

## **Student population projections and accommodation need for new London Plan 2017 (amended October 2018)**

[NB. October 2018 – some of the tables in this paper contain 2015/16 student population data from the Higher Education Statistics Agency (HESA), these numbers and the linked population projections have been amended to round them to the nearest 5 in accordance with HESA Standard Rounding Methodology. Additionally, a correction has been made to category 2 and 3 student population numbers in the *Projected need for purpose-built student accommodation* tables (page 14), for details see correction note on page 14. These minor amendments have negligible effect on the projections for the student population and do not change the annualised requirement for purpose-built student accommodation bed spaces stated on page 14 and in paragraph 4.17.2 of the draft London Plan]

This paper sets out the methodology used by the GLA to project the population of full-time student attending higher education institutions in London over the period of the new London Plan to 2041. The paper presents the result of these student population projections and explains the rationale for estimating how many of these students need to be accommodated in purpose-built student accommodation. The methodology for the student projections and estimating how many students need to be accommodated in PBSA has been developed through GLA engagement with the Mayor's Academic Forum.

### **1. Higher education projections methodology**

#### **1.1. Rationale for approach to projecting student number**

- 1.1.1. The London SHMA 2017 sets out how students are accounted for as part of London's overall housing need in chapter 8. Separately from its mainstream demographic projections, the GLA has produced its own projections of London's student population to inform estimates of demand for purpose-built student accommodation (PBSA). To identify how many students may need to be accommodated in PBSA over the London Plan period it is necessary to project the change in overall population of students attending London's higher education institutions (HEI).
- 1.1.2. There are many factors which may influence the number of higher education student in London over the plan period, from UK Government policies and funding to HEI estate plans, and changes in attractiveness of other countries universities to UK and international students. As it is not possible to know how these factors may influence HE student numbers, the most robust approach to projecting future student population in London is considered to be to use recent trend in the student population coupled with demographic projections where applicable.
- 1.1.3. London's HE student population projection is composed of a number of subgroups of student based on the data available for the students attending particular HEI. The subgroups are:

- **London HESA students**

This refers to those students accounted in the Higher Education Statistics Agency (HESA) data for London Universities<sup>1</sup>. This group accounts for most HE students in London and comprises:

- I. Undergraduate and postgraduate students that are domiciled internationally in other EU countries (other EU) and the rest of the world (non-EU).
  - A. This group of undergraduates has been broken down to create projections for students in their first year of study.
- II. Undergraduate students that are domiciled in the UK in London or outside London (other UK).
  - A. This group of undergraduates has been broken down to create projections for students in their first year of study.
- III. Postgraduate students that are domiciled in the UK in London or outside London (other UK).

- **Students not capture by London HESA data**

These are student as HEI that are not captured under the London HESA data and comprise the following groups.

- IV. Branch campuses - London campus branches of non-London universities which are HEFCE funded, but are not currently captured in London's HESA data. Projections for these students are produce for:
  - A. Undergraduate and postgraduate students that are domiciled internationally (other EU and non-EU).
  - B. Undergraduate and postgraduate students that are domiciled in the UK
- V. Alternative providers - higher education providers who do not receive recurrent funding from the Higher Education Funding Council for England (HEFCE) or other public bodies and who are not further education colleges.
  - A. Undergraduate students that are UK or internationally domiciled.

1.1.4. Details of the methods used for projecting each of the student subgroups and the projected population is presented in the following sections 1.2 to 1.4

1.1.5. Note in future years the role of HEFCE is to be replaced by the Office for Students (OfS) which will be operational from April 2018.

1.1.6. Note HESA is likely to be the designated data body for OfS and there should be more accurate data capture of students at alternative providers, but estimates of student numbers at branch campuses is not likely to be improved.

## **1.2. Projection methodology and results for London HESA students**

### **I. All years international undergraduate and postgraduate trend projections (Other EU and non-EU)**

Data used: Custom HESA data extract which includes first year marker, age of students and domicile

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<sup>1</sup> London HESA students are those that attend London universities funded by HEFCE (non-London campuses may be HESA funded, but are not captured in London's HESA data).

Methodology

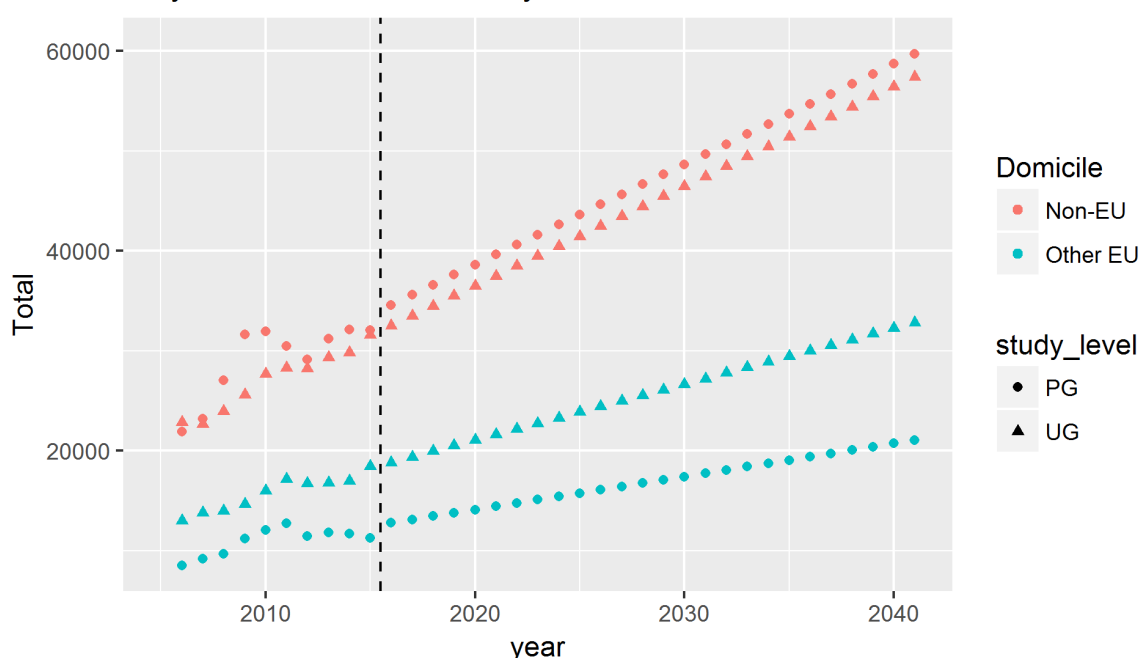
1.2.1. For each group of other EU undergraduate, other EU postgraduate, non-EU undergraduate and non-EU postgraduate students:

