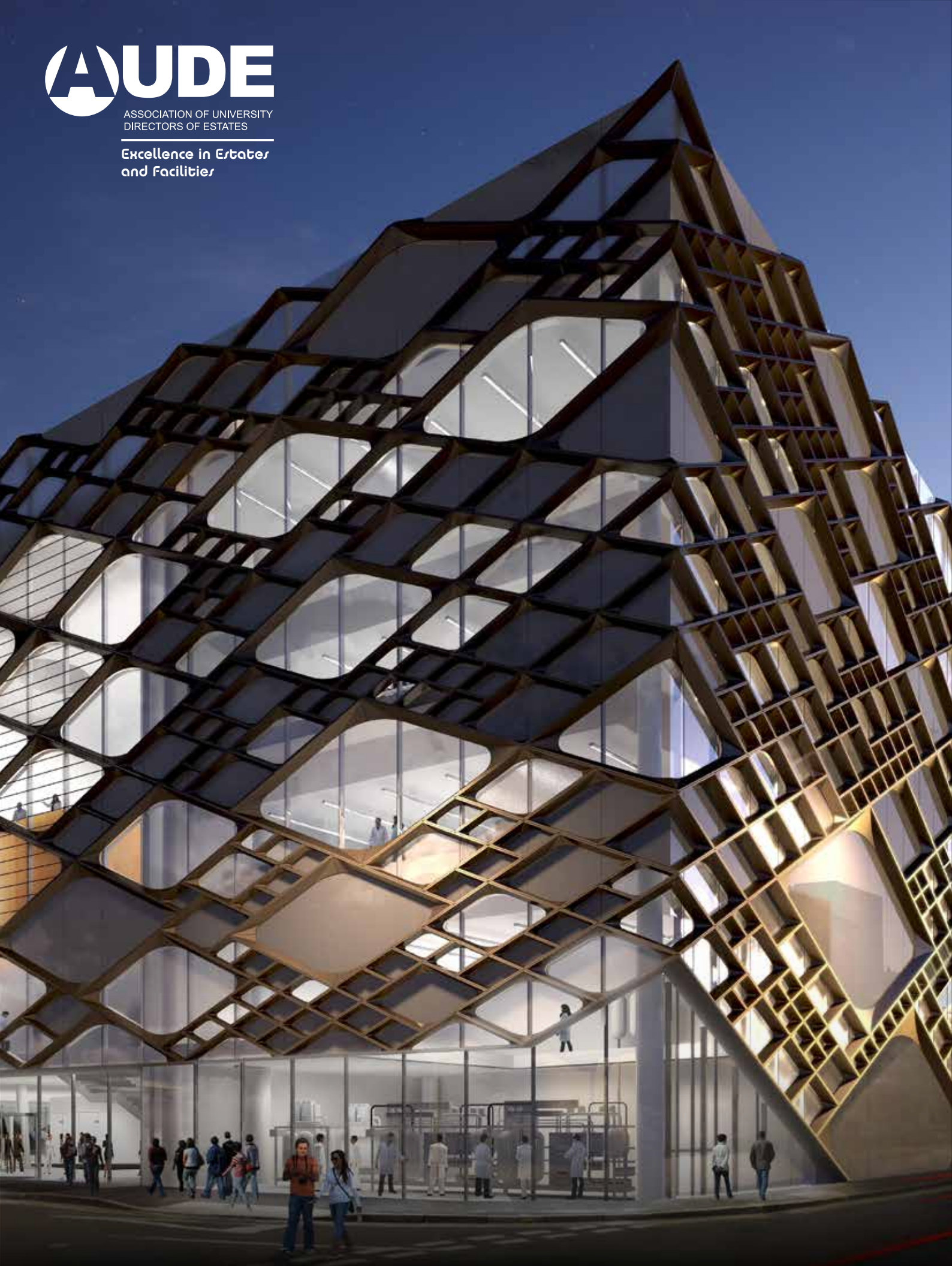
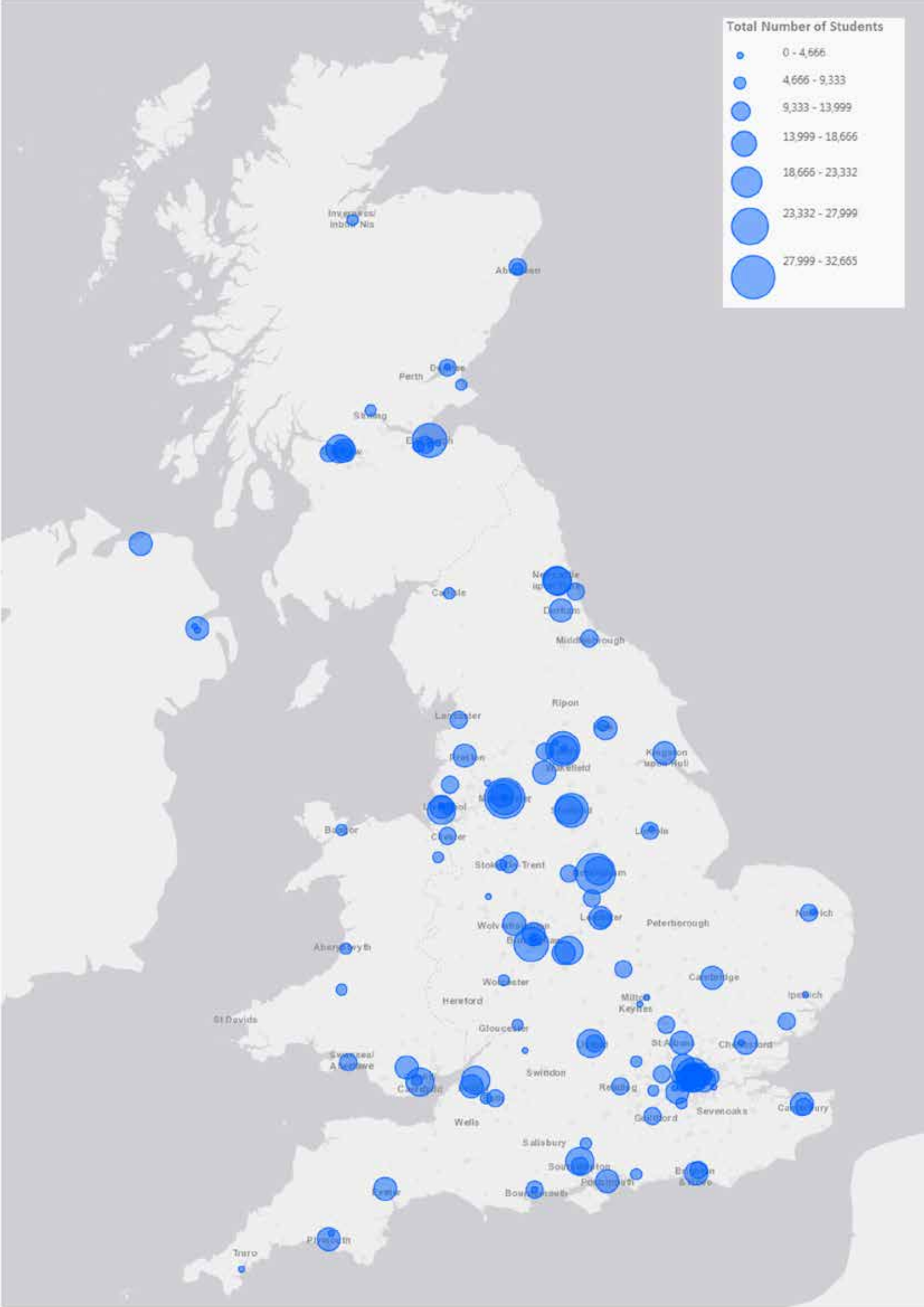
AUDE
ASSOCIATION OF UNIVERSITY DIRECTORS OF ESTATES

Excellence in Estates and Facilities



Higher Education estates statistics report

November 2015


Total Number of Students
0 - 4,666
4,666 - 9,333
9,333 - 13,999
13,999 - 18,666
18,666 - 23,332
23,332 - 27,999
27,999 - 32,665
Perth
Ripon
Peterborough
Hereford
Gloucester
Swindon
Wells
Salisbury
Truro
St Davids

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The Association of University Directors of Estates (AUDE) is the membership organisation for university estates and facilities. AUDE supports estates professionals in providing best value, a high quality student and staff experience and to ensure estates are run in a professional, innovative, efficient and effective manner.

Membership of AUDE is organisational, with 156 universities in membership, almost the entire sector. Through networking, training and knowledge sharing, AUDE helps support university estates staff in their jobs and careers. AUDE's regional groups provide a lively programme of meetings and events, run by the members and for the members.

Contents

Foreword


Sir Ian Diamond, Vice-Chancellor
Aberdeen University

I am reminded daily how fortunate we are in the UK that we have such a fantastic Higher Education sector available to us. In the latest Times Higher Education World Rankings, 34 UK Universities were included in the top 200 and we must recognise that one of the key factors in scoring is the depth, breadth and quality of facilities available to the students.

The role that the estates and facilities management teams play across our Higher Education Institutions often goes unsung and yet they are an integral part in the modernising and maintaining of our university estates and facilities across the UK. That is why, the Association of University Director of Estates' (AUDE) annual Estate Management Statistics report has become a key management tool. It enables us to benchmark against other institutions, to share best practice, to see where we are making real improvements and where more needs to be done. It is an important document as it acts as a clear marker for all senior decision makers in Universities on the health of our estates and facilities.

I have had the pleasure of working with colleagues at AUDE for many years and their dedication to meeting efficiency challenges and striving for excellence can be seen in the statistics and analysis provided here. The sector as a whole is still faced with many challenges. As the market becomes ever more competitive - and the funding environment remains as challenging as ever - we will all continue to strive to improve the student experience and speaking to students has informed us that one key driver will be having excellent, well-maintained facilities.

Also, in a climate where income is reducing in real terms, universities are having to become even more efficient to enable them to continue to invest. We need to find recurrent savings which will enable us to make necessary investments in infrastructure, in academic endeavours, and give us the flexibility to react to challenges that we are bound to face in the next few years, and opportunities we can take advantage of.

At this time of significant change in higher education I am buoyed to see that overall our estates continue to improve and evolve whilst investment and operational costs are being maintained. Challenges remain, and we must continue to meet these head-on; it is our duty to continue striving for excellence to ensure we draw and retain the finest students from across the UK and internationally. AUDE and its members are at the forefront of ensuring the high quality of UK university estates and facilities management is upheld. I would like to thank them for their hard work and thank AUDE for providing their annual EMS report.

I hope that you find this report as useful as I have and that it will support you in the important roles that you fulfil.

Sir Ian Diamond
Foreword for AUDE EMS Report 2014

Summary

The University sector continues to address substantial changes to its operating environment;

- The introduction and raising of tuition fees has changed the nature of the relationship between student and provider completely.
- Income within the sector has increased, but at a lower rate than previously enjoyed. Increasing income comes through increasing numbers with no increase in fees due until 2017/18 (and then with strings attached).
- Government control of student numbers has ended completely, and institutions can set their own size and recruitment objectives, leading to greater competition between institutions.
- The demographics of the country are shifting and reducing the number of 19 year-olds for a decade.

The response by the sector has been to ensure that the institutions are investing appropriately in order to attract students and staff. This has been achieved not only by borrowing, but also by driving substantial operational efficiencies. This has been particularly driven in the Estates sector where we've seen property costs remain stable for the last five years despite substantial upward cost pressures.

Partly as a consequence of these operational savings, and also through access to affordable debt, and the need to be competitive, institutions continue to invest substantially in their estate. This is both in the provision of new buildings as well as the refurbishment of older buildings. These new and refurbished buildings are being maintained within the existing budget cost of the older estate. Universities see this capital program as vital to being able to attract the best students and staff, research by Frontier Economics (published by HEFCE) re-enforces this link. This in an era where competition for students is likely to intensify as the number of young people reduces and the market opens up. Overseas recruitment will continue to be an important part of some institutions' strategies. Quality continues to be a key indicator for students, and indeed other research points to the value of capital expenditure in attracting additional student numbers.

In addition to these key messages, it's clear that the sector is working to improve its efficiency. We can see that income per m^2 is increasing (particularly in relation to teaching space, which indicates that more students are passing through the same space), although research income has not increased at the same rate, it has been increasing slowly.

Whilst the funding environment continues to remain uncertain, the sector faces financial challenges head on. It is vital that investment levels are maintained to ensure that buildings and equipment remain fit for purpose and continue to meet the needs of students and staff. Estate teams can then secure investment in both infrastructure and backlog maintenance to maintain high standards of quality.

Other policies also seem to be having an impact; efficiencies are resulting in increased utilisation of space (evidenced by the increase in income per m^2), carbon emissions down (with an associated reduction in consumption per m^2), and capital investment has increased in Universities' own residential accommodation.

The report highlights a number of key performance metrics that aim to help institutions understand both how the sector is performing as a whole, and how KPIs can help to inform individual institutions as to their performance. No one measure is able to adequately establish estates performance and institutions need to have a 'dashboard' of key metrics to be able to give a rounded understanding of their estates performance. We hope that this report highlights a number of these measures and that institutions can take their own steps to understand their estates performance in the light of these.

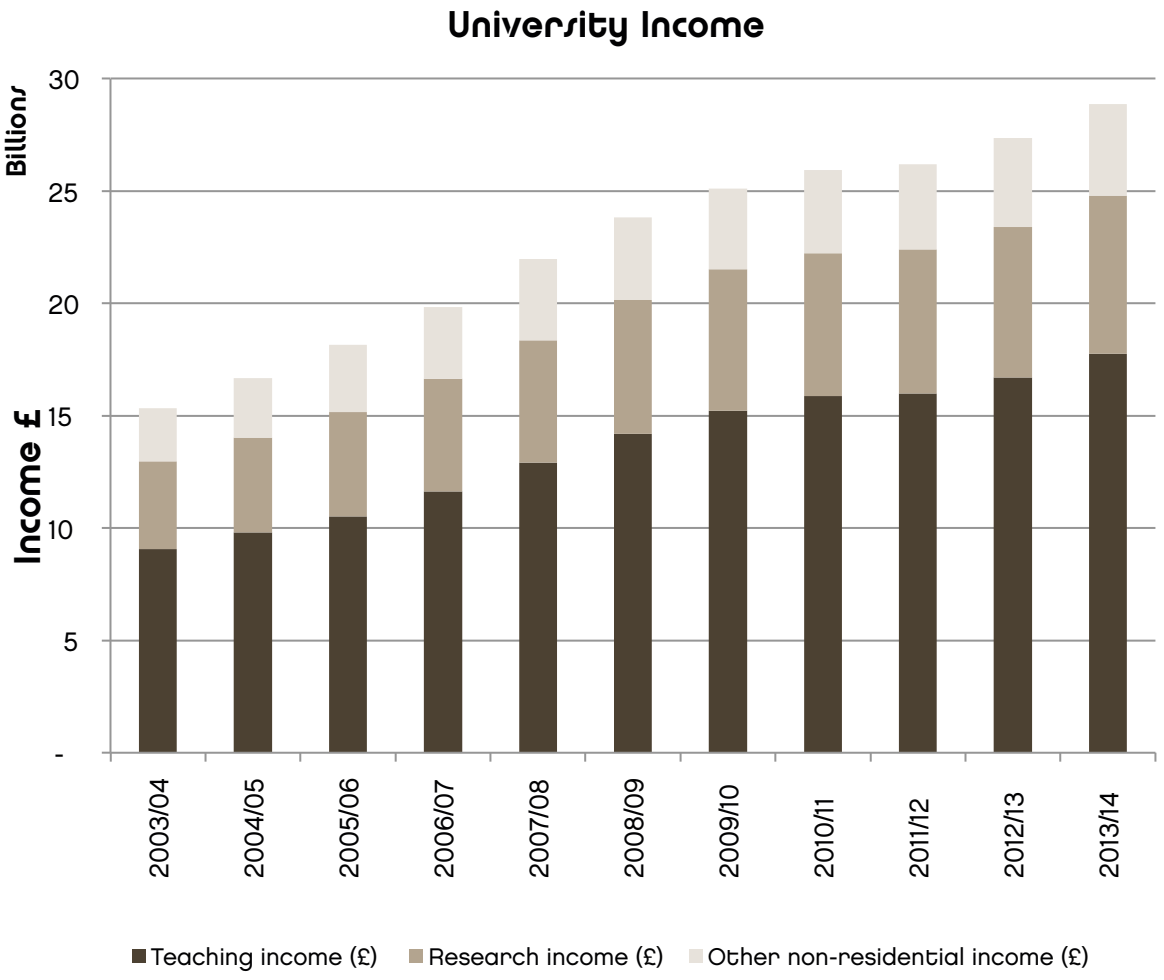
1 THE SECTOR

The University sector continues to be impacted by continuous change. September 2015 sees the first intake of students where Universities have not had government control on the number that they can recruit. This has happened as students have become consumers with the introduction, then trebling, of tuition fees.

At the moment the pool of available students is continuing to decline, and will continue to decline for a further six years before the number of 18 year olds will start to rise again. The current population of 18 year olds won't be reached for a further six years after that.

This suggests that the next decade will be an increasingly competitive time between Universities. There will be a reducing number of students to be attracted to an increasing number of places at institutions.

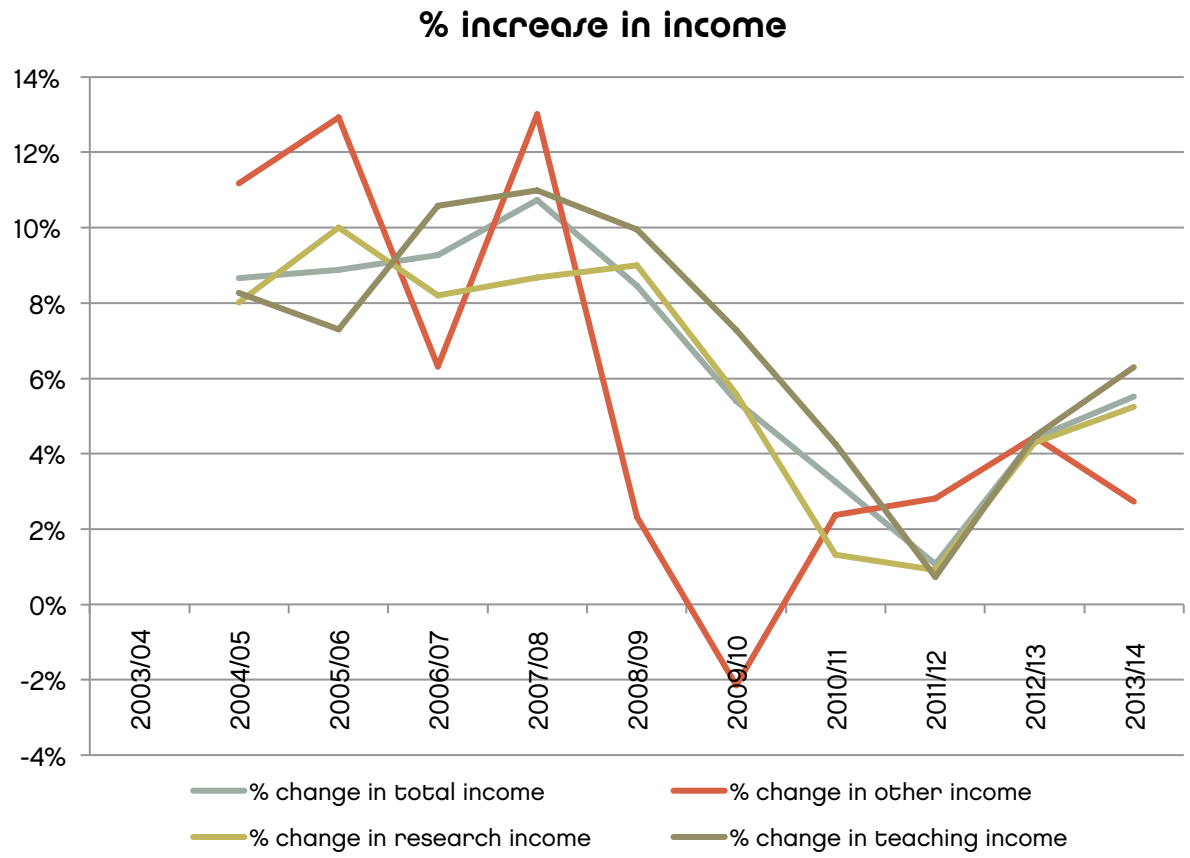
UNIVERSITY INCOME



University income continues to rise. In the last 10 years there has not been a year in which University income did not rise overall against the previous year. This has to be seen in the context of student fees; which were introduced at £3,000 in 2006, and then increased to £9,000 (maximum) in academic year 2012/13. Tuition fees have remained at this level (which represents a 5% reduction in real terms) although an inflationary increase in future years is mooted (subject to some form of quality checks).

In 2003/4 teaching formed 59% of total HEI income, and in 2013/14 it formed 61% of the sector's income, a modest rise in the relative importance of teaching income.

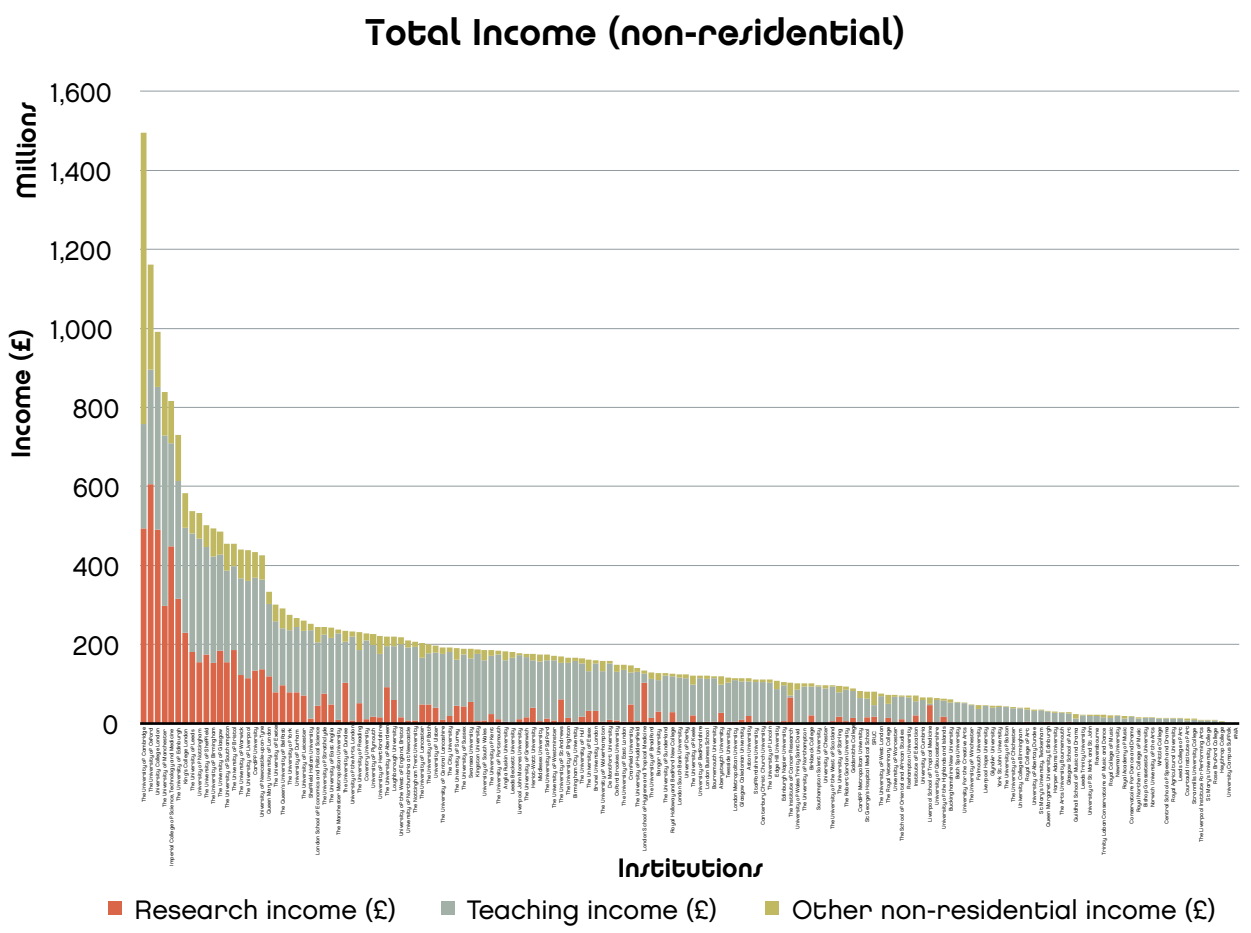
RATE OF CHANGE OF INCOME



The rate of increase in income had been running at around 10% per annum for the years up to 2008/9 when the rate of increase reduced to 2% by 2011/12. Since then, income has been increasing at a greater rate, and teaching income is now increasing at 6% a year. Given that undergraduate income per student is now fixed, increase in teaching income has to be via increasing numbers of students, or increasing overseas and postgraduate numbers.

The rate of change of income shows how critical the introduction of £9,000 student fees were to the sector, as prior to their introduction the rate of increase of teaching income was very rapidly reducing to levels below inflation. In 2011/12 income remained almost static to 2010/11 but since 2011/12 rates of increase have increased to over 6% last year.

TOTAL INCOME BY INSTITUTION



This chart shows the range of size of income for the individual institutions.

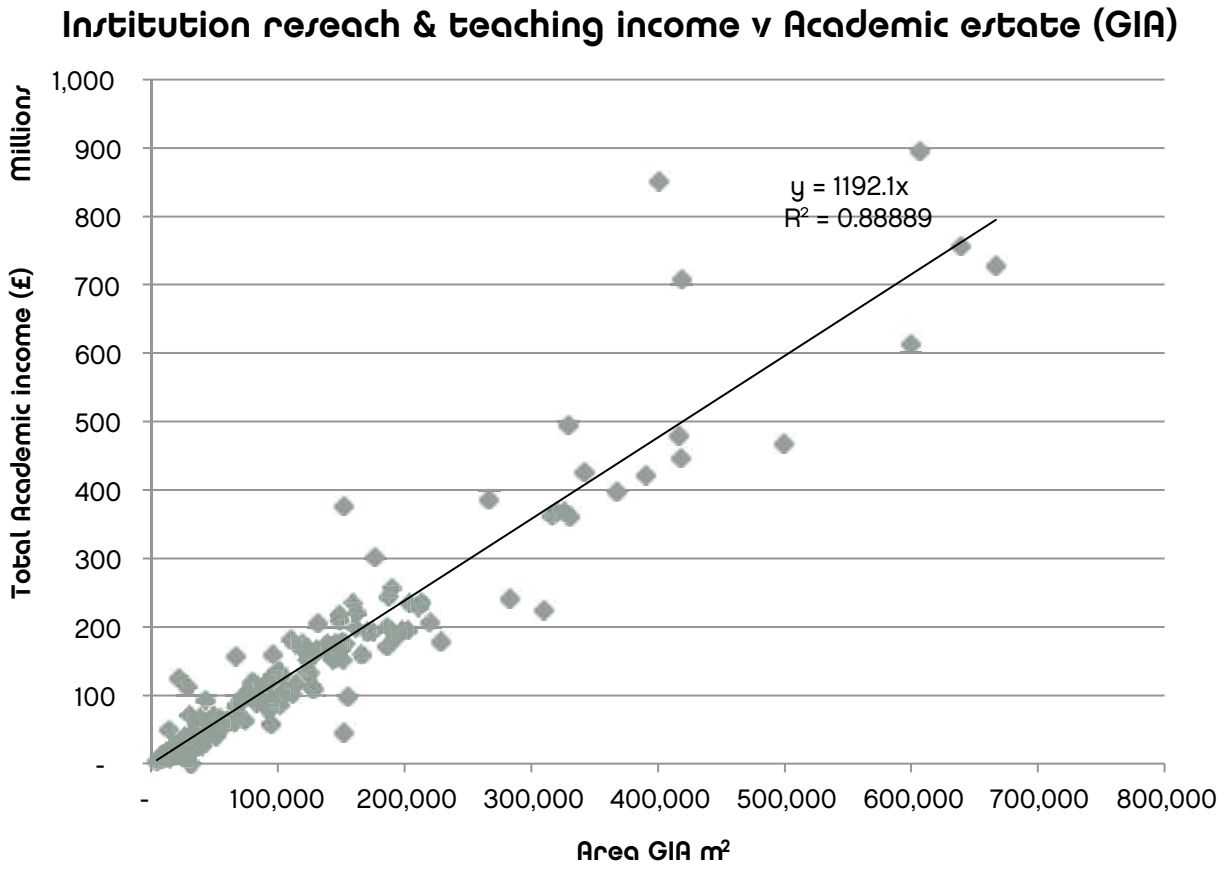
As with previous reports, we have excluded 'other' income from our analysis of the University's non-residential estate. This is because by definition, this 'other' income is generated in other ways which are not related to the University's core business or estate (for example, Oxford University Press, Cambridge University Exam Board, income generated by ownership of spin-out businesses and the income generated by overseas enterprises etc). Conferencing type income (and other income generating activity using the University estate) is typically included within residential income; see the section on Residences.

It is also worth noting that most of the 'other' income is generated by a relatively few institutions, some of which generate a substantial amount of income this way (i.e. over £200m in some cases).

What this chart shows is how research income is mostly the preserve of the larger institutions, and that there are also a significant number of teaching institutions which generate over £100m from their teaching activity.

Institutions also generate income in ways outside teaching and research. This might typically include income from activities such as conferencing and catering. This income has been increasing, and is included in the residential income element of the HESA return.

INCOME AGAINST ESTATE SIZE

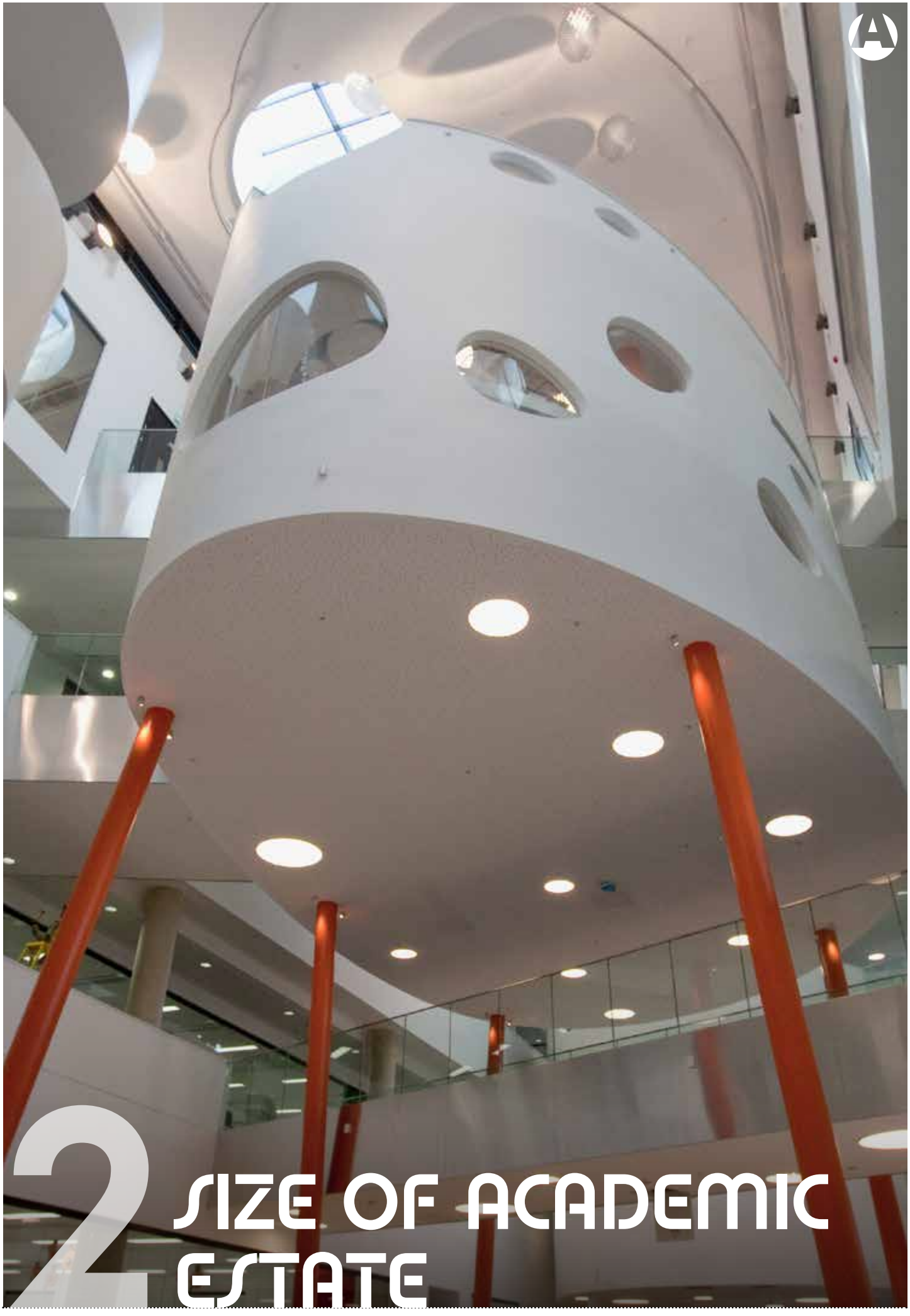


The relationship between estate size and income is both obvious and clear.

The larger institutions tend to be the more research intensive intuitions. There is a very high level of correlation for the institutions which have an estate below 300,000m^2. These are typically teaching institutions which often have very similar parameters to work within.

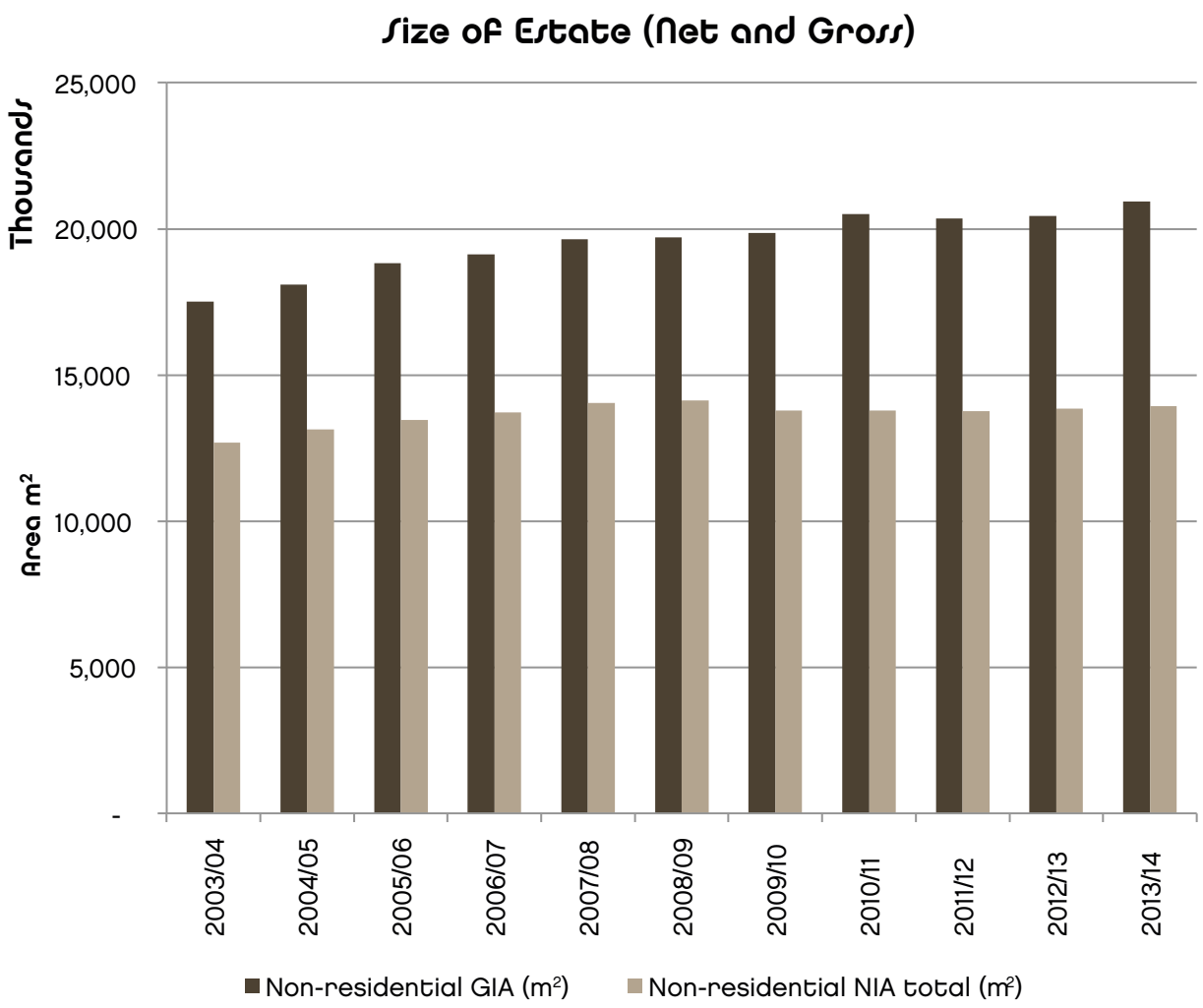
The variance for income generated per unit of area starts to become more significant as the institutions get larger. This we would suggest is because of the increasing vagaries of research. Different types of research generate different levels of income, and require substantially different amounts of space. It is likely that the makeup of research of the different research intensive institutions will have a material impact on the income per m^2 that it generates.

The smaller institutions typically have a greater proportion of their income generated from teaching. It would appear from these figures that there is more significant similarity between income per m^2 within teaching institutions. Given that most institutions are charging the full £9,000 per undergraduate, and that still home undergraduates make up the largest proportion of most HEIs students, the similarity in this ratio is not surprising.



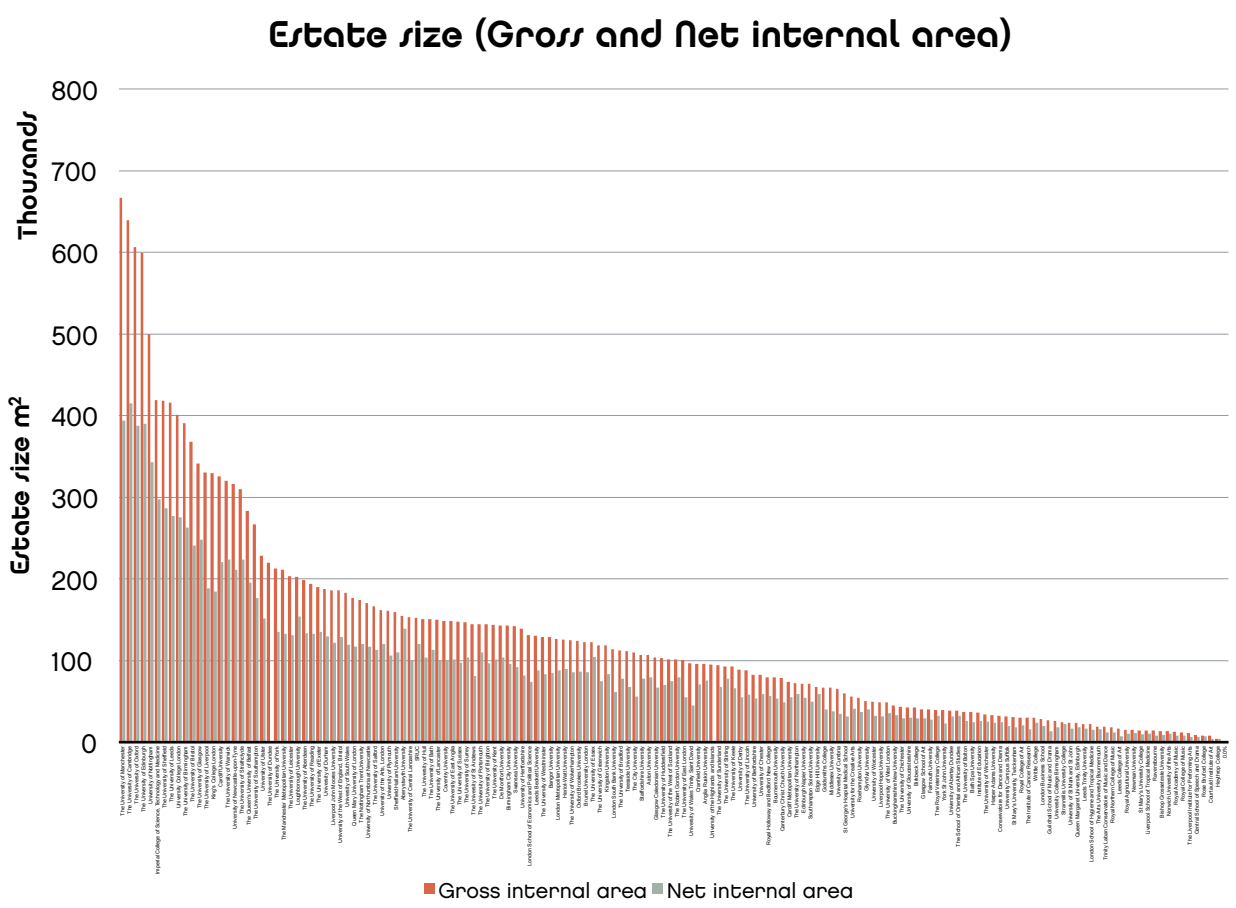
2 SIZE OF ACADEMIC ESTATE

SIZE OF ACADEMIC ESTATE



The University estate is large, and continues to increase in size. It is often difficult for those not familiar with the sector to grasp the size, not only of the total sector, but often of individual institutions. It is potentially only the large scale building firms which grasp the level of investment that Universities provide, as we discuss later, the capital invested in the estate is a very significant number.

