evolving increasingly specialised and professional systems to optimise the performance of that function and realisation of land value.

Funding: raising a bond

The University's Green Paper of 2010 detailed the anticipated cost, a financial appraisal, and potential risks of the North West project, underlining the need for viability and ringfencing to protect the University from exposure. It suggested that joint venture arrangements with appropriate partners might be developed for specific elements or phases of the project, but stressed that there would be no advantage in transferring the estate out of the direct ownership of the University to a separate corporate vehicle (Cambridge University Reporter 2010).

The total cost of the project, including the private housing, is projected to be £1bn, spread over 15–20 years, and split 40:60 between the University and private developers, 'on the assumption that the University would develop the infrastructure, the University housing, the local centre, and be responsible for the associated s106 payments' (Cambridge University Reporter:17). The total development expenditure by the University is thus estimated at £400m plus. This excludes the value of the land itself, which, as the former University Farm, already lies within its ownership. In order to capitalise the project, the University took advantage of its AAA credit rating to sell a bond to investors (mainly pension funds), producing a working capital fund of £350m, of which a proportion is loaned to the project for the first phase of development on a 40-year repayment basis at 4.25% interest, and sales (400 serviced sites for market housing) and rental income will be used to repay the loan. From the masterplanner's perspective, this capitalisation process has been very important in terms of enabling the implementation of a coherent, strategic approach to planning and design, avoiding the pitfalls associated with a lack of capital base for infrastructure at the outset – as at West Cambridge, where this was manifested in ‘very uneven development’ (masterplanner 2013) that has been the subject of persistent criticism since: ‘If we’re to achieve the degree of ambition [we want] in quality objectives it needs to be capitalized properly, it can’t be done on a piecemeal basis – which is how universities usually do things’ (masterplanner 2013).

For the Registrary, it was important that ‘the university should take advantage of the market’ and demonstrate ‘commercial edge’ (Jonathan Nicholls 2013) while ensuring that the project was also entirely ring-fenced. On the other hand, the bond issue also prompted concern among some members of the university. It was reported that, amongst others, ‘Ross Anderson, professor of security engineering at Cambridge, was the sole member of the institution’s council to dissent from the original decision to seek external financing for the project. He said that the proposal “was a child of the now-vanished property boom. I took the view that we’d be better off keeping the land, as the basis for [the] development of new departments and institutes” over the next 50 years’ (Morgan 2012). With a view to mitigating the potential impacts of a collapse in the property market, the Green Paper
stresses that risk on developments is to be transferred to others ‘wherever feasible and in accordance with the University’s policies, particularly market housing’ (Cambridge University Reporter 2010:19). However, in comments on the Green Paper, members of a local residents’ association (NAFRA) also remind the university that the land ‘has not been taken out of the Green Belt to solve the University financial woes by creating a vast shopping mall, or high-rise science park, or high-rise housing project, or whatever’ – but rather ‘to provide for [its] housing, academic and research facility needs’, above and beyond any motives of financial profit. 5

In terms of meeting its own needs, the University anticipates that a further source of funding in the future may be buy-in from the colleges to postgraduate student housing for their own members; while additional ‘donation possibilities’ could also at some point result in the foundation of a new college foundation on the site. But for the present, it has made the bold decision to accelerate the funding and design development for the first phase of the project, amounting to one-third of the total scheme, in order to drive the whole initiative forward and enable the occupation of the site at the earliest opportunity.

Project set-up: the Syndicate

‘If the North West Cambridge site is developed, it will take more than a decade for all phases to be completed. It is also likely that the University will have a perpetual financial and ownership interest in the developed site. The duties arising from this, as well as those from the development phases, would best be discharged, not through a committee, but through a commercially focused Syndicate’

Green Paper (Cambridge University Reporter 2010:17)

Notwithstanding the acceleration of the first phase of the development, the North West project has a long-term time-frame, including a long lead-in. The university started thinking about the project during the late 1990s, taking the view that major decisions would require an 'extensive warming-up process' (Deputy Project Director 2013) in order to maximise the scope for consensus supported by 'proper reporting protocols and a share information base' (Registrary 2013). Initially the project was run from the Estates Management and Building Services department as a policy initiative, until the decision was taken to set up a Syndicate, with delegated responsibilities from the University Council, 'which will operate at arm's length from all parties including the University itself and with a balanced membership reflecting internal and external perspectives and skills' (Cambridge University Reporter 2010:19). That Syndicate subsequently delegated a small executive development team in 2009, to operate as a special project unit apart from the Estates department, and act as client for the masterplanner and all the architects appointed to the masterplan.

According to the Registrary, it was considered that the company structure would ‘give confidence to academic colleagues’ (Jonathan Nicholls 2013), with a clear mechanism for accountability to the University including regular financial reports. The University is governed by two bodies, Regent House, comprising more than 3,800 members with a range of interests across the University, and a University Council, an elected group of University officials and departmental representatives, which delegates some responsibilities to particular syndicates established to deal with specific areas of activity – eg Cambridge University Press, and the West and North West Cambridge syndicate. Decision-making processes are distributed across these bodies, with syndicates having autonomy except in certain matters which need to be referred either to the Council, the Finance Committee, or to Regent House for a balloted vote – as in the case of the decision to raise a bond and proceed with Phase 1 of the North West development.

The Syndicates in turn include University members, some of whom also sit on the
Council or Finance Committee, and external members with relevant experience – in this case, development expertise: ‘the Syndicate needs to balance representing the University’s interests with making a survival Development Project’ (Deputy Project Director 2013). The Registrary and Pro-Vice Chancellor Jeremy Sanders both sit on the North West Syndicate, which meets monthly and returns verbal reports to Council. It is further advised by three panels, for Quality (similar to Design and Review), Sustainability, and Public Art, meeting at different intervals. Each panel includes a Syndicate representative, so at all levels of the project structure there is overlap: ‘the nature of discussions within the University are not dissimilar to many multi-headed agencies or organisations’ (Deputy Project Director 2013).

The Development Team is a stand-alone team located near the project site and has no direct reporting relationship except to the Syndicate, as executive board, and to Roger Taylor, who was appointed Development Director at the start, but has since become Estates Director in charge of the University’s overall estates strategy, and from 2013 has been supported by Heather Topel as Deputy Project Director with day-to-day responsibility for running the project. Taylor brought with him experience in mixed-use development for Taylor Wimpey across the country, while Topel was previously Director of the Planning team at AECOM, coordinating the planning application operation across all the consultancies, before moving client-side.

As she says, the university team started small with two people growing to three or four when the architects started working on the project in 2012. Her role is ‘project oversight on behalf of the University, dealing with all of the University interface issues and governance, all of the stakeholder management [including] University, public, local authorities, community groups. I look after the planning issues from a client perspective, all the town planning detail and some special projects like the school proposals, community centre joint venture...’ (Deputy Project Director 2013). By 2014 there were 12 people on the team, including a Commercial Director, Construction and Design Director, and a series of Design Managers with responsibility for design details as well as more strategic issues.