- A. For each of the past 10 years, aggregate over all full-time students at London HE institutions to give the total number of students.
- B. Fit a line of best fit to these totals using least squares method (total number of students proportional to year)
- C. Use this line to project forward into future years

N.b. undergraduate is an aggregation of undergraduate first degree and undergraduate other.

1.2.2. The graph below shows recorded and projected (after the dotted line for academic year 2015/16) numbers of international domiciled undergraduate and postgraduate students for all years of study.

10 year trend model for all years



Number of full-time UG and PG students for all year of study				
Academic year	PG non-EU	PG other EU	UG non-EU	UG other EU
2015/16	32,070	11,285	31,585	18,440
2041/42	59,705	21,050	57,415	32,810

**I. A First year international undergraduate and postgraduate trend projections (Other EU and non-EU)**

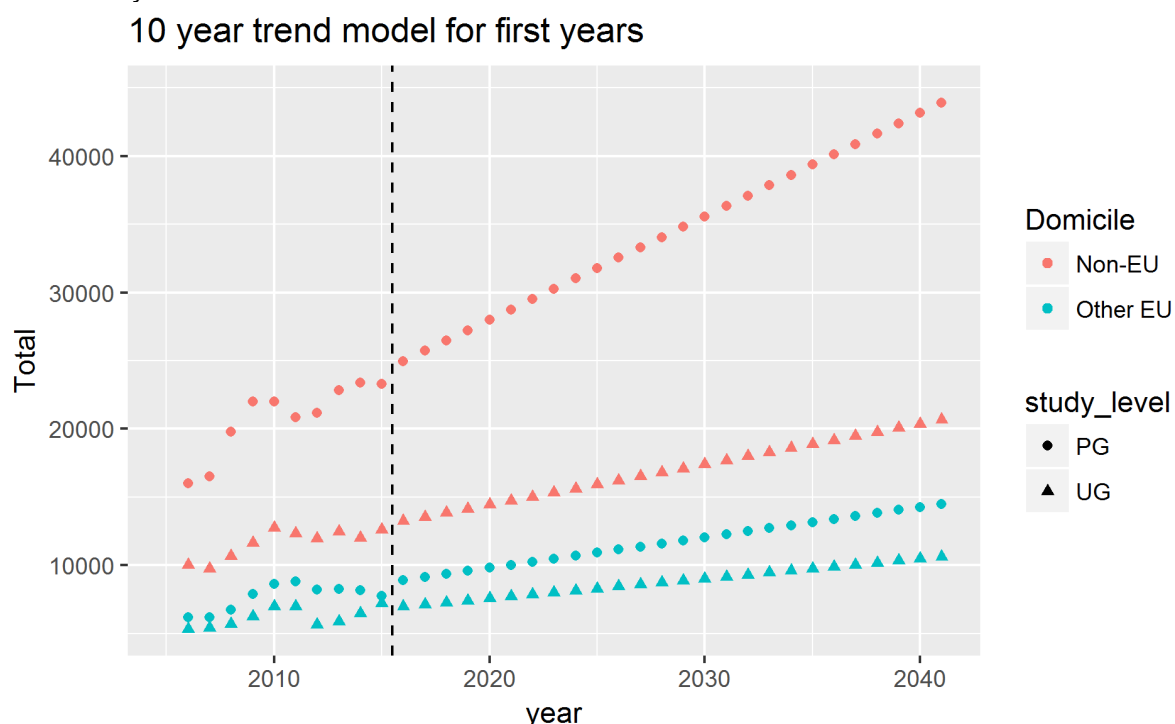
Data used: Custom HESA data extract which includes first year marker

Methodology

1.2.3. The same methodology as used for “All years international undergraduate and postgraduate trend projections (Other EU and non-EU)” except only for students in the first year of their course.

- 1.2.4. For each group of other first year EU undergraduate, first year other EU postgraduate, first year non-EU undergraduate and first year non-EU postgraduate students:
- Aggregate over all first-year students in that group at London HE institutions to give the total number of students for each of the past 10 years
  - Fit a line of best fit to these totals using least squares (total number of students proportional to year)
  - Use this line to project forward into future years

1.2.5. The graph below shows recorded and projected (after the dotted line) numbers of international domiciled undergraduate and postgraduate students for first years of study only.