SIZE OF ACADEMIC ESTATE

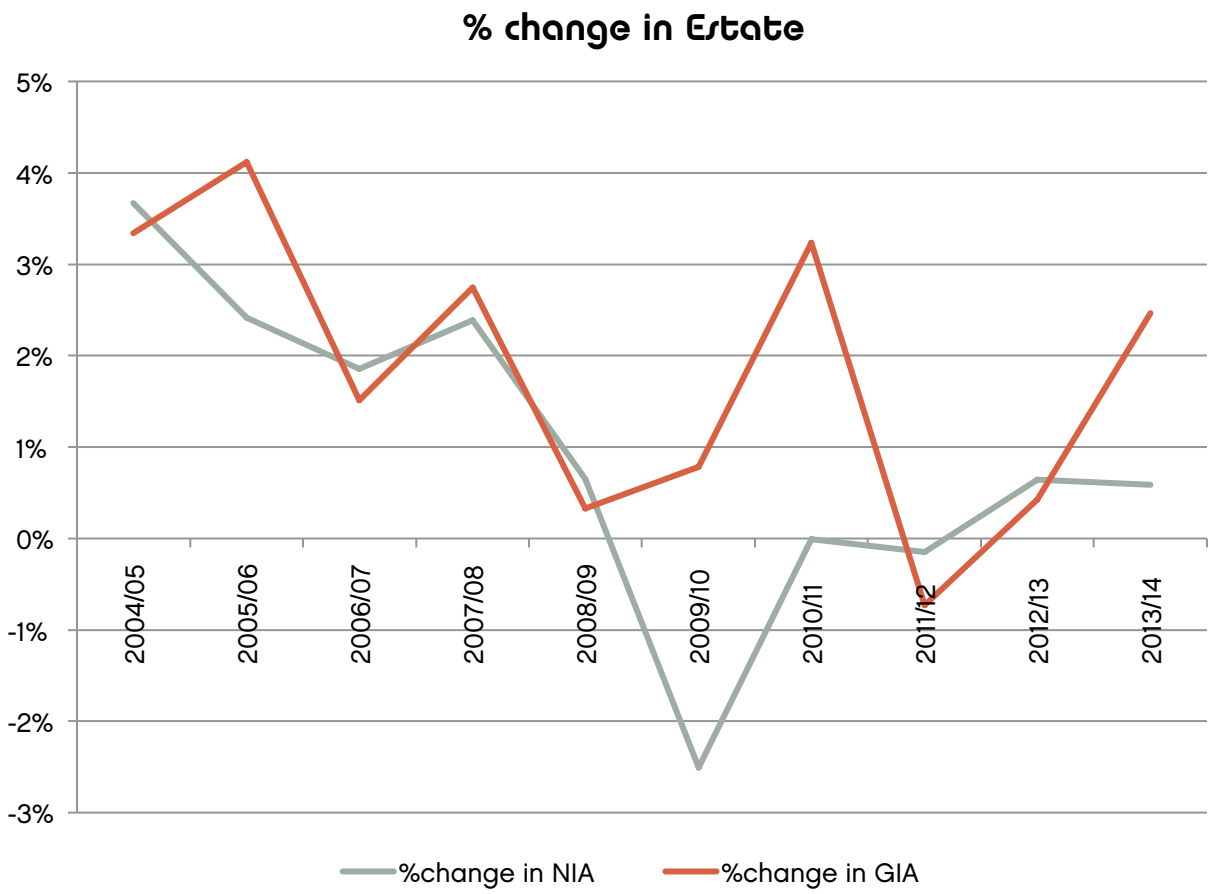


This chart shows the range of sizes of University estates. The size of the largest institutions is many times the size of the smaller institutions.

There are a small group of five institutions with estates that are larger than 500,000m^2 (GIA), there then follow a group of about a dozen institutions with estates that range from 200,000 to 400,000m^2.

The median value for the estate is about 100,000m^2, so about half of the sector operates with an estate of less than 100,000m^2 .

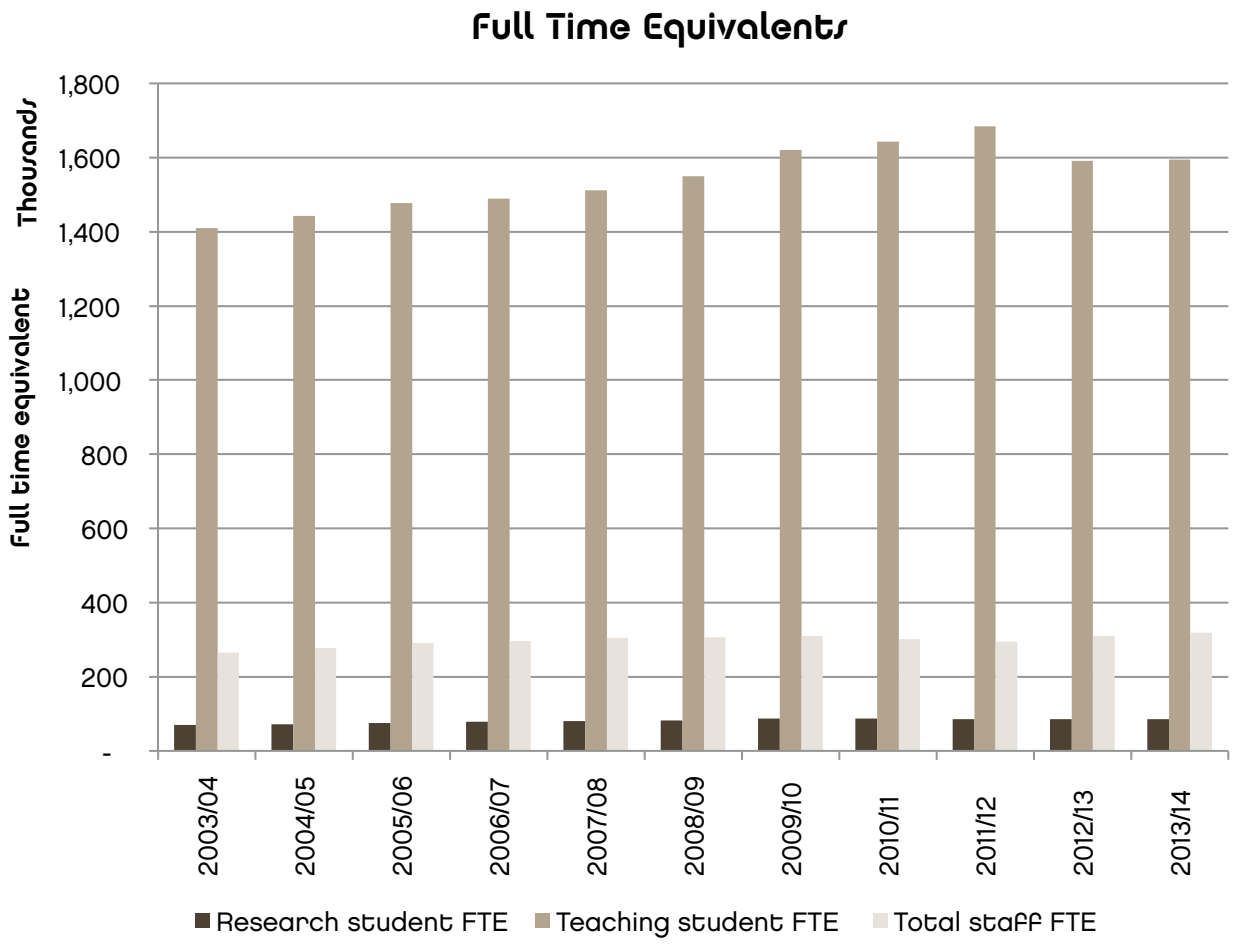
RATE OF CHANGE OF ESTATE SIZE



The increase in the estate in terms of percentage is not huge. Often this is because capital is being expended on upgrading and replacing existing estate and hence the estate size may not change significantly.

The change in the relationship between net and gross space is complicated. It is potentially because complex buildings are replacing relatively simple older buildings. The ratio of net to gross depends on the nature of the building. Often highly serviced research buildings will have a lower net to gross ratio than a building which is predominantly office space. Also, teaching spaces which have high occupancy spaces (such as lecture theatres) often require large atrium spaces to accommodate the changeover of people. It could also be to do with re-measurement and re-allocation of spaces within buildings. The creation of larger flexible spaces around campus will also have seen an increase in ratio of net to gross, and the general improvement in the efficiency of buildings currently being built will have added to the change in the net ratio.

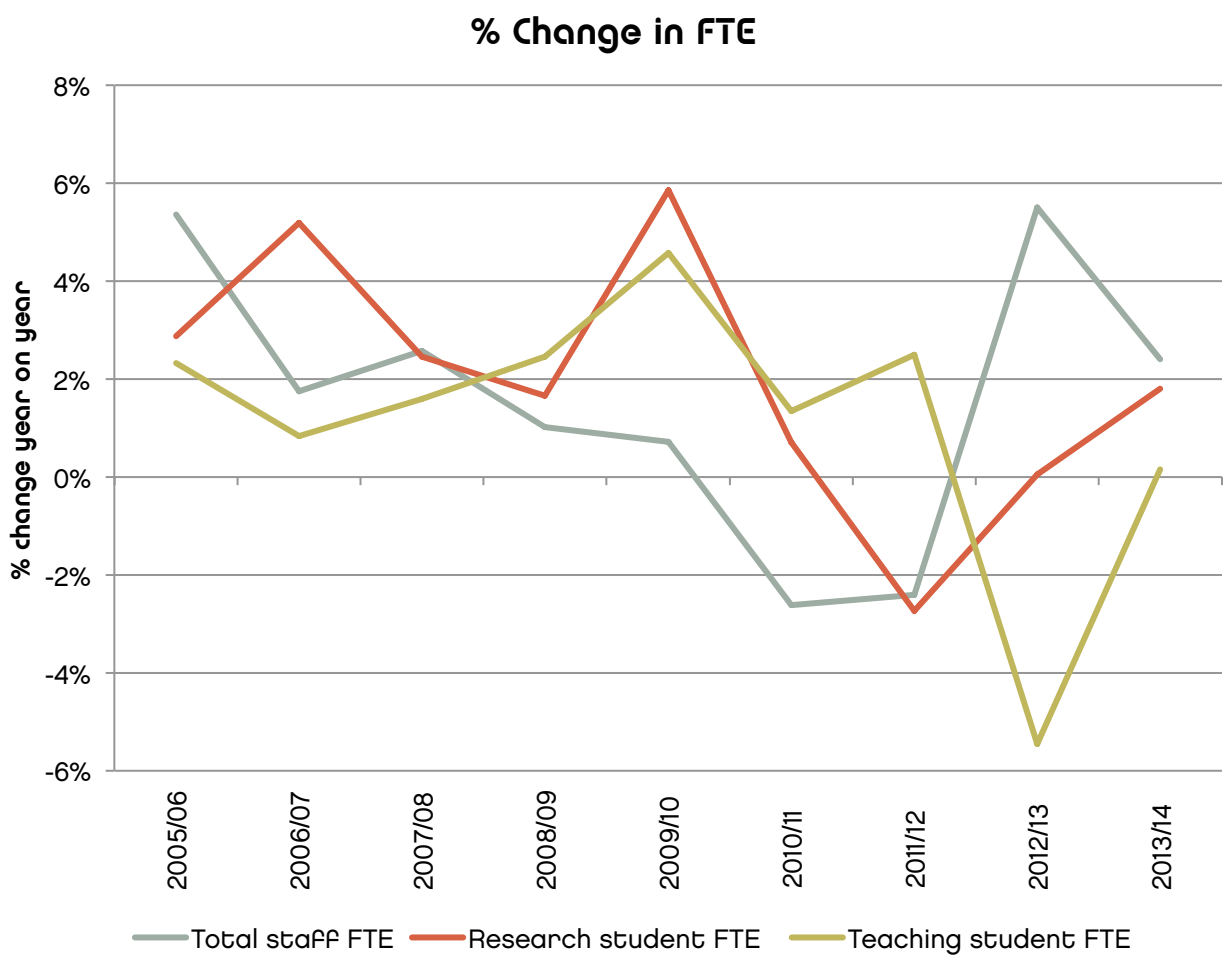
STUDENT AND STAFF NUMBERS



Student numbers had been on an upward trajectory for most of the duration of the study. There have been a number of peaks (particularly 2011/12) and these are driven by student behaviour and the potential to avoid increasing fees (student fees trebled to £9,000 with effect from students starting their studies in academic year 2012/13). Despite student numbers being broadly similar this year, overall income is increasing, despite tuition fees not rising by inflation. Student numbers have increased in 2013/14 in comparison to last year, however they have yet to reach the same level as before the introduction of the increased fee level (2010/11).

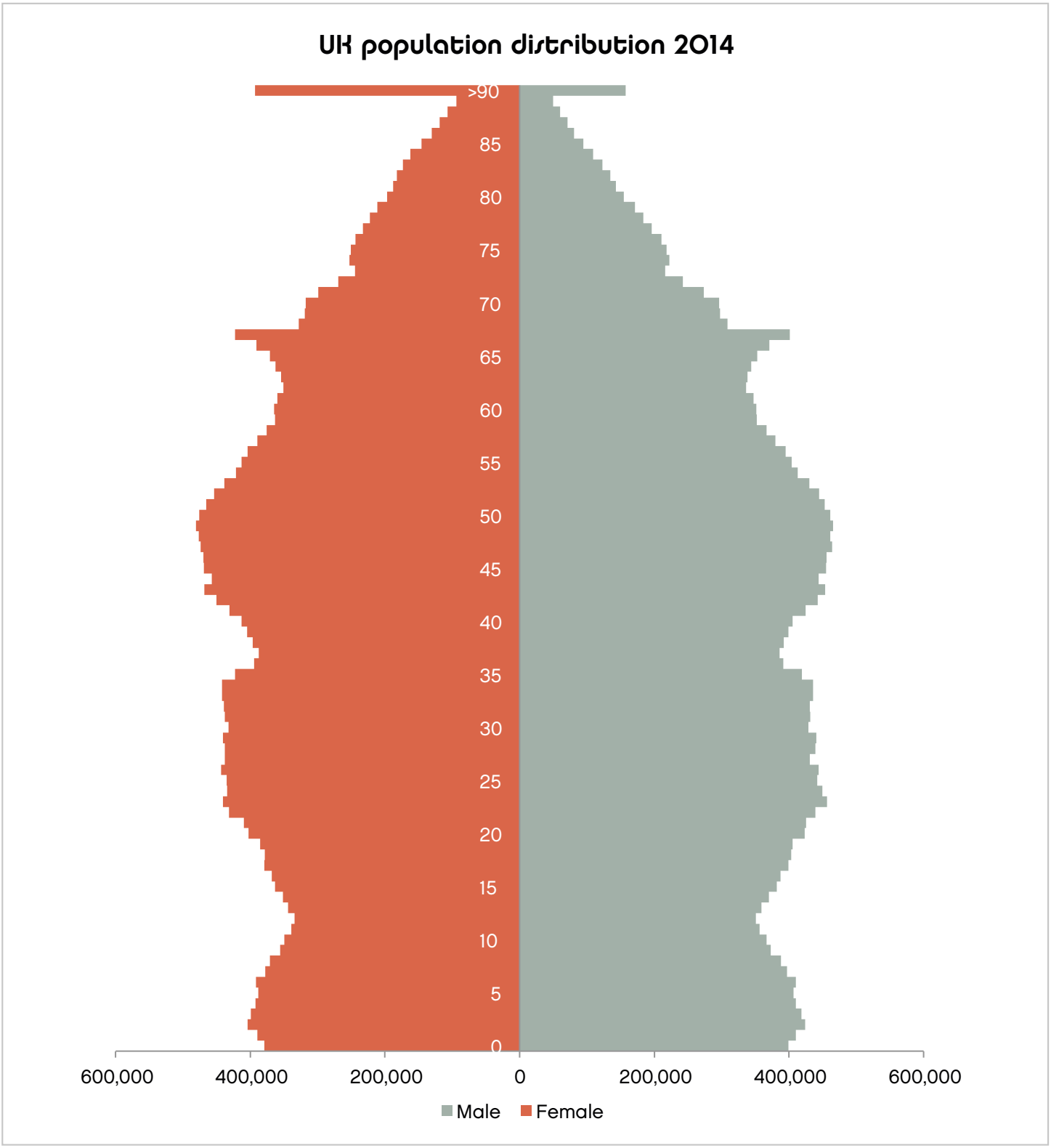
The removal of the student cap has enabled Universities to plan their own expansion. This pre-supposes that over the medium term a greater percentage of the target age-group are encouraged to participate in Higher Education. This has also to be measured against the demographic changes currently underway.

PERCENTAGE CHANGE IN FTE NUMBERS



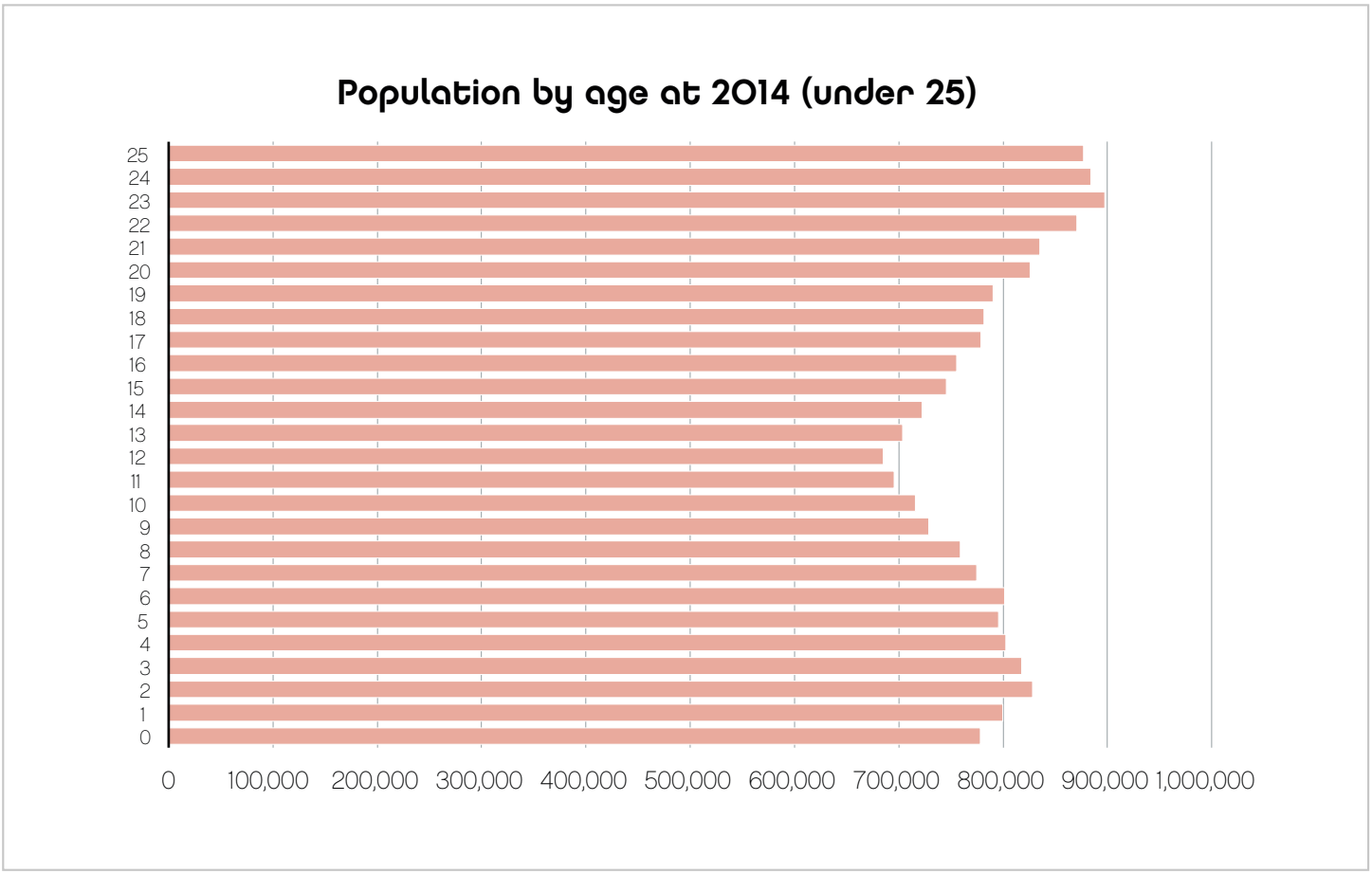
Student numbers, and undergraduate ones in particular, have varied substantially over the last four years. The general consensus is that students that would have taken a Gap Year in 2011/12 didn't, and attended HE, thus causing a spike in 2011/12. This resulted in a dip in 2012/13 from which the sector is recovering this year.

UK DEMOGRAPHICS



Population pyramid of the United Kingdom, mid 2014 showing the whole age-range.

What this chart shows is that for a substantial length of time the number of people available to go to University (i.e. 19 year old people) has remained relatively level (for the last 15 years, prior to which there was a small dip in numbers). The sector is now experiencing a substantial reduction in the number of people available to go into the sector. This is examined in more detail below.



UK demographics (ONS, MYE2: Population estimates by single year of age and sex for local authorities in the UK, mid-2014). This shows a reduced portion of the graph above and combines male and female into one figure.

As the graph here shows, there is a substantial reduction in the number of people in the age ranges from 23 to 12 (the number drops from 900,000 to 685,000).

This year the number of 18 year olds (i.e. those applying to University) is 781,000 students. This will continue to fall until it reaches the low number (of children currently aged 12 above).

From then on the number of students will again increase, not reaching the same level as this year until 2030 (when children currently aged 2 are starting to attend University). This can be further evidenced by the requirement to build primary schools across the country to cope with the increase in demand for these places.

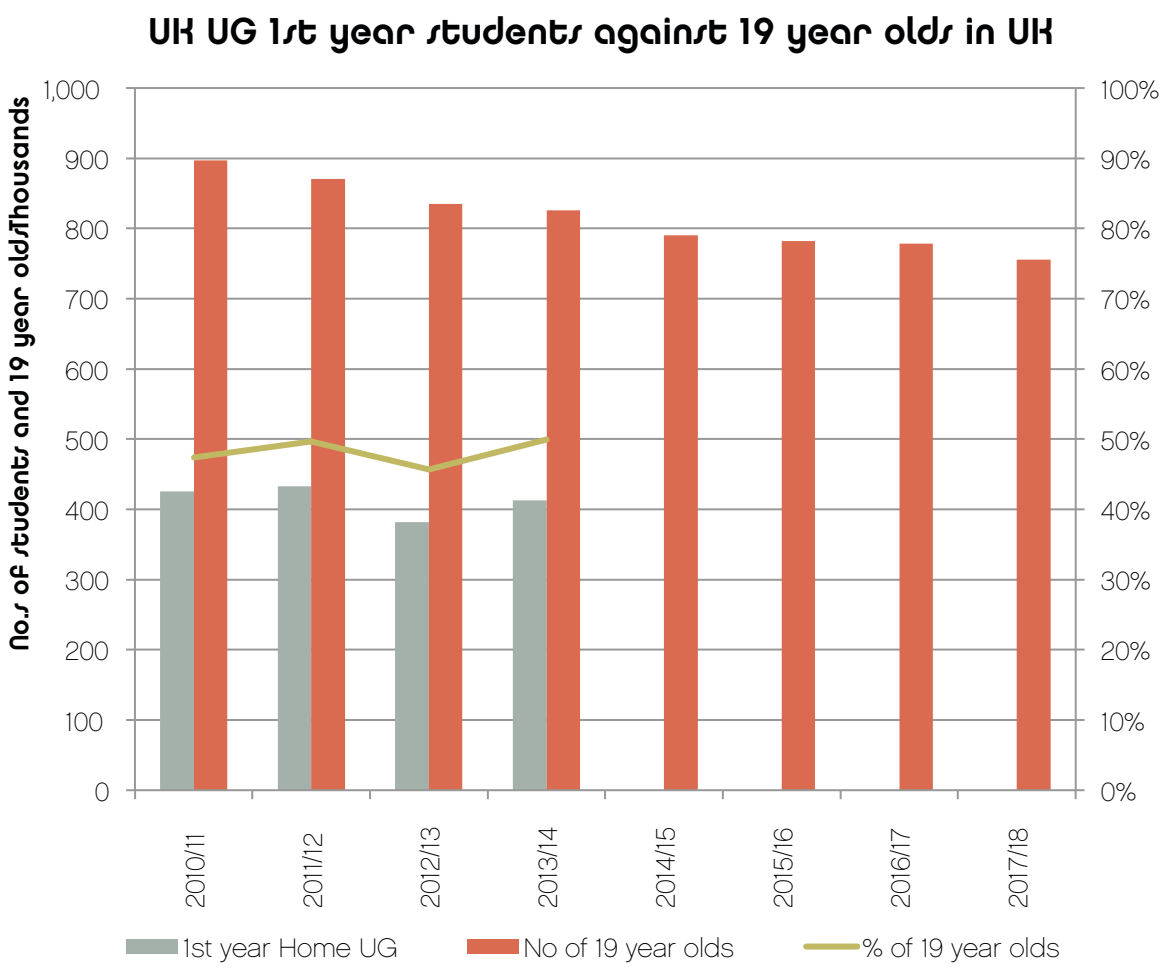
The context for Universities is significant. They will be competing for students from a reducing number of people for a further six years before the number starts to increase again. The number of people available to go to Higher (and Further) Education will continue to reduce for this period of time.

This is shown in the graph UK undergraduate 1st year students against 19 year olds. This shows that the number of 1st year students is around 400,000 (this has varied over the last four years), and represents approximately 50% of the total number of 19 year olds as at this year's figures.

The number of 19 year olds is set to reduce from the high of 900,000 in academic year 2010/11 to a low of 685,000 in academic year 2022/23. To maintain the same number of Home undergraduates (i.e. 420,000) this would represent 60% of 19 year olds. Equally, maintaining the same percentage as now (i.e. 47%) would be a reduction in home undergraduates down to 320,000 (i.e. 47% of 685,000) a reduction in students of 80,000 out of each year of study.

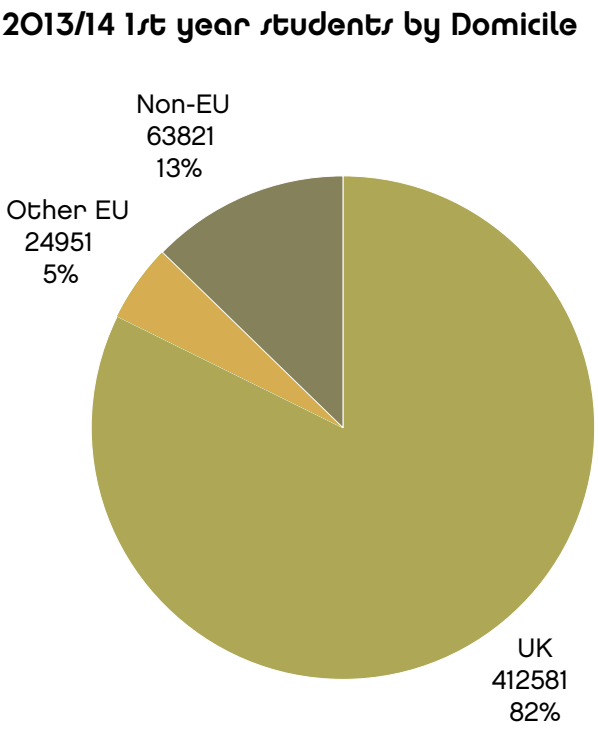
It should be noted that not all students are straight from school, and that many students attend at different ages.

OVERSEAS AND EU STUDENTS

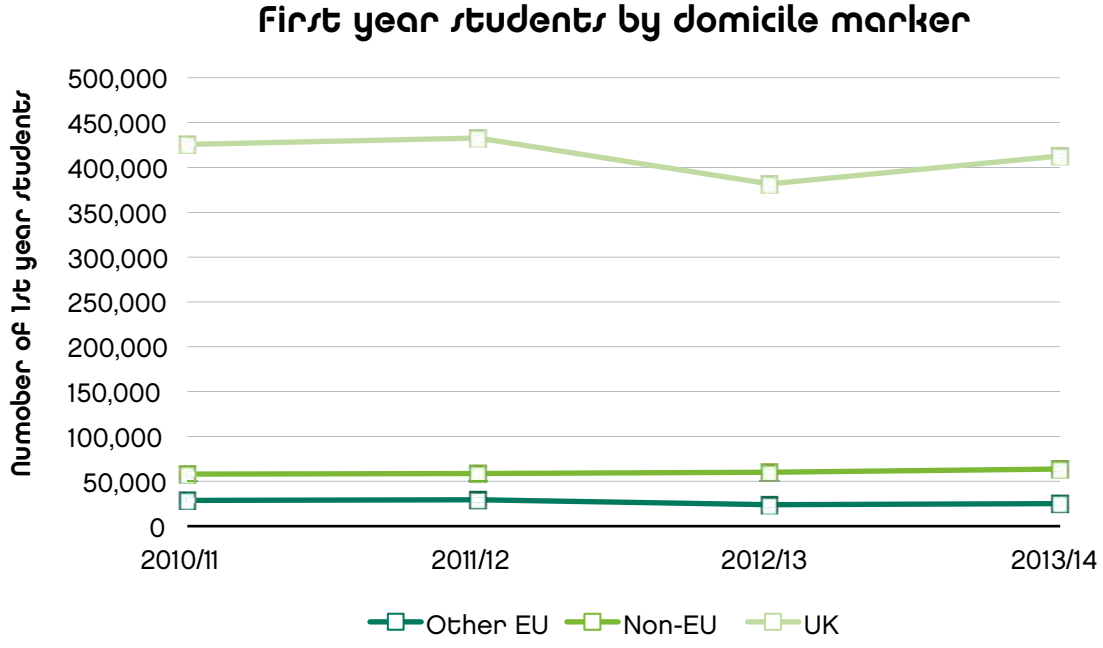


Overseas and in other EU students countries currently make up 18% (88,772) of the current undergraduate 1st year population. This has remained relatively stable in terms of numbers over the last four years, although there was a notable reduction in other EU students in 2012/13. This is likely to have been caused by the introduction of higher fees in the UK against other EU destinations.

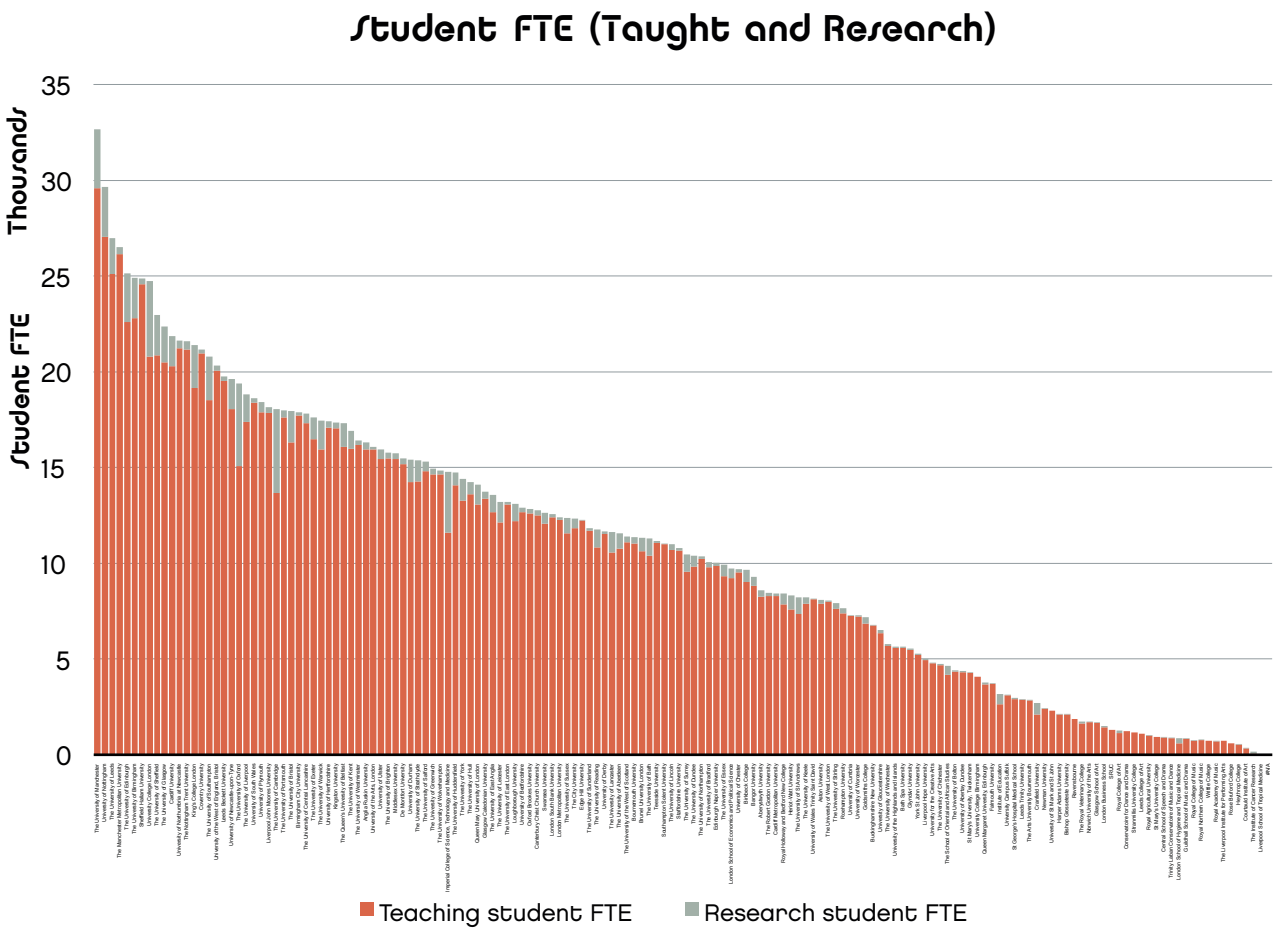
1ST YEAR STUDENTS BY DOMICILE AND BY MARKER



Many institutions have sought to develop a greater offering to overseas and other EU students over the last few years. Currently UK home undergraduates represent 82% of all first year students, EU students a further 5%. Non-EU students represent 13% of the first year students in the UK. The number of non-EU students in the first year of study has remained relatively level at just over 50,000 for the last four years.



SIZE OF INSTITUTIONS, STUDENT FTE (TAUGHT AND RESEARCH)



This chart shows the sizes of individual institutions in the UK. There is a wide spread of numbers of students at institutions, with about a third of all UK institutions having fewer than 5,000 students. Half of all institutions have more than 10,000 students, and 17 institutions with more than 20,000 students (and only one with more than 30,000 students).

3 CAPITAL EXPENDITURE

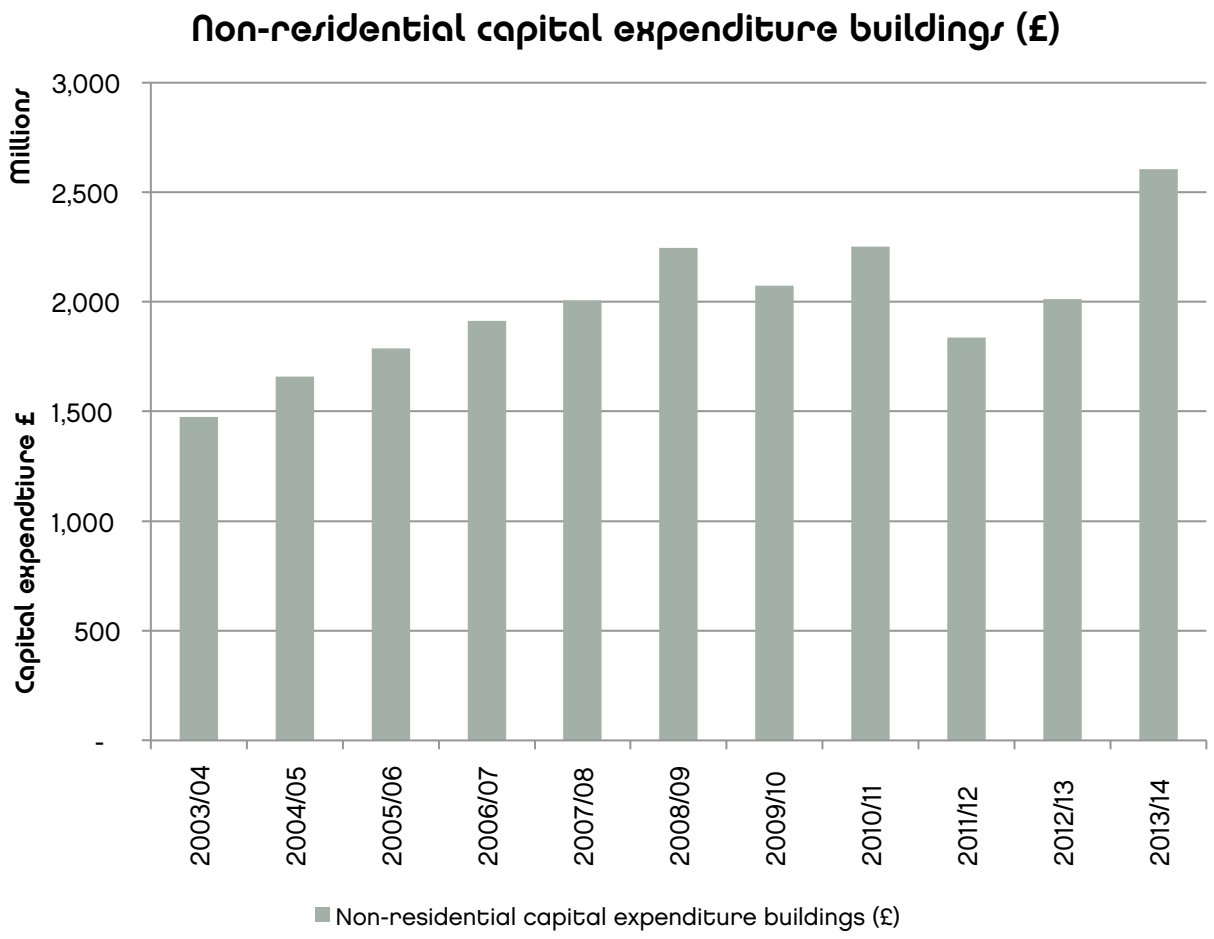
TOTAL CAPITAL EXPENDITURE

Over the last 10 years, Universities have continued to spend significant amounts of capital on their estate.