The University’s adoption of a professional, small-scale company structure for the project, answerable to but ringfenced from the University, is said to have provided reassurance to colleagues and observers, while the different elements of the structure are held together both formally and informally by overlapping individual representation – including Topel’s own transfer from consultant to client side, embedding imported planning expertise within the organisation. This has been crucial to the smooth running of the process: as her former colleague at AECOM, Jonathan Rose, points out, ‘a major [university] client should have a way of holding those relationships institutionally’ (masterplanner 2013).

Planning process: long-term engagement and partnership

‘There’s a very rigorous planning process, a very rigorous process all-in-all; in terms of presenting to various University bodies and to the University’s Design Panel, and then to the planners’
Architect 2014’

The University has from the outset emphasised the nature of the North West project as a partnership with the local authorities. On both sides there were clear outcomes that were to be achieved: the University wanted to build a ‘flagship development’ to ‘show off’, the City Council wanted ‘exemplary development’ (planning officer 2014), and between them they agreed to commit to an ‘elevated level of sustainability’ as a framework for achieving those objectives.

As a planning officer explained, the University is ‘not a cut and run developer’ in the public perception, and therefore it’s ‘not surprising that people are a bit complacent
about the scheme – because it’s the University’ (planning officer 2014). On the other hand, the University is clear about the need to engage actively with the city planning authorities and district council in order to ‘maintain a planning policy background at the regional, county and district level, which is favourable to the direct interests of the University (predominantly in Cambridge or very close to Cambridge) [and] ensuring that the planning authority understands the local, national and international roles of the University’ (University of Cambridge 2007:5). This stance underpins the extensive long-term engagement with the authorities which has paved the way for the North West project and made it possible, dating back to the Cambridge Futures initiative of 1999.8

‘People don’t realise how much work was done through Cambridge Futures to pave the way for the development to take place with no objections’ (Marcial Echenique 2013): this policy initiative led by a research team based in the University’s Department of Architecture (led by Professor Echenique), in partnership with businesses and the council, was set up to explore future planning options for the city in consultation with the public, based on the principle that ‘universities have a key role to play in helping to develop and articulate responses to the highly complex planning problems that face contemporary society’ (CABE Archive 2011). A number of alternative models were presented for stasis or growth, to show ‘the impact of alternative strategies on issues such as the costs of production and housing, social mix and traffic congestion’ (CABE Archive 2011). All of these had become significant problems due to the constraints on growth imposed by the 1950s Green Belt designation and the explosion of growth in the science and technology sector (the ‘Cambridge Phenomenon’) which, as reported in the Cambridge City Council Urban Capacity Study of 1998, had produced a significant increase in the working population and an influx of 40,000 people into the city each day from the surrounding areas (Platt 2015). The public response favoured the case for expansion, allowing the Cambridgeshire and Peterborough Structure Plan to be changed at a Public Inquiry in 2003 so that the green belt could be released through a system of ‘green swaps’, or ‘green wedges’ extending from the periphery into the centre of the city. The plan established a need for 8,900 new homes to be constructed in the built-up area of the city, with 8,000 new homes to be built on the edge, and designated the site between Madingly and Huntingdon Roads as a Strategic Employment Location to be reserved for predominantly University-related uses when a clear need could be demonstrated, with the requirement that a masterplan be prepared for its development.

At the same time, the Government’s Sustainable Communities Plan (2003) set out the need to address housing supply and affordability in the south-east, especially in relation to recruitment and retention of staff around Cambridge, identifying London-Stansted-Cambridge-Peterborough as a Growth Corridor. These significant policy shifts provide the context for the University’s efforts to bring its University Farm site on the edge of the city out of the Green Belt, and bring forward development on it. In 2001 EDAW was appointed to draw up a planning feasibility study that would articulate the University’s need for housing and research growth, and associated uses to cross-subsidise the development.

The work was complicated by the fact that half the site lay under the jurisdiction of the City of Cambridge, and half under that of South Cambridgeshire District Council. However it helped to spur the formation of a new joint development control committee (JDCC) to oversee a decision-making process that also encompassed measures for the growth of the transport network, new social infrastructure and retail provision, and the establishment of the principle of ‘mixed and balanced’ communities at the site, as well as on other developments in the city fringes.

In 2006, the City Council identified new sites on the edge of the Local Plan where new housing developments could go, including the North West site, agreed on the basis of ‘university need’. In 2009 a new Area Action Plan was produced collaboratively between the planning authorities and the University’s consultants (AECOM which had by then absorbed
EDAW) presenting evidence on behalf of the University, to establish the detail of how the land would be developed, including a requirement for 50% housing for sale on the open market. AECOM was appointed the same year as masterplanner for the site through a competitive tender.

The City Council points out that they had already ‘learnt lessons from other sites elsewhere’ (council spokesman) and did not need the University to lead the way; rather it was a collaborative approach which developed in parallel with the plans for a neighbouring site to the West, Darwin Green, which had also been taken out of the green belt for housing development led by David Wilson Homes, subsequently replaced by Barratts. However, there is a clear sense that a differential quality of development on the two sites is anticipated: in the words of a local resident, ‘we can expect a lot of little boxes there [at Darwin Green]’ (local resident 2014). By contrast, there is an expectation that the university site will meet higher standards and constitute a proper new ‘urban quarter’. The key problem which has been identified by some local residents is a lack of proper ‘joined-up thinking’ across the two sites (local resident 2014), and an inability on both sides to engage with the question of links between the two in the early stages.

Community engagement from the outset

‘NAFRA looks forward to similar soliciting of feedback from all with an interest in this project as it proceeds, and hopes that this won’t be restricted to members of the Regent House and to formal University decision-making procedures. A Green Paper is an uncommon (but by no means unwelcome) approach to University development ... In the interests of transparency, and to give greater credibility to the outcome, we would urge publication (via the NWC website) of comments received’

NAFRA (Cambridge University Reporter 2010:4)

The sheer extent of proposed development across the two sites in this part of Cambridge necessitated a concerted effort on the part of the University to establish a comprehensive public engagement strategy early on. It was well aware that failure to mobilise support from largely affluent and well-connected local residents, many of whom were themselves University or college staff with their own networks of contacts inside the University, would not only hinder its ambitions but also tarnish its reputation.