Number of full-time UG and PG students in first year of study				
Academic year	PG non-EU	PG other EU	UG non-EU	UG other EU
2015/16	23,275	7,755	12,605	7,235
2041/42	43,920	14,500	20,660	10,620

## II. & II.A Domestic Undergraduates population linked trend projections (London and other UK)

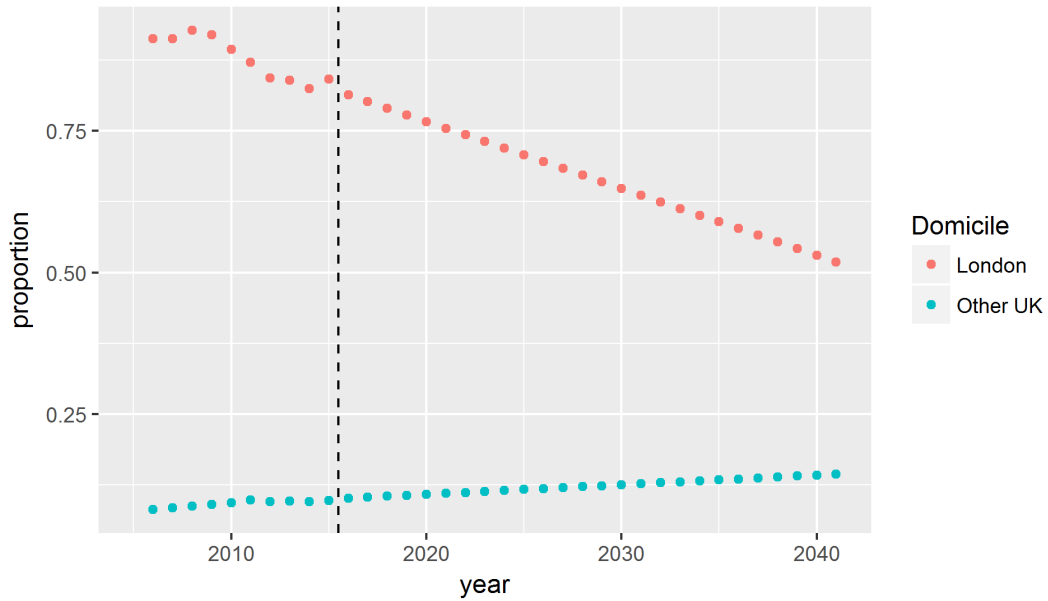
Data used:

- Custom HESA data extract which includes first year marker, age of students and domicile
- GLA population projections for London and the rest of the UK (see London datastore)

### Methodology

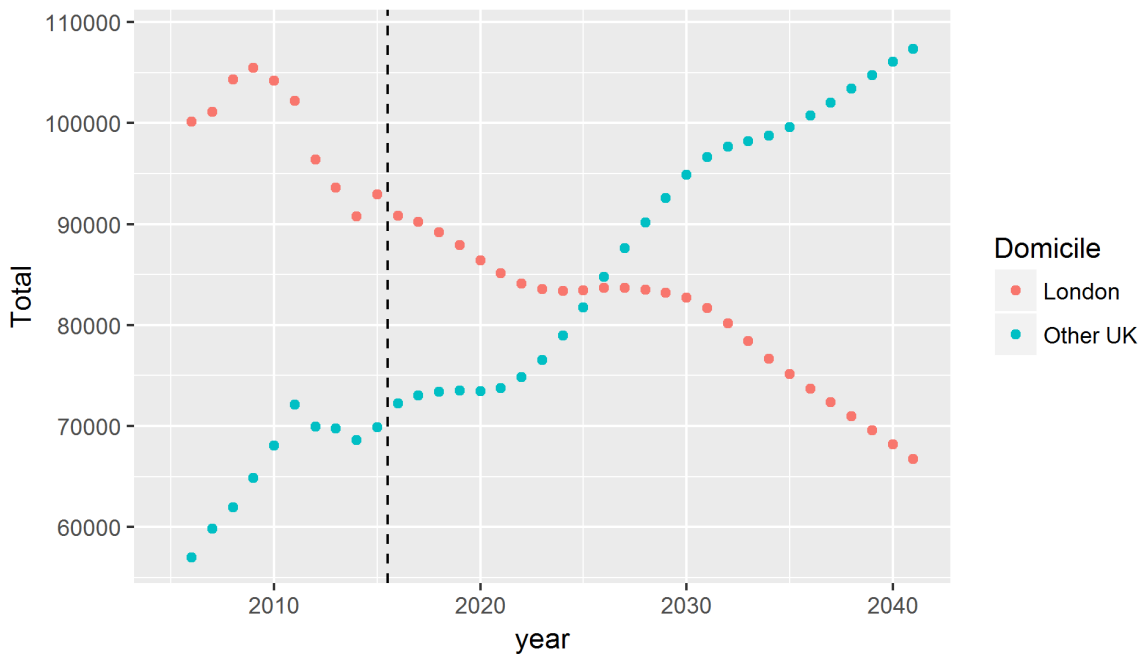
- 1.2.6. Apply the following methodology for each group of: All London domiciled undergraduates, all rest-of UK domiciled undergraduates, first year London domiciled undergraduates, first year rest-of-UK domiciled graduates
- A. Filter and aggregate HESA data to include all full-time undergraduates at all London HE institutions by age and the appropriate domicile/study level.
  - B. Filter the GLA population projection to the domicile area (i.e. only London or only rest of UK).
  - C. For each of the past 10 years:
    1. Create a population profile to match the age distribution of students.
      - a. Take the age distribution of the students and use this to apply a weighting to each age in the population projection. (For example, if in that year 20% of students are age 18, then 20% of the population projection of 18-year olds is taken. This ensures that the total population calculated in step b has more contribution from ages which are more common.)
      - b. Aggregate these weighted populations over all ages to give a single number for the population – this is our population pool that students are drawn from.
    2. Aggregate the HESA student numbers over all ages
    3. Calculate the proportion of the population pool from step 1b which are London HESA students
  - D. Fit a line of best fit to these proportions over the past 10 years using least squares method (proportion proportional to year). Use this line to project the proportions into the future
  - E. For future years, create the population profile using that year's GLA population projection and the age distribution from the latest year of HESA data (2015/16)
  - F. Multiply the population profile by the proportion for the projection years to calculate the projected number of students.
- 1.2.7. The graph below shows recorded and projected (after the dotted line) proportions of the London domiciled and other UK domiciled people from the population pool calculated in step C.1 above that are London HESA undergraduate students

Population linked 10 year trend all yrs - proportions



1.1.7. The graph below shows recorded and projected (after the dotted line) numbers of UK domiciled (London and other UK) undergraduate students for all years of study.