The first five years of the last decade saw a steadily rising expenditure; however the last five years have seen the amount spent fluctuate quite significantly over the period. Expenditure in 2013/14 was over £2.5bn which is the highest annual spending recorded.

It should be noted that these figures are the capital expenditure as returned in the EMR form. This represents the capital programme for the University and typically includes new buildings, as well as major refurbishment projects. It is not possible to separate out that which is 'refurbishment' and that which is 'estate expansion and new-build'.

NON-RESIDENTIAL CAPITAL EXPENDITURE, BUILDINGS



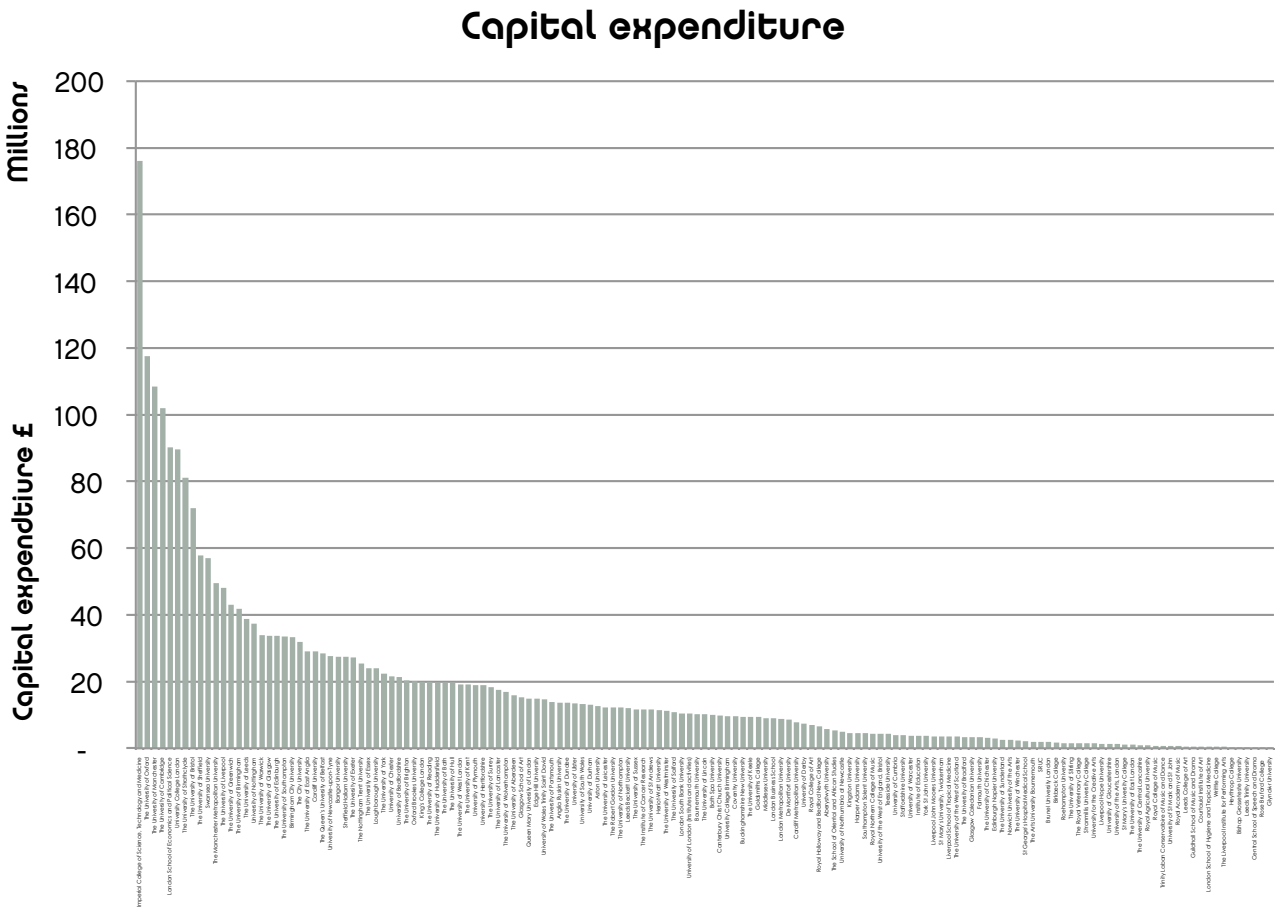
HEFCE have produced (with Frontier Economics) a study reviewing capital expenditure, their key findings (quoting directly) are as follows:

- There is clear evidence that capital is associated with significant positive changes in a number of outcomes at Higher Education institutions, including student numbers, numbers of researchers and contract and consultancy research income.
- Capital spending fell between 2008 and 2014 in 50% of institutions, and by as much as 25% in a third of institutions.
- There is clear evidence of the ongoing need, on the part of Government and the sector itself, for further capital investment in the sector, to continue to attract the best students, lecturers and researchers in the world.
- There is clear evidence of the additionality of HEFCE funding and the need for continued Government support for the sector.
- A funding approach that combines the formulaic and competitive mechanisms should be continued.

'A review of HEFCE Capital expenditure – a report by Frontier Economics' HEFCE 2015

It is clear that within the sector that institutions have determined that they should continue to invest in their infrastructure – indeed the Frontier Economics study suggests that a surplus of 7% per annum is required in order to sustain this. As these figures show the size of investment has not reduced as was perhaps expected. It is also likely that some of these institutions are continuing on a sizeable capital plan, rather than a one-off project or expenditure. Hence it is likely that these types of expenditure are likely to continue at least in the short to medium term as institutions complete their substantial projects.

CAPITAL EXPENDITURE BY INSTITUTION



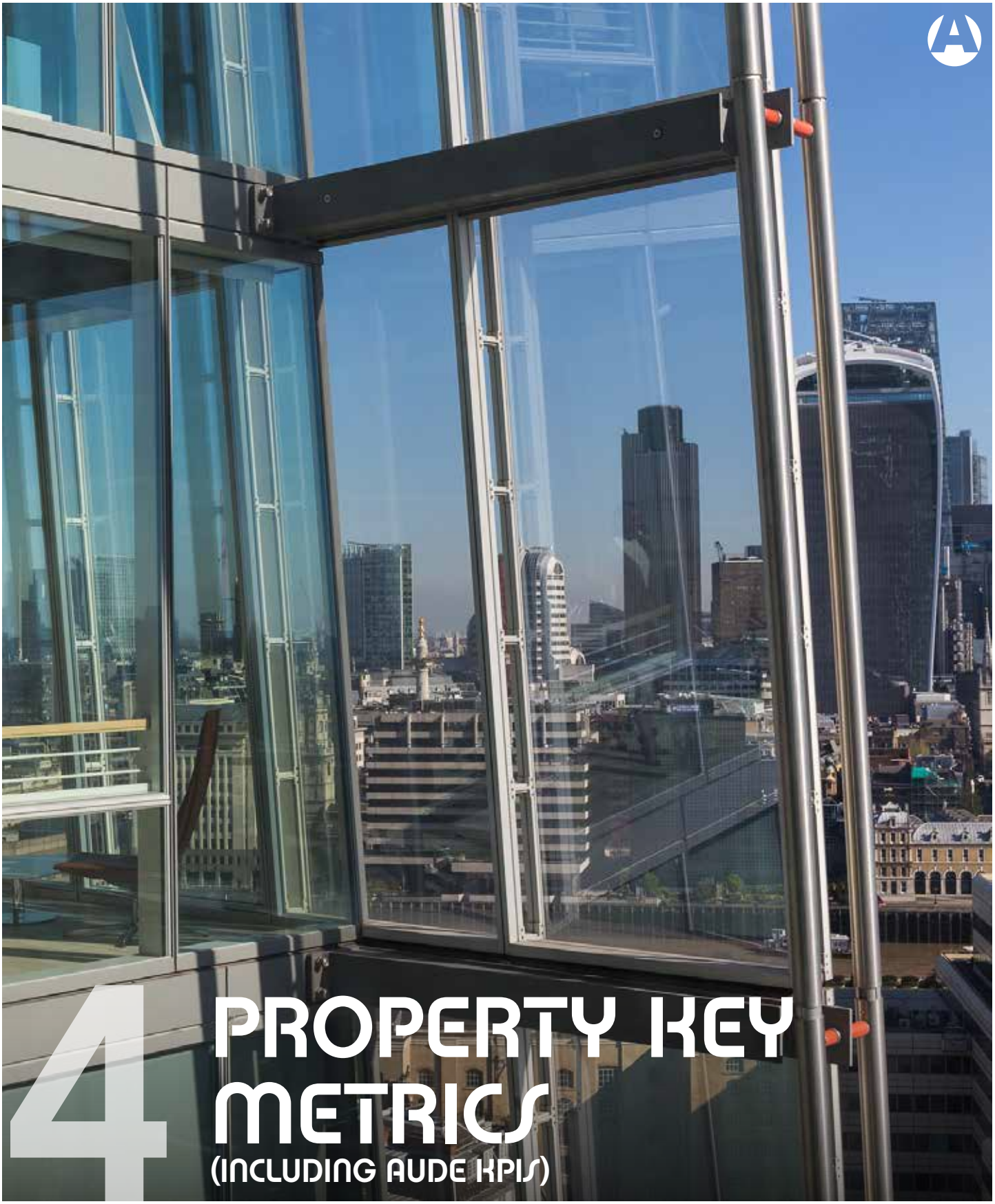
Some institutions are in the process of substantial capital programmes, often running into the hundreds of millions of pounds over a number of years.

There are over a dozen institutions which spent in excess of £40m in the year 2013/14 (and four with expenditure of over £100m)

For many institutions this represents their on-going annual capital expenditure; something they are now anticipating spending at this rate in the medium term. For others, typically smaller institutions, this capital expenditure is a one-off expenditure to renew and replace a significant portion of their estate.

The demand for expenditure is open to debate but there is a general consensus that:

- Universities are in a different position where they are able to compete for students. One of the key elements of this competition is the provision of the right environment for students to learn in. Often cited as a key objective in the development of capital programmes is the need to improve the student experience by improving the environment. The changing demographics as detailed earlier in this report perhaps makes it more acute that institutions are seen to have the right environments in order to continue to attract the required student numbers.
- Debt has never been so readily available at affordable costs, and interest rates remain low; whilst the projection in the medium term suggests that rates will rise to about half of their long term average, this is still relatively cheap against the historic cost of money. Furthermore, Universities are seen as safe places, and are increasingly looking to more innovative means of raising money (such as bond issues) again which is generating relatively cheap money for institutions to invest in their estate.
- Some of the capital expenditure is being used for the refurbishment and upgrading of existing accommodation. This is driven by a need to provide more modern and functionally suitable accommodation across the whole campus, so existing accommodation can function alongside more purpose built new accommodation.
- Some institutions have buildings which are at the end of their life, and require significant capital investment in either refurbishment or wholesale replacement.



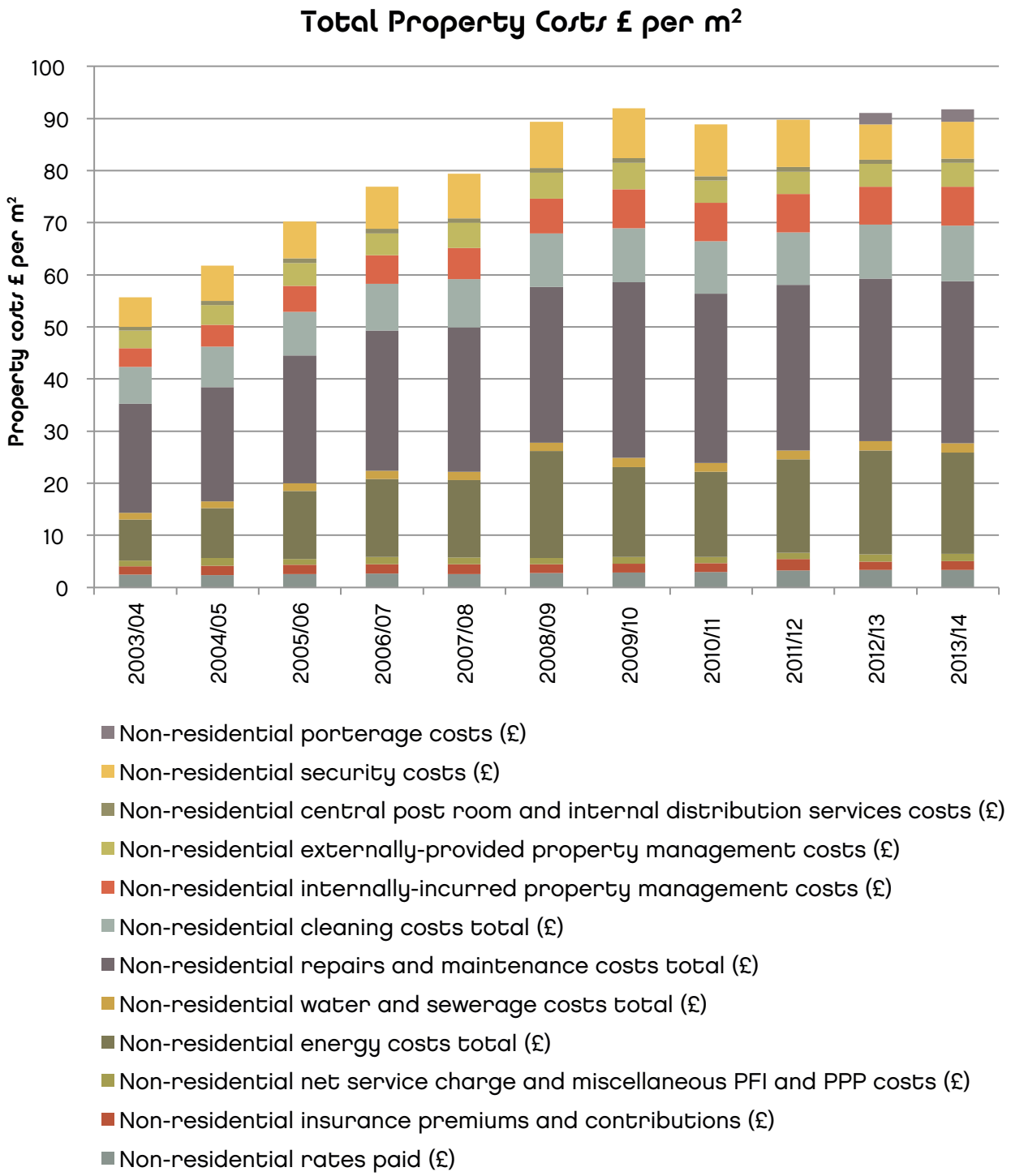
4 PROPERTY KEY METRICS (INCLUDING AUDE KPIS)

AUDE has recently published a guide which includes eight key performance indicators within four main categories (Efficiency, Quality, Value and Sustainability). This report uses these four categories, and has included the eight AUDE KPIs as well as some further indicators that members may also find useful to help understand how their estate is performing.

The specific KPIs published by AUDE have been prefaced with AUDE KPI to ensure this is clear.

EFFICIENCY

AUDE KPI TOTAL PROPERTY COSTS

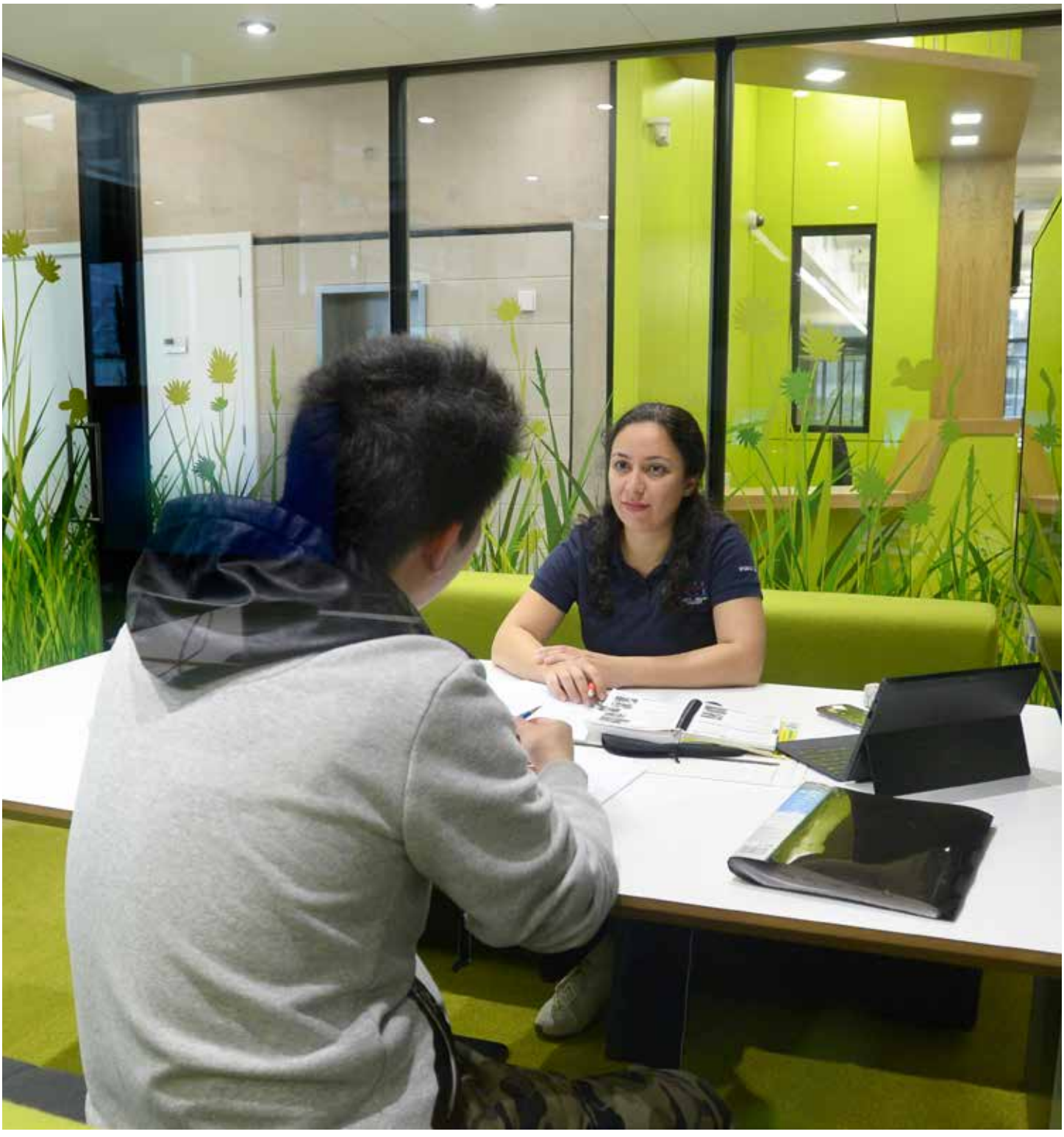


The last decade can be thought of as two distinct phases; the first phase saw property costs rising significantly year on year to a maximum average cost of over £90 per m^2 (GIA) per annum, the next five years have seen property costs held at that figure.

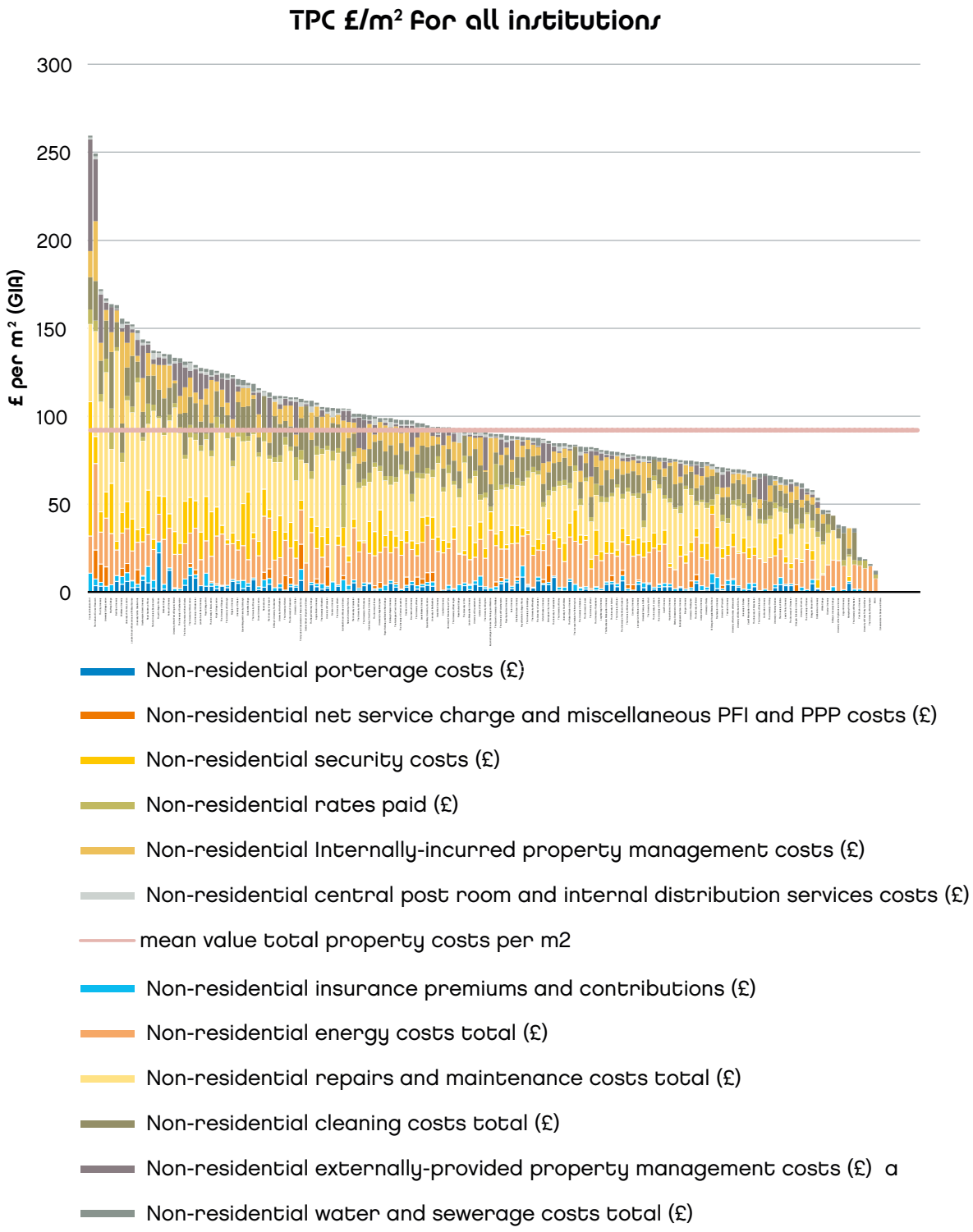
During this time there have been substantial upward pressures on these costs and it must be considered that Estates Directors have answered the requirement of their institutions to operate within the constrained budgets that have been set.

This has been achieved notwithstanding the substantial variations in the costs of operating the University estate across the Country. This shows that whilst some institutions have particularly expensive estate to operate (over £150 per m^2), the majority of institutions are within 20% of the mean figure of £91 per m^2 to run their estate.

Repairs and maintenance continues to be the largest single element in the Total Property Costs for institutions, with Energy costs in second place.

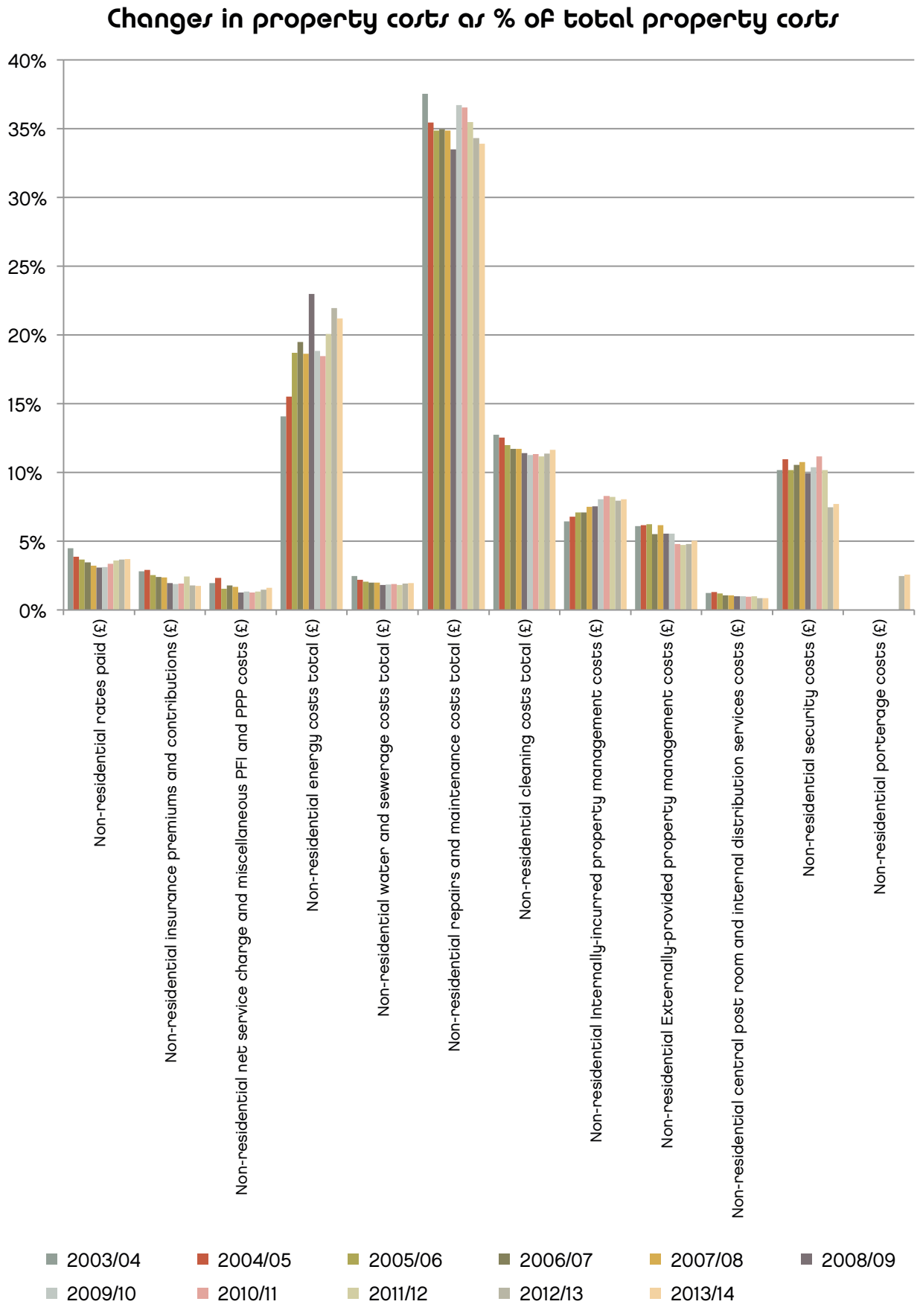


TOTAL PROPERTY COSTS, ALL INSTITUTIONS



This chart shows the range of total property costs for all institutions across the UK. With the exception of those at both end of the spectrum, what is apparent is that most institutions spend similar amounts on their estates, 50% of institutions spend between £75 and £125 per m^2 per annum.

CHANGES IN PROPERTY COSTS AS % OF TPC



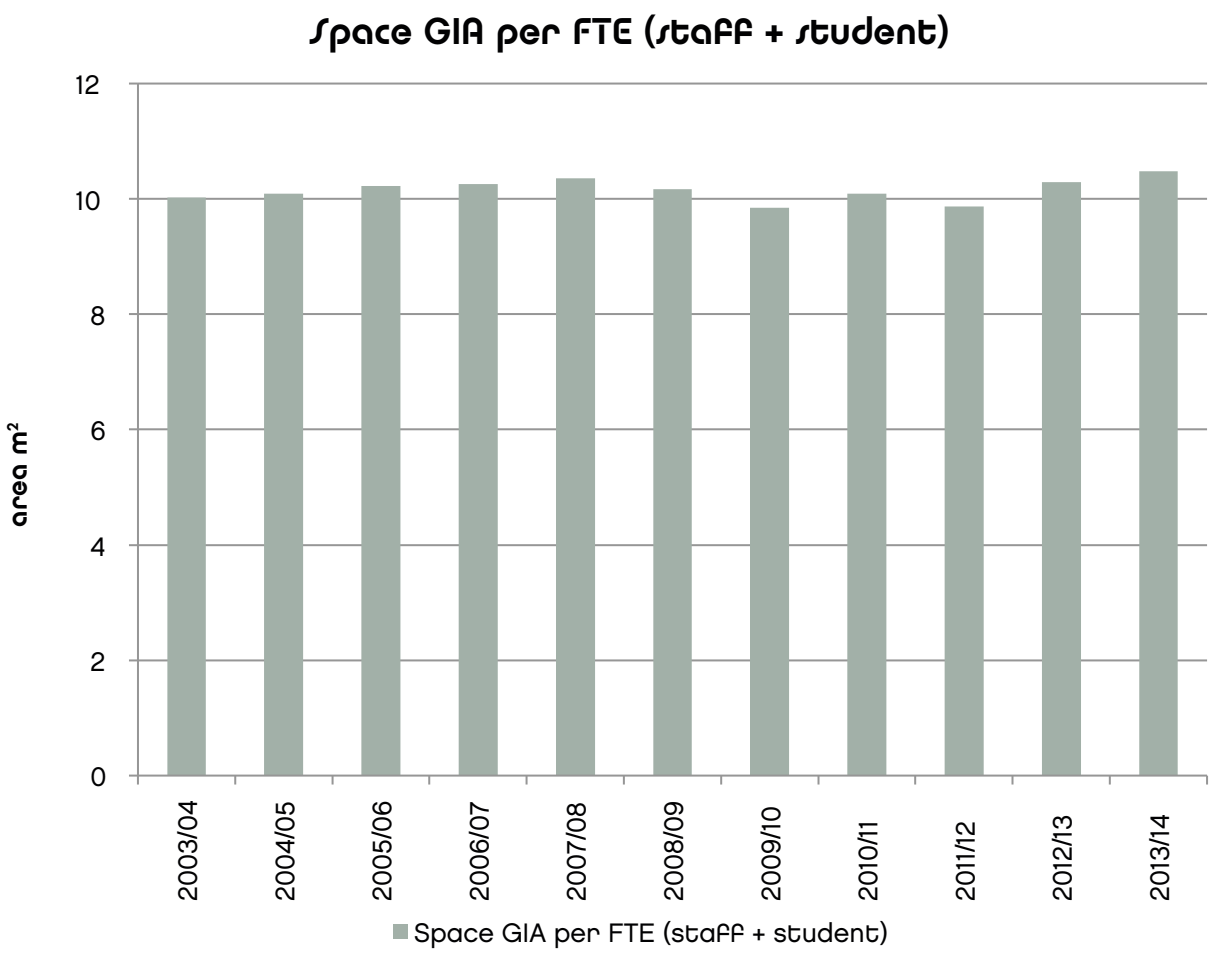
What is also clear is that over the past decade, the relative proportions of different costs have remained fairly similar with only energy rising significantly in importance as an element of cost (this has had the consequence that other costs have slightly reduced in significance). Repairs and maintenance is still the single largest cost element.

Given the nature of fixed costs within this area, Universities have continued to improve efficiency in areas such as security, post and cleaning.

One area that is giving some cause for concern is that it was generally anticipated that the costs of repairs and maintenance have been increasing; however this has not been matched with the anticipated increase in maintenance costs.

This raises the question as to whether maintenance costs are being capitalised and are thus included within the capital element of expenditure (which would be quite normal for a major refurbishment of a building). It could also be that some institutions may be seeing a backlog of maintenance develop as budgetary constraints keep maintenance spending fixed at the same level as five years ago.

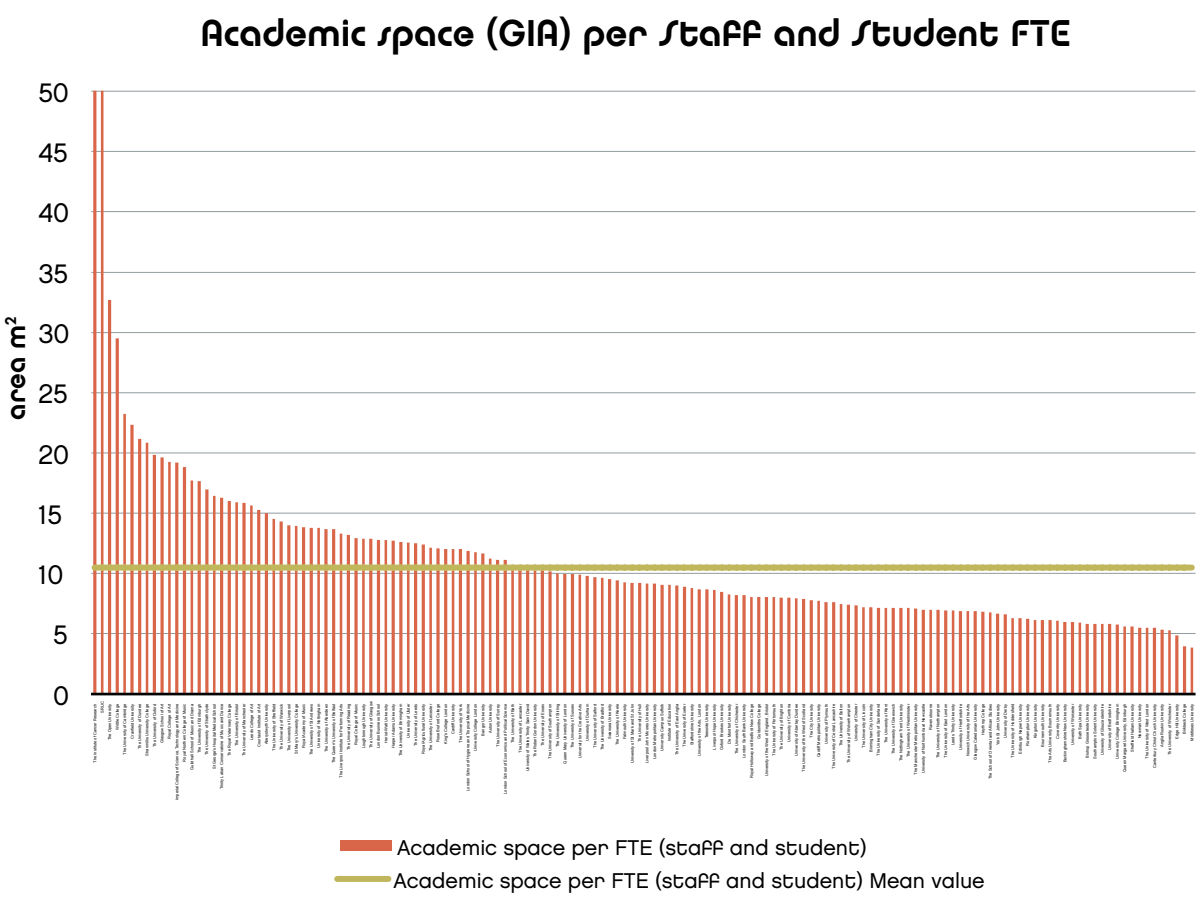
AUDE KPI AREA PER STUDENT AND STAFF FTE M² (GIA)



This metric is designed to be a high level measure of the overall provision of space compared to the number of staff and student FTEs (all under and post graduate students added to the number of staff). As is shown, this number has varied very little in the past ten years. The slight increase in the last two years is almost certainly attributable to the reduction in student numbers (with a small increase in the size of the estate).

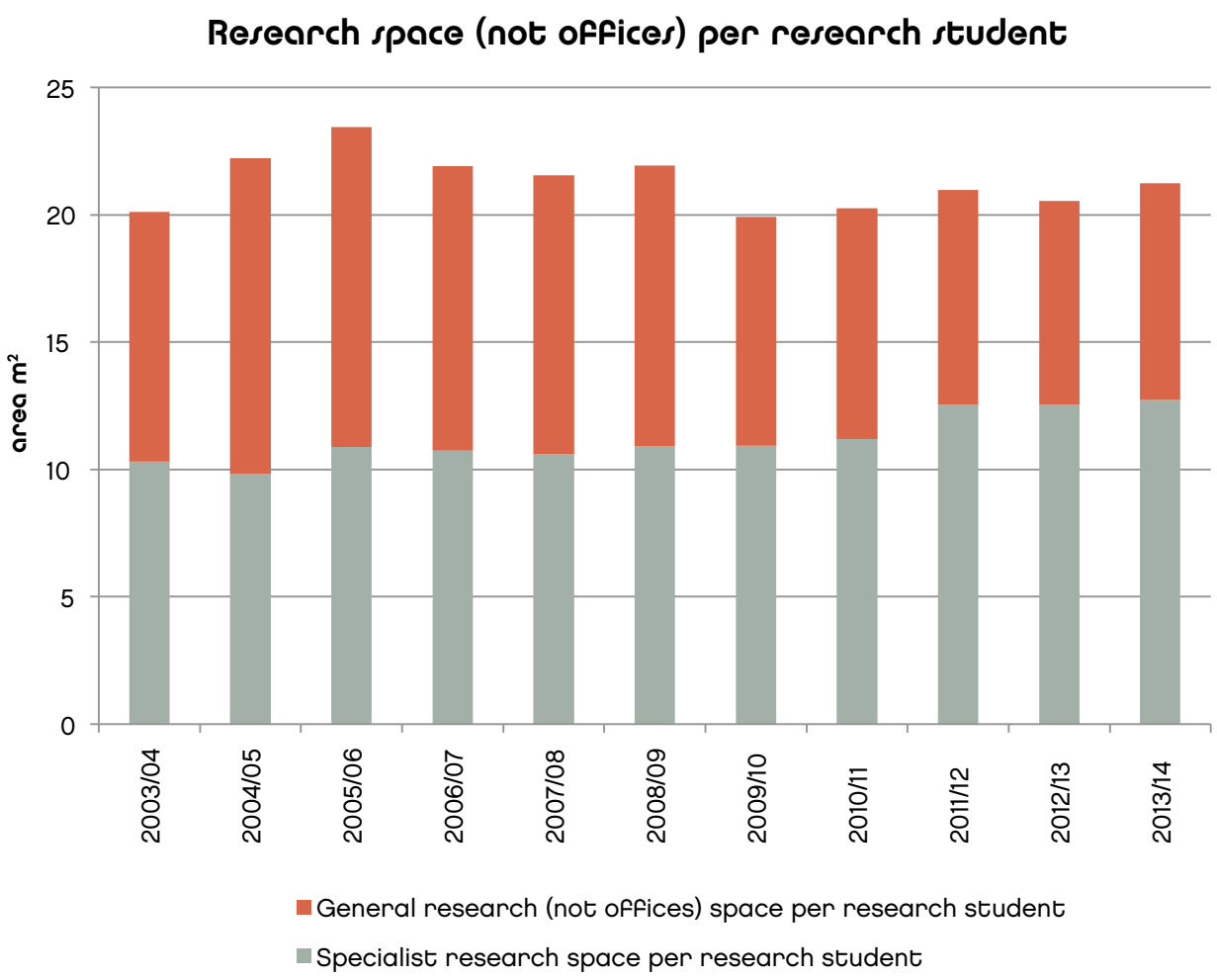
Institutions should ensure an appropriate peer group is used when comparing this metric, as there are substantial differences from one institution to another dependent upon the nature of individual institutions. (Research intensive institutions will have a greater GIA per FTE than teaching intensive institutions for example).