Consultancy Communications Management was appointed in 2009, contracted to oversee engagement on the masterplan through to planning permission (secured 2013). The three key audiences were carefully mapped out as: internal members of the University (academic staff and students – of which the latter will not benefit from the development – and support staff); key stakeholders, both local and from further afield, including councillors, vicars, MPs, the Cycling Forum, Preservation Society and subregional organisations; and the general public. The engagement strategy had to conform to the University’s established decision-making processes, making it more complicated than it would be on a normal development, with a view to developing long-term relationships on the ground. A Community Group was set up early on, to meet three times a year to discuss subjects determined by its members – invited representatives from specific community groups. This has subsequently been supplemented by a Council-run joint Community Forum established for both the NWC and Darwin Green developments, in order to address the problem of the relationship between the two. A stand-alone NWC project website was launched, described by a Council planning officer (2014) as ‘the best I’ve ever seen for a development’, and including a Statement of Community Engagement. In addition, a subscriber newsletter was produced and a series of regular briefings offered, as well
as a regular letter to 3,000 local residents in the immediate vicinity. Finally, workshops were organised for key stakeholders during the development of the masterplan itself: ‘interactive discussions around plans with opportunities to move around land uses and density’ (Deputy Project Director 2013).

Paul Barnes of Communications Management notes that the Community Group has remained consistent over time and even grown, and that the university has put in ‘a lot of the work ... around thanking people – [for] their commitment of time and effort’ (Barnes 2013). The view of residents, such as those who set up Nineteen Acres Field Residents Association specifically in response to the proposals, is that: ‘we would prefer to see the North West Cambridge Site remain undeveloped, as it is, with much of it remaining in the Green Belt. The development of this site will have a markedly negative impact on our lives…. However, we realize that the University has an expressed need to develop the North West Cambridge Site for housing, academic and research purposes, and ... that the accommodation provided by the University will contribute toward meeting the housing needs of the Cambridge region over the next decade. Therefore ... we have worked with the Department of Estate Management at the University and later with the North West Project Group, along with the Cambridge City and South Cambs planning personnel, to try to assure that this development would be sensitive to our needs as existing residents as well as being attractive and sustainable in its own right. We are reasonably content that we have achieved these goals’ (Cambridge University Reporter 2010:2). However it is also noted that, although the University is considered to have ‘shone in how much it was doing’ (local resident 2014), especially by contrast with Darwin Green’s developers, planning fatigue over a long period is a significant problem, and many residents are too busy with their day jobs to engage in the process unless it directly alters the view from their back gardens. They are ‘scared they’ll be given jobs to do’ (local resident 2014), and in addition they are sufficiently reassured by the fact that the university is the developer not to inform themselves in too much detail: ‘our perception ... is that residents look to the University Scheme to deliver on quality that they cannot rely on on others to do. And part of that has to do with the investment, knowing that the University will be there for the long-term ... when it comes to the University facilities they are very keen to benefit from them. And the retail and community facilities, having something nearby....’ (Deputy Project Director 2013).

However, one resident suggests that ‘it’s only just dawning on most residents what’s happening to the city’. She also notes that, although the consultation net has been widely drawn, certain groups – particularly the Church – have, by virtue of being well-organised, exerted particular influence over the process. One Parish in particular is seen as having ‘stolen a march’ on the project, with four units of housing reserved for faith workers, which, she says, ‘we feel ... is wrong ... [since] the majority of people are not of faith’, and the emphasis on the role of faith in the constitution of the new community (although there is no provision for a dedicated new faith building) runs counter to the views of secularist and humanist residents. On the other hand, she says, ‘attendance at forum meetings hasn’t been wonderful’, and if there are complaints from residents ‘it’s their fault’ (local resident 2014).

Engagement through public art

While the project team has been cautious about both over-consulting on and over-publicising its development activities, it has been keen to promote its public art strategy, as an integral, though not formal, part of its overall community engagement plan. The AAP and the Council’s planning guidance both emphasise the need for public art to be part of the proposed development ‘to help generate pride in the area, increase a sense of ownership, develop cultural identity, create distinction, character and identity and contribute to quality of life...’ (North West Cambridge 2012:2). From the project team’s point of view, it is an...
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important component in bringing visibility to the site and promoting public awareness of the project, due to the nature of its location: ‘it's essentially a backland site ... it has one public footpath over it now and it feels like it's on the fringes of Cambridge. So establishing an awareness of the Site from very early on and making it feel connected and part of the City, and developing a programme of events around that, is important’ (Deputy Project Director 2013).

This view led to the appointment in 2011 of InsiteArts and the Contemporary Art Society as advisors/curators for five years, and to write a public art strategy in collaboration with Roger Taylor. The budget for Phase 1 is £1.5m, with £3.2m allocated for the full 25 year programme, funded by the s106 agreement and potentially through additional alumni donations. The strategy was promoted to the architects who attended the tender briefing to ensure that it was embedded into the design approach from the start, and premises and facilities for the artists have been provided at the Gravel Hill site office.

Three artists in residence are appointed each year to work with selected university departments, receiving a fee of £10,000 each, and a £5,000 making budget. In 2012, two artists, Nina Pope and Karen Guthrie, worked with the Archaeology Department and members of the public to create a model village of the first phase of the development using the mud spoil produced by the archaeological dig which preceded infrastructure works. In addition, artists are appointed to undertake permanent commissions on the site, working alongside the Design Team. For example, Winter and Hoerbelt worked in collaboration with the landscape designers on a project called The Wanderer, located at the edge of the site. This is a sculptural work relating to ideas about water management and sound mitigation.

The permanent works involve less public participation, but are intended to engage the public in different ways, and to reach people who may slip through the net of conventional consultation tactics. Sam Wilkinson of curators InsiteArts has explained: ‘It's not about art for art's sake, but about making a place, taking ownership. Consultation is big, but fatigue is also a big problem. Public art leaves a mark on you personally ... it's about reaching out to the people who aren't in those networks’ (Sam Wilkinson 2014). Not all residents are convinced of course. One describes the public art programme as ‘a bit of a joke’ (local resident 2014), which serves to distract attention from more political issues. She also questions how much it must be costing the university, when there are so many people involved, and whether that money might not better be spent on education.

![Photo C.Melhuish 2014](image-url)
Appointment and roles of masterplanners and architects

‘The four big drivers for the masterplan: connectivity, community, character and climate’
AECOM, World Architecture Festival 2014

Following its appointment as masterplanner, and the stakeholder and public consultations in November 2009, AECOM began work towards submission of the outline planning application – the city’s largest – in 2011. The 15-strong team was split between urban design, planning and landscape. Its role involved not only producing and submitting the planning application for the masterplan and design code (based on the parameters developed and set out in the AAP), but also writing the brief and design guidance for the architects, and participating in the selection process, as well as briefing the urban design charette (2012) run by the University for students and staff in the Department of Architecture.

Following the appointment (also 2012) of 14 architectural practices to seven commissions for the design of buildings in the first phase, AECOM took on a coordination role of ‘masterplan guardianship’, to ensure that all the design proposals conformed to the design code which had been established and approved by the planning authorities.