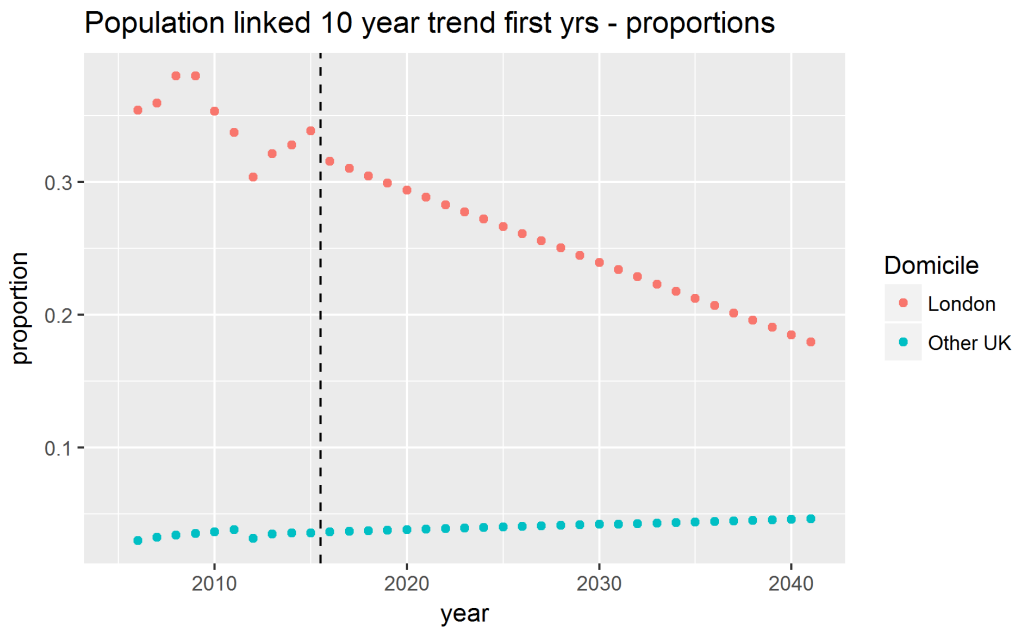
Population linked 10 year trend all yrs



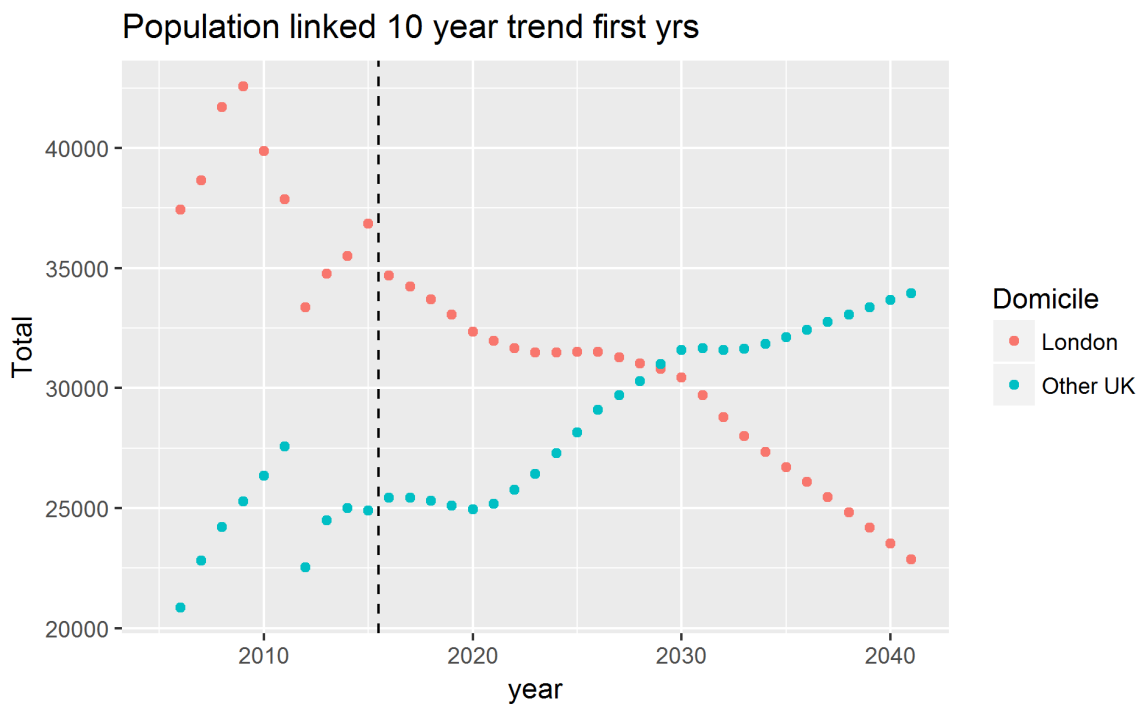
Number of full-time UG students in all years of study		
Academic year	UG London domiciled students	UG other UK domiciled students
2015/16	92,930	69,910
2041/42	66,745	107,375

1.2.8. The graph below shows recorded and projected (after the dotted line) proportions of the London domiciled and other UK domiciled people from the population pool

calculated in step C.1 above that are London HESA ungraduated students in the first year of study



1.2.9. The graph below shows recorded and projected (after the dotted line) numbers of UK domiciled (London and other UK) undergraduate students in first years of study.