AREA PER STUDENT AND STAFF FTE, ALL INSTITUTIONS



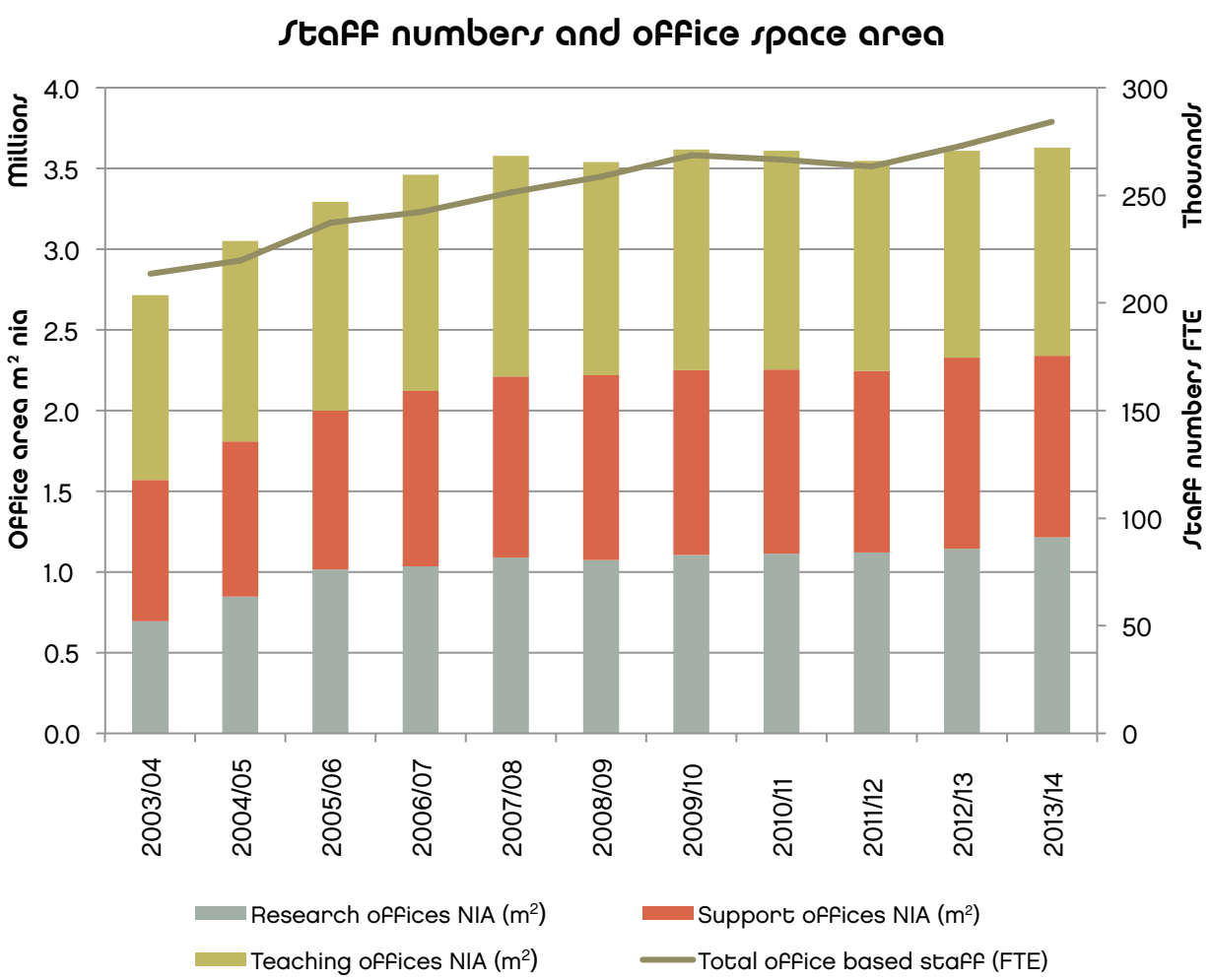
This graph shows the space per FTE for all institutions across the UK. About 75% of all institutions operate within + or – 5m^2 of the mean. It is only a few institutions which have much more than the mean (and these could be specialist institutions with for example, a particular specialism which requires large amounts of space, such as agriculture).

RESEARCH SPACE BY RESEARCH FTE



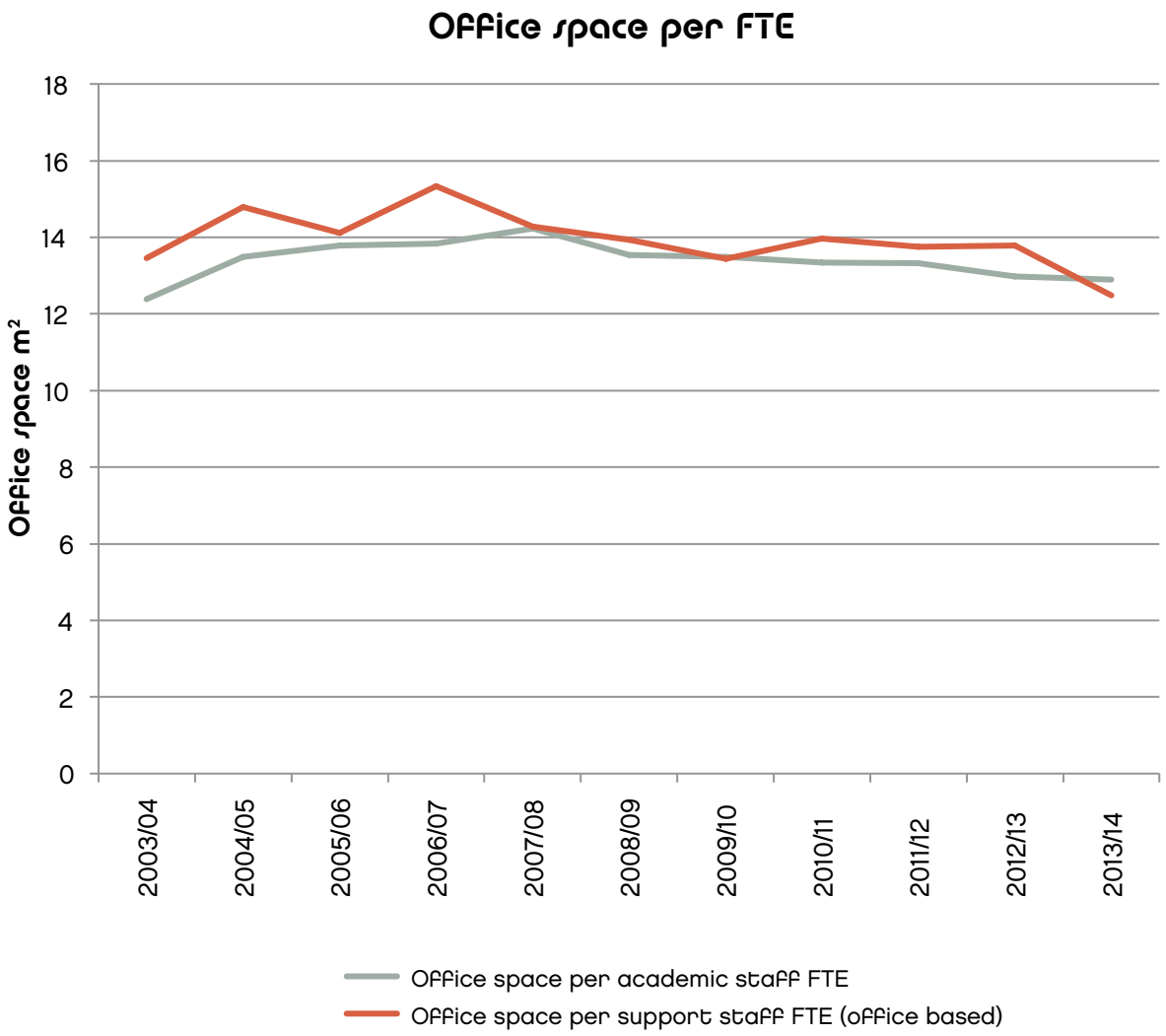
This metric looks at research space, general and specialised (excluding office space) divided by the number of research students. It shows the much larger requirement for space that research activity requires, and how there has been a steady increase in the amount of specialised space, whilst general space has reduced. Overall the provision of space has remained at around 20m^2 per research FTE.

OFFICE SPACE BY TYPE OF STAFF



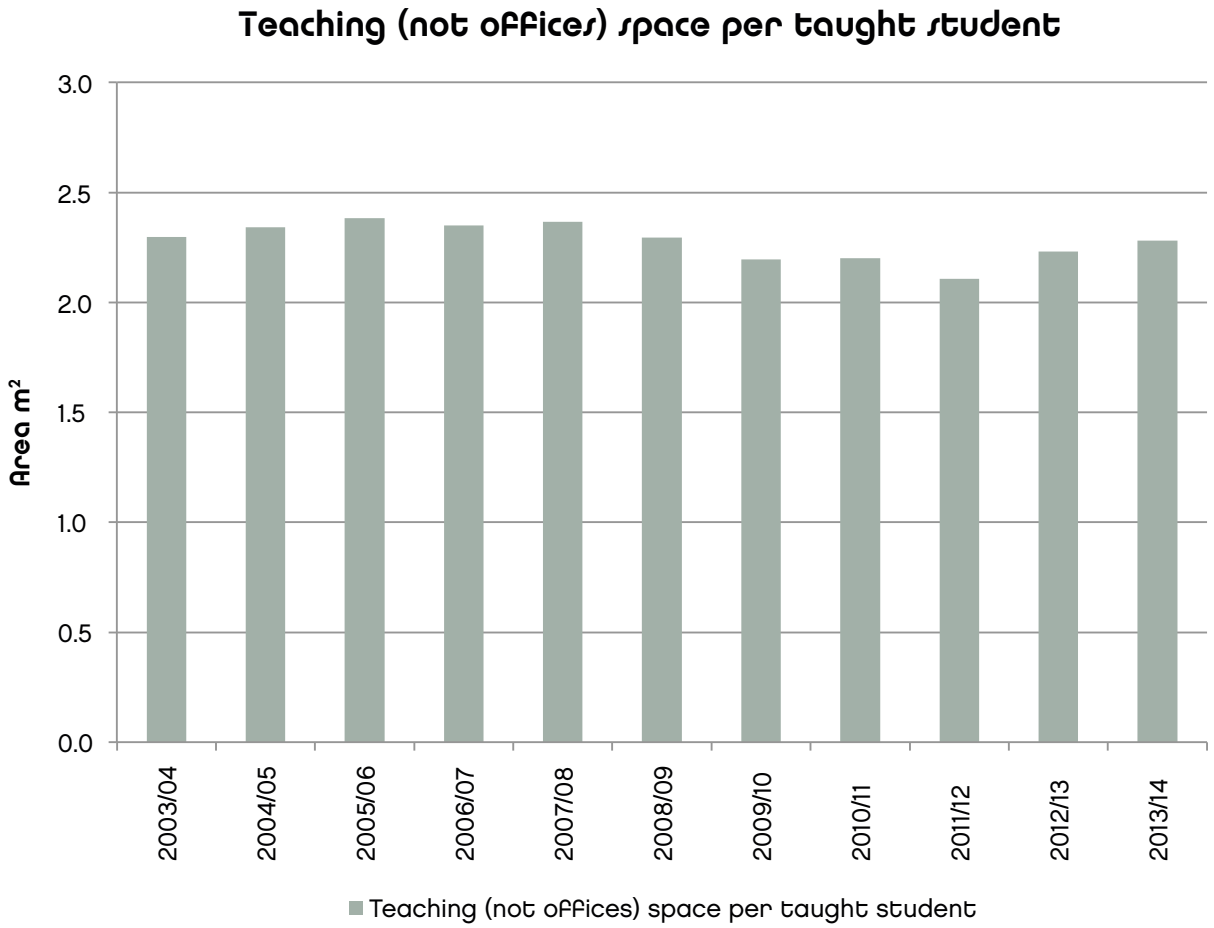
This graph should be read in conjunction with the next graph which shows the amount of office space per FTE across the HEI Estate. Space per FTE has slightly reduced in the study period (from 13.5 to 12.5 m^2 per academic FTE, and 14.8 to 12.5m^2 for administrative staff). Whist this is a move in the right direction, it is also clear that as numbers of staff increase, there is a propensity for office accommodation to increase in line with this increase in staff numbers.

AVERAGE OFFICE AREA PER FTE



As described in the comments above, the average space per FTE has been slowly reducing over the study period. What is still surprising is that office space provision for support staff is still provided at an average of over 12m² per FTE. This given that most institutions have moved to a more flexible (open-plan) provision of space for support staff.

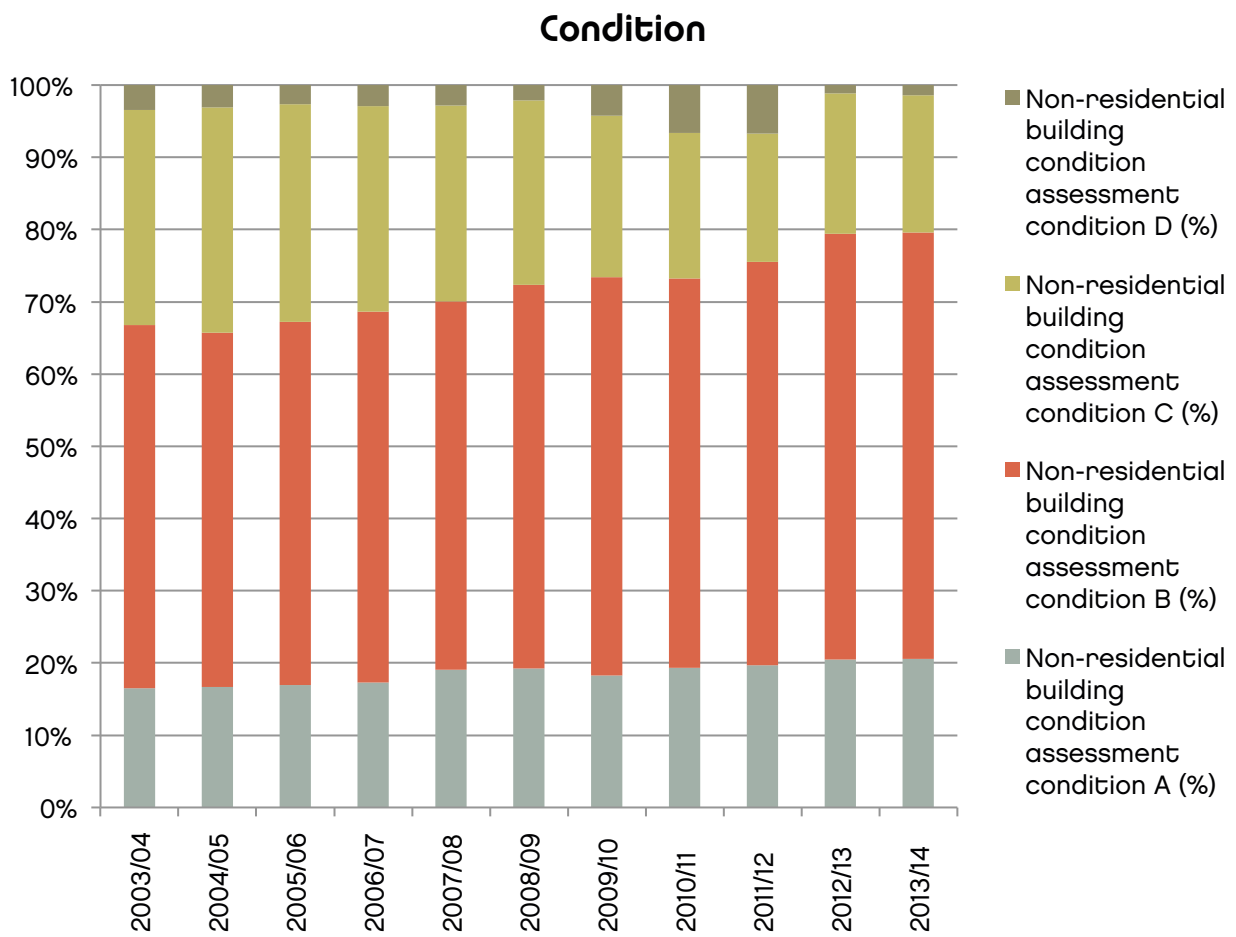
TEACHING SPACE PER TAUGHT FTE



This metric uses the teaching space (excluding office accommodation) divided by the number of taught students. It is clearly influenced both by the provision of space, and also the number of students. Whilst the number of students in Higher Education has increased over the period, the space per student has remained relatively stable at about 2.2m^2 per FTE.

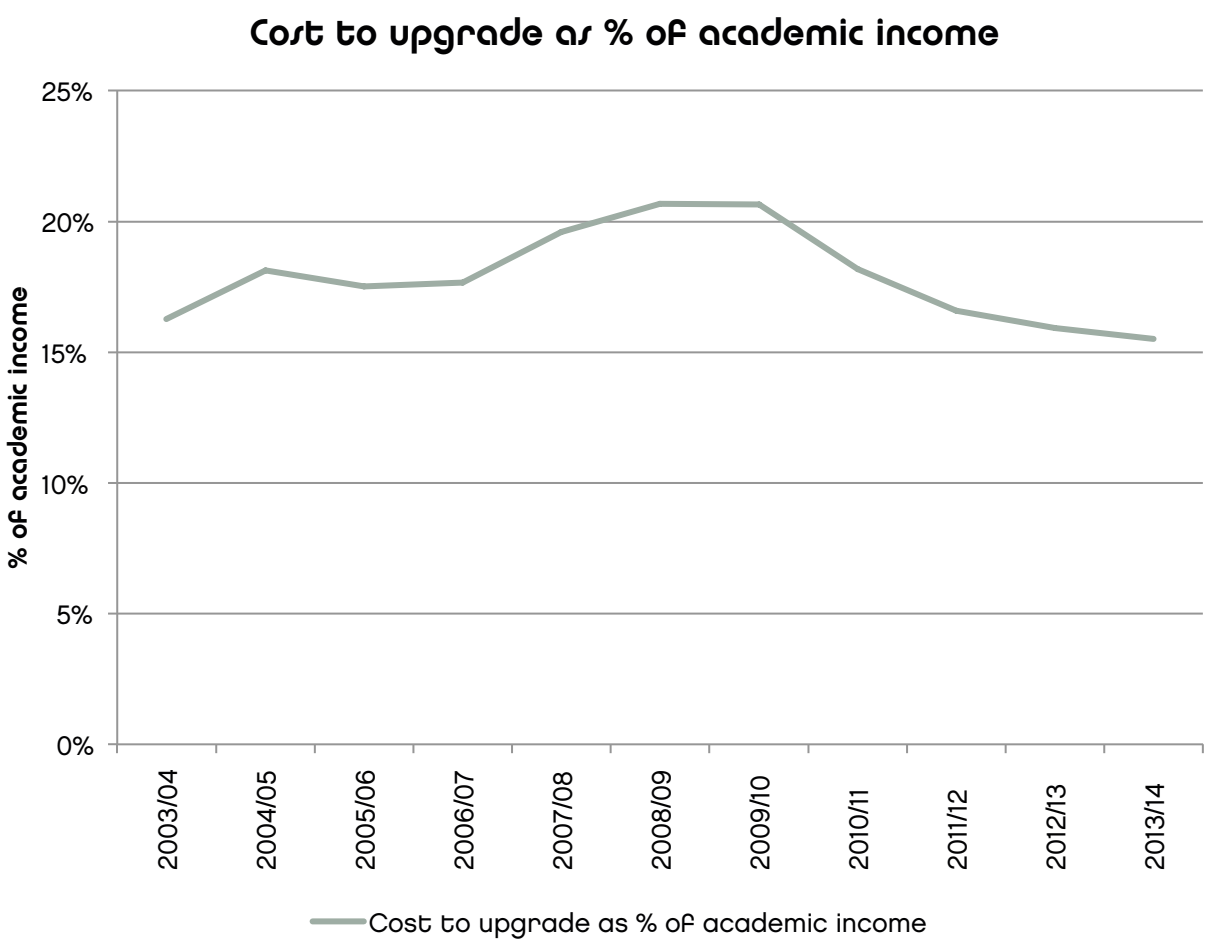
QUALITY

AUDE KPI PERCENTAGE OF GIA IN CONDITION A AND B



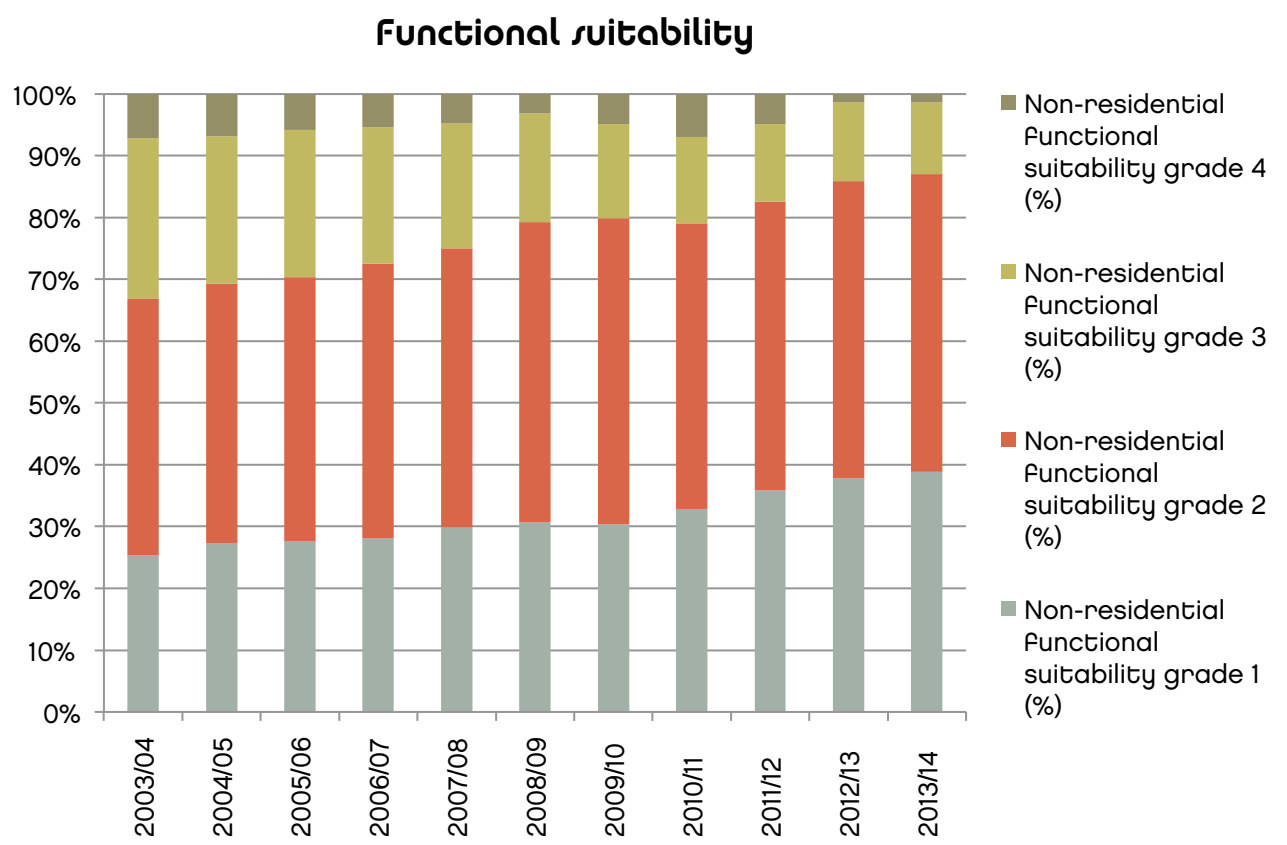
The overall condition of the estate continues to improve, with an increasing percentage of the total estate in conditions A and B. The percentage of estate in condition D has reduced to the lowest figure in the 10 years of the study.

COST TO UPGRADE TO B AS % OF INCOME



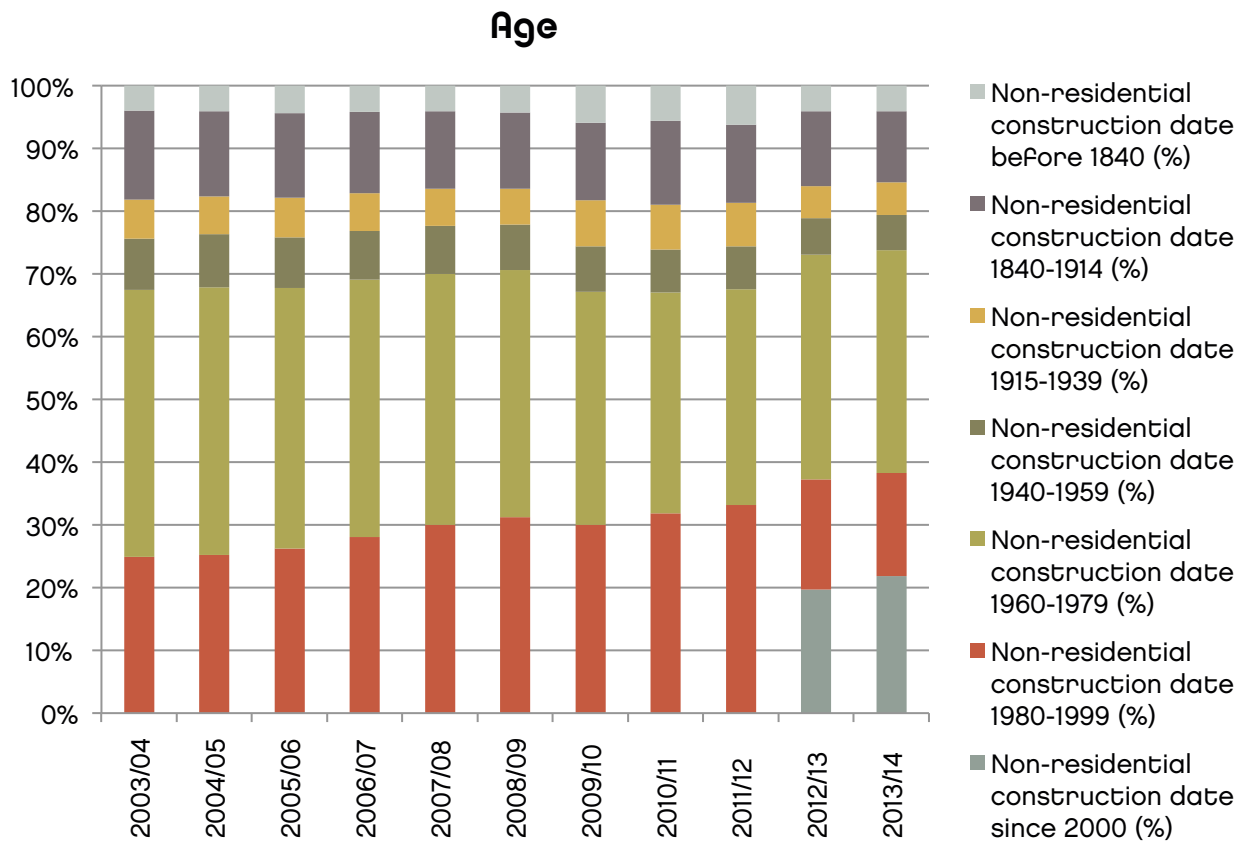
The cost to upgrade buildings as a % of academic income has fallen significantly over the last 4 years. This is presumably as estates have been refurbished, there is less expenditure required. Also, income has been rising in the same size estate, potentially reducing the impact of the cost of upgrading.

AUDE KPI PERCENTAGE OF GIA IN FUNCTIONAL SUITABILITY GRADES 1 AND 2



The functional suitability of the estate has increased considerably over the last 10 years as institutions have spent capital with a clear desire to make their estate more fit for purpose. The % of estate which is functionally not suitable (i.e. functional suitability grade 4) has reduced to the lowest in the study period.

AGE

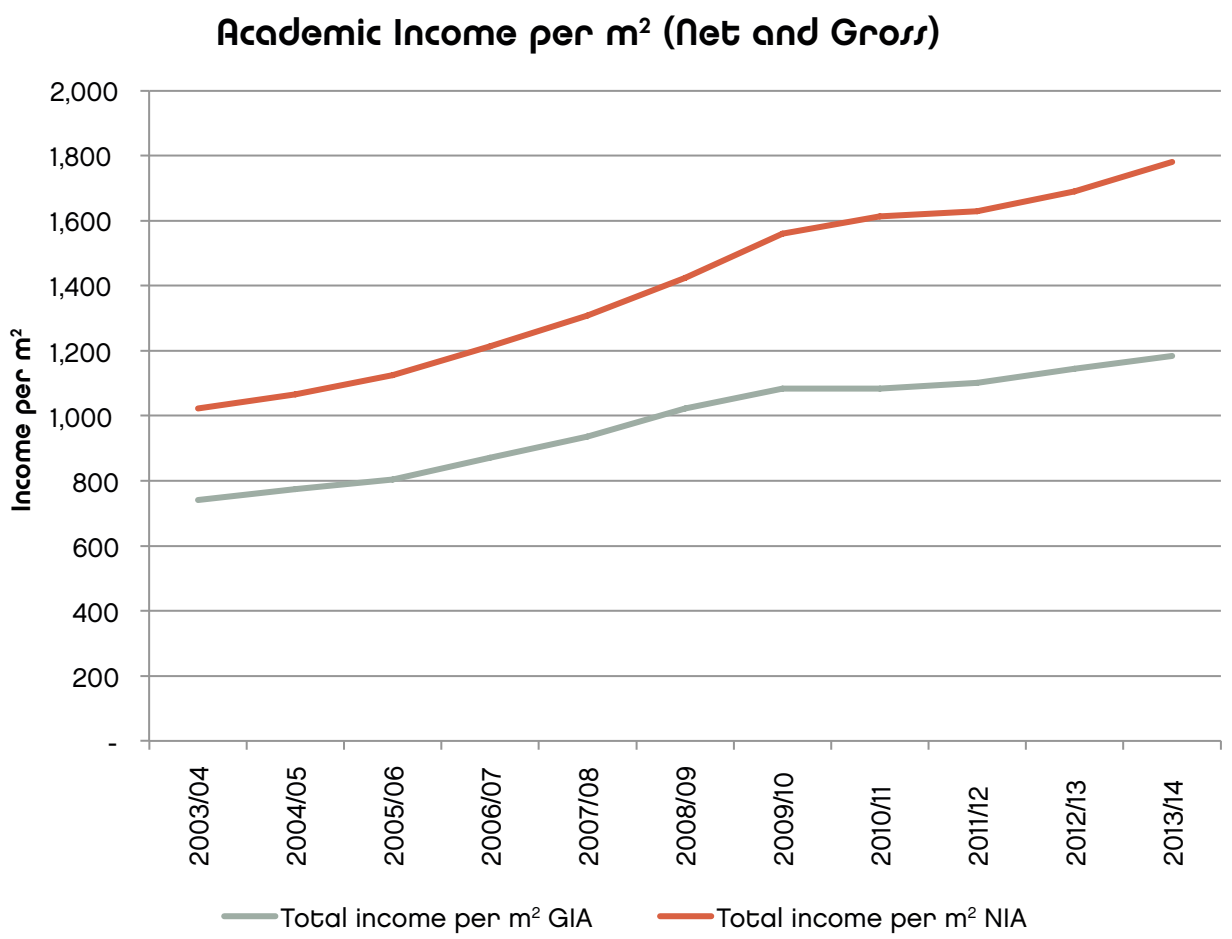


The UK HEI estate is very large; and as a consequence the replacement of if takes time to undertake. What this chart shows is that the proportion of the estate that is built since 1960 has slowly been increasing.

The challenge for the sector is that there is a significant amount of the estate is reaching a critical point in its life when it will require refurbishment. Buildings built in 1980 are now 35 years old and likely to require significant investment in the near future.

VALUE

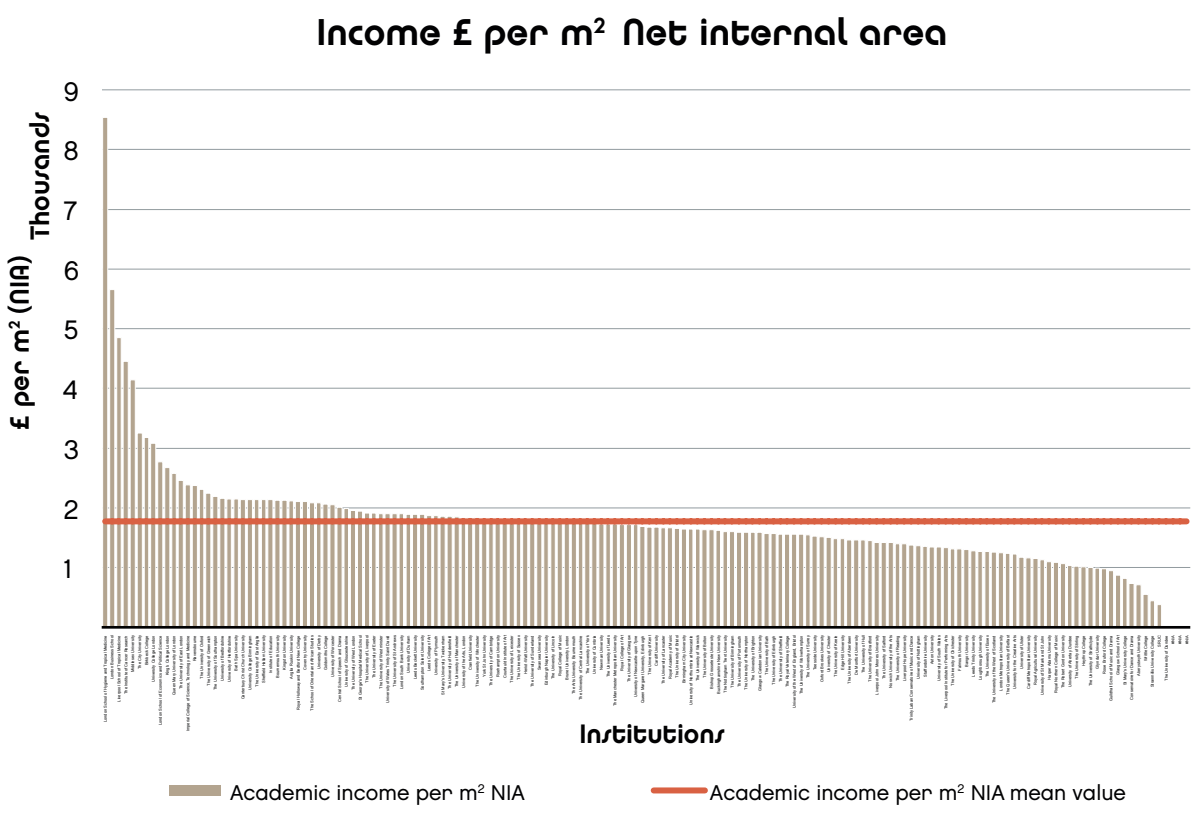
AUDE KPI INCOME PER M² (GIA)



The efficiency with which Universities use their estate continues to increase. Income per m² is rising, and whilst income is increasing, this shows that Universities are using their estate more efficiently.

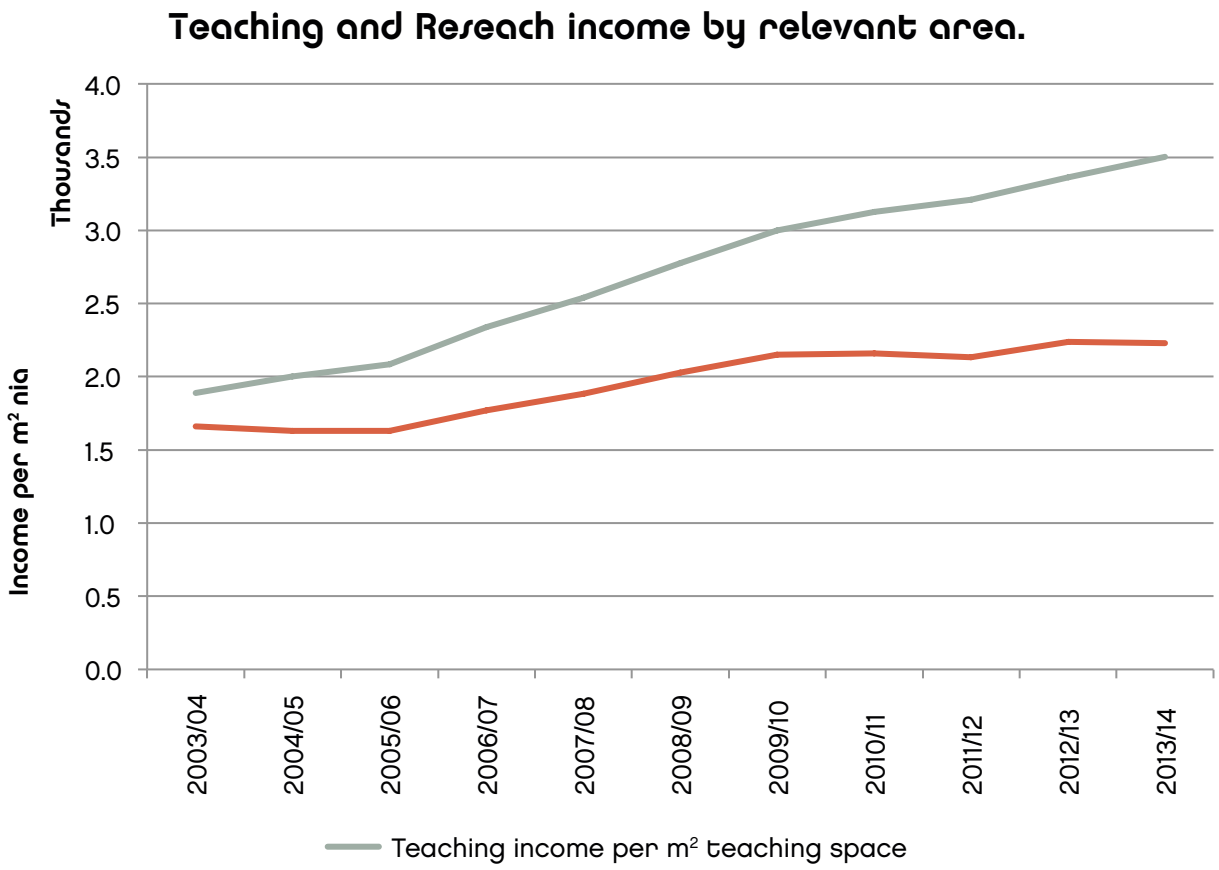
Income per unit area is a recognised HE measure of performance that enables comparison between different types of institution (research or teaching intensive). By increasing income per unit area, institutions are able to reduce the burden of their estates costs whilst potentially increasing the expenditure per m².

INCOME PER M² FOR ALL INSTITUTIONS



This chart shows that with the exception of a few institutions which generate a very significant income, the majority of institutions generate between £1,500 and £2,000 academic income per m². As such, it is a very good metric to measure estate efficiency.

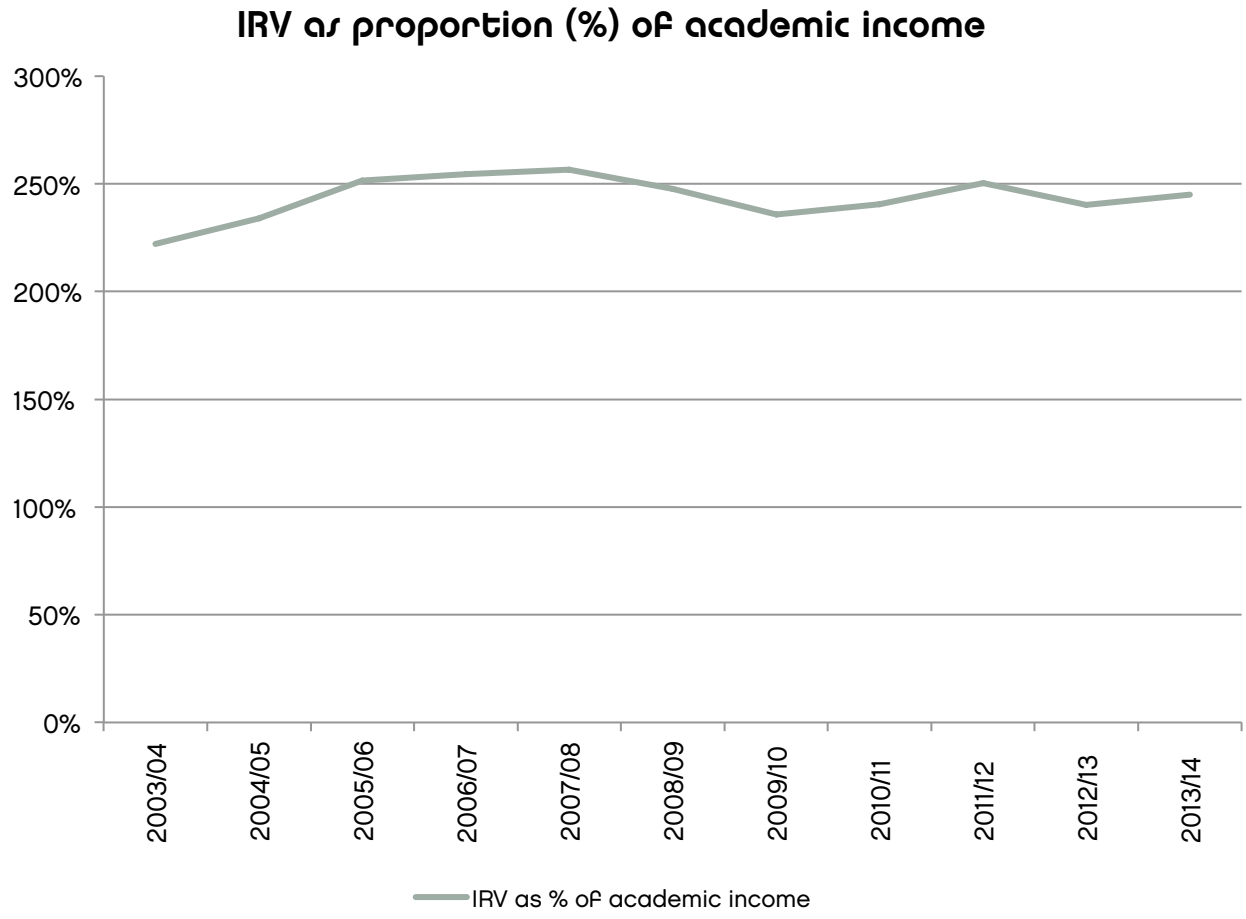
TEACHING AND RESEARCH INCOME PER M^2



This graph shows teaching income per m^2 of teaching space and research income per m^2 of research space. What this shows is that use of teaching space has increased significantly over the period, whereas research space utilisation has not increased at the same rate. This metric excludes administrative and support space and as such measures the activity taking place in space allocated to that activity.