The call for architects, run by Colander, was divided between seven lots, with very high numbers of applications on each one. The University followed strict procurement guidelines to produce shortlists of 10, then three or four invited to tender on each: ‘it was an incredible amount of work to get that right’ (masterplanner 2013). Roger Taylor has described the field as ‘a galaxy of architectural talent’ (Roger Taylor 2013), but the selection process was ‘as much about how they might work together ... a common ethos, approach to materials ... the environmental response’ (masterplanner 2013). The architects were expected to conform to general principals enshrined in the masterplan and agreed with the local authority, but to be proactive in terms of interpretation and in the design of their own buildings.

Architectural appointments were awarded in summer 2012 to Wilkinson Eyre and Mole Architects with landscaping by Townshend (Lot 1, supermarket, energy centre, GP surgery, university apartments); David Chipperfield, subsequently replaced by Stanton Williams (Lot 2 local shops, housing office and university apartments); Mecanoo (Lot 3 university apartments); Cottrell and Vermeulen, Sarah Wigglesworth Architects and AOC, (Lot 4 university apartments and family houses – the Ridgeway Village); RH Partnership (Lot
The key elements of the masterplan include a green buffer zone adjacent to the M11 and a central park, constituting one-third of the site as public space. The local centre (Eddington: Phase 1) and two ‘villages’ of residential development (known as Gravel Hill and Ridgeway Village) make up the rest of the ‘walkable’ development, with higher density (3–5 storeys) mixed-use buildings in the centre, and lower density typologies around the edges, backing onto existing housing and gardens. The 2,000 units of student housing are broken down into three clusters, to reproduce a college scale of development, if not typology. Future research and development activities are distributed in three clusters on the north-western, western, and south-eastern edges of the site. It is traversed from south to north by a new primary street connecting Madingley and Huntingdon Roads, with a dedicated pedestrian/cycle route also cutting through the centre of the development and connecting to the existing network into the centre of Cambridge via Storey’s Way.

The design challenge was how to create buildings at the right density that support a sense of community amongst a diverse and transient population of mostly university-related workers and students, and generate a collective vision across the large number of architectural practices, rather than an ‘architectural zoo’. AECOM produced a 3D computer-generated reference model into which the architects’ models of their own buildings could be incorporated as they emerged, which would pull the project together as a cohesive entity, but also give the architects something ‘to push and pull against’ (masterplanner 2013). Each lot would then be the subject of its own detailed planning application, coming forward incrementally from 2013 onwards. In early 2015, two further parcels of development...
were awarded to two commercial developers, Hill Residential and Countryside Properties, working with Alison Brooks Architects and Pollard Thomas Edwards, and Proctor and Matthews Architects respectively to deliver market housing in line with the parameters set by the masterplan.

The design principles established both by the masterplan and by the University's own design charette underline the importance of avoiding the introverted collegiate model, with outward-facing buildings that engage with the street (‘a welcoming environment ... a desirable destination for both “town” and “gown”),' and creates very clear rules concerning the massing of buildings, the relationships between them, and organisation of vehicular access and circulation. While this provides the advantage of cohesion, it is noted that ‘it also creates an awful lot of constraints which everyone has to work with, even if you discover some very good reason why it might be better to do something else’ (architect 2014). Since the masterplan is driven to a great degree by technical requirements relating to daylighting, fire access, waste management etc, one of the problems identified is that it has forced the introduction of large spaces (typically 10m wide) between buildings as they get taller. This creates a disproportionate amount of empty public circulation space to building mass and communal organisation, which the architects have endeavoured to address by designing semi-courtyard, semi-permeable structures to introduce a sense of intimacy, proximity, and interaction in the development, evoking without replicating the college model in order to produce a scale of construction and inhabitation which is more in line with that of the city centre.

**Visions and narratives**

The overarching vision behind the North West Cambridge Development has been that of ‘a vibrant, urban extension to the City that predominates as a University quarter but is also a mixed academic and residential community ... connected internally and with the wider city by green spaces and pedestrian and cycle routes ... It will be an exemplar of what can be achieved through contemporary technology, architecture, and urban planning’ (Cambridge University Reporter 2010:3). The idea that North West Cambridge would set new standards in urban design has been fundamental to the project from the start, over
and above any academic vision of what the site would offer in terms of university research and teaching programmes, which indeed remain largely missing from the narrative. However, as Marcial Echenique points out, urban design alone cannot bring vibrant places into being. Careful economic and spatial modelling are required to assess the relationship of land use, employment, and transport provision, ensuring that everything connects together; while also being careful ‘to keep the special quality of Cambridge as a good place to live, or it will lose its fundamental appeal, its basis for growth’ (Marcial Echenique 2013).

University and city – ‘mixed and balanced’

The projected residential population of the new quarter is estimated at 7,000 on completion, with a working population of around 4,500 hosted by the academic and commercial research facilities (Cambridge University Reporter: 2010). Although it is university-led, the Council’s planning guidelines enforce the principle of ‘mixed and balanced’, so that it should neither become a ‘university ghetto’, nor a repetition of the West Cambridge development where there was little or no consultation with residents and limited residential provision. North West is viewed as part of a ‘necklace’ of new residential development designed to address Cambridge’s chronic housing shortage – not as the Option 3 model defined by Cambridge Futures as circling the city outside the greenbelt, but one lying within it and including Darwin Green and Orchard Park eastwards towards Cambridge Science Park.

In the public exhibition prepared in 2009 and 2010, it was stated that ‘The vision for the development is a sustainable new collegiate community close to the local centre designed to meet the needs of a growing postgraduate student community in the city. Students live in small sociable family house groups’. However this narrative has been significantly modified to emphasise the character of the development as an ‘urban quarter’ bringing benefits to the wider population, rather than as an exclusive university community. The council has worked hard with the University to achieve this shift of emphasis, explaining that: ‘we as officers have always been concerned to get the “mixed and balanced” community right’ (planning officer 2014). Nevertheless, the vision for the new community is hardly ‘mixed and balanced’ in the conventional understanding, since, under an unusual planning anomaly, the University has been permitted to classify all of its staff accommodation at North West Cambridge as affordable ‘key worker’ housing (50% of housing provision of the site, on a discounted rental basis set as a proportion of net household income), in place of the standard 40% of affordable housing (including both social and intermediate rent) normally imposed by the council for new developments. Although council officers state that the new housing stock will help to ease pressure on the council housing waiting list, it seems unlikely that many university staff would be eligible for housing assistance through this channel, and certainly none of the future occupants will be unemployed. Hence the ‘mixed and balanced’ complexion of the new development will be delivered essentially through the private housing component sold on the open market at standard Cambridge prices, to a mix of university and non-university owner-occupiers (including young researchers taking the next step into ‘leg-up’ housing after their first contract) - moving within similar social networks.