Number of full-time UG in first year of study		
Academic year	UG London domiciled students	UG other UK domiciled students
2015/16	36,835	24,910
2041/42	22,865	33,960

### III. Domestic postgraduate population linked trend projections (London and other UK)

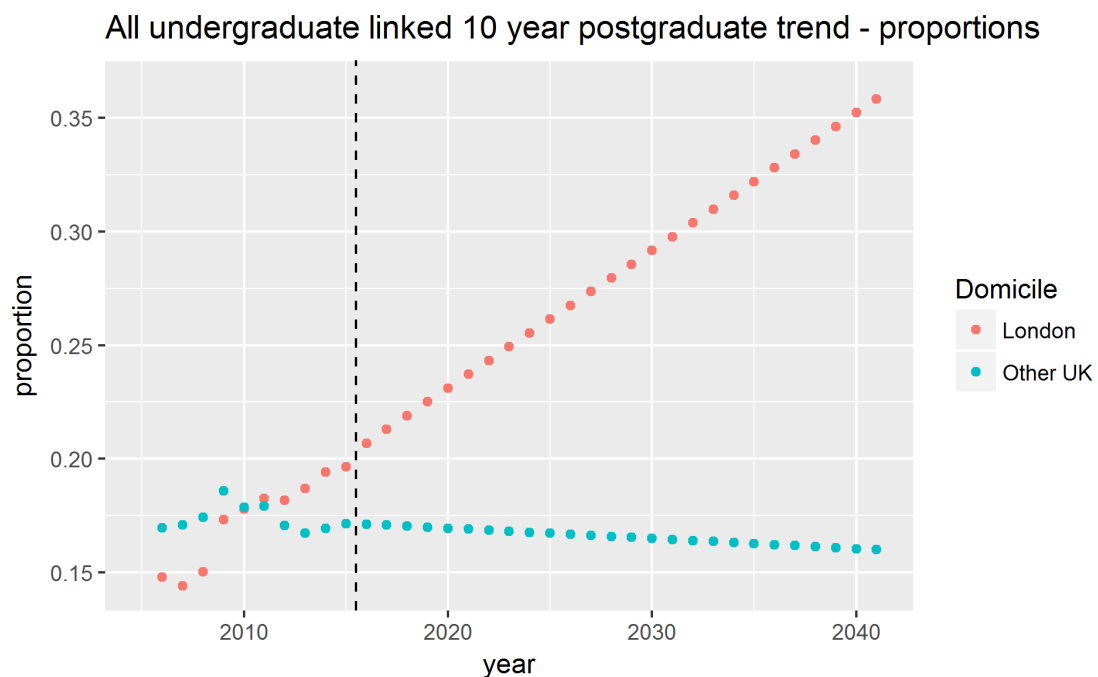
1.2.10. Postgraduate projections are linked to the undergraduate projections.

1.2.11. Apply the following methodology for each group of: London domiciled students, rest of UK domiciled students

#### Methodology

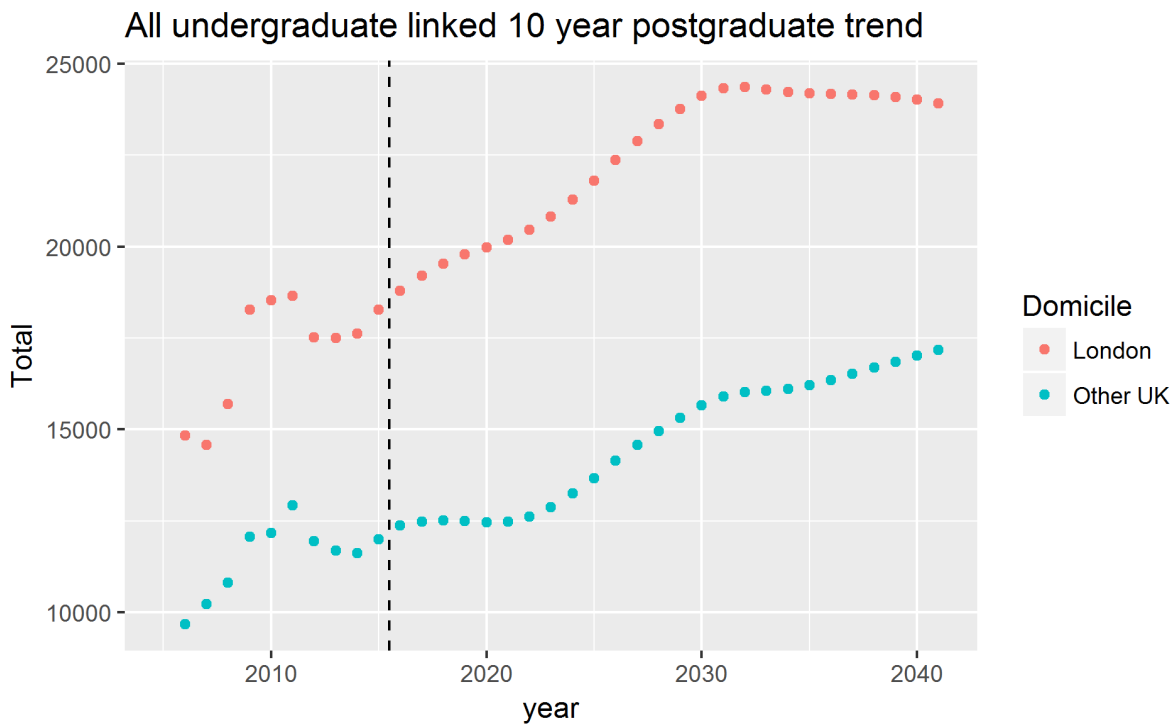
- For each of the past 10 years, calculate the proportion of postgraduates to undergraduates
- Fit a line of best fit to these proportions using least squares method (proportion ~ year)
- Use this line to project proportions forward into future years
- Multiply the projected proportions by the projected number of undergraduates to calculate the projected number of postgraduates.

1.2.12. The graph below shows recorded and projected (after the dotted line) proportions of postgraduate students to undergraduate students for London domiciled and other UK domiciled London HESA students.