The increase in student numbers, and the income generated by that activity has clearly assisted in driving up teaching income per m^2 teaching space. This notwithstanding the fact that institutions have created additional space for learning as part of their capital programmes.

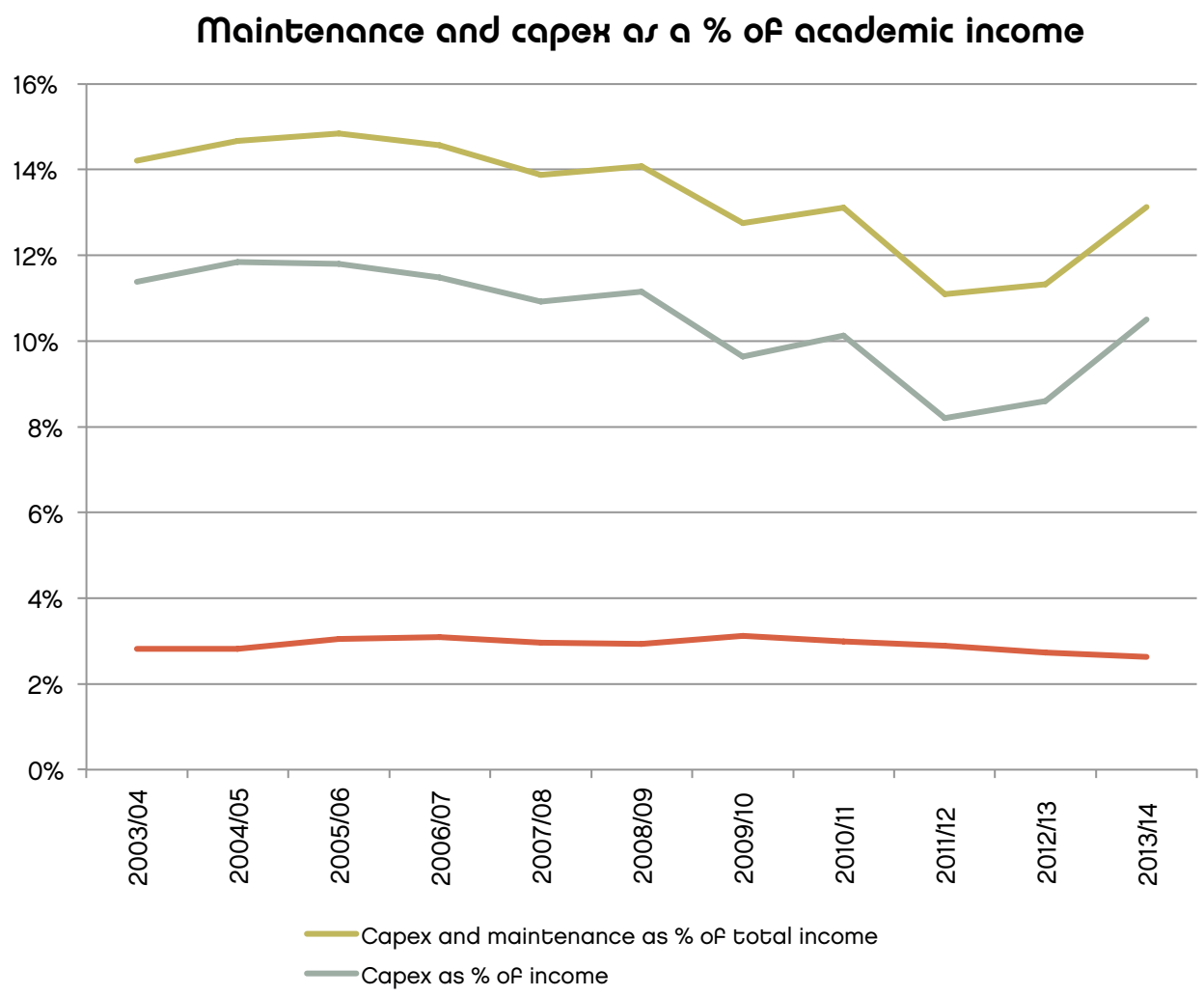
AUDE KPI IRV AS PROPORTION OF ACADEMIC INCOME



IRV (Insurance Replacement Value) is being used in this statistic as a proxy for Capital Value of the estate. As such this statistic seeks to understand the return on capital employed (i.e. the academic income as a percentage of the Capital Value). Over time, this has remained relatively stable and as income has increased, so has the net 'worth' of the University's estate required to deliver that income.

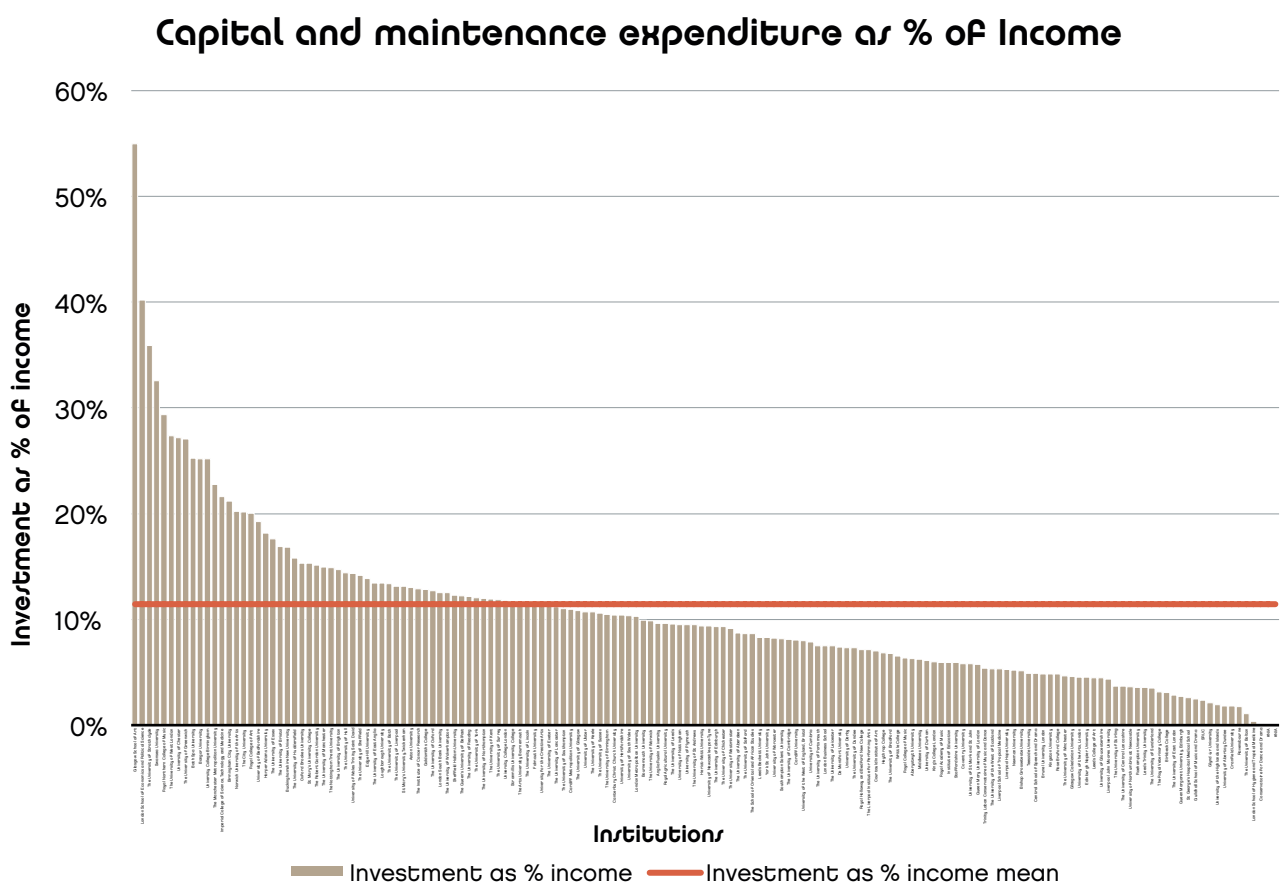
SUSTAINABILITY

AUDE KPI MAINTENANCE AND CAPEX AS PERCENTAGE OF IRV



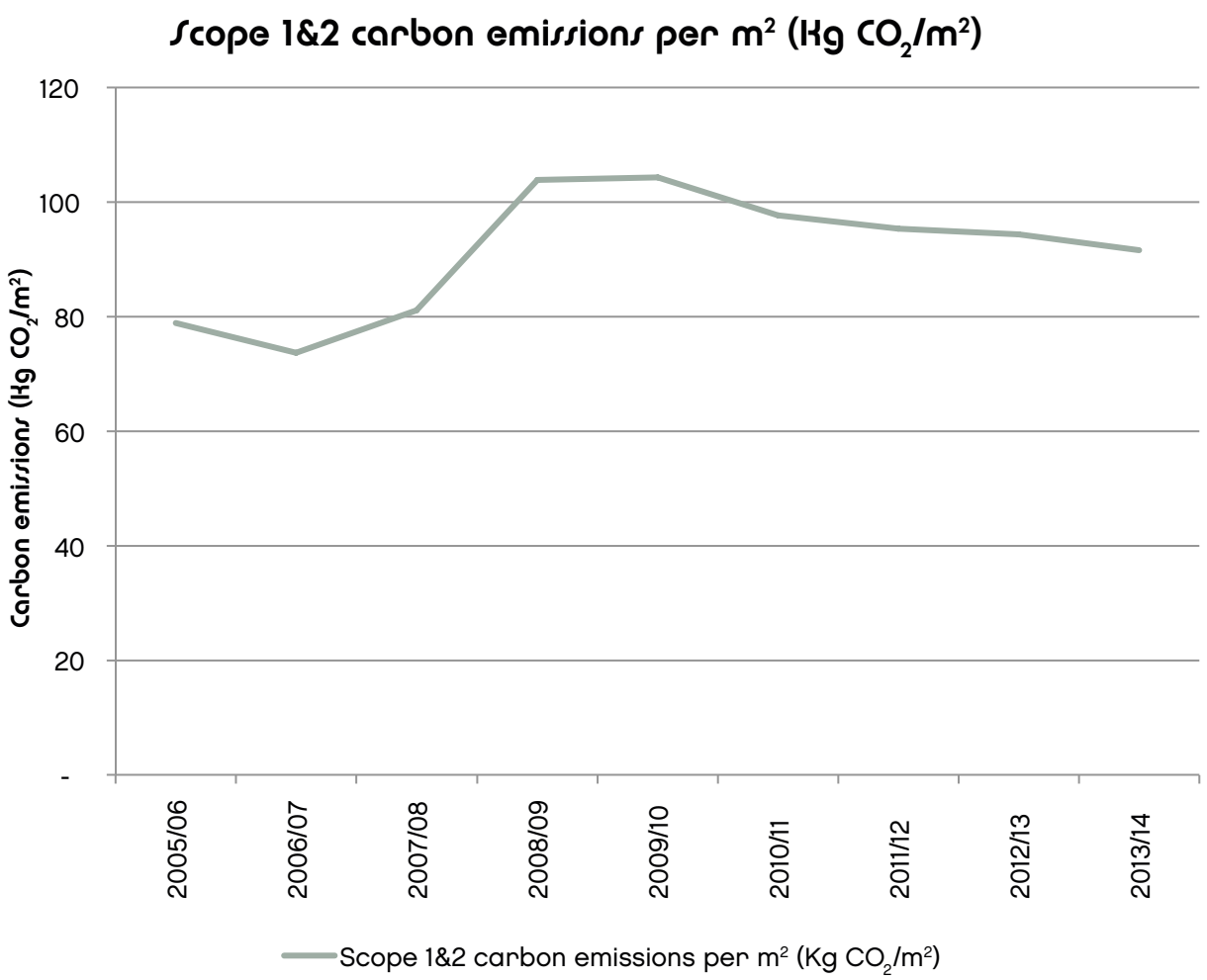
The accepted wisdom is that institutions need to spend a reasonable proportion of their income on investing and maintaining the estate. 14% has often been quoted as a target for investment; this has not been reached as a mean for a number of years although the trend has been increasing over the last three years.

CAPITAL AND MAINTENANCE EXPENDITURE AS A % OF INCOME, ALL INSTITUTIONS



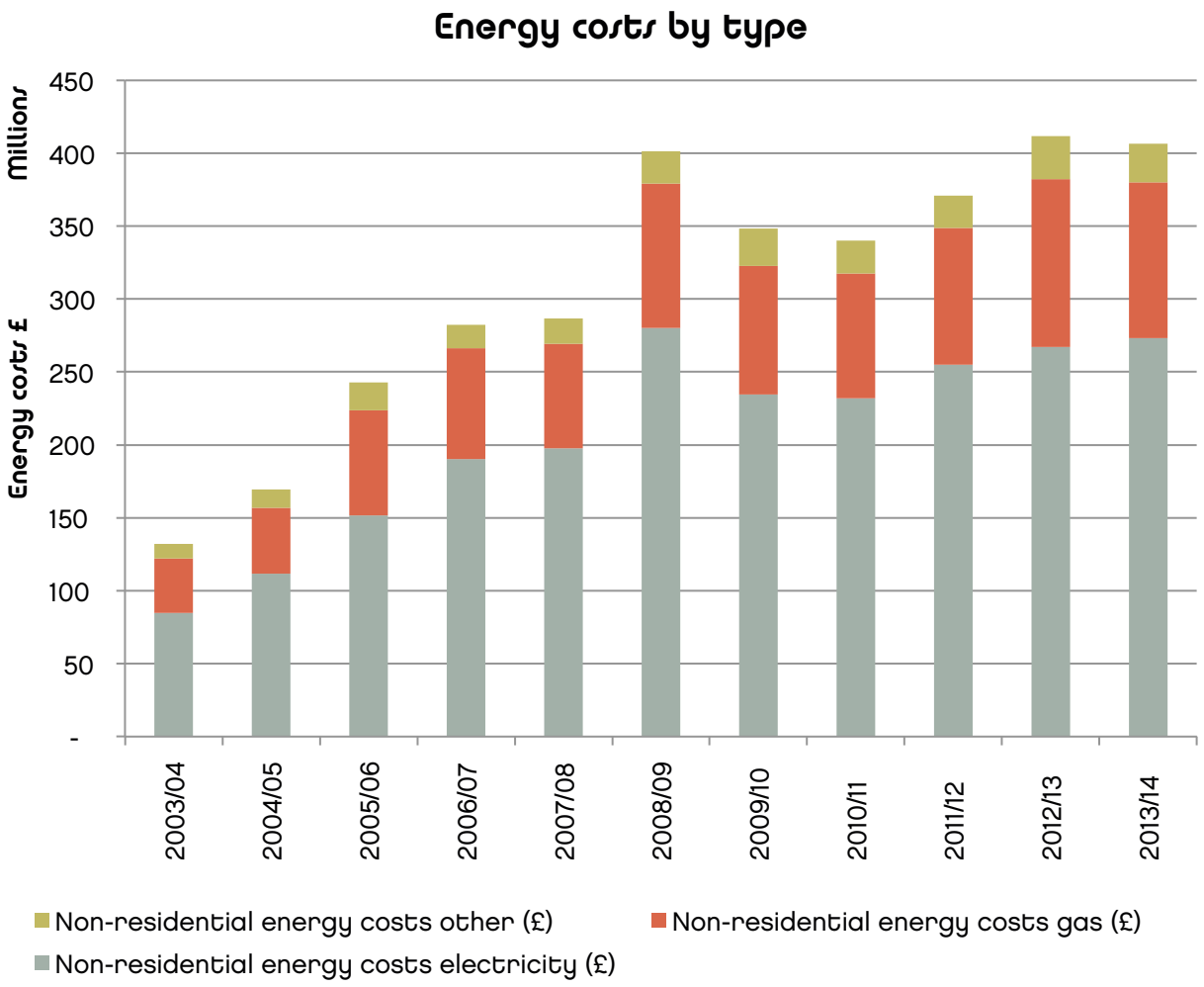
Institutions which have very high investment as a percentage of income are typically smaller institutions which are undergoing a significant 'one off' investment. Whilst there are large institutions making large investments, this often is a smaller percentage of their income than for a smaller institution replacing a large part of its estate.

AUDE KPI CARBON EMISSIONS SCOPE 1 AND 2 PER M²



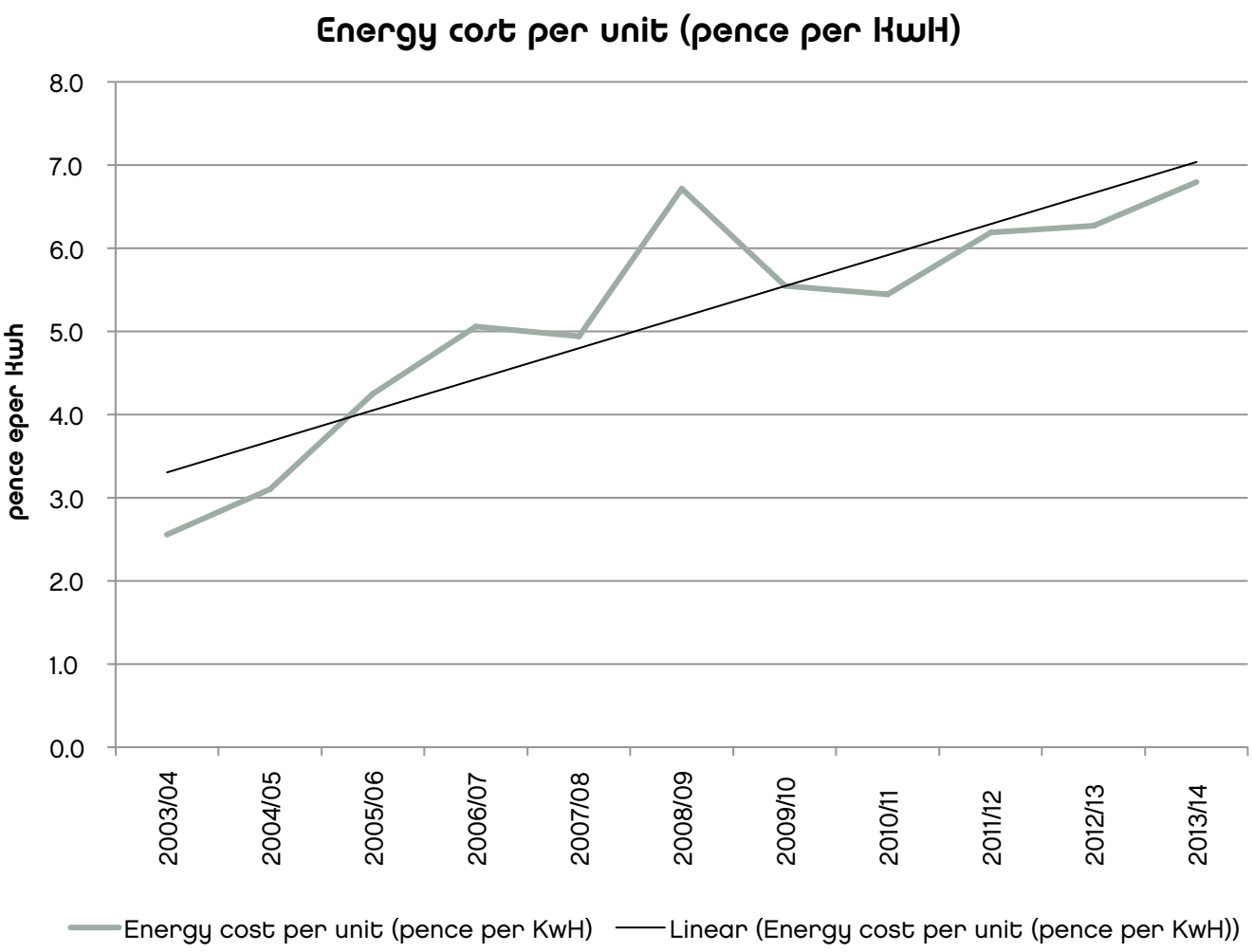
Emissions per m² have been slowly reducing over the last six years. This would suggest that the environmental sustainability policies that institutions are investing in are paying off with a reduced carbon output.

ENERGY COST BY TYPE



Energy expenditure continues to increase, (albeit with a slight decrease from last year). Costs have now increased to greater than the peak expenditure in 2008/09. The global price of oil (and gas) is bound to impact on the cost of energy, and institutions could see a reduction in these costs as the wholesale price feeds through to tariffs.

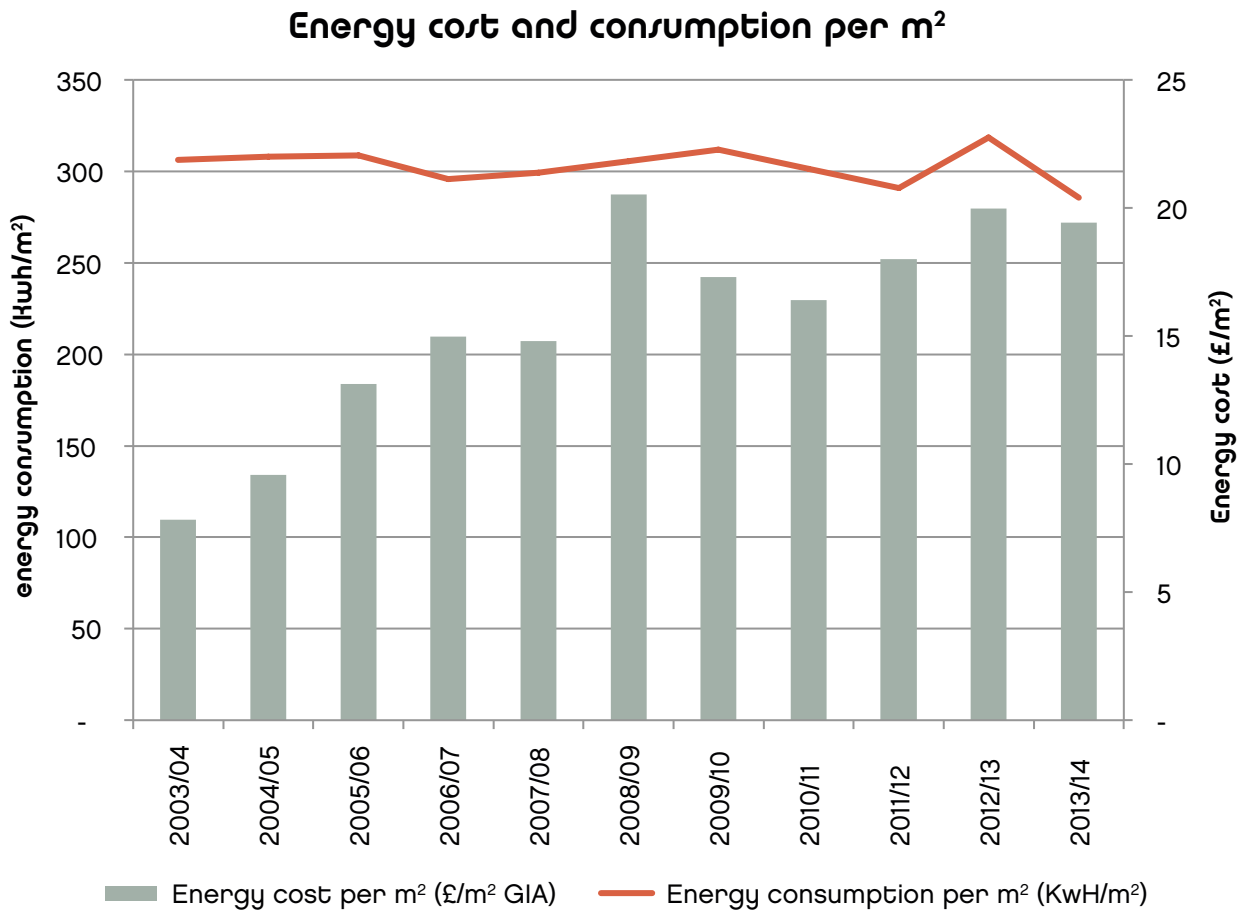
ENERGY COST PER UNIT



Energy costs have continued to increase at a rate greater than inflation. The general view was that energy costs were likely to continue to increase at this sort of rate in the medium to long term. The global price of oil and gas has significantly reduced within the last year. This is expected to feed into the tariffs that users pay and is likely to result in a reduction in unit cost.

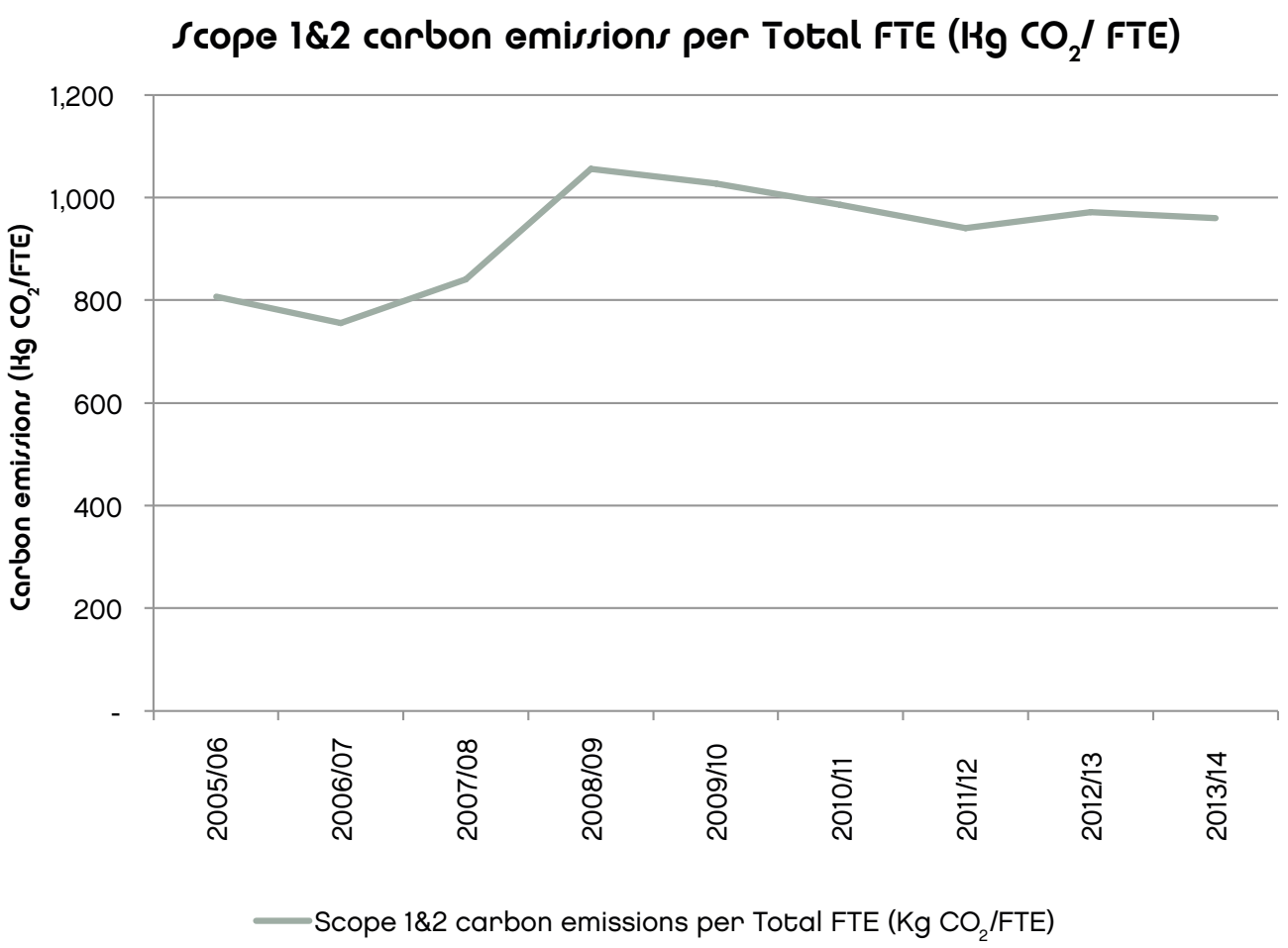
The demand that institutions put on buildings continue to increase; not only is there greater activity going on in buildings, but it also continues for longer during the day (with a significant number of buildings now operating 24hrs a day), and with greater activity in traditional vacation time.

COST AND CONSUMPTION PER M²



This chart shows the consumption and cost per m² GIA. It is notable that consumption has not reduced as a function of area (although there is a sharp reduction over last year's peak). The hypothesis is that whilst energy saving measures has made an impact, this has been undertaken as space is being more heavily used. This heavier use results in a greater demand for energy (e.g. for longer hours) and also a greater demand to ensure that the space provides a 'fit for purpose' environment (i.e. running at the right temperature, despite greater demand).

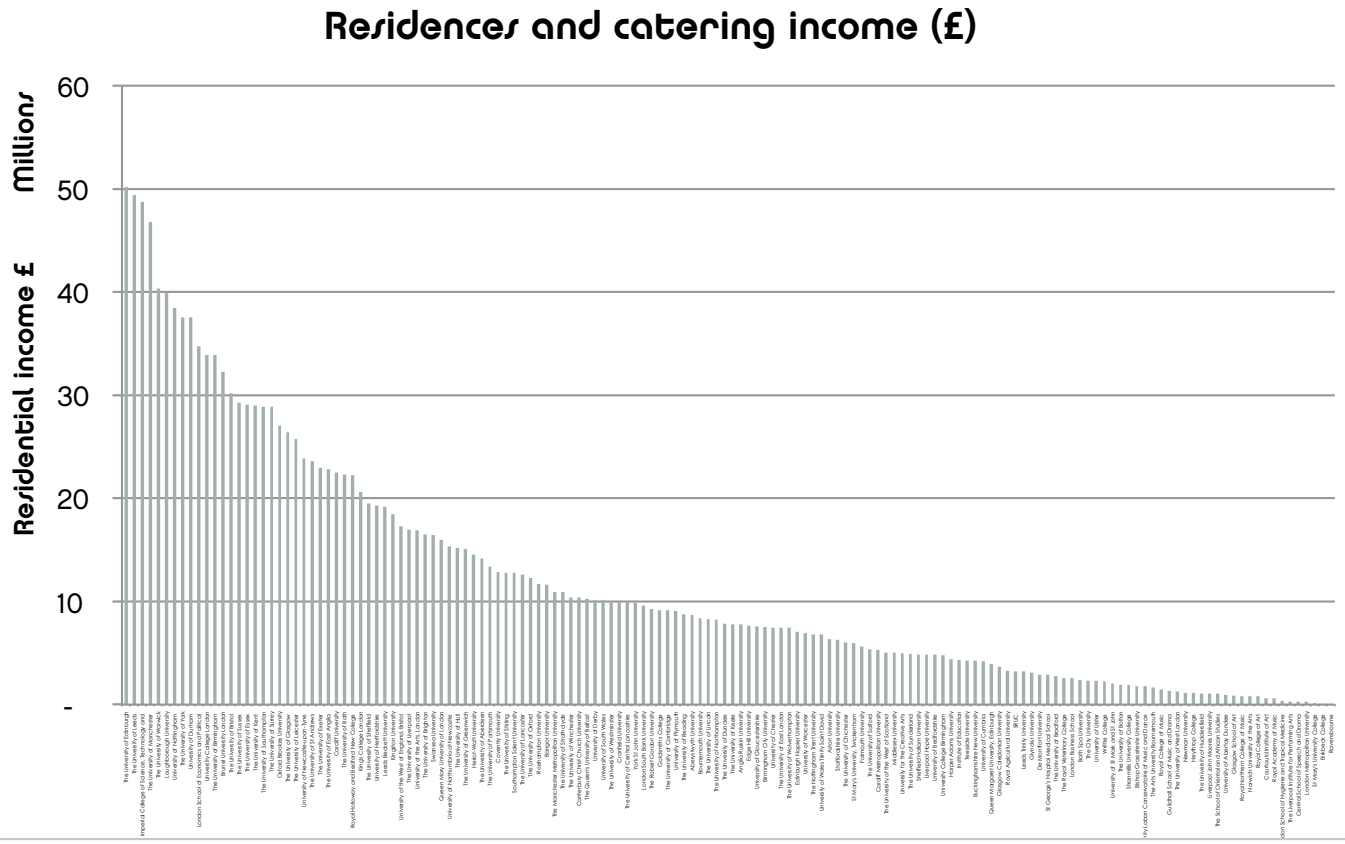
EMISSIONS PER FTE



An additional measure that can be used to review carbon performance is the carbon emissions per FTE. This measure is showing a reduction in emissions per FTE. Partly this is as a result of improved environmental performance (although this is, as discussed earlier, slight) and is much more related to the increase in FTEs per m^2 as referenced in the AUDE KPIs earlier (Efficiency).

5 RESIDENTIAL ESTATE

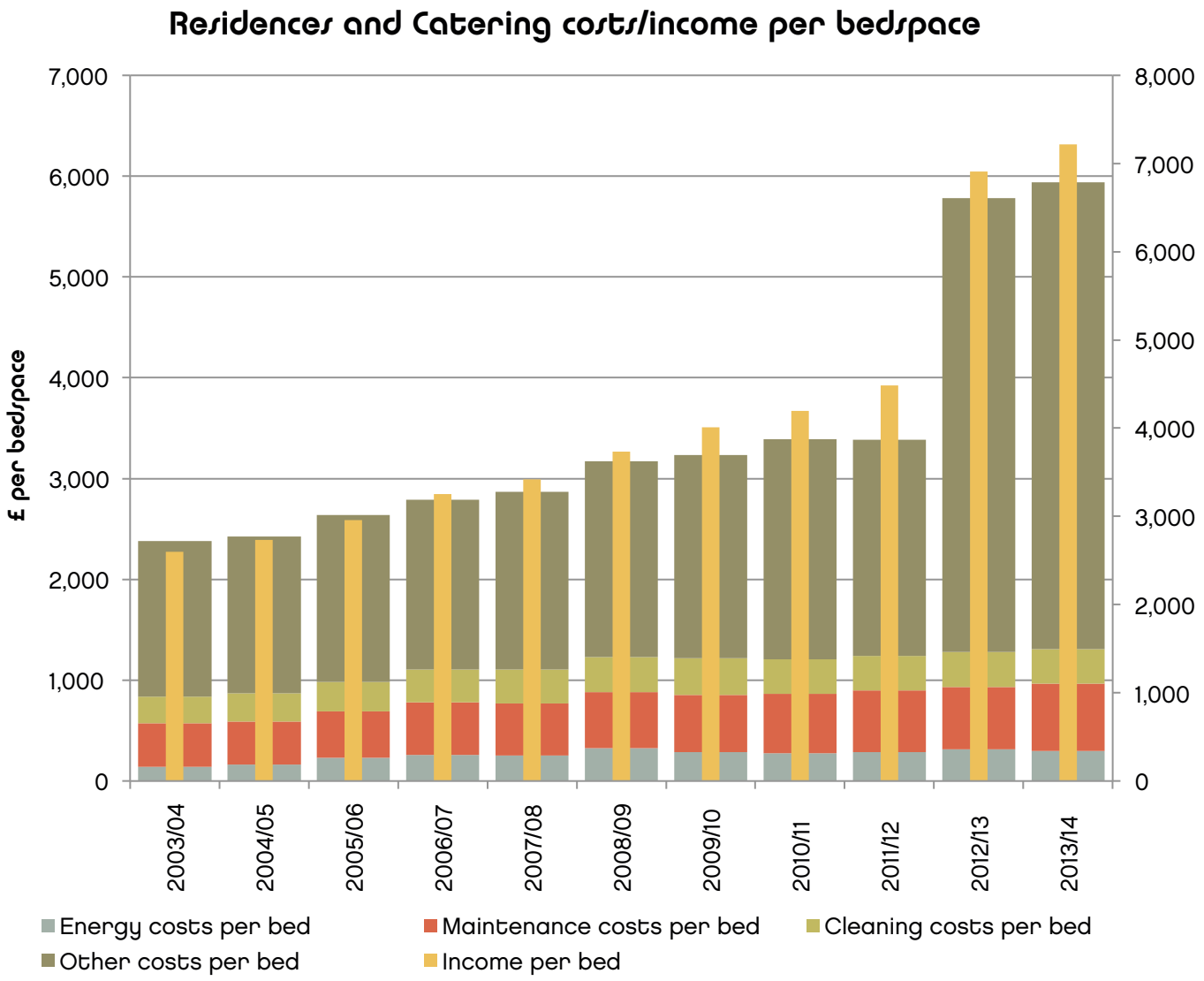
RESIDENCE AND CATERING INCOME BY INSTITUTION



Residences and catering income is clearly both an important source of additional income. 35 institutions generate over £30m from their residences and catering operations. It should be noted that typically this includes income from conferencing and catering activities outside normal academic activity.

Residential income generates a total of £1.7bn across the sector and provides a total of over 250,000 bedspaces, with a further 100,000 under leases or nominations agreement from the private sector.