Design vision

‘The image of a campanile marking North West Cambridge is beguiling, the efficacy of which will be discussed with the appointed architects and the University’s development team’
Jonathan Rose, AECOM, 2012
Another vision for this new balanced community was produced by graduate students in the University’s Department of Architecture as part of a separate academic design exercise that ran in parallel with the actual appointment of architects for the site in 2012. It had a traditional feel, marked by a campanile perhaps a little too evocative of the ‘ivory tower’ image which universities have been keen to put behind them. On the other hand, it demonstrated the desire to establish an urbanity based on traditions and scales of development which recognize the identity of Cambridge as a quintessentially university town, and rejects both typical campus-style development and suburban typologies and densities. It produced recommendations intended to make North West Cambridge ‘a desirable destination for both “town” and “gown”’.19

The vision embodied in the AECOM masterplan also establishes an integrated urban model of development, distinct from that of a dormitory town or university campus, which is intended to nurture ‘the art of daily life’ (AECOM)20 as an extension of the city. But it adopts a more contemporary design approach which is strongly shaped by the technical requirements imposed by the sustainability agenda – for example the use of flat roofs with photovoltaics throughout the scheme, and particular materials (principally brick). This has led to the appointment of architects who work in an explicitly contemporary idiom using modern building technologies, while also drawing on traditional typologies of spatial organization and building distribution, including the models of the college and market square, in order to create a sense of social interaction and community across the scheme. In the words of one architect describing the design approach to Lot 2, it’s about ‘how you start to create established communities around groups of people as you do in the traditional college – a community of key workers – and then work out towards the more urban aspects of the Scheme. That’s how we’ve been developing this, looking for spatial structures around the buildings which encourage people to interact’ (architect 2014). At the heart of the scheme, the local centre focused around a public square, is designed to establish a community hub which generates the social and spatial identity of the wider development through an expanding network of spaces of different character. Thus the design vision for the project lies as much in its spatial organization and connectivity as in the facades and architectural detailing of the buildings themselves, with a view to bringing people together within a cohesive new neighbourhood.

**Sustainability agenda and design code**

Fundamental to the planning deal with the authorities was the agreement that North West Cambridge would establish new standards of environmental sustainability through its design and construction. It will be the first Code for Sustainable Homes Level 5 development of its scale in the country, with retail and non-residential elements designed to BREEAM Excellent. It will have the largest non-potable rainwater sustainable drainage and recycling system in the UK, and a very low parking ratio, seen as ‘ambitious’ by a planning case officer, based on the principle that many of the inhabitants will be single or couples rather than families, and cycle rather than use cars. Vehicular traffic through the development is channeled along two main routes, with restricted access to other areas, and the size of the supermarket, 2000 sq m of retail space operated by Sainsbury’s, has been agreed on the basis of what would be suitable for local use as opposed to attracting incoming traffic from further afield.

The impact of the development on traffic flow through the area, and on local water resources, has been questioned repeatedly at community consultation events during the development of the masterplan and building projects. Traffic heading into Cambridge from the north-west already runs ‘nose-to-tail’ past her house, comments one resident, in the morning rush hour. And in an area of the country classified as ‘semi-arid’, how will the
water consumption of an additional 7,000 residents be accommodated? The project team maintains that, according to Cambridgeshire County Council’s own studies, additional traffic generated from the site at peak times will not be more than 1% of existing volumes, with fewer than 40% of residents travelling to work by car (University of Cambridge 2011:5), while its plans also include improvements to existing bus services which will be subsidized by the University. As for water management, the Code 5 design standard will minimize water use in homes by nearly 50% through the use of rainwater channeled in rills running down the natural slope of the site to the west, where it will be collected in ponds in the open space next to the M11 to be treated and pumped back into homes for non-potable use. This system also addresses fears of increased risk of flooding on the site due to development.

In addition to these measures, a £2.98m District Heating System contract has been awarded to Vital Energi Utilities, and an innovative waste management system of 450 underground bins is to be put in place, with a shared service collection agreed between the City and District Councils, whereby the former will empty and maintain the bins on behalf of both using a new, specially adapted collection vehicle.

These various points of the sustainability agenda have had an important influence on the development of the design code and architectural responses to it. As an architect explains, ‘The whole development is codified for sustainable homes, and that has driven a lot of the architectural language; it has a significant impact on what we can and can’t do … [and] there’s a great deal of common language between the buildings partly driven by those technical issues.’ For example: ‘Code Five drives very well-insulated, quite simple volumes … a limited building envelope to floor-plate … and difficulties in getting very articulated facades because of thermal bridging issues’ (architect 2014). It has also resulted in the implementation of flat roofs across the site which has not been received well by some residents on the perimeter, and even surprised the masterplanner and architects: ‘there were ambitions in the original masterplan to have more broken-up roof forms, and it was a surprise for everyone that actually the only answer was a flat roof with photovoltaics on’ (architect 2014). On the more positive side however, the requirement for high levels of daylighting to apartments has set deep apartment plans off-limits, leading to a higher quality of residential accommodation.

In terms of materials, the sustainability requirements have indicated durable, low-maintenance options which weather well, leading to the adoption of ‘a shared palette … which is principally brick’ (architect 2014). Rather than experiment with ecological prefabricated timber construction systems, the University’s preference was to use traditional, tried-and-tested techniques. ‘There’s a bible … it’s quite complicated and it was probably more complicated because the Design Code was being developed in parallel with [the architects’] design proposals’, comments an architect (architect 2014). On the other hand, it has also created scope for some interesting design explorations. For example, the emphasis on cycling and provision of cycling facilities has prompted the architects for the housing in Lot 2 to think about how that can mesh the environmental with the social sustainability of the site: ‘we like the idea that you arrive by bicycle, and parking your cycle in a communal structure where you meet other people is one of the opportunities to reinforce this sense of community. So we are creating houses or courtyard gardens for bicycles. Each of them has an opening with trees growing through it. These are actually rain gardens, so they [are linked to] our sustainable drainage strategy. They’re broken down into groups of bicycles, so that means that you’re sharing them with more than just the people on your staircase and there’s an opportunity to meet other people’ (architect 2014).

For other developers, North West Cambridge will certainly set a high standard of what is attainable in terms of setting and meeting sustainability criteria. However, as a planning case-officer points out, it is a slightly ‘false hope’ that the University will raise the
bar for sustainability standards, since ‘normal’ developers are not required to conform to the same ‘elevated policy levels’. So, although universities as developers are viewed as being able to push boundaries and generate exemplary models, it remains unclear how those standards might be enforced for others with less advantageous access to finance and resources, and no long-term commitment.

