

<b>Title:</b> Removing the Immigration Health Surcharge exemption of nationals from Australia and New Zealand and reducing the annual rate applicable to the Youth Mobility Scheme from £200 to £150  <b>IA No:</b> HO0225  <b>Lead department or agency:</b> Home Office  <b>Other departments or agencies:</b> Department of Health	<b>Impact Assessment (IA)</b>		
	<b>Date:</b> 28 January 2016		
	<b>Stage:</b> Final		
	<b>Source of intervention:</b> Domestic		
	<b>Type of measure:</b> Secondary legislation		
<b>Contact for enquiries:</b> Migration Policy, Home Office			
<b>Summary: Intervention and Options</b>			<b>RPC Opinion:</b> Not Applicable

Cost of Preferred (or more likely) Option			
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2009 prices)	In scope of One-In, Two-Out? Measure qualifies as
£41m	NA	NA	No   NA

**What is the problem under consideration? Why is government intervention necessary?**

The immigration health surcharge was introduced in 2015, ensuring that temporary, non-European Economic Area migrants contribute to the NHS in a manner commensurate with their immigration status. Nationals of Australia and New Zealand are currently exempt from paying the surcharge. During discussions with the Australian and New Zealand Governments, however, it has been agreed that the health surcharge should apply to nationals of these two countries, to bring them in line with other non-EEA nationals, from April 2016.

**What are the policy objectives and the intended effects?**

The policy objective is to ensure that nationals of Australia and New Zealand coming to the UK pay the immigration health surcharge in line with other non-EEA migrants, whilst recognising the UK's close links with these two countries.

**What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)**

Option 0: 'Do nothing'. Nationals of Australia and New Zealand would continue to be exempt from paying the immigration health surcharge, and a rate of £200 annually would continue to be applicable to the YMS.

Option 1: To remove the exemption from the health surcharge for nationals of Australia and New Zealand, and reduce the level of the rate applicable to the YMS from £200 to £150 annually.

Option 1 is the preferred option as it better meets the above objectives.

<b>Will the policy be reviewed?</b> It will not be reviewed. <b>If applicable, set review date:</b> NA					
Does implementation go beyond minimum EU requirements?				N/A	
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.		<b>Micro</b> Yes/No	<b>&lt; 20</b> Yes/No	<b>Small</b> Yes/No	<b>Medium</b> Yes/No
What is the CO <sub>2</sub> equivalent change in greenhouse gas emissions? (Million tonnes CO <sub>2</sub> equivalent)				<b>Traded:</b>	
				<b>Non-traded:</b>	

**I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.**

Signed by the responsible Minister: James Brokenshire Date: 1st February 2016

# Summary: Analysis & Evidence

# Policy Option 1

**Description:** To remove the health surcharge exemption of nationals of Australia and New Zealand, and reduce the annual rate applicable to the YMS from £200 to £150

## FULL ECONOMIC ASSESSMENT

Price Base Year 16-17	PV Base Year 16-17	Time Period Years 5	Net Benefit (Present Value (PV)) (£m)		
			Low: 41	High: 37	Best Estimate: 41

COSTS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Minimal	1	3	13
High	Minimal		5	23
Best Estimate	Minimal		3	17

### Description and scale of key monetised costs by 'main affected groups'

Administration costs for the Home Office (HO) - minimal.  
 Administration costs for the NHS - minimal.  
 Loss in revenue to Government from reducing the rate for the YMS - around £12m (PV).  
 Loss in revenue to HO due to fewer applications – around £0.2 million (PV).  
 Impacts on the Exchequer – around £5 million (PV).  
 Cost to the Public Sector from paying the commission from the surcharge – around £1 million (PV).

### Other key non-monetised costs by 'main affected groups'

Cost to nationals of Australia and New Zealand coming to the UK from having to pay the surcharge.  
 Impact on economic growth from a reduction in the number of migrants in the UK.

BENEFITS (£m)	Total Transition (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0		11	54
High	0		12	61
Best Estimate	0		12	58

### Description and scale of key monetised benefits by 'main affected groups'

Income to Government from removing the health surcharge exemption - around £53 million (PV).  
 Reduction to public service and welfare provision – around £3 million (PV).  
 Increased employment opportunities for UK residents – around £1 million (PV).  
 Reduction in HO application processing costs – around £0.1 million (PV).  
 Benefit to the Public Sector from paying the commission from the surcharge – around £1 million (PV).

### Other key non-monetised benefits by 'main affected groups'

Benefit to migrants being granted UK visas under the YMS.

Key assumptions/sensitivities/risks	Discount rate (%)	3.5
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Migrant price elasticities are assumed to be as set out in Annex A (in-country PBS dependants are assumed to be non-responsive to changes in fees). Elasticity effects are based on the change in fees against the expected income of the applicant over the duration of stay in the UK. Fiscal effects are based on assumed income and direct and indirect tax contributions; unit costs of public service provision are estimated for migrants based on available evidence.

## BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			In scope of OITO?	Measure qualifies as
Costs: NA	Benefits: NA	Net: NA	No	NA

## Evidence Base (for summary sheets)

### Problem under consideration

The Immigration (Health Charge) Order 2015, made under section 38 of the Immigration Act 2014 and implemented in April 2015, requires that non-EEA temporary migrants who make an immigration application to come to the UK for more than 6 months, or who apply to extend their stay in the UK, make a direct contribution to the NHS via payment of an immigration health surcharge. Exemptions from the requirement to pay the surcharge are listed in Schedule 2 of the Order and include nationals of Australia and New Zealand. Government intervention is necessary to lift the exemption for nationals of Australia and New Zealand so that they too pay the surcharge.

### Rationale for intervention

The rationale for the introduction of the immigration health charge is set out in the impact assessment dated 28 January 2015 which was laid with the draft Immigration (Health Charge) Order 2015. It can be viewed here: <http://www.legislation.gov.uk/ukdsi/2015/978011128473/impacts>

Since implementation of the Immigration (Health Charge) Order 2015, non-EEA temporary migrants who make an immigration application to come to the UK for more than 6 months, or who apply to extend their stay in the UK, subject to certain exemptions, make a direct contribution to the NHS via payment of an immigration health charge. The charge is currently set at £200 a year each for temporary migrants and their dependants, with a discounted rate of £150 a year for students and their dependants. The charge is collected at the point a migrant applies for a visa or to extend their stay in the country. Those who pay the charge can access NHS services free of charge whilst their leave remains valid, subject to those charges UK residents must pay for such as prescriptions and dental treatment in England. In the first six months since its introduction in April 2015, the Immigration Health Surcharge has collected more than £100 million in income for the NHS.

During discussions with the Australian and New Zealand Governments, as part of wider discussions on reciprocal healthcare arrangements, it was agreed that the health charge should apply to nationals of these two countries, to bring them in line with other non-European Economic Area nationals, from April 2016.

In recognition of the UK's close links with these two countries, we intend to reduce the health charge rate applicable to the Youth Mobility Scheme (YMS) from £200 to £150. Whilst in global terms the YMS represents a small proportion of total UK visa applications, it is the category used by the majority of nationals of Australia and New Zealand entering the United Kingdom for more than six months. This reduction to the health charge for the Youth Mobility Scheme visa category will apply to all nationalities eligible to enter the UK on this basis.

### Policy objective

The objective of this amendment to policy is to ensure that nationals of Australia and New Zealand pay the immigration health surcharge in line with other non-EEA migrants. The impact on nationals of these two countries would, however, be partially mitigated by the proposed reduction in the rate applicable to the YMS.

### Description of options considered

**Option 0:** 'Do nothing'. Nationals of Australia and New Zealand would continue to be exempt from paying the immigration health surcharge, and a rate of £200 annually would continue to be applicable to the YMS.

**Option 1:** To remove the exemption for nationals of Australia and New Zealand, and lower the level of the rate applicable to the YMS from £200 to £150 annually.

### Risks and assumptions

This IA only covers a 5-year period due to the uncertainty over future changes to the immigration system and the statistical techniques used to project future application volumes. It is noted that the impacts of the proposed policy changes are likely to materialise beyond the appraisal period considered in this IA.

Therefore, a longer appraisal period would result in larger impacts. It is also assumed the proposed changes would be implemented in April 2016.

The section below sets out the data and assumptions used to quantify the impacts of the proposed changes.

### Volumes

As the immigration health surcharge applies to immigration applications for temporary leave in non-visitor routes - main and dependent – including Tier 1, Tier 2 (excluding ICT migrants), Tier 4 and Tier 5 applicants, as well as family applications and those that apply under ‘UK ancestry’, ‘Other non-PBS employment’ and ‘Private Life’, the following groups are considered to be affected by this policy:

- all new out of country applications for leave lengths greater than 6 months and all in country applications made by nationals of Australia and New Zealand; and
- all new out of country applications made under the YMS.

In 2016-17, a total of approximately 24,000 visas<sup>1</sup> are expected to be granted to nationals of Australia and New Zealand. These account for around 5 per cent of the visas granted to all nationals. The Home Office does not forecast future levels of migration. Thus, this IA assumes volumes will be constant over the appraisal period. Tables 1 and 2 below provide a breakdown of the expected annual volume of applications and grants, respectively, by visa category.

	<b>Nationals of Australia and New Zealand</b>		<b>All nationalities</b>	
	<b>Out of Country<sup>b</sup></b>	<b>In Country</b>	<b>Out of Country<sup>b</sup></b>	<b>In Country</b>
<b>Tier 1</b>	150	40	6,800	3,900
<b>Tier 2<sup>a</sup></b>	1,400	900	37,000	43,000
<b>Tier 4</b>	1,800	80	256,000	48,000
<b>Tier 5</b>	18,300	50	48,000	1,400
<b>Family</b>	2,100	2,300	51,000	91,000
<b>Other<sup>c</sup></b>	-	20	-	730
<b>TOTAL