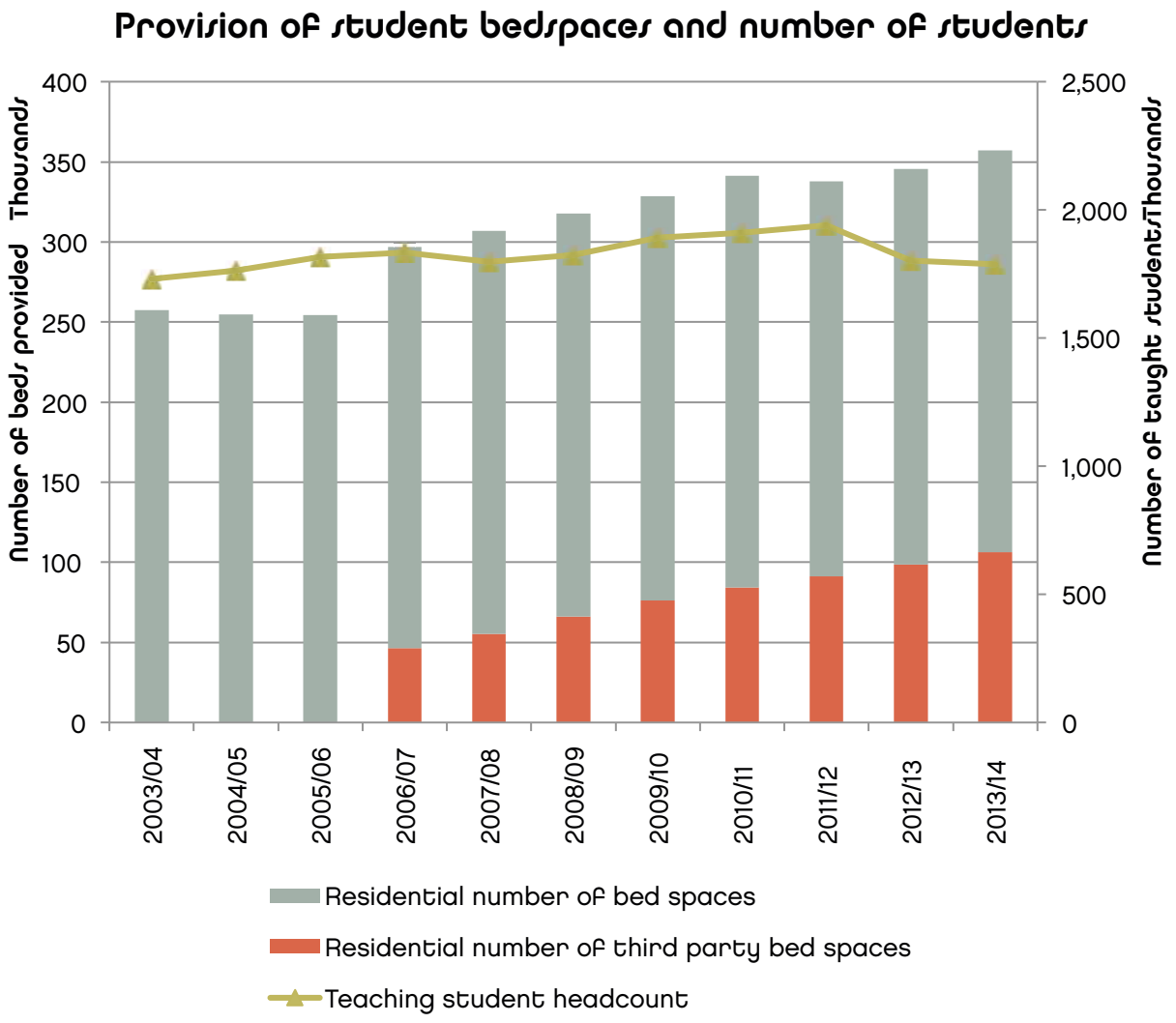
INCOME / EXPENDITURE PER BED



For the last two years, conference and catering income have been included within residences accounts. This accounts for the substantial increase in both costs and income in 2012/13 and 2013/14.

It should also be made clear that within the residences income and expenditure are all costs and income associated with activities such as conference income, summer lettings, weddings and other income generation activities like these (both within the residential and typically, academic estate). This should not be confused with 'Other' income (as referred to in the University income chart) which originates from an entirely different income stream not associated with the University's estate (such as income from shares, overseas activities and other businesses).

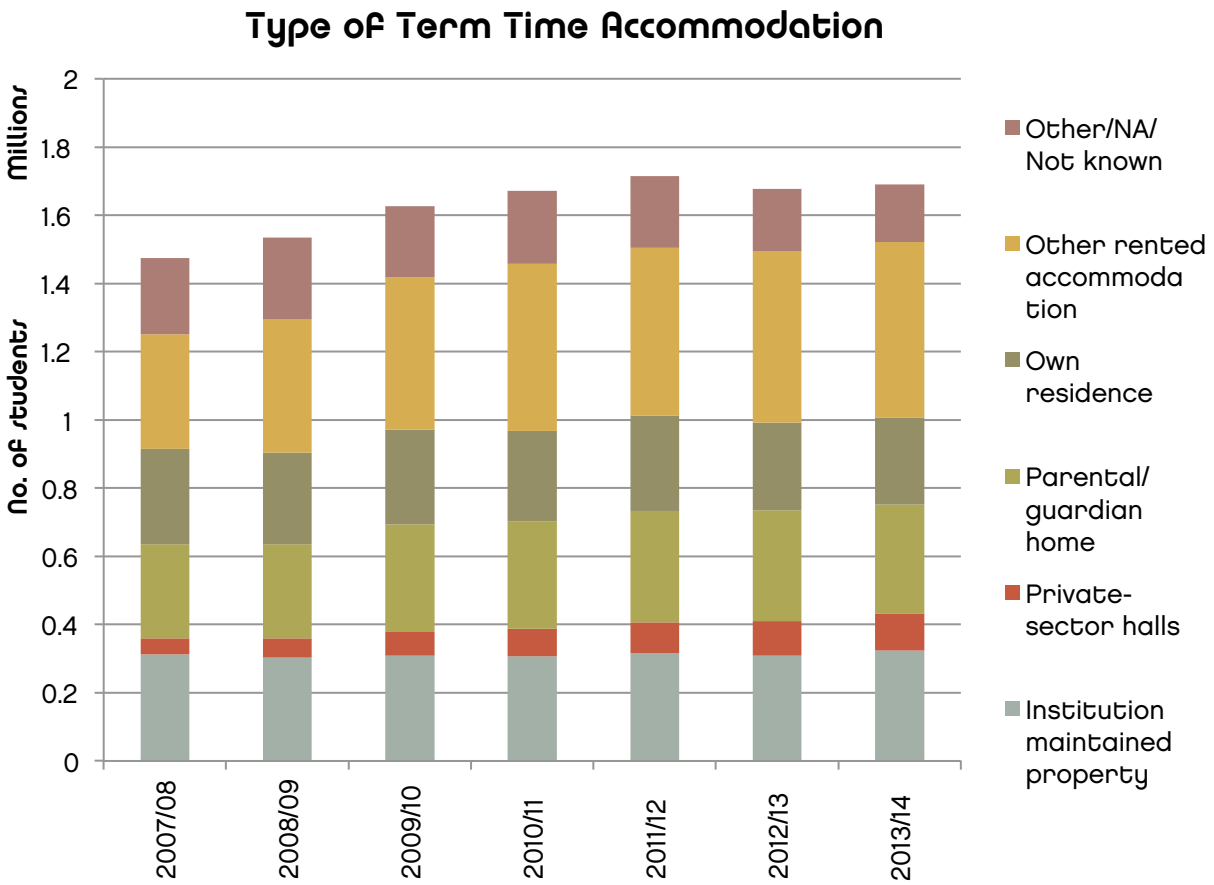
NUMBER OF STUDENT BEDS

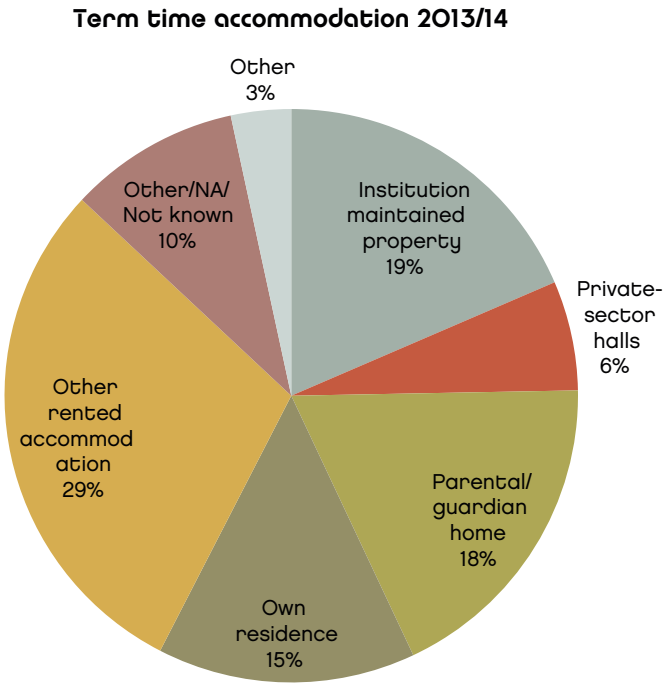


There has been speculation that this year (i.e. Sept 2015) will see a shortage of student beds to meet the increase in demand for spaces at Higher Education institutions. Bedspaces provided by Universities (and the private sector space under some form of lease or nominations agreement) has increased, but it still represents a small fraction (less than one sixth) of the total student headcount.

Institutions recognise the importance of first year residential accommodation as a differentiating factor, and are looking at different ways of ensuring an adequate provision of accommodation is made. This is often being provided with increasingly innovative assistance from the private sector halls providers.

TYPE OF TERM TIME ACCOMMODATION



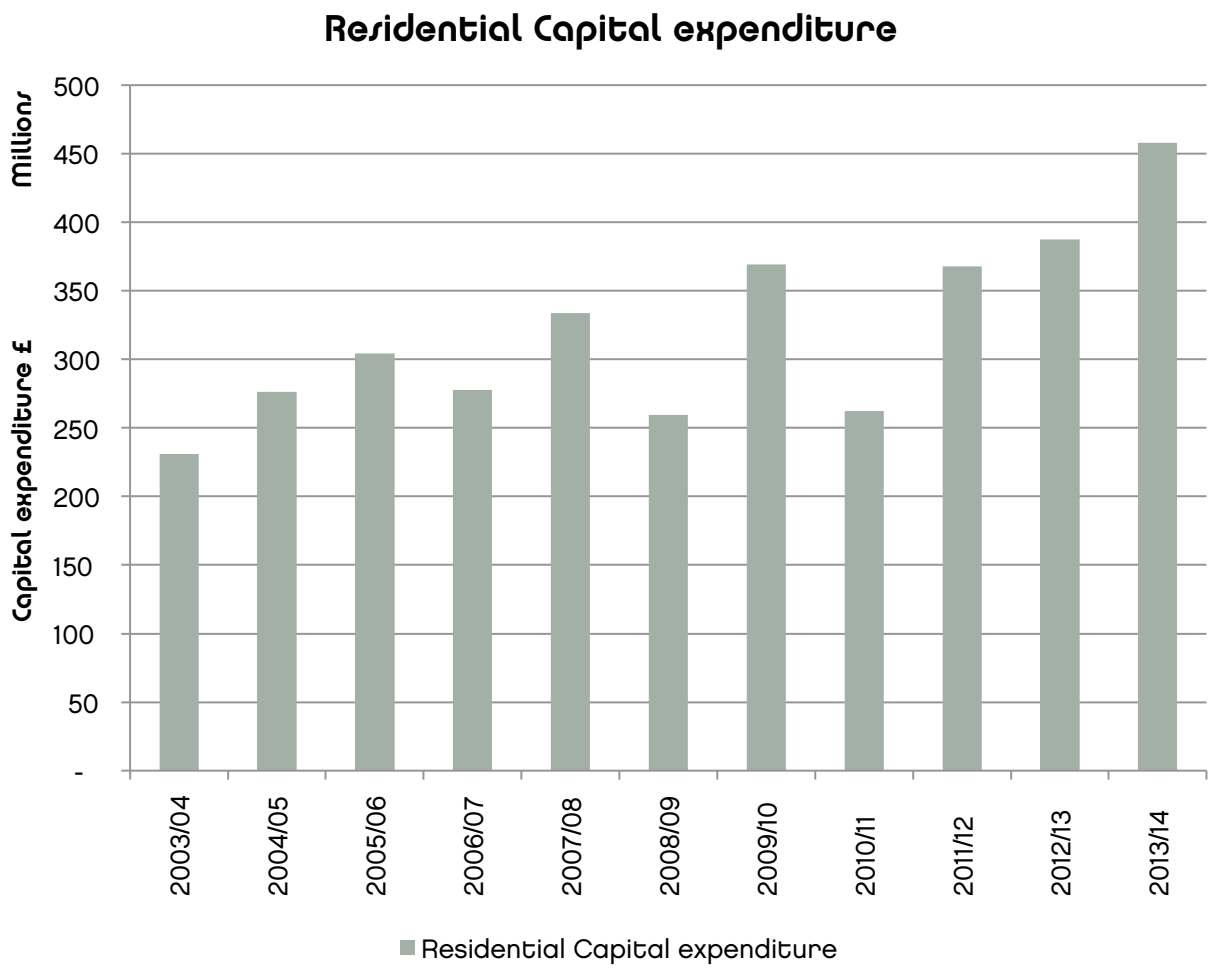


University provided accommodation only accounts for a small percentage (19%) of the accommodation for the student population.

There has been a substantial rise in private sector halls, however these only account for 6% of bedspaces.

The largest single type of accommodation is 'other rented accommodation' (typically houses in multiple occupation) which account for 29% of all accommodation.

RESIDENTIAL CAPITAL EXPENDITURE

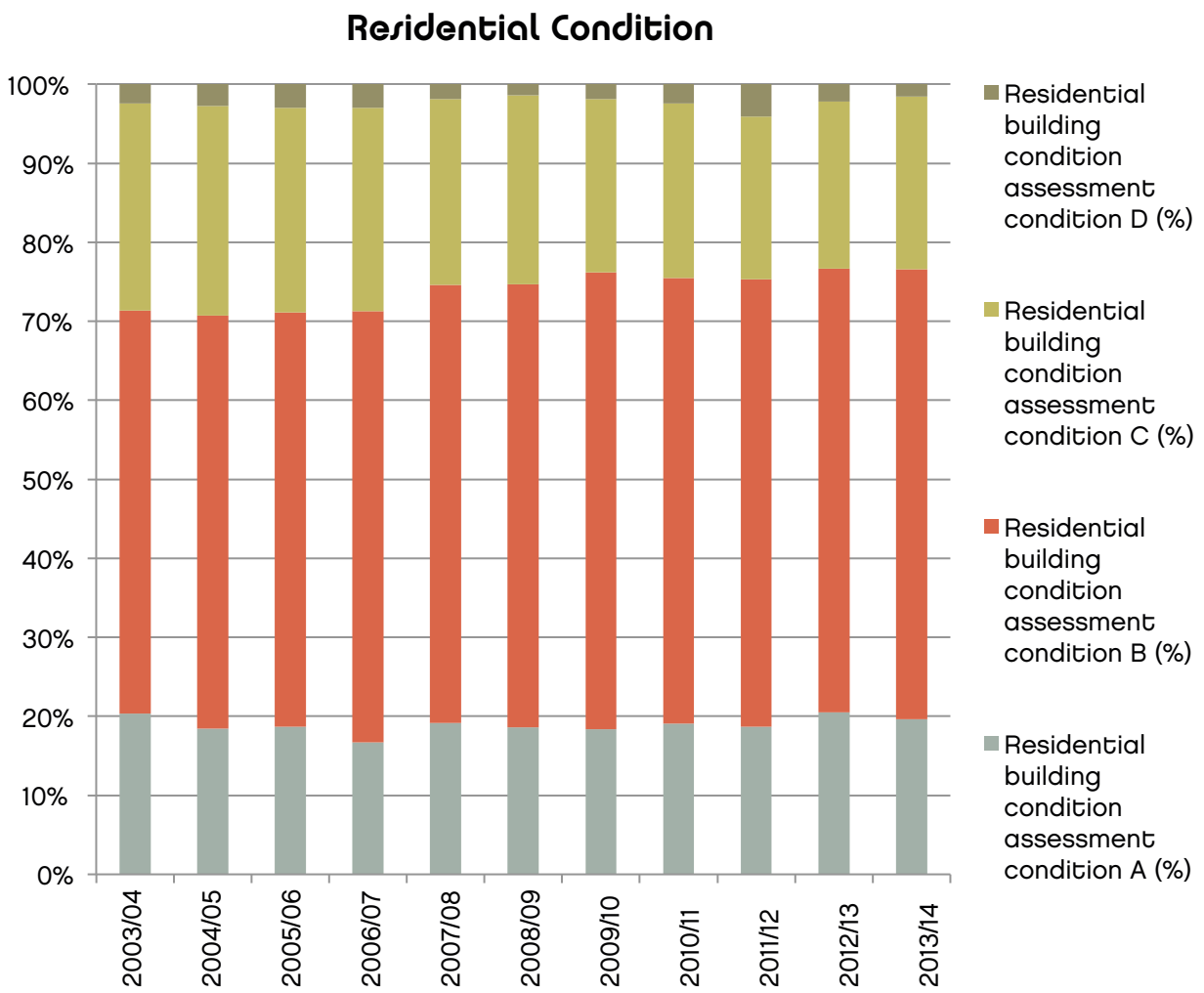


It has been argued the Universities have not been investing sufficiently in their residential estate. This suggests that University investment has been increasing and is now the greatest it has been in the last 10 years.

Along with this investment in the owned estate, institutions are continuing to work in partnership with the private sector to secure third party accommodation to meet the demands of students.

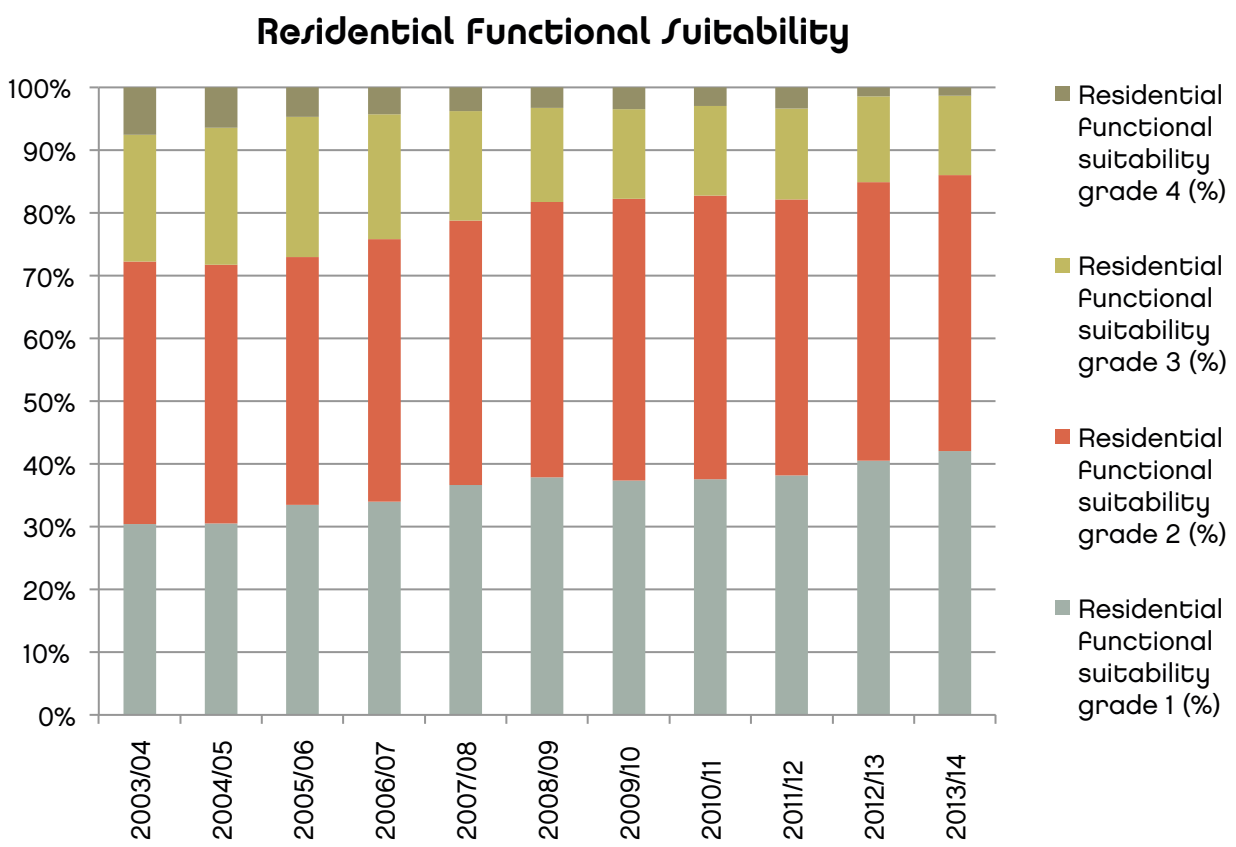
Universities understand the importance of the quality of residential accommodation in terms of recruitment of both home and overseas students. There are however, many other ways for institutions to ensure that they meet their obligations to provide accommodation by engaging with the private sector, if not investing the capital themselves.

CONDITION



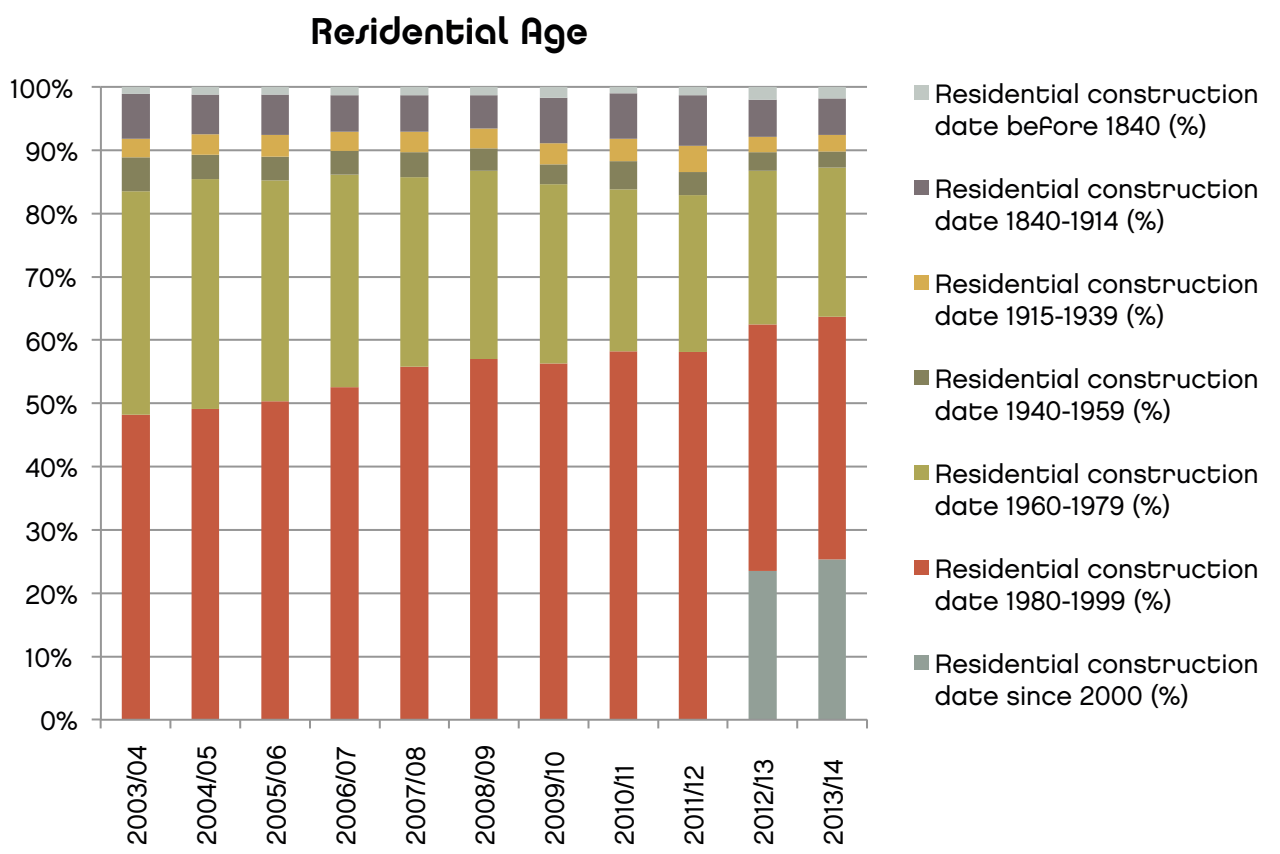
The condition of the residential estate has increased over the last 10 years; however this increase is only marginal, from 71% of the estate in conditions A and B, to 76%. There are certainly a number of institutions for which the condition of some of their own residences is a cause for concern and an area for investment.

FUNCTIONAL SUITABILITY



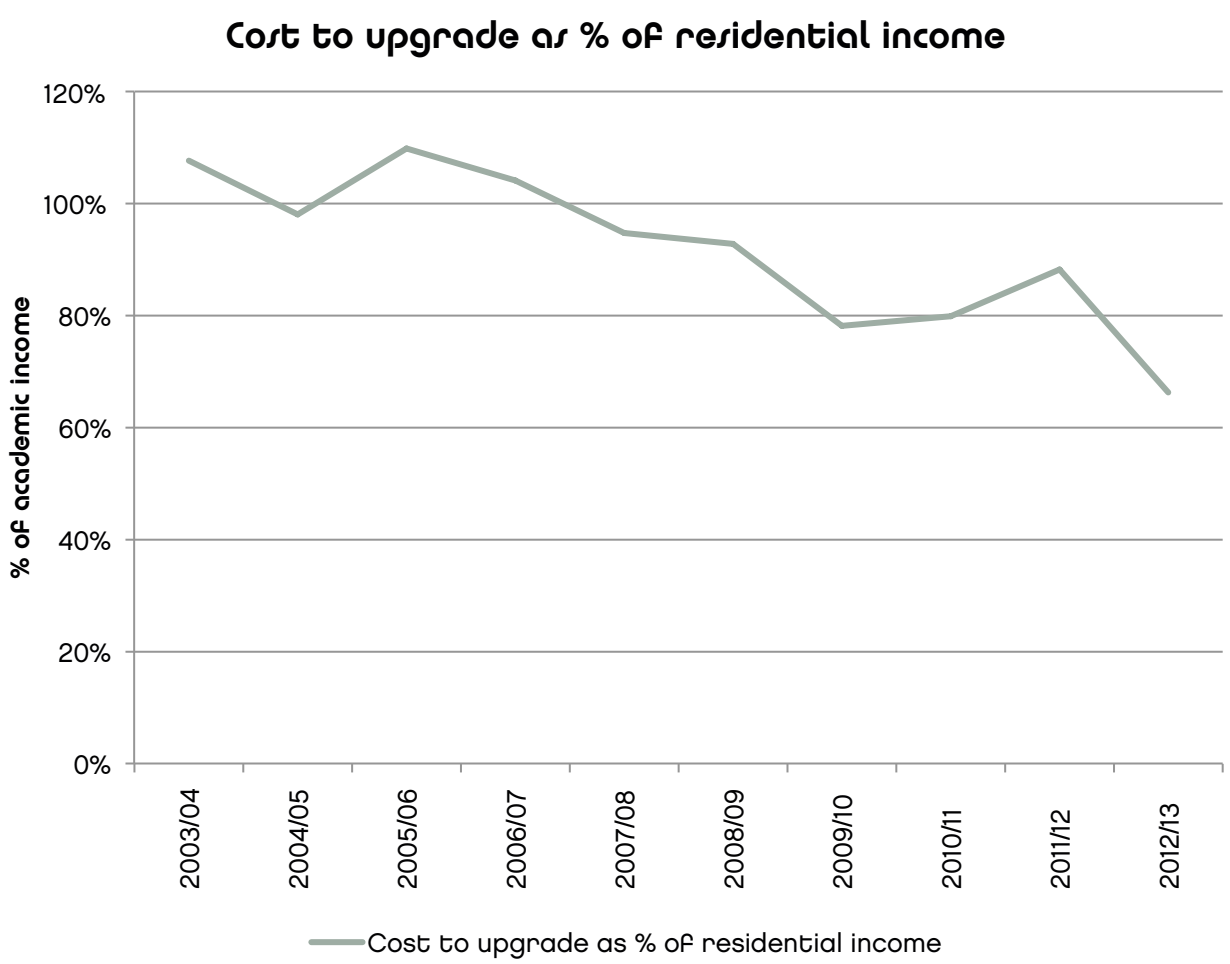
The suitability of accommodation has been improving year on year during the last decade. Students, and particularly their parents, are no longer prepared to accept unsuitable accommodation (which includes shared bedrooms, and bathrooms shared between many people).

AGE



As institutions do invest in their residential estate, the percentage of more recent buildings increases. There will continue to be a number of very old residential institutions, although the bulk of the accommodation will be replaced or upgraded over time.

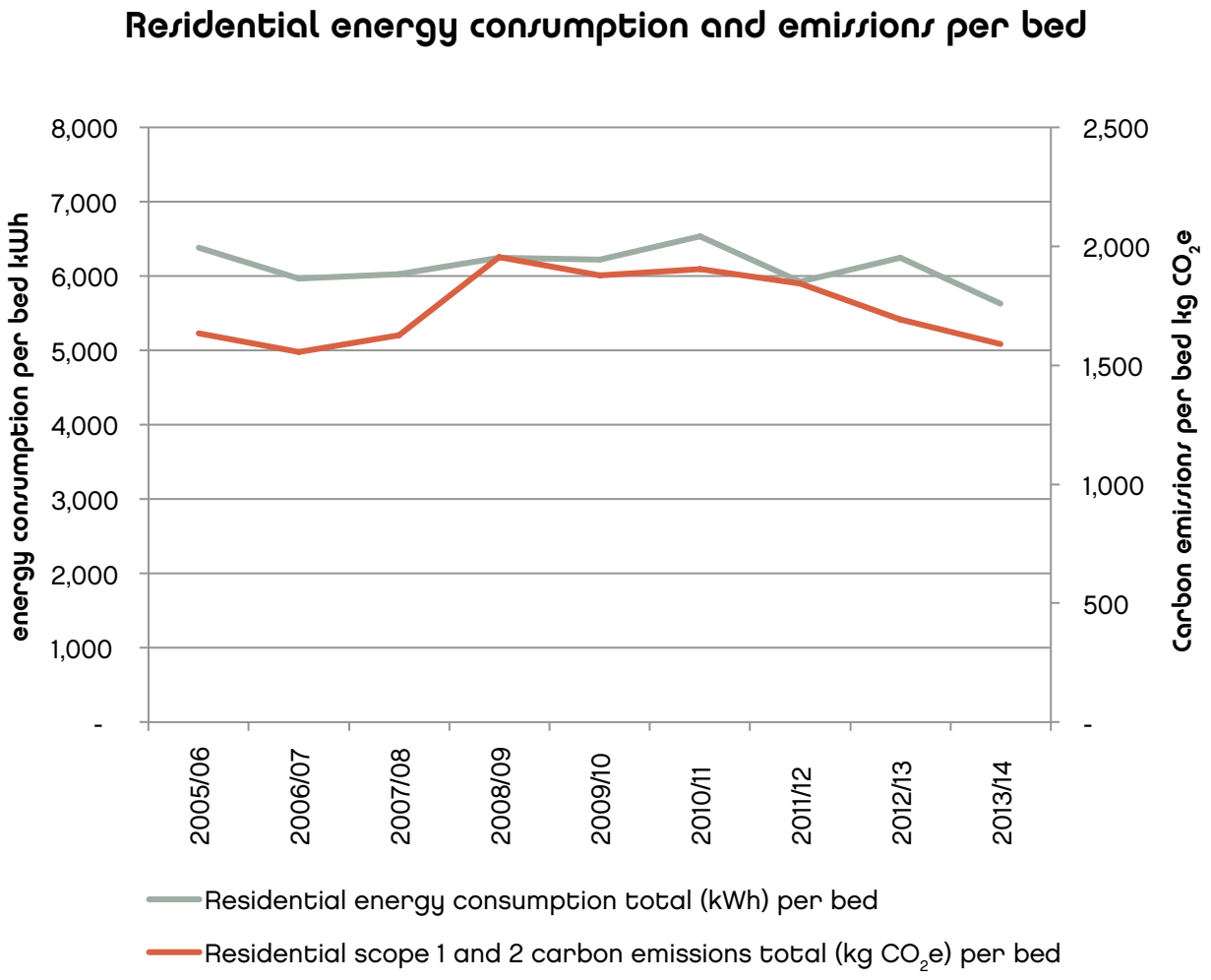
COST TO UPGRADE TO B



The cost to upgrade to Condition B as a percentage of income has significantly reduced as the income reported in this section now includes conference income. Notwithstanding this, it is clear that as some investment has been made, the cost to upgrade has reduced over the period.

Institutions are also increasingly looking to other funding sources to underpin the cost of refurbishing and re-providing residential accommodation.

RESIDENTIAL ENERGY CONSUMPTION



The challenge for institutions is to bring the consumption of energy (and thus the emission of carbon) down by judicial investment in appropriate sustainable energy solutions. There has been some degree of success as the emissions have been on a downward trajectory since 2008/09.

The challenge for institutions (and the private sector halls) is that students increasingly demand a higher standard of accommodation (with a greater proportion of e.g. ensuite bathrooms with quality showers). We understand that private sector halls increasingly see the use of hot water as the key challenge, having put in place many energy saving initiatives to ensure space heating is under careful monitoring and control..

6 SCOTLAND

As in the UK as a whole, Scotland has seen the overall level of income continue to increase. The fee situation is different in Scotland, and this has come about through a rise in the number of students to a record number.

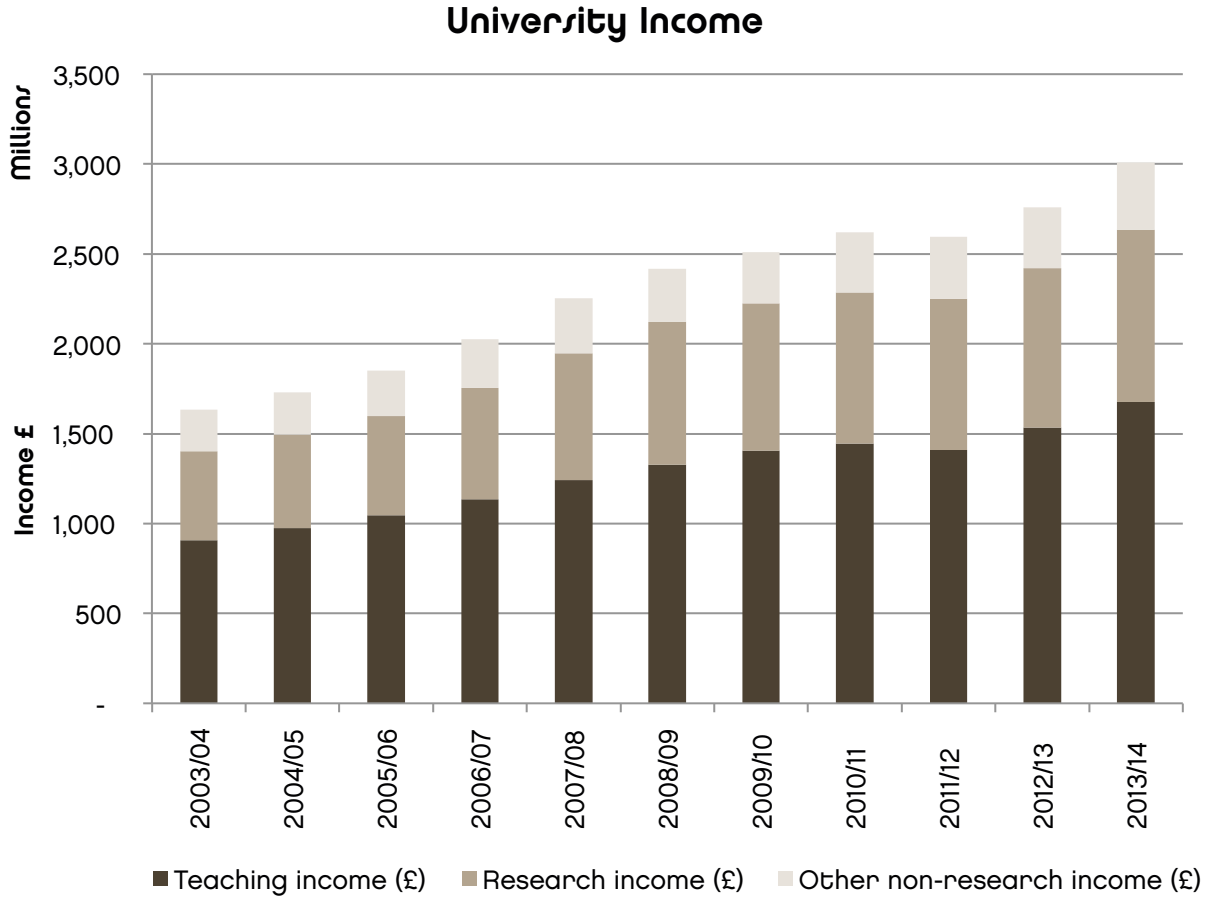
The Estate continues to grow in size with significant capital expenditure.

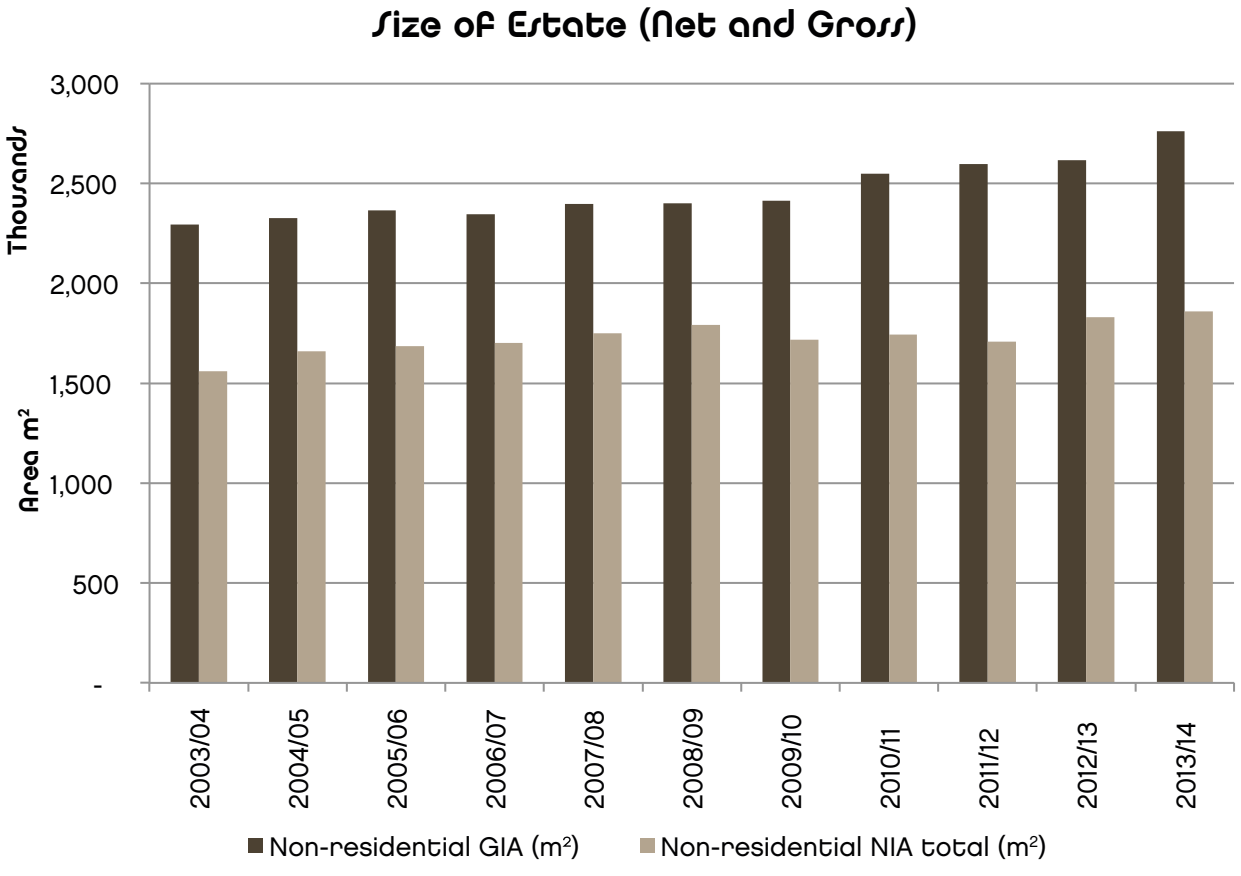
It appears from the KPIs that Scotland's total property costs are significantly lower than those of the UK as a whole, however space per student is also higher than the UK's mean.

Both the condition of the estate and its functional suitability has been improving over the period of the study. This should be expected given the capital being expended.