**Future flexibility for university estate**

‘In terms of quality and how that drives quality, most of the streets, public spaces, buildings, land within the site will be retained by the University; it’s not being offered to the City for adoption, or South Cambridgeshire, and it will be managed by the University Estate … the University’s in it for the long haul’

*Deputy Project Director 2013*

Notwithstanding the rhetoric around high quality design and an urban vision, the North West project is anchored in a strong narrative around its own financial viability, institutional reputation, and long-term flexibility in terms of its estate. As the largest single capital development it has undertaken in its 800-year history, North West has mobilized and consumed enormous resources and will continue to do so over the 25 years of its phased implementation. At the same time, it represents a resource in itself from which the university intends to profit – but, as a planning officer puts it, ‘a different kind of profit’ from a commercial developer, which is invested in a long-term vision and commitment to the site. In the words of the Deputy Project Director: ‘Since many of the occupants will be University constituents there is an incentive to ensure that you are responding to their needs – and that’s everything from academic interests to sustainability and environmental quality, and making sure facilities are there from the get-go. So that drives quality … The main priority for the University here is to provide affordable, fit-for-purpose housing that’s going to help maintain its competitiveness. The sole driver is not a commercial out-turn … the University is looking to drive up standards, and raise the bar in terms of sustainability and design’ (Deputy Project Director 2013).

This is generally understood by the local community, as expressed in NAFRA’s comments on the Green Paper (Cambridge University Reporter 2010), yet at the same time the development of the site will undoubtedly transform this part of Cambridge to an extent which may not yet be fully grasped by many residents. A planning officer speculates that people will be ‘shocked’ when they finally start to see five-storey buildings materializing on the site, and may regret not having taken more interest earlier on. The reality is that most residents who have engaged with the consultation process have put their trust in the University as a historic landowner with a reputation to maintain, while focusing most closely on aspects of the scheme which immediately affect their own properties (ie proximity of new buildings), rather than the impact of the development as a whole in terms of its transformation of the area into a wholly new kind of place.

**Place-making and naming**

‘Identifying place names for the development is not an easy task. We are grateful to our local community which, through consultation, has informed our approach to naming … Natural naming grounds the new development within its location, adding to the sense of place that we are creating’

*Roger Taylor, Project Director (North West Cambridge 2014)*

The rhetoric of place-making has become a familiar aspect of urban development in the
so-called ‘experience economy’ (Lonsway 2009), evoking an idea that new places can be
einstantaneously created and rooted in existing contexts by assembling an inventory of
particular design elements held together by a convincing story-line. But there have been
many questions about the vision and characterization of the North West development as
a new ‘urban quarter’, highlighted by the issue of identifying appropriate names for new
neighbourhoods and streets within the development.

From the start, North West Cambridge has been intended to tell an ‘urban’ story that
would set the development apart from its suburban and rural hinterland, as an extension
of the city reaching out towards the perimeter – yet the city of Cambridge is hardly an
urban context, rather a market and university town. Furthermore, the decision to create
a new ‘market square’ at the heart of the North West local centre creates confusion since
a historic market square already exists in the centre of Cambridge. The urban narrative
seems directed towards justifying the large scale and volume of the intervention in a
much less dense and small-scale, low-rise context, and also perhaps with an international
cosmopolitan audience in mind; while the naming of the two residential neighbourhoods
as Ridgeway Village and Gravel Hill, referencing existing natural landscape features,
seems designed to appeal to existing residents familiar with the rural context in which
Cambridge sits.

As a council spokesman mentions, naming new developments is a sensitive issue,
and closely linked to branding strategies on the part of developers, commercial or
otherwise. The Council has been keen to work with the university on its branding and
placemaking strategy, because it knows from past experience that local communities can
be very sensitive about the names that developers dream up for their sites, and because
‘we want to have together some influence over this area of the town’ (planning officer 2014).
For this reason, one strand of the Public Art Strategy, in which the council has had
a significant hand, has been the ‘Making Place – Naming Commission’, designed to mobilise
artists to work with local people towards the development of ideas for new names for the
development ‘and to support branding of the development’ (North West Cambridge 2012).
This will involve three text-based artists, writers or poets working alongside the marketing
team to gather thoughts, memories and stories from local people about the area as each
phase of the development unfolds and develop a range of site names.

Early in 2015 it was announced that a name had finally been identified for the new
local centre on the site: Eddington, after the astronomer, mathematician and physicist
Sir Arthur Eddington. Not only is the University’s Department of Astronomy located
immediately adjacent to the site, but Eddington himself lived for some time in the Gravel
Hill Farmhouse, where the site office is now located. But more importantly perhaps,
Eddington’s name will have resonance within the field of scientific research and
enterprise on an international scale, lending global reach to the naming decision behind
the local centre.

Translation into place

‘It’s almost like seeding the development … the heart of the thing is developed
by the University and then it can spread out’

Architect 2014

As the process of naming unfolds, drawing both on natural physical and geographical
features of the landscape, and on people who may combine a strong connection with the
University and an internationally recognizable profile, the construction of the North West project is concurrently translating the masterplanner and architects' designs into a material reality embedded in that physical and social landscape. With the University's decision to accelerate the construction of the first phase, containing the local centre and its social amenities, there is optimism that this 'seeding' process will kickstart the development into life as a real ‘place’ at an early stage, allowing subsequent phases to evolve in a more natural organic process, spreading out from the heart. ‘The centre will establish the identity of the wider development’, explains an architect (architect 2014) but also, it is hoped, provide the catalyst for positive change in the area which will benefit the city as a whole.

Site context

The North West Cambridge development is neither a typical scenario for urban regeneration on the one hand, nor concerns about gentrification on the other. It is an affluent, suburban area, within a 20–30 minute walk of the historic city centre, and described by a planning officer as ‘very nice – posh’ (planning officer 2014). He further notes that there is no significant deprivation anywhere in Cambridge, and development has been encouraged primarily in order to address a housing shortage caused by an economic boom, not the effects of recession, and in recognition of the continuing importance of the University's role in sustaining the city's economic growth.

The site is located within a triangular wedge of land between the two main radial roads leading north-west out of Cambridge (Madingley and Huntingdon Roads), and bounded on its western edge by the M11. The area abutting the M11 is open farmland, bordered along Huntingdon Road by private houses and gardens. On the other side of Huntingdon Road, as it heads towards Girton, lies a network of residential streets which will be densified in time by the Darwin Green development. Madingley Road hosts more mixed development, with access to three of the newer Cambridge colleges and extensive student accommodation on the north side, alongside some clusters of private detached houses on the edges of the site. To the south of Madingley Road lies the university's West Cambridge site. Although the roads are busy at times with traffic, the area has a leafy, quiet, and secluded atmosphere, with an almost complete lack of shopping or other social amenities. The houses are set back from the roads within generous gardens, veiled from the public eye by greenery. But passers-by are few and far between, despite the concentration of student numbers at the colleges – more evident from the large numbers of bicycles parked outside than human presence or sound.