1.2.13. The graph below shows recorded and projected (after the dotted line) numbers of UK domiciled (London and other UK) postgraduate students for all years of study.





Number of full-time PG students in all years of study		
Academic year	London domiciled students	Other UK domiciled students
2015/16	18,265	11,985
2041/42	23,915	17,180

### Total of London HESA student projection

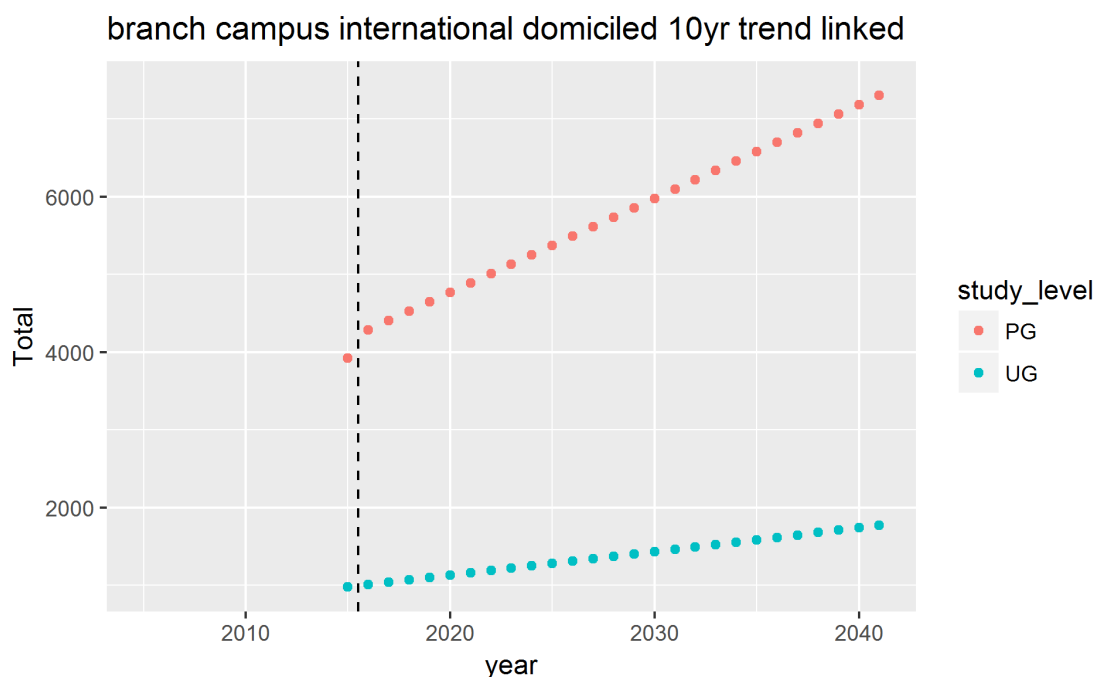
Academic Year	Course level (full-time)	Location of domicile				Totals
		Other EU	Non- EU	London	Other UK	
2015/16	UG	18,440	31,585	92,930	69,910	<b>212,870</b>
	PG	11,285	32,070	18,265	11,985	<b>73,610</b>
2041/42	UG	32,810	57,415	66,745	107,375	<b>247,315</b>
	PG	21,050	59,710	23,915	17,180	<b>103,810</b>

### 1.3. Projection methodology and results for students not capture by London HESA data

- 1.3.1. Data on student numbers at alternative providers and branch campuses detailed below are approximate because the total number of alternative providers and branch campuses in London is not available. London Higher have estimated the student number for these groups as there is partial data on numbers of students at alternative providers from official sources and no official data on student numbers at branch campuses.