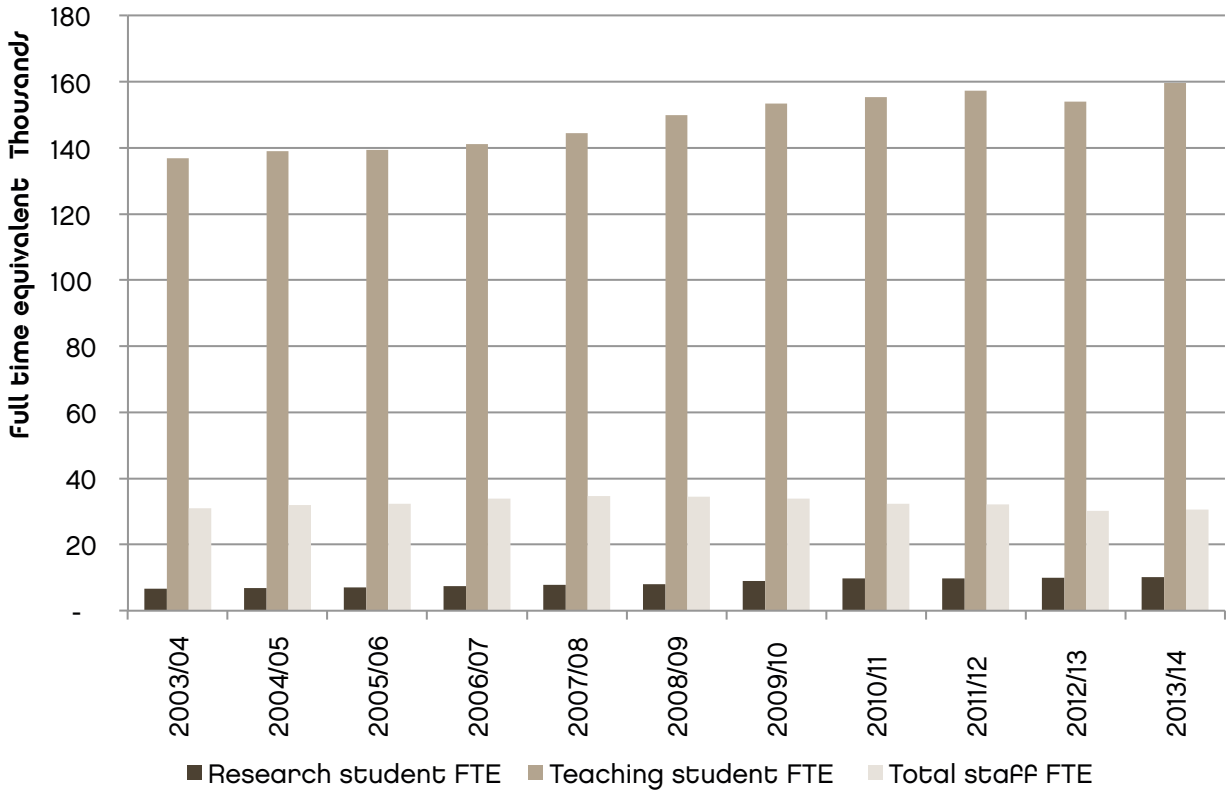
Income per m^2 has been increasing, however it is substantially less than the mean for the UK as a whole (£1,400 per m^2 NIA against at UK mean of £1,800/m^2 NIA).

Carbon emissions are slowly reducing from a peak in 2009/10.

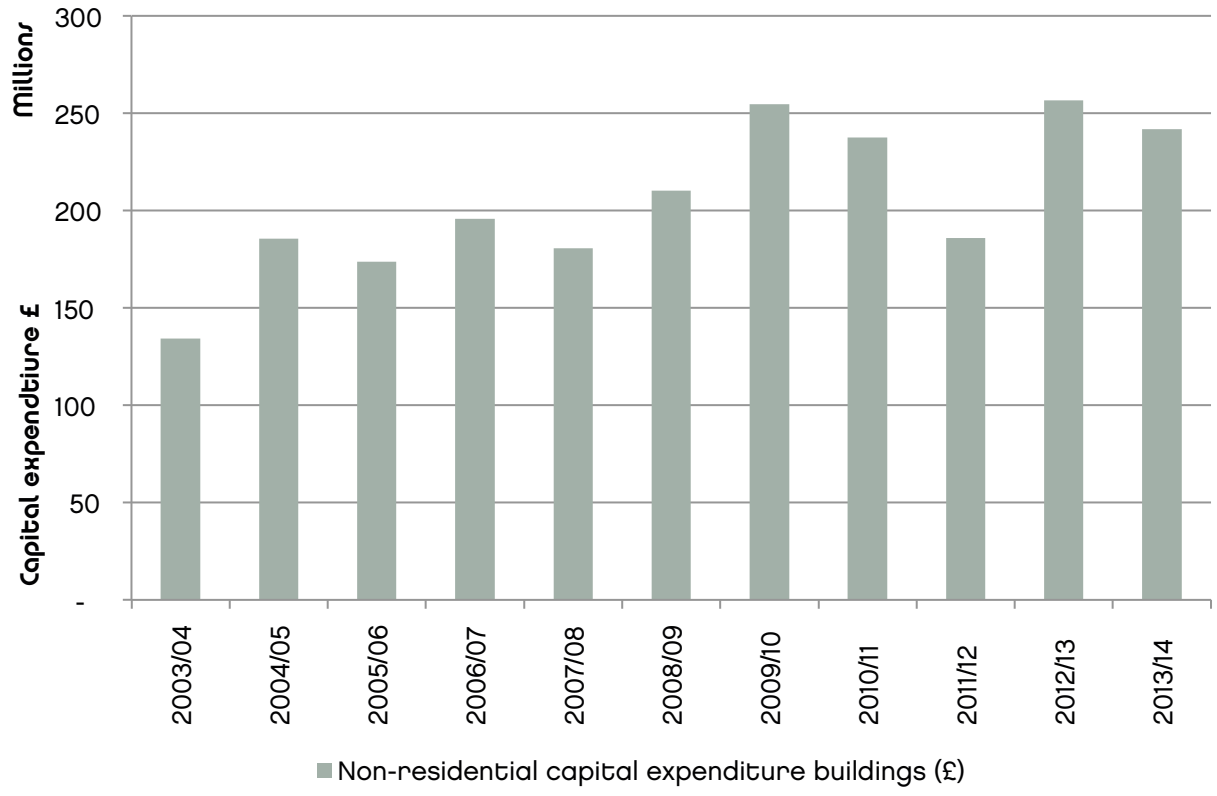

University Income
Millions
Income £
3,500
3,000
2,500
2,000
1,500
1,000
500
-
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
2012/13
2013/14
Teaching income (£)
Research income (£)
Other non-research income (£)


Size of Estate (Net and Gross)
Thousands
Area m²
3,000
2,500
2,000
1,500
1,000
500
-
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
2012/13
2013/14
Non-residential GIA (m²)
Non-residential NIA total (m²)

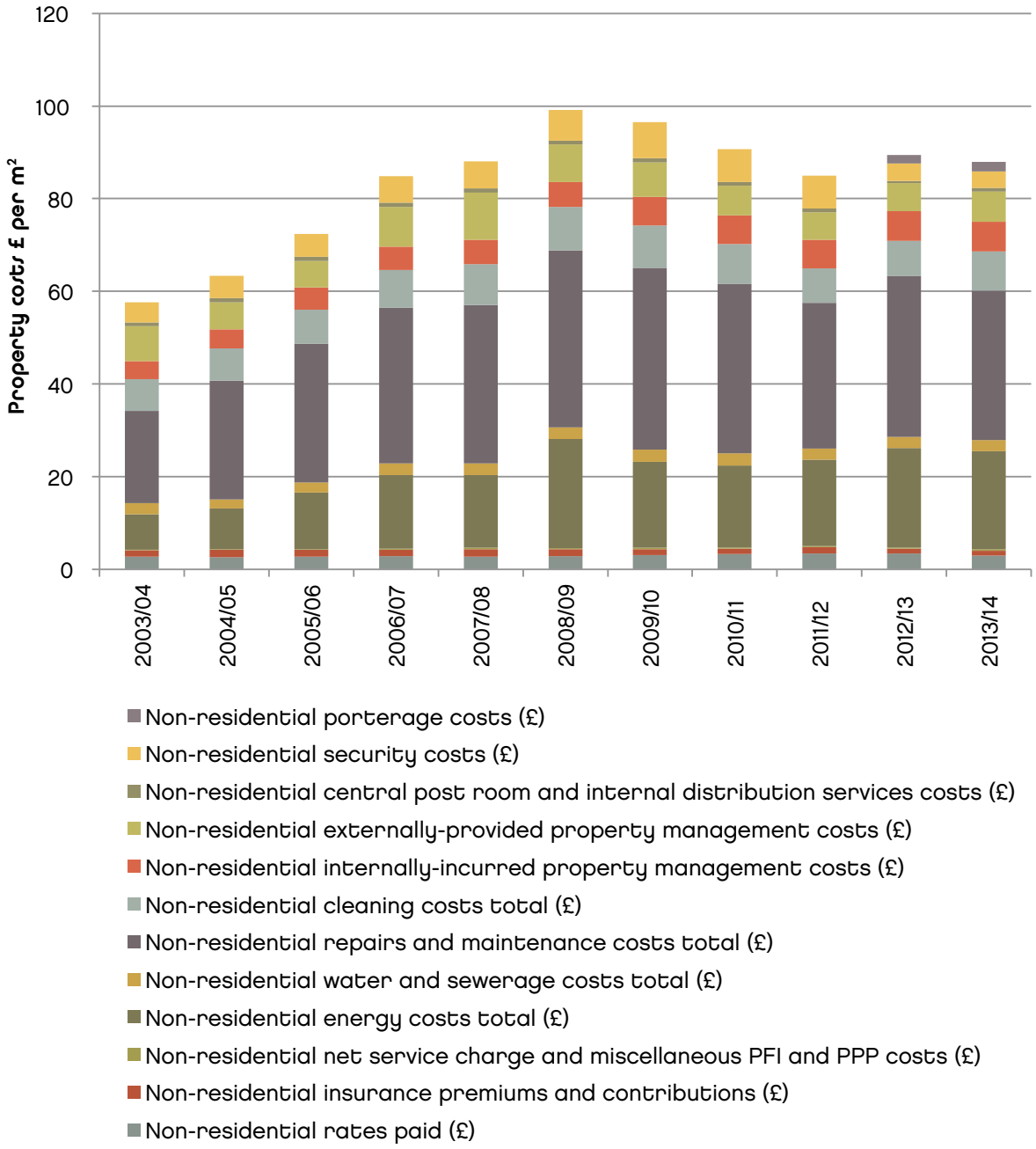
Student Numbers Full Time Equivalents



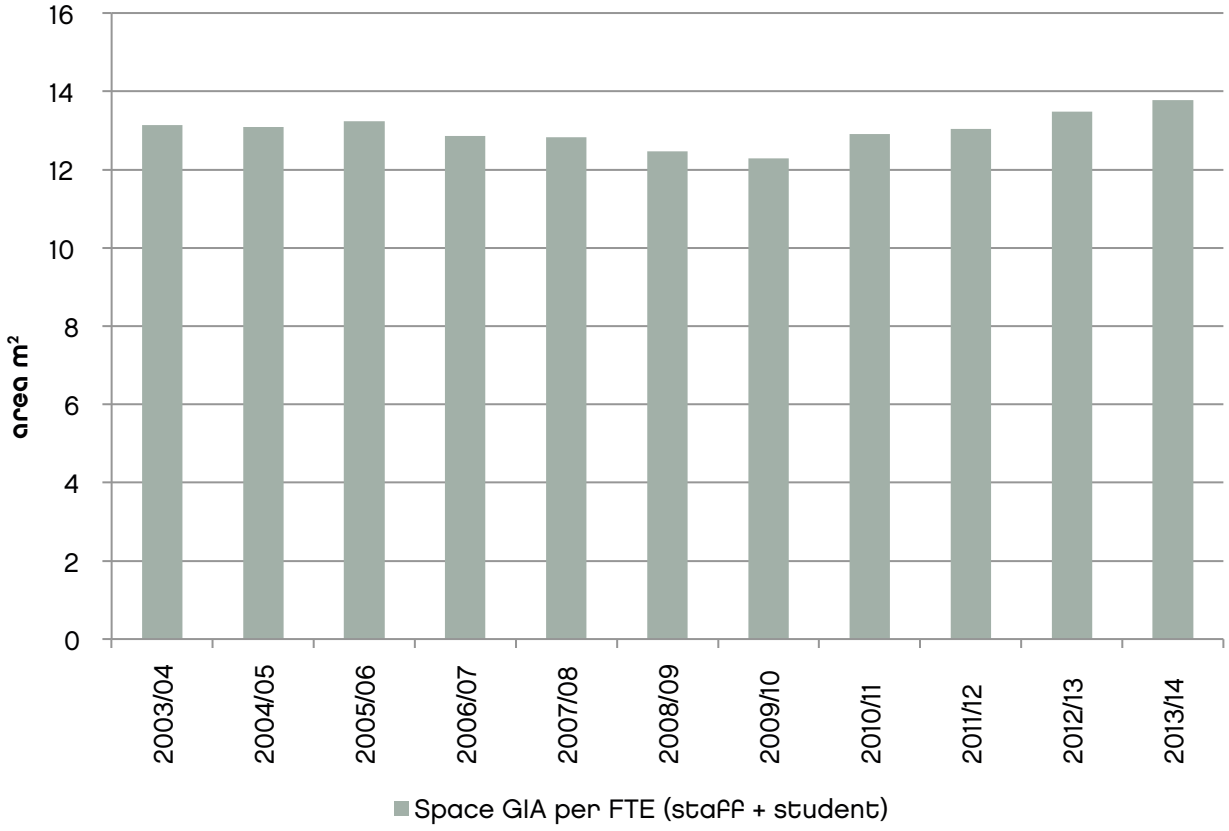
Non-residential capital expenditure buildings (£)



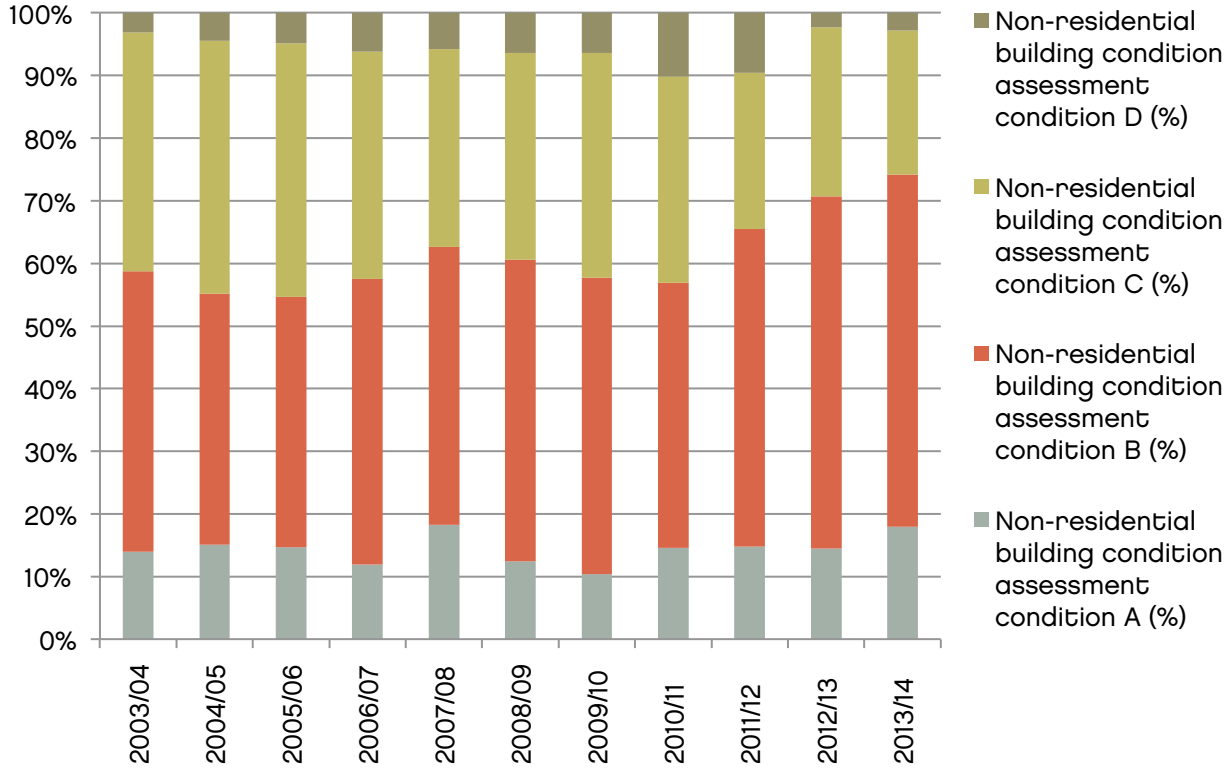
AUDE KPI Total property costs per m² (GIA)Total Property Costs £ per m²



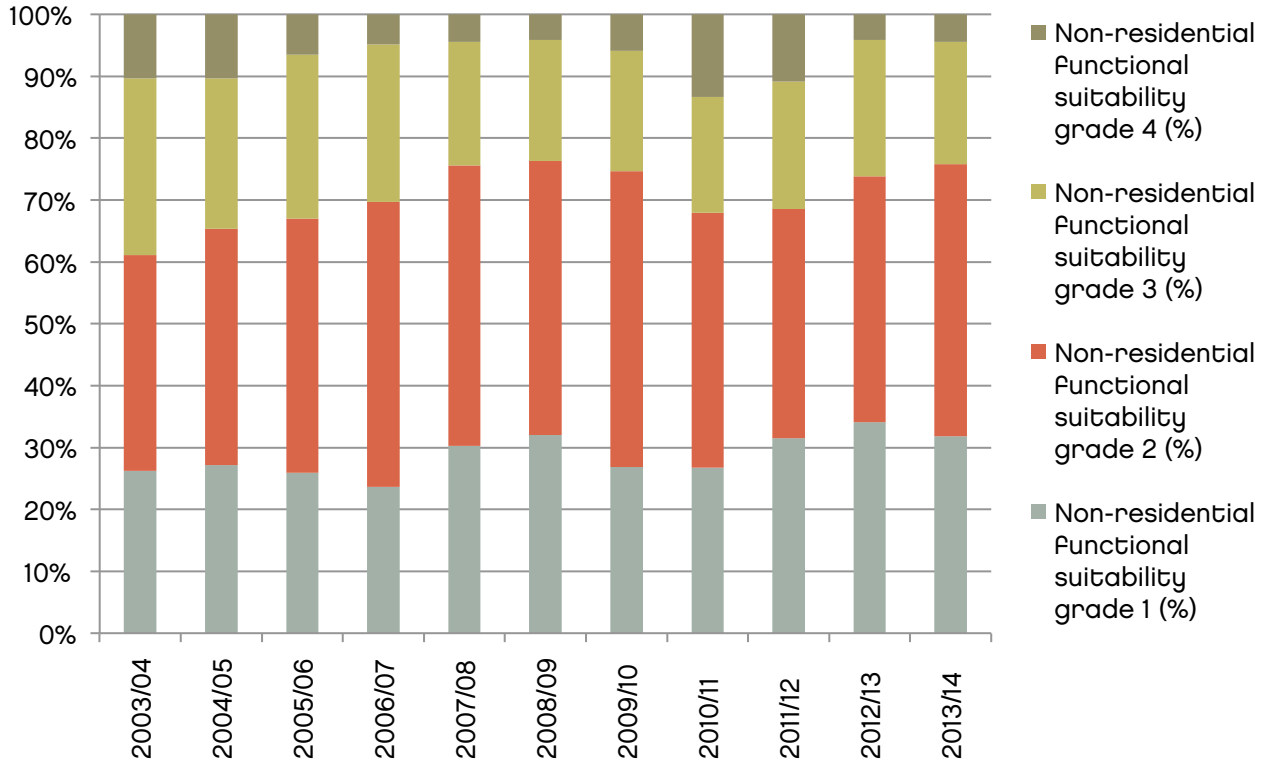
AUDE KPI Area per Student and Staff FTE m² (GIA)



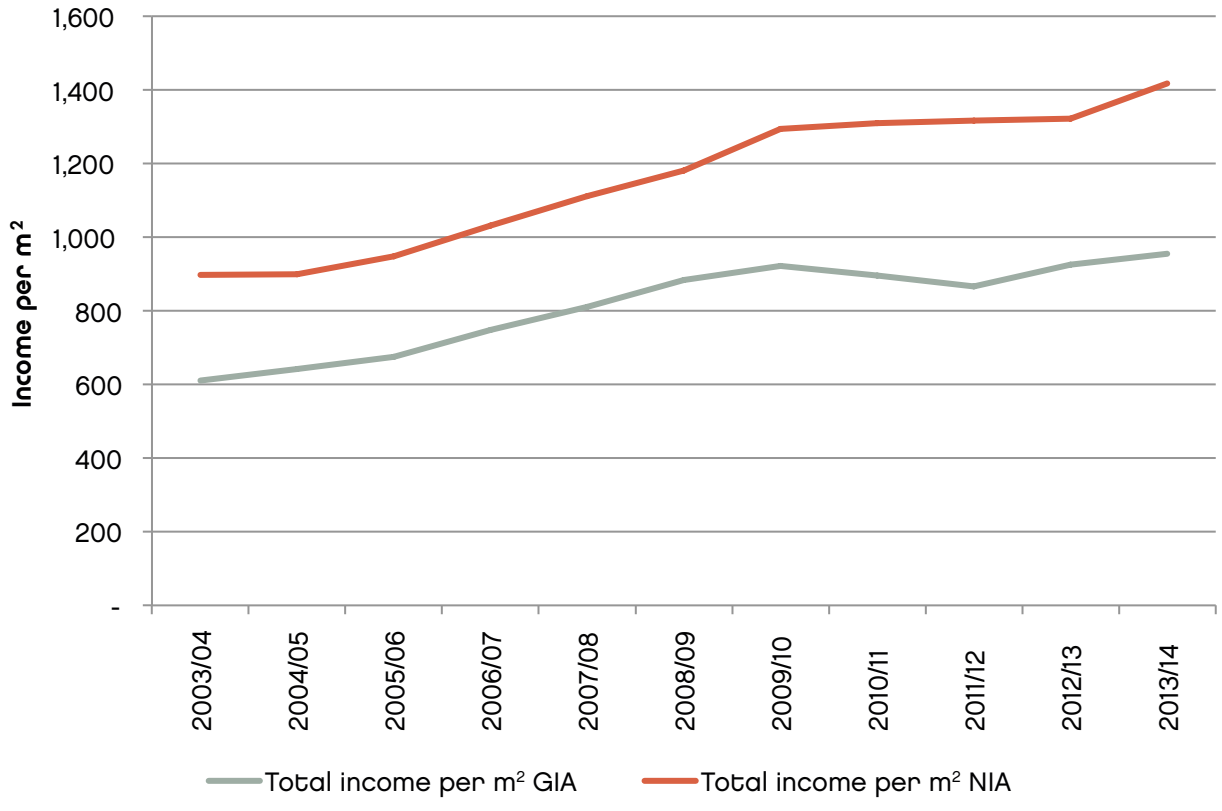
AUDE KPI Percentage of GIA in condition A and B



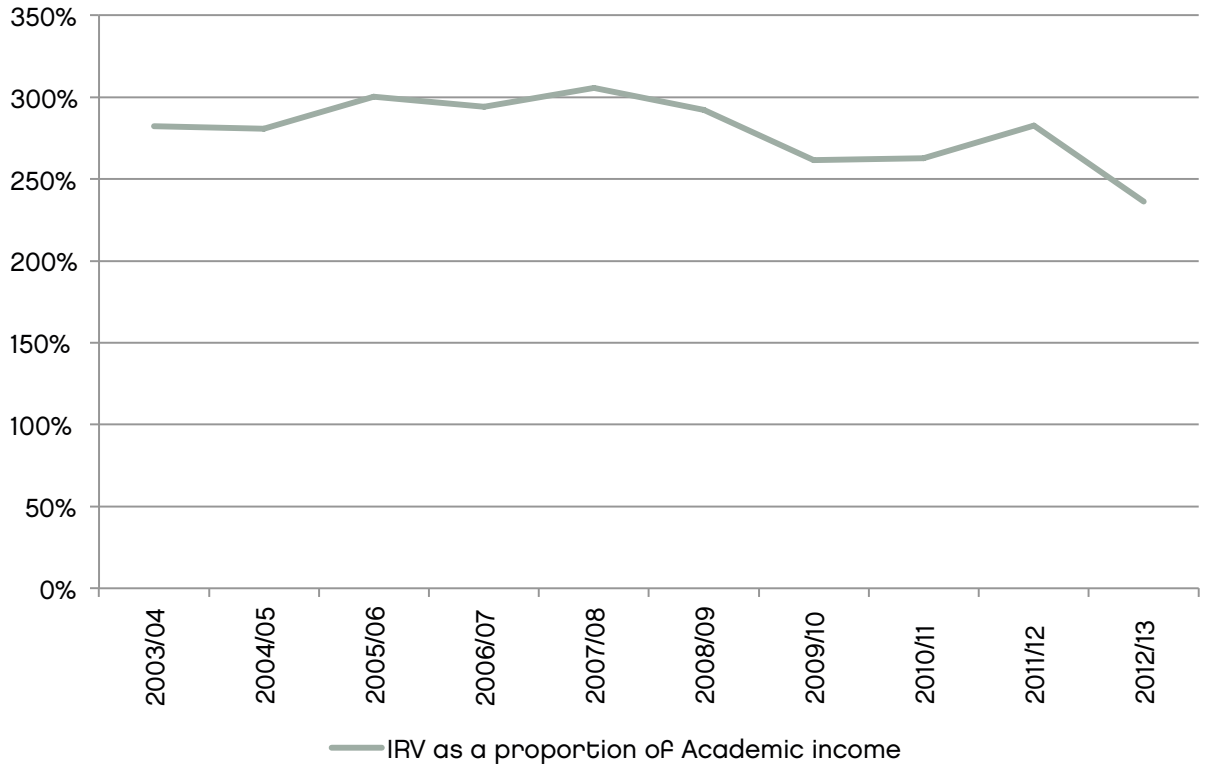
AUDE KPI Percentage of GIA in Functional suitability A and B



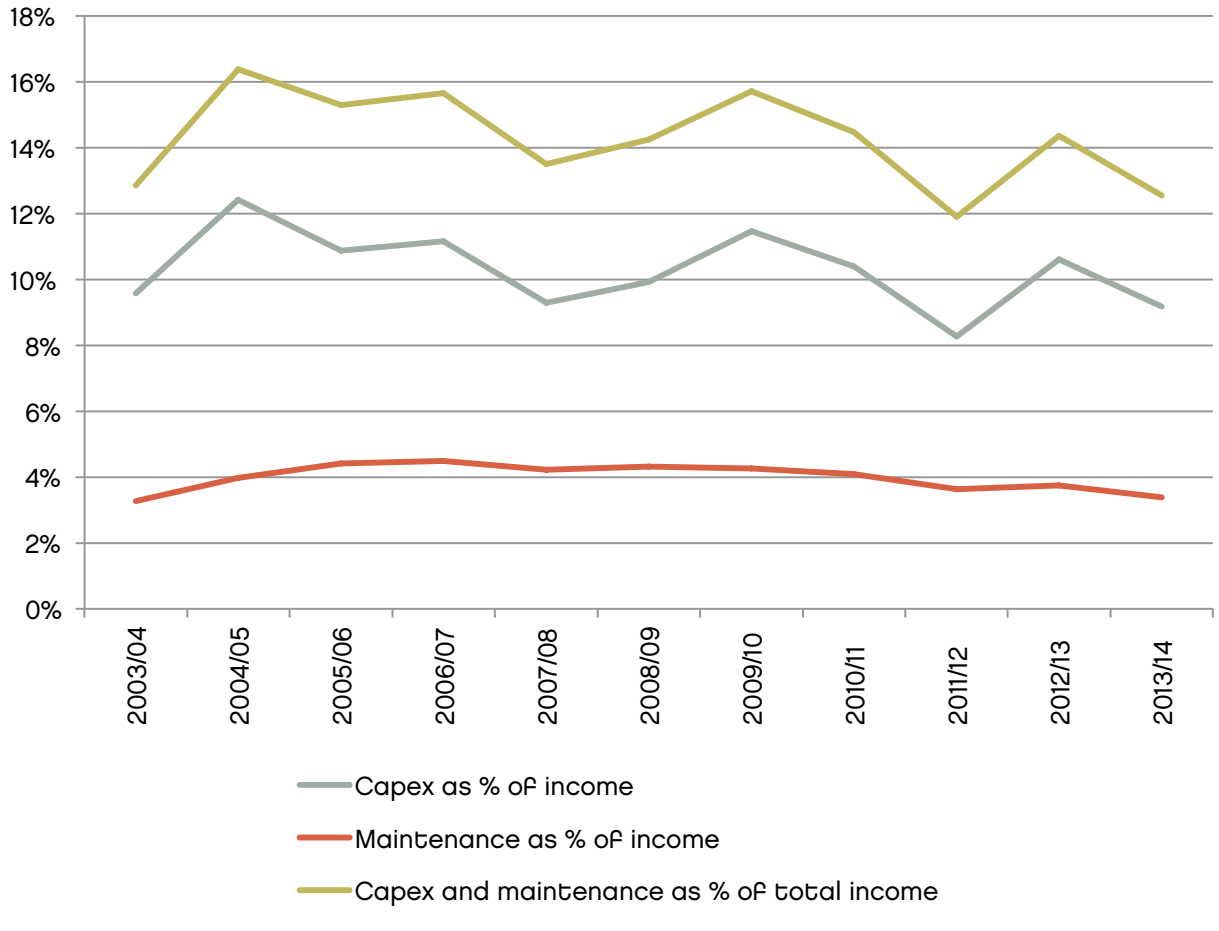
AUDE KPI Teaching and Research Income per m² (GIA) Net and Gross

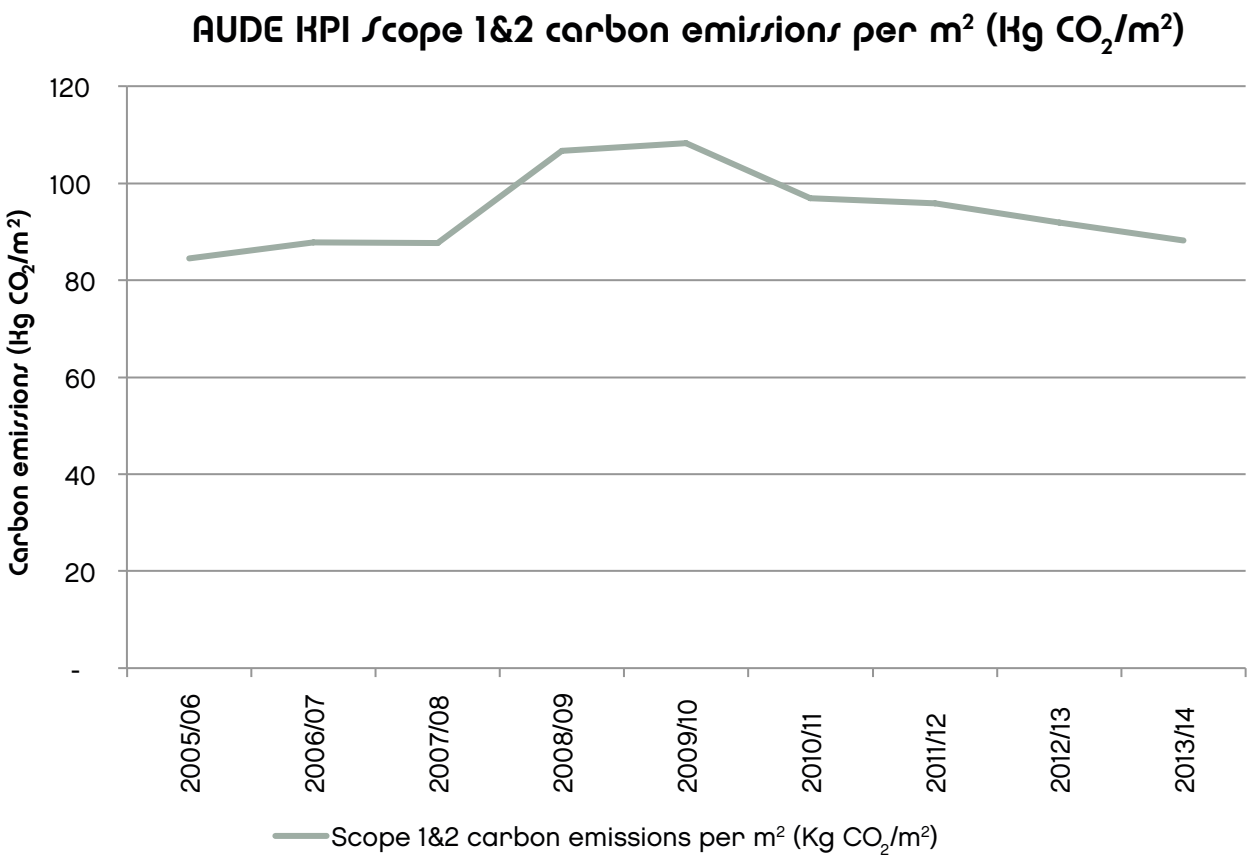


AUDE KPI IRV as a proportion (%) of Academic income



AUDE KPI Maintenance and CapEx as a % of academic income




AUDE KPI Scope 1&2 carbon emissions per m² (Kg CO₂/m²)
Carbon emissions (Kg CO₂/m²)
120
100
80
60
40
20
-
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
2012/13
2013/14
Scope 1&2 carbon emissions per m² (Kg CO₂/m²)

7 WALES

In 2013/14 Wales saw an increase in its income, the first time income had substantially increased since 2009/10. Student numbers are now around 90,000 which is higher than 2008/09, but lower than the three years between (i.e. before the substantial increase in fees).

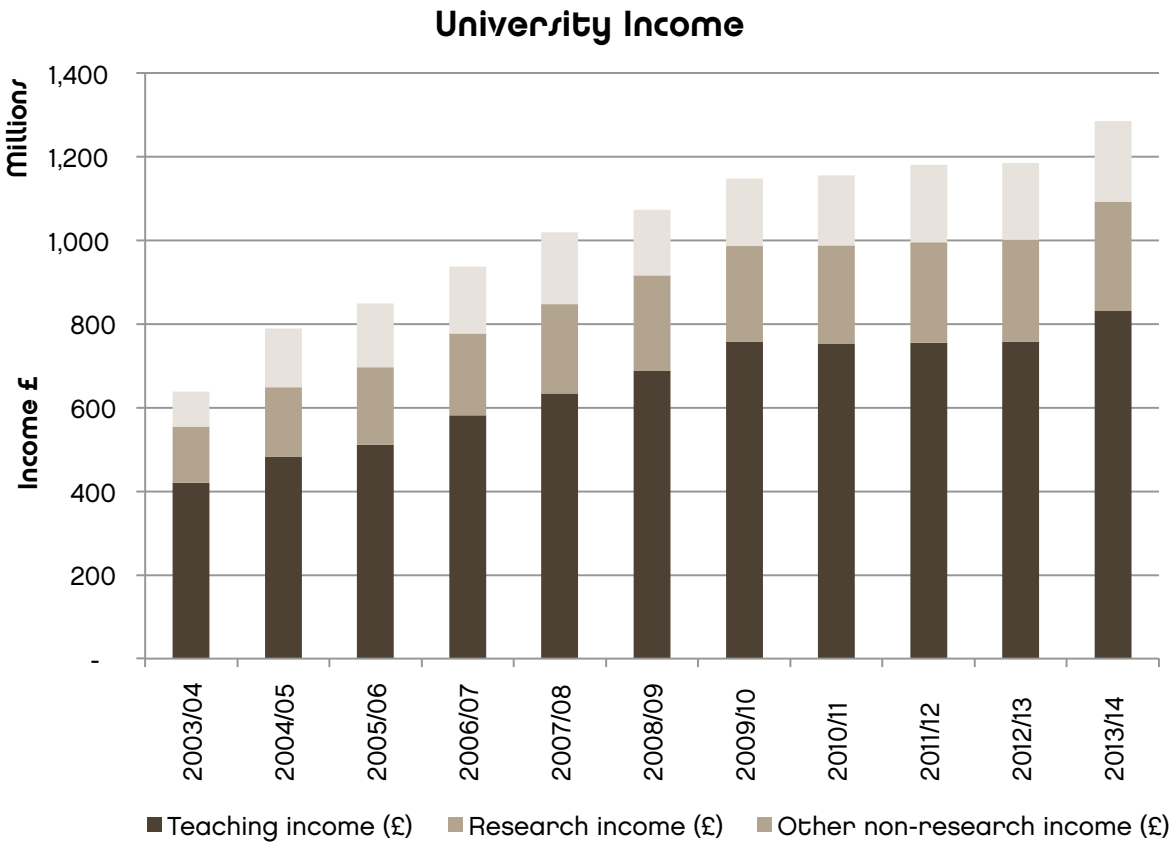
Wales has approached the implementation of student fees by introducing student fee support. The effect of this is not clear, however it has as yet to result in an increase in student numbers in Wales.

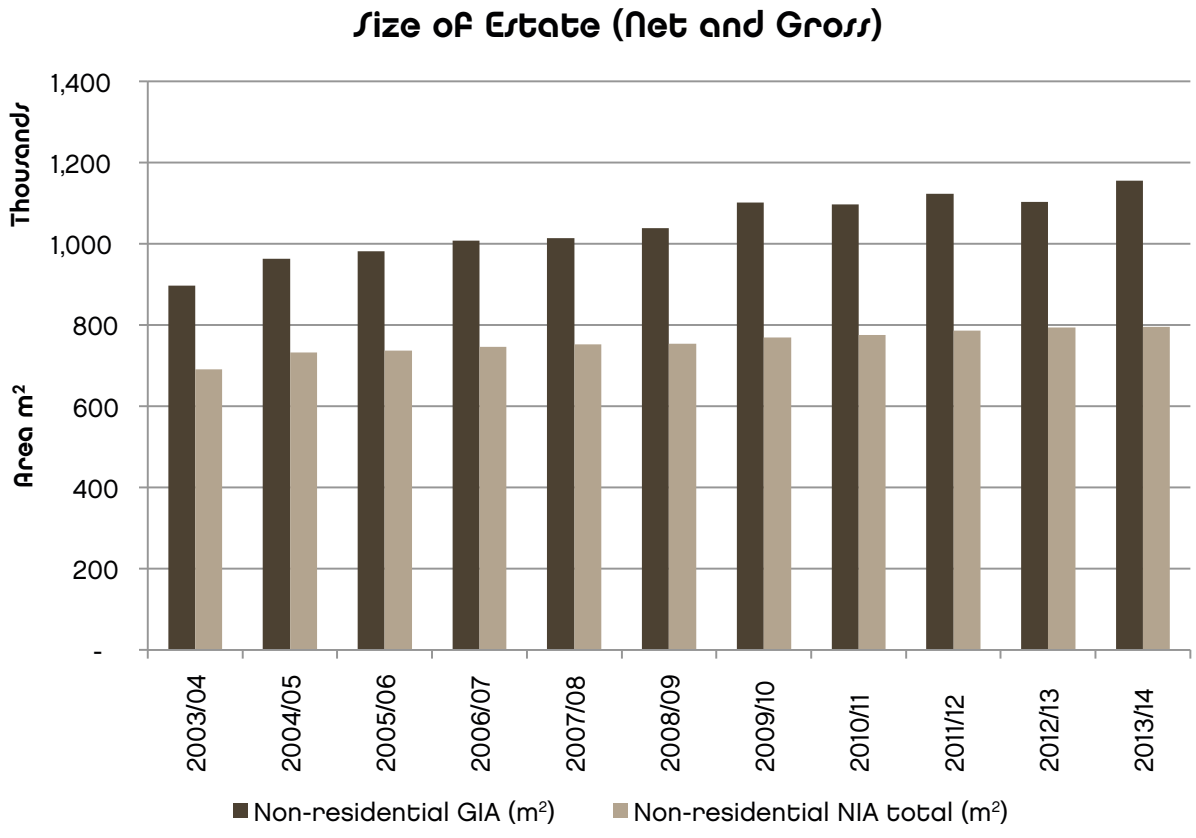
Capital expenditure in Wales has increased substantially, with a figure for 2013/14 that is approaching £160million; a much greater figure than spent during any one year in the past 10 years.