The 150 ha new development will spread out from the end of Storey's Way to the edge of the M11 and Madingley Rise, with the new local centre located just north of the park-and-ride facility off Madingley Road. Student housing will be distributed to the west and north of it, buffered from the motorway by a long strip of open parkland. Other residential provision is distributed to the east (Storey's Field) and north (Ridgeway Village), forming a natural extension to the existing concentration of residential development either side of Huntingdon Road. Hence the view expressed by one architect: 'I don't think it's invading a community in any way – they're more interested in what they're going to get out of it and how close the development is to their back gardens, because they're 50 ft long and look out onto fields…' (architect 2014).

Phased construction process

Nonetheless, this has been a prime concern both for the project team and for the local residents associations, particularly NAFRA and Storey's Way. The decision to start the highest density development (apartment buildings) at the furthest point from existing
houses is a strategic response to local concerns, allowing subsequent waves of residential development (family houses) to unfold gradually at decreasing densities towards the north-eastern edge of the site, interspersed with significant areas of open land.

Having commenced infrastructure works on site in August 2014 (under the £49.9m contract awarded to Skanska), it is anticipated that the first 352 student housing units (contractor GRAHAM Construction), 400 private homes, and 352 university key worker apartments, will be occupied between the end of 2015 and mid-2016 (Phase 1A), with a coherent neighbourhood centre up and running (contractor BAM) – including a new primary school run by the university scheduled to open in September 2015 (contractor Willmott Dixon). The remainder of Phase 1 will be finished by mid 2017 (including another 300 market homes). The second phase of university and market housing is broadly scheduled for completion in 2021, and the conclusion of development, including potential academic and research facilities, is due to finish between 2025 and 2030; however none of this has yet been determined or approved for implementation by the University.

From the council perspective, there is confidence that the phasing will work and the university accommodation built as scheduled, along with the social infrastructure that will bring people into the site from the start. With most sites, the concern is that there won’t be enough social infrastructure in place early on. But there is more anxiety here that a new economic downturn could mean that the private housing won’t be delivered on time, to realise the mixed environment that has been promised. This would contravene the planning principle enshrined in the 2009 Area Action Plan, and undermine the identity of the development as a truly urban quarter.

**Community infrastructure and social impacts**

\[4.3\]

‘I think we’ll be better off – but we’ll have more buildings – more building – and loss of green lung’

_Local resident 2014_

The North West Cambridge site is not one, then, in need of ‘regeneration’ as such, but it has received planning approval on the basis that it will deliver ‘a strong and healthy community’, to quote Roger Taylor (Hopkirk 2012), and this has been pinned to the provision of both mixed housing and much-needed shopping and social amenities in an under-serviced area, including one-third of the scheme returned as public open space. This has been driven in part, on the University’s side, by an awareness of the problems inherent in the previous West Cambridge development, which is widely seen as being ‘socially, a disaster’ (local resident 2014), with no shops for miles.

But there has also been debate around the proposed schools provision, and local disagreement over the uneven distribution of social amenities across the North West and Darwin Green sites, which are identified with slightly different demographics. Residents have long been campaigning for a new secondary school in the area, and have been disappointed that North West Cambridge will not deliver one. All the sixth-form provision is located on the south side of the city, and the new secondary promised on the Darwin Green development, towards which the University is making a substantial contribution, will only go up to 16 years. Conversely, there are already two primary schools in the area, which the new University Primary seems set to duplicate. ‘It will either be a disaster, or somewhere everyone wants to go, to the detriment of the others’, claims one resident (local resident 2014), while the development team points out that these schools are already at capacity and certainly won’t be able to meet demand from a new community of 6,500 residents.

Furthermore, the proposed development of 1800 homes at Darwin Green has been approved without any community hall facility and only two units of retail accommodation

...
in contrast to the 700 sq m of community space (200 sq m more than required) plus retail at North West Cambridge. Residents have demanded to know why Barratts have been ‘let off’ provision of community amenities, while the University seems to be under pressure to invest funds in social infrastructure which perhaps should be channeled directly into higher education. The council has argued that this is not the case, but that the Darwin Green development, being more family-orientated, has a different demographic which should be reflected in the provision of a ‘youth café’ or children’s centre rather than duplicating facilities on the North West site.

Indeed, the North West site will have a rather unique social demographic, comprising a high proportion of highly-qualified, international, and probably transient employees alongside the student population: 75% of those eligible for key worker housing are likely to be post-doctoral researchers, while only 25% will be university support staff who might otherwise be on the council waiting list for housing. Applicants will be means-tested to ensure eligibility based on the rent accounting for more than 30% of net household income – a task somewhat simplified by the fact that all applicants will be on the University’s own payroll. However this has not passed without criticism, as the university’s student newspaper reported: ‘concerns have been raised that low-cost homes are being provided to university staff already earning as much as £47,000, instead of automatically favouring lower-income Cambridge residents’ (Graham 2013). Furthermore, 75% of the new affordable university housing will be made up of one-or two-bedroom units favouring single people or couples, with only 25% designed as family accommodation, although the figures are reversed for the market housing which has no affordable component. The remaining 50% of more family-friendly market housing provision will sell in line with Cambridge’s elevated property prices.

Unlike Darwin Green and other developments, where planning guidelines specify that affordable housing be pepper-potted throughout the development to avoid concentrated areas of unemployment and antisocial activity associated with it, the North West site distributes the key worker accommodation in more cohesive clusters. This reflects an implicit assumption that tenants known to be qualified and employed are unlikely to create trouble-spots of disruptive behaviour; but also the recognized need for transient international staff without collegiate affiliations, located at a distance from the city centre and facilities, to be provided with some kind of social structure through the planning of the accommodation around communal areas. This awareness has also prompted the establishment by the University of a new Office of Postdoctoral Affairs with pastoral responsibilities for the social, as well as academic, welfare of postdoctoral staff. In addition, the housing clusters are located in proximity to the public space in the scheme, with a view to encouraging tenants to occupy it for a range of activities, and contribute to the development of community life more widely on the site. The community centre, run by a trust jointly funded and staffed by university and council community development workers will play a key role in pulling this together, and in ensuring that the area doesn’t become a ‘university ghetto’ in the future.

This ambition is further echoed in the manifesto for the new university training school, a three-form entry local authority school. The newly-appointed head teacher James Biddulph explains that: ‘Although the school has the name of the university we want to very much be part of the community of local schools and be in partnership with them’ (Welham 2015). But there are concerns that both a lack of critical mass at the outset, and high turnover of the population over a three-year cycle into the future, could jeopardise the hoped-for social development and sustainability of the new neighbourhood. An architect mentions that strategies are being considered for the curation of the public spaces with organized, programmed activity (eg a farmer’s market, screenings, special events), as for example at high profile development sites such as Kings Cross in London, in order
‘to boost its identity’. There is an understanding, then, behind the rhetoric of placemaking and community building, that ‘seeding’ a healthy new community on the site is likely to be a long, slow process which will need to be supported by a continuing input from the University before it bears fruit.