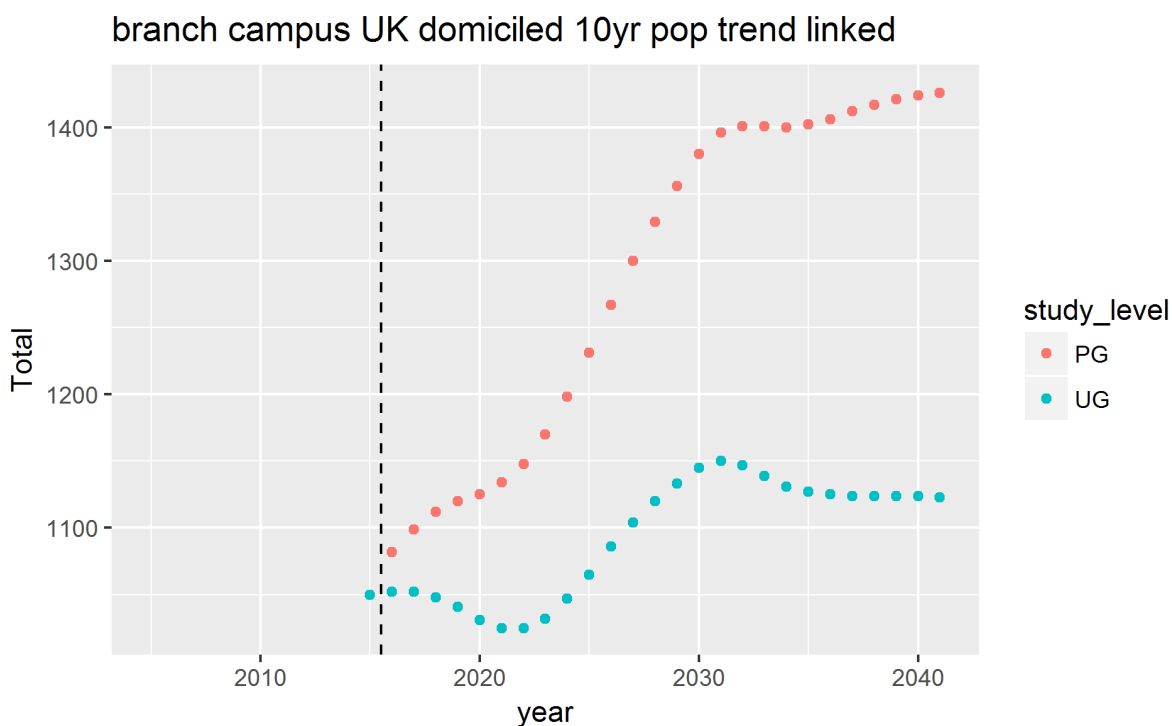
#### IV. Branch campuses

- 1.3.2. A branch campus is a London centre offering higher education courses by a UK university, which is based outside of London and receives support from HEFCE or equivalent bodies in the devolved administrations. Examples include Coventry University London Campus and Newcastle University London.
- 1.3.3. Branch campus numbers for 2015/16 were estimated by London Higher for each combination of international and UK domiciled, and postgraduate and undergraduate study level. It is assumed that for each of these combinations, the proportion of students at branch campuses to those in London HESA registered HE institutions will stay constant over the plan period. The number of UK domiciled students has not been broken down into London and other UK domiciled as this information is not available. London Higher estimate a total of 10% of UK domiciled students will need accommodating in PBSA. The PBSA need for the non-UK students is assumed to be the same as for the London HESA non-UK students, detailed in the following section.
- 1.3.4. The graph below shows the current estimated and projected (after the dotted line) numbers of international domiciled undergraduate and postgraduate students for all years of study at branch campuses.



Number of full-time UG and PG students in all year of study		
Academic year	UG International domiciled	PG International domiciled
2015/16	980	3,920
2041/42	1,765	7,300

- 1.3.5. The graph below shows the current estimated and projected (after the dotted line) numbers of UK domiciled undergraduate and postgraduate students for all years of study at branch campuses.



Number of full-time UG and PG students in all year of study		
Academic year	UG UK domiciled	PG UK domiciled
2015/16	1,050	1,050
2041/42	1,125	1,425

**VI. Alternative providers in London**

1.3.6. Alternative providers (APs) are higher education providers who do not receive annual funding from the Higher Education Funding Council for England (HEFCE) or other public bodies and who are not further education colleges. Most offer a mix of higher education (undergraduate and postgraduate degrees) and further education courses (HND, HNC). Many are formed as for-profit companies, but some may be not-for-profit charities. Please see <http://www.hefce.ac.uk/analysis/HEinEngland/providers/aps/> for further information.

1.3.7. London Higher estimated the number of students at alternative providers in London using HEFCE data, including an estimate of the additional providers missing in the HEFCE data from an assessment of institutions that are approved sponsors for Tier 4 visas (using from UK Visas and Immigration sponsors lists). The data for the students at these HEIs is limited and only for undergraduates. There is no trend data to use as a basis for projecting the future population of students from this group of HEIs. Therefore, this component of London’s student population is assumed to stay constant over the plan period. Many of these students are on non-degree courses that are less than three years. The majority of the students are estimated to be domiciled in London and surrounding areas. London Higher estimate that 5% of the UK domiciled student need PBSA. The PBSA need for the non-UK students is assumed to be the same as for the London HESA non-UK students, detailed in the following section.

Number of full-time students in all years of study			
Academic year	UG UK domiciled students	UG other EU domiciled	UG non- EU domiciled
2015/16	42,499	2,738	4,566
2041/42	42,499	2,738	4,566

#### 1.4. Other HEI students not included in population estimates

- 1.4.1. The previous London Plan (2015) estimates of the number of students that are not capture by London HESA data included international exchange students from Study Abroad and Erasmus programmes. These students formed a small element of the overall student population.
- 1.4.2. Generally, these students are only in London for part of the academic year and thus do not generate a need for PBSA in the same way as other full-time students at London HEIs do. These students may use a PBSA bedroom in vacation time and thus create no additional need for PBSA. The data available for determining the current number of these students and projecting this population over the plan period is not considered sufficiently robust. Given the lack of robust data available and small demand these students are likely to create for additional PBSA the population of these students have not been estimated for the new London Plan.

## 2. Projected need for purpose-built student accommodation

- 2.1.1. From the projections for the student population detailed above the total student population over the plan period can be estimated including number of first year undergraduates and postgraduates. Using these student population projections the number of students studying in London that could need to be accommodated in PBSA each year can be estimated (see below). The number of student bedspaces needed each year can then be compared to the current number of purpose-built student bedrooms (one bedspace equating to one purpose-built student bedroom) in London to estimate the need for additional student rooms over the plan period.
- 2.1.2. **Need:** The estimated number of PBSA bedspaces needed is based on the number of students that are generally considered a priority by universities for accommodating in PBSA and who would be offered a place in university-owned PBSA if there was the capacity. This group essentially comprises those students that are most likely to find it difficult to obtain other forms of accommodation in London and prefer the option of PBSA. The GLA has worked with the Mayor's Academic Forum members to determine which students should be included in this group in need of PBSA. It is made up of the following categories:
- 100% of full-time first year undergraduate that are from the UK but domiciled outside London or domiciled outside the UK. Rationale:
    - An important factor in attracting students to a university is the ability of the university to offer first year undergraduate students PBSA. Navigating the private rental sector in London can be a daunting prospect for new students moving to London and thus having the security of a place in PBSA is important for first year undergraduates.