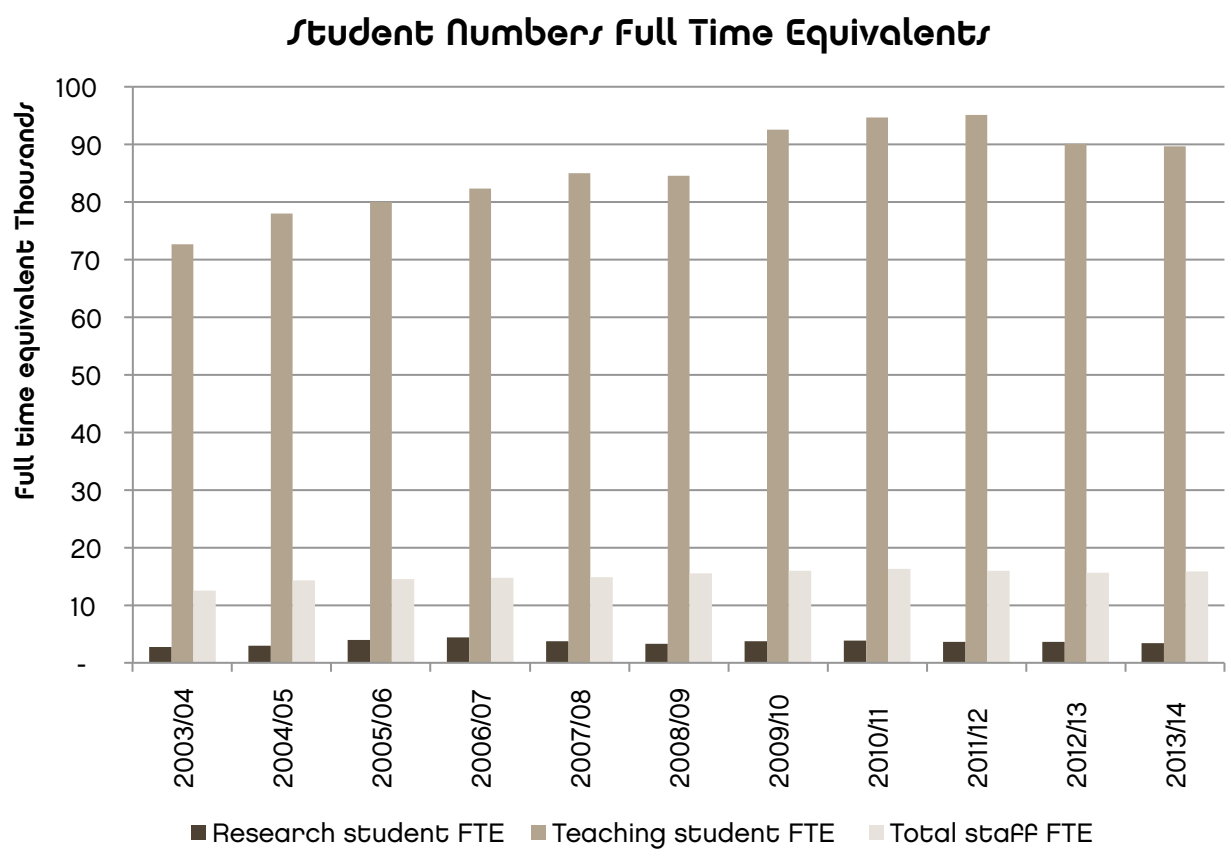
Total property costs are, rather like Scotland, substantially lower per m^2 than for the UK as a whole. However, space per student is very much in line with the UK's figures as a whole.

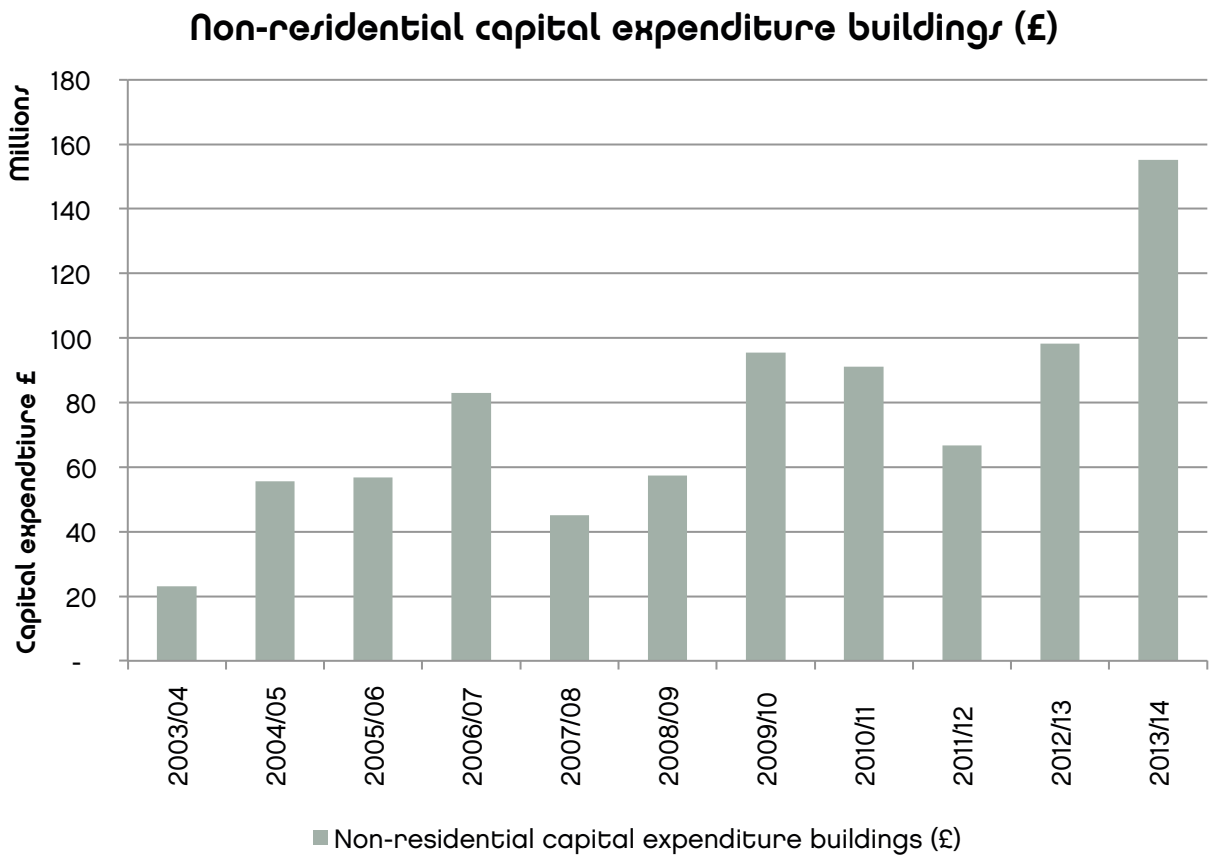
Condition and functional suitability have both been increasing over the period of the study (although not exclusively upwards at the beginning of the period).

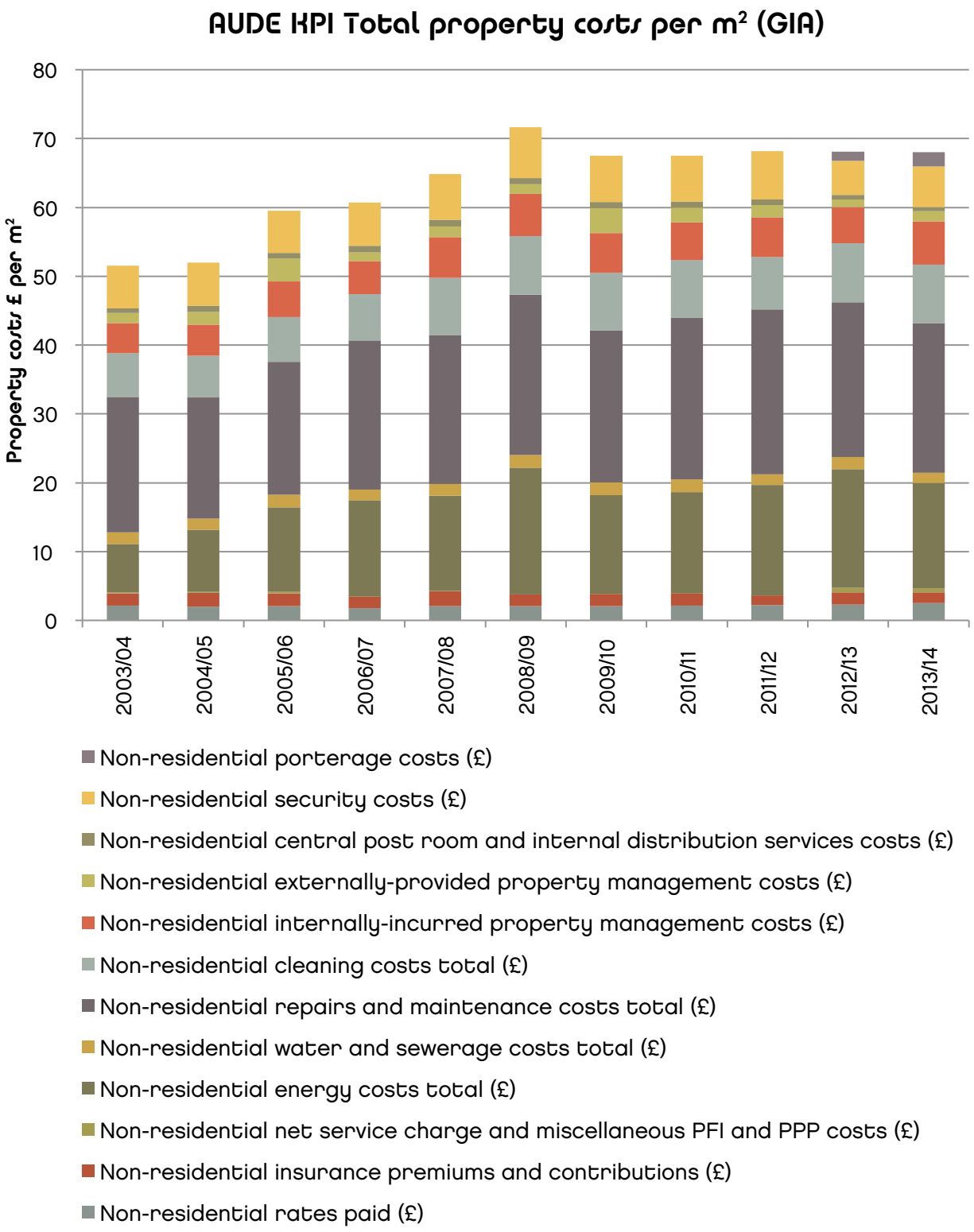
Income per m^2 is lower than the UK's mean figure, and is very similar to Scotland in terms of the efficient use of estate.


University Income
Millions
Income £
1,400
1,200
1,000
800
600
400
200
-
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
2012/13
2013/14
Teaching income (£)
Research income (£)
Other non-research income (£)

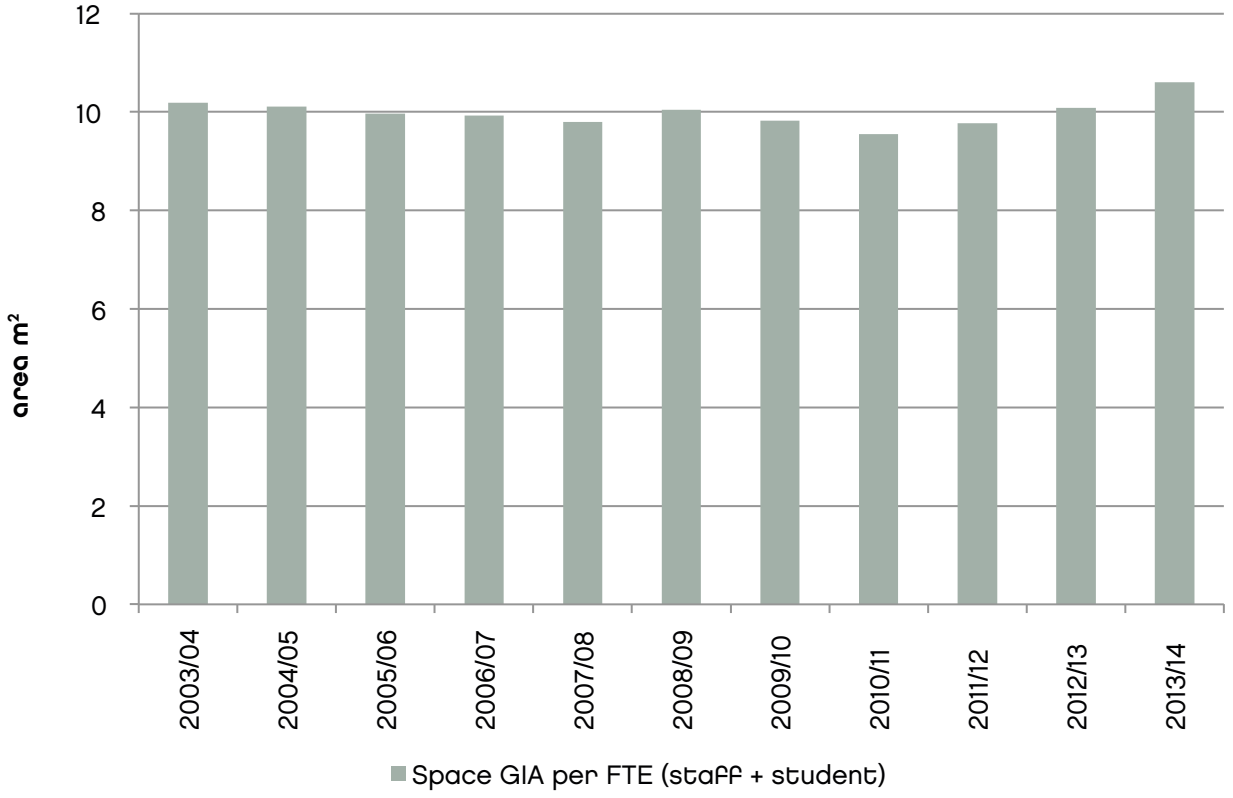

Size of Estate (Net and Gross)
Thousands
Area m²
1,400
1,200
1,000
800
600
400
200
-
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
2012/13
2013/14
Non-residential GIA (m²)
Non-residential NIA total (m²)


Student Numbers Full Time Equivalents
Full time equivalent Thousands
100
90
80
70
60
50
40
30
20
10
-
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
2012/13
2013/14
Research student FTE
Teaching student FTE
Total staff FTE

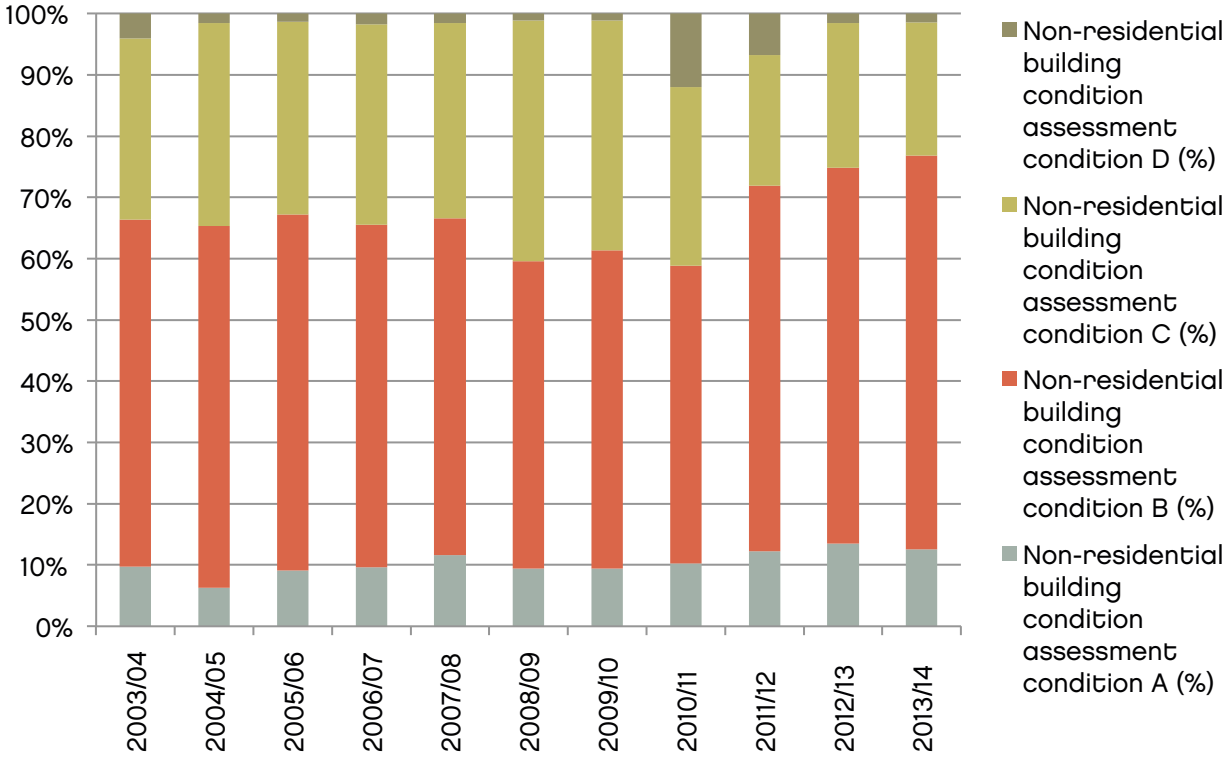

Non-residential capital expenditure buildings (£)
Millions
Capital expenditure £
180
160
140
120
100
80
60
40
20
-
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
2012/13
2013/14
Non-residential capital expenditure buildings (£)


AUDE KPI Total property costs per m² (GIA)
Property costs £ per m²
80
70
60
50
40
30
20
10
0
2003/04
2004/05
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
2012/13
2013/14
Non-residential porterage costs (£)
Non-residential security costs (£)
Non-residential central post room and internal distribution services costs (£)
Non-residential externally-provided property management costs (£)
Non-residential internally-incurred property management costs (£)
Non-residential cleaning costs total (£)
Non-residential repairs and maintenance costs total (£)
Non-residential water and sewerage costs total (£)
Non-residential energy costs total (£)
Non-residential net service charge and miscellaneous PFI and PPP costs (£)
Non-residential insurance premiums and contributions (£)
Non-residential rates paid (£)

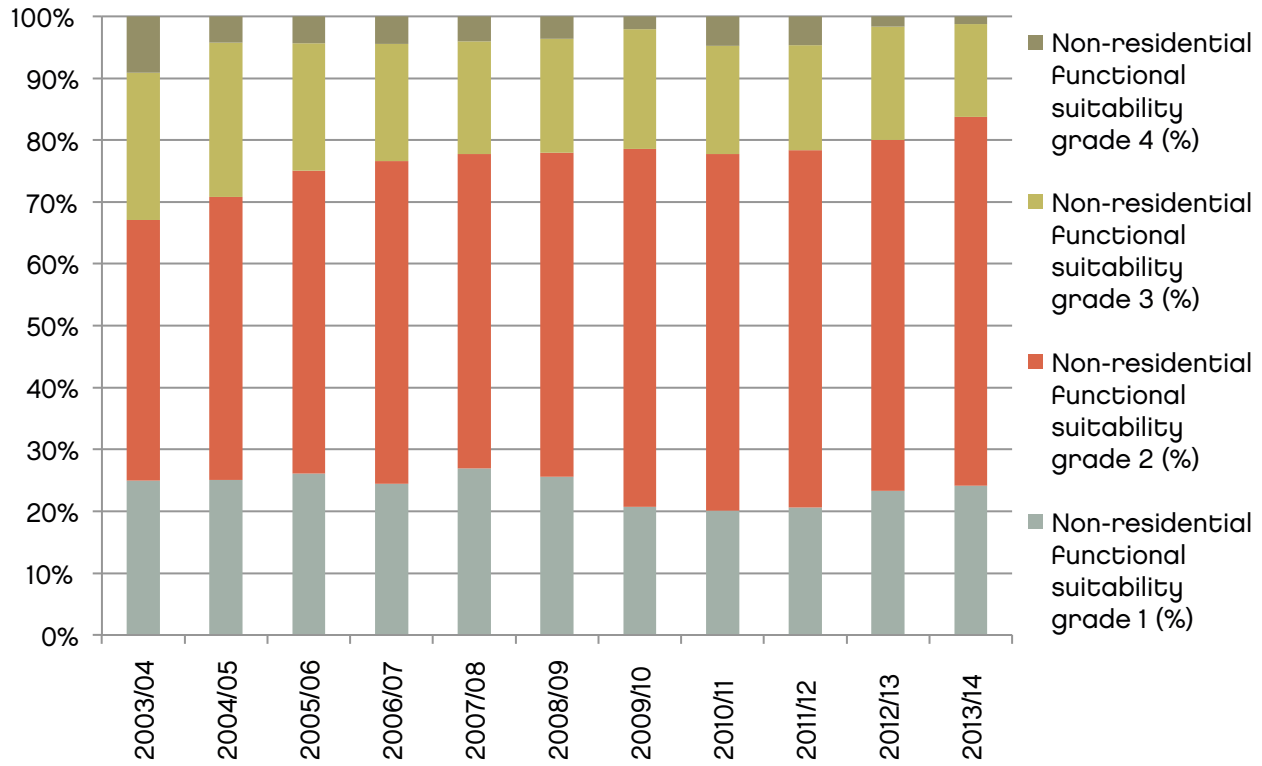
AUDE KPI Area per Student and Staff FTE m² (GIA)



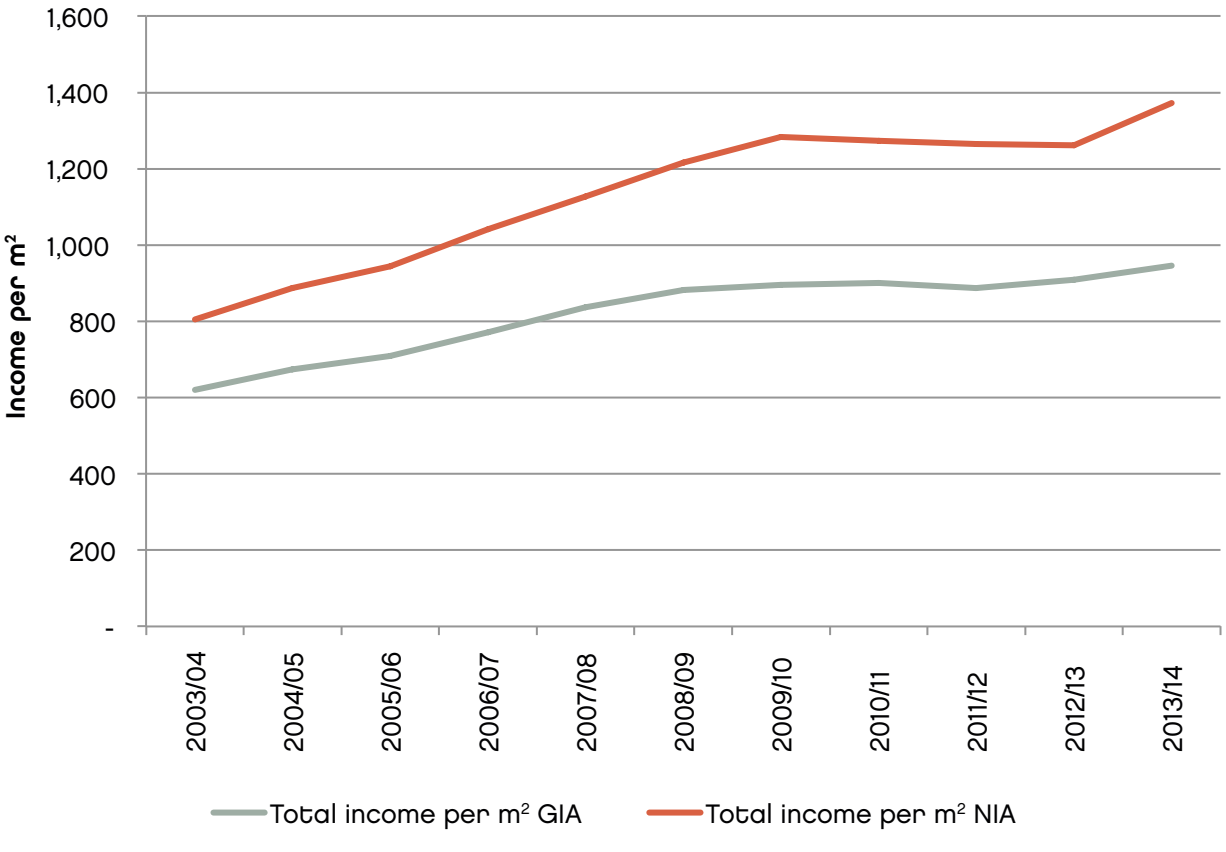
AUDE KPI Percentage of GIA in condition A and B



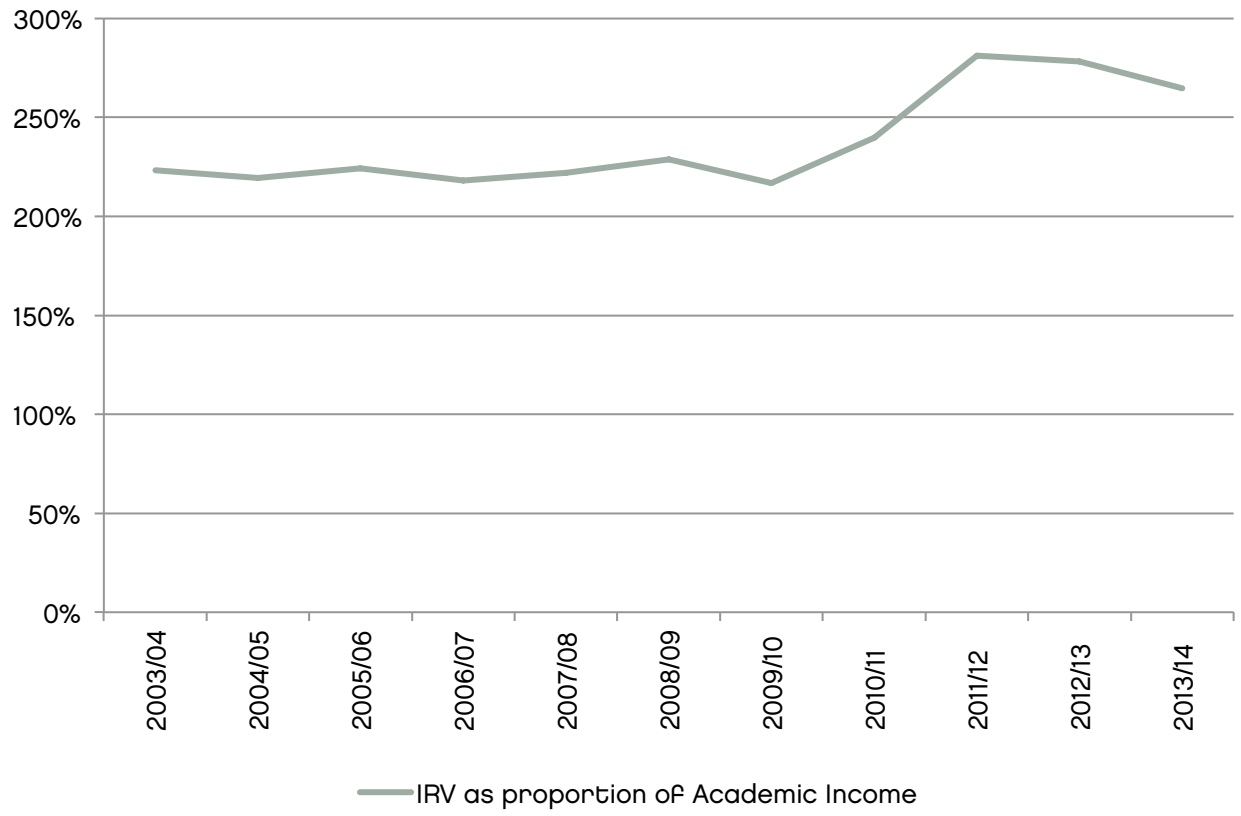
AUDE KPI Percentage of GIA in Functional suitability A and B



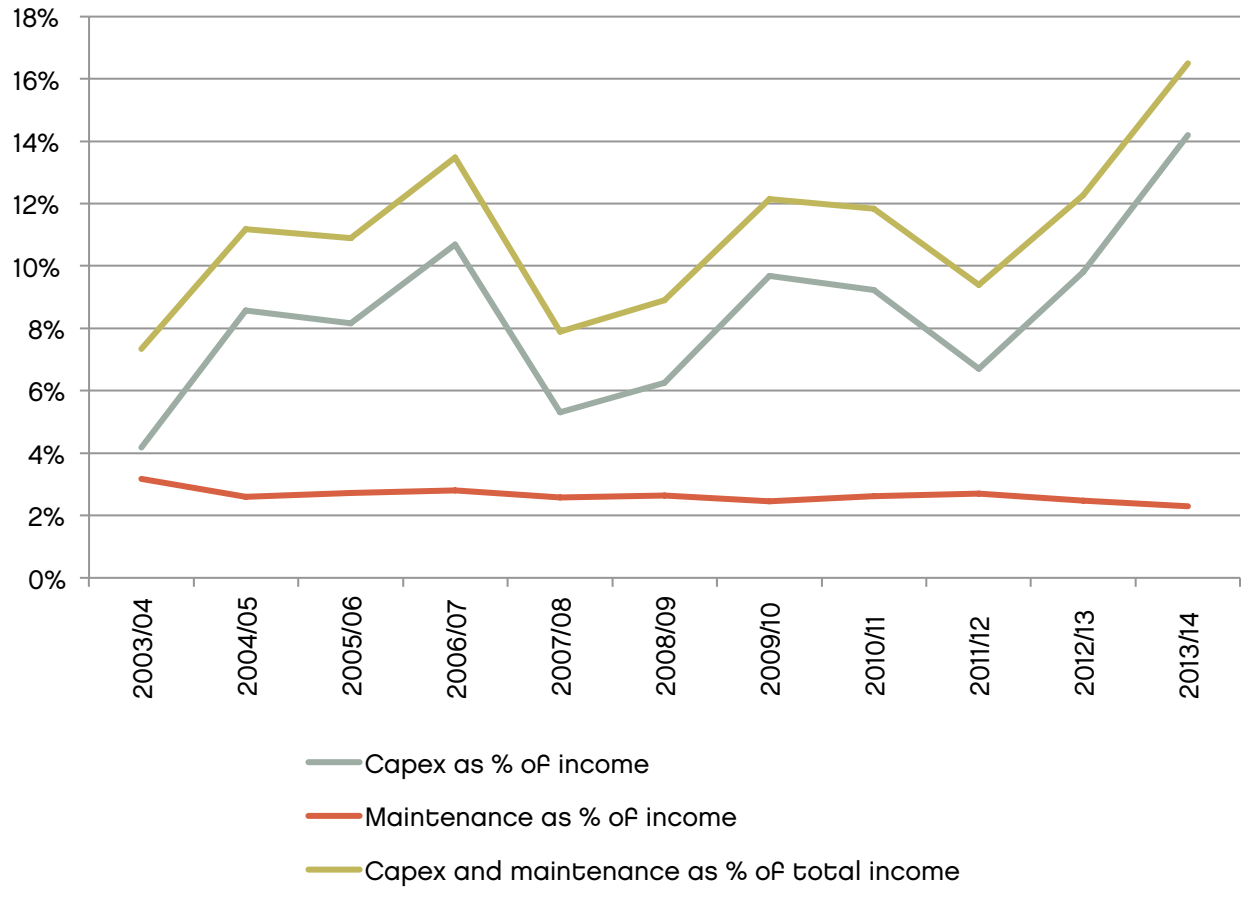
AUDE KPI Teaching and Research Income per m² GIA (Net and Gross)

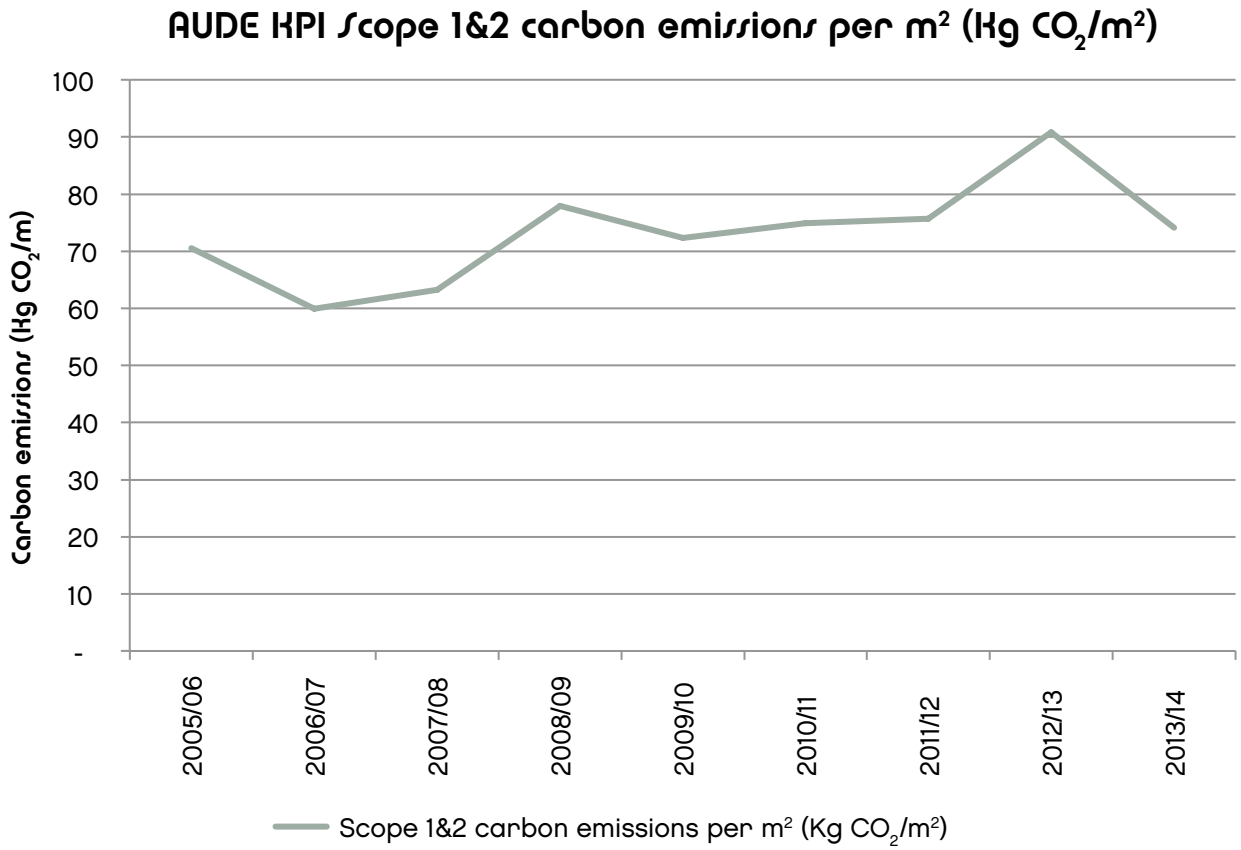


AUDE KPI IRV as proportion of Academic Income

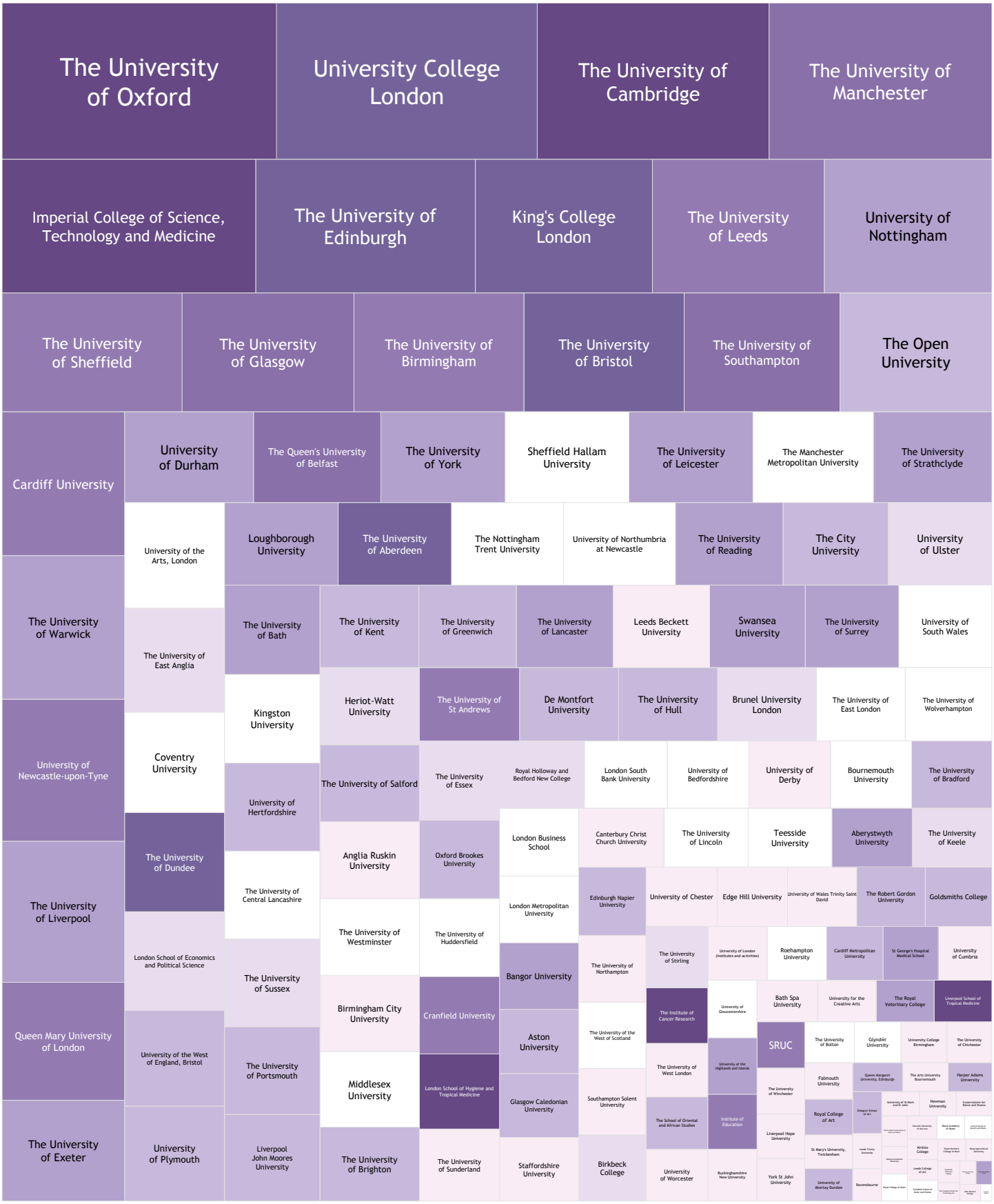


AUDE KPI Maintenance and CapEx as a % of academic income




AUDE KPI Scope 1&2 carbon emissions per m² (Kg CO2/m²)
Carbon emissions (Kg CO2/m)
100
90
80
70
60
50
40
30
20
10
-
2005/06
2006/07
2007/08
2008/09
2009/10
2010/11
2011/12
2012/13
2013/14
Scope 1&2 carbon emissions per m² (Kg CO2/m²)

UNIVERSITY INCOME



This chart shows cumulative income across all HEIs. The area of each University's box represents its total academic (i.e. teaching and research) income. The darker the Purple, the greater the % of that income generated by research.

0 – 3	3 – 6	6 – 19	19 – 25	25 – 34	34 – 40	40 – 46	46 – 63	63 – 100

8 CREDITS

PHOTOGRAPHY

FRONT PAGE Sheffield University
FOREWORD Sir Ian Diamond
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P33 Aston University
P55 University of Hertfordshire
P66 Edinburgh University
P74 Swansea University
ABOVE University of Wolverhampton

AUDE WOULD LIKE TO THANK —

SIR IAN DIAMOND University of Aberdeen
GEORGE GRIFFITH CBRE
SUE HOLMES Oxford Brookes University
ANDREW MAY University of Hertfordshire
CLARE RICHARDSON and **LISA WRIGHT** Kindred Agency
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