Future growth and the urban economy

‘It’s very difficult to disentangle the University from Cambridge; they’re inextricably intertwined’

Deputy Project Director 2013

In its award-winning submission to the World Architecture Festival, AECOM stated that the ‘As the masterplan comes alive in the coming years and decades, one of the world’s most beautiful urban settings will continue to be a world centre for research and inquiry. The foundations are firmly in place for this UNESCO-listed town centre and iconic university to grow sustainably well into the centuries ahead’. For the University, the opening up of the site as a key component of their estates strategy has allowed the development of a new 40 to 50-year perspective on the estate across all the areas of collegiate growth, graduate student growth, post-doctoral research staff need, and academic and research requirements to bolster its competitive strengths. For the city, the long-term process involved in negotiating the release of the land has led to a significant revision of the regional Structure Plan which has lifted the constraints on growth, and allowed for new urban development to accommodate the economic advantages brought about by the boom in science and technology research-led industries.

Although the primary aim of the North West development was to provide affordable housing for university staff, it is also recognized that the site will provide scope for potential research-related job growth in the future which will benefit the city. Along with the University’s other sites dispersed around the city, it is likely to provide an example of innovation cluster type growth, in which like-minded businesses want to co-locate both with each other and in proximity to University resources, but one which is better integrated into a mixed urban setting, connected to the city centre. As such, it falls in line with the trend towards urban integration of innovation and knowledge-based business enterprises, and away from the campus-style developments of the past, exemplified by early science parks such as Cambridge’s own.

The question it raises is whether it is necessarily a good thing for a city to become exclusively dependent on the knowledge economy, how widely the benefits of such knowledge-based growth can be distributed among the general population, and how long a healthy ‘mixed and balanced’ demographic can be sustained if it is unsupported by other areas of activity. For one sceptical resident, the concept of ‘dynamic equilibrium’ is preferable to that of pure expansion in one dimension. Cambridge has been privileged in surviving the recession almost unscathed, and manifests very low indicators of deprivation. But as a council spokesman puts it, it has existed ‘in a bubble’, largely protected from the economic realities which have afflicted much of the country by a combination of the university and its science and technology-related industries.
Key issues and learning points

**Key drivers** the priority for this development was less to provide new academic research space than to address the lack of affordable housing in the city for University staff and students, especially postdoctoral research staff, in order for the university to be able to retain and attract the best international staff and students. It also had to be a flagship for integrated, 'mixed and balanced' development which would not become a 'university ghetto', and for sustainability (designed to Code for Sustainable Homes level 5 across the whole site, with retail and non-residential elements designed to BREEAM Excellent).

**Funding** it demonstrates the importance of proper capital funding underpinning from the outset, through bond financing, to ensure quality in the immediate and long term. The total cost of the project (£1bn) is split 40:60 between the University and commercial housing developers responsible for the delivery of market housing on designated sections of the site. Finance for the project is ring-fenced within the NorthWest Cambridge syndicate accountable to the University's finance committee, and a small dedicated management team appointed to run it.

**Location** the 150 acre site comprises university farmland released for development from the green belt. It lies just within the northwestern edge of the city bounded by the M11 motorway, and also well-connected to the city centre (a 15-minute cycle ride). It is surrounded by affluent suburban residential and college development to the east, west and south, and the development will deliver a new community hub, supermarket and public open space intended to serve the wider area.

**Masterplanning and design** the site has been masterplanned by global consultancy Aecom, which has implemented a coherent, strategic approach to planning and design, with separate architectural teams appointed across a number of different lots through a high-profile architectural competition. High quality design has been central to the project brief from the start, and a rigorous process of design review is conducted through the university bodies, its design panel and the city planners. Some issues have been highlighted in the relationship between the masterplan and architectural components, eg the amount and breadth of open public circulation space (including emergency access) relative to building mass and communal amenities, and the potential need to ‘curate’ public spaces to boost activity and identity. An emphasis on provision for cycling as a common mode of transport has generated some interesting design proposals intended to promote sociability, eg cycle parking in communal ‘houses’ or courtyards (rain gardens).

**Academic programming** to date there is no academic programming for the site, and construction of academic facilities will only be implemented once a need has been established.

**Non-academic engagement** the project has invested heavily in community engagement and building local relationships over the long term, both to achieve progress in the development and to deliver a message about the nature and spirit of the university, its public image and reputation. An independent engagement consultant was appointed to co-ordinate activities, and an extensive public art programme has been implemented to engage local communities and create a sense of ownership in the development. The project will include the construction of a new primary school and community centre jointly run by the University and local community representatives.
Specific assets  the NorthWest project provides a model for the transformation of a university estates department into a professional developer and client which has built internal capacity through a circulation of expertise into the university from outside. holding relationships institutionally. The physical development is conceived as an integral part of the city, or ‘urban extension’, which delivers on an expectation for universities to engage with wider communities and social challenges in addition to higher education services.
Notes

1. Jonathan Nicholls, University Registrary, phone interview by Clare Melhuish, Nov 2013. All further attributed quotations as cited unless otherwise stated.

2. Planning officer, Cambridge City Council, interview by Clare Melhuish, March 2014. All further attributed quotations as cited unless otherwise stated.

3. Marcial Echenique, Emeritus Professor of Land Use and Transport Studies, former Head of Department 2003–8, Department of Architecture University of Cambridge, interview by Clare Melhuish, Churchill College Cambridge, Nov 2013. All further attributed quotations as cited unless otherwise stated.

4. Principal: Design and Planning, AECOM, masterplanner for the North West Cambridge Development, interview by Clare Melhuish, Nov 2013. All further attributed quotations as cited unless otherwise stated.

5. North West Cambridge Development, Responses to Green Paper, 4. NAFRA (Nineteen Acre Field Residents Association), 3

6. Deputy Project Director (Heather Topel) North West Cambridge Development, interview by Clare Melhuish, UCL London, 2013. All further attributed quotations as cited unless otherwise stated.

7. Architect on North West Cambridge development, interview by Clare Melhuish, London, Feb 2014. All further attributed quotations as cited unless otherwise stated.


9. Local resident, interview by Clare Melhuish, Cambridge, Feb 2014. All further attributed quotations as cited unless otherwise stated.

10. http://www.nwcambridge.co.uk

11. Paul Barnes, Communications Management, phone interview by Clare Melhuish, Jan 2014

12. Sam Wilkinson, Director InsiteArts, interview by Clare Melhuish, London July 2014

13. The North West Cambridge masterplan won Award of the Year in the Future Projects – Masterplanning category at World Architecture Festival 2014, Singapore


15. Roger Taylor speaking at Community Forum, Methodist Church Hall, Castle Road, Cambridge 2013.

16. North West Cambridge Urban Design Charette 2012, Department of Architecture, University of Cambridge

17. Public exhibition boards 2010


21. AECOM, project description, World Architecture Festival 2014, Singapore

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