- Students already domiciled in London prior to starting their course at a London University are generally not eligible for university managed PBSA as they already have accommodation in the city.
2. 25% of full-time second and third year undergraduates domiciled in other EU countries and 40 % of full-time second and third year undergraduates domiciled outside of the EU. Rationale:
    - These groups are likely to have more difficulty than UK domiciled students in renting mainstream market housing due to the provisions of the 2014 Immigration Act requiring landlords to check that a tenant or lodger can legally rent a residential property in England, as well as potential difficulties in not understanding the rental system in the UK.
    - The 25% and 40% figures are chosen because these are approximately the percentages of other EU and non-EU undergraduate students respectively surveyed by University of London Housing Services (ULHS) that said they wanted to live in PBSA after their first year.
  3. 20 % of full-time second and third year undergraduates from the UK but domiciled outside London. Rationale:
    - There is continuing demand for PBSA from a minority of undergraduate UK students that London universities feel are a priority to house in PBSA. These include students whose parents do not own a home (and who therefore, according to current rental practice in London, cannot act as rental guarantors for their children), and students who may, due to a disability or impairment, struggle to find accessible PRS accommodation that meets their needs.
    - The 20% figure is chosen because this is the percentages of undergraduate UK students domiciled outside London surveyed by ULHS that said they wanted to live in PBSA after their first year
  4. 100% of full-time first year postgraduates domiciled outside the UK. Rationale:
    - This group is likely to have more difficulty than UK domiciled students in renting mainstream market housing due to the provisions of the 2014 Immigration Act requiring landlords to check that a tenant or lodger can legally rent a residential property in England, as well as potential difficulties in not understanding the rental system in the UK.
    - These students are generally only in London for just under one year as they are on taught Masters degree courses. They are therefore unlikely to want to enter into the traditional 1-year tenancy agreement for private rental or to find flatmates to share a home.

2.1.3. The tables below show the current (2015/16 is the date of the most recent data used in the projections) and projected student population numbers of these categories of students at the end of the London Plan period in 2041/42.

#### Projected need for purpose-built student accommodation 2015/16

2015/16	London HESA students			Campus branches of non-London HEI		Alternative Providers			Total PBSA need
	other EU	Non EU	Other UK (non-London)	Other UK (non-London)	other EU & Non EU	Other EU	Non EU	Other UK (non-London)	
<b>Category 1</b>	7,235	12,605	24,910	105	327	913	1,522	2,123	
<b>Category 2 and 3</b>	2,801	7,592	9,000	42	212	456	1,218		
<b>Category 4</b>	7,755	23,275	NA	NA	2,744	NA	NA	NA	
<b>PBSA need</b>	<b>17,791</b>	<b>43,472</b>	<b>33,910</b>	<b>147</b>	<b>3,283</b>	<b>1,369</b>	<b>2,740</b>	<b>2,123</b>	<b>104,835</b>

#### Projected need for purpose-built student accommodation 2041/42

2041/42	London HESA students			Campus branches of non-London HEI		Alternative Providers			Total PBSA need
	other EU	Non EU	Other UK (non-London)	Other UK (non-London)	other EU & non EU	Other EU	Non EU	Other UK (non-London)	
<b>Category 1</b>	10,620	20,660	33,960	113	588	913	1,522	2,123	
<b>Category 2 and 3</b>	5,548	14,702	14,683	45	382	456	1,218		
<b>Category 4</b>	14,500	43,920	NA	NA	5,110	NA	NA	NA	
<b>PBSA need</b>	<b>30,668</b>	<b>79,282</b>	<b>48,643</b>	<b>158</b>	<b>6,081</b>	<b>1,369</b>	<b>2,740</b>	<b>2,123</b>	<b>171,063</b>

#### Table notes:

##### Category 1:

- All full-time 1<sup>st</sup> year non-UK and other UK UG
- For Alternative Providers and Campus Branch international students 1<sup>st</sup> year students are estimated as 1/3 of total UG due to lack of 1<sup>st</sup> year UG data
- For Campus Branch 1<sup>st</sup> year UK UG students the number of other UK (non-London) domiciled students is estimated by London Higher as 10% of total UK UG (see section 1.3 above).

##### Category 2 and 3:

- Full-time 2<sup>nd</sup> and 3<sup>rd</sup> year UG = 25% other EU, 40% non-EU, and 20% other-UK  
*[Correction at October 2018 - Where first year data is available the total population of full-time 2nd and 3rd year UG is calculated as follows: all full-time UG students for each domicile group minus the number of 1<sup>st</sup> year UG students in that group.  
Where first year data is not available the population for each year of UG full-time study (i.e. 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> year) for each domicile group is calculated as one third of all full-time UG students for that domicile group.]*

- For campus branch an average of 25% and 40% (= 32.5%) of 2<sup>nd</sup> and 3<sup>rd</sup> year is used as the international students are not disaggregated.
- For UK non-London Alternative Providers an estimate of need for PBSA has been made for all UG years at 5% of UK students (see section 1.3 above)

Category 1, 2 and 3:

- For Alternative Providers other UK (non-London) students an estimate of need for PBSA has been made for all UG years at 5% of UK students by London Higher.

Category 4: All full-time first year non-UK PG

- This is estimated at 70% of all PG where first year data not available (based on analysis of London HESA date)

Added together these categories sum to a total of approximately 105,000 students in 2015/16, and a projected total of 171,000 in 2041/42.

2.1.4. **Existing provision:** The existing number of bedspaces was estimated by University of London Housing Services (ULHS) in 2016 from a variety of data sources including university halls, the London Development Database, Knight Frank data and data about charitable halls provided by University of London. After adjusting for double-counting, ULHS estimated that there was currently around 83,000 PBSA bedspaces in London.

2.1.5. **Net requirement:** Comparing the current provision with the gross projected need, we arrive at a net need for approximately 88,000 additional PBSA bedspaces between 2016 and 2041, or 3,500 when annualised over the 25-year period.

Source(s):

HESA Student Record 2015/16; HESA Student Record 2014/15; HESA Student Record 2013/14; HESA Student Record 2012/13; HESA Student Record 2011/12; HESA Student Record 2010/11; HESA Student Record 2009/10; HESA Student Record 2008/09; HESA Student Record 2007/08; HESA Student Record 2006/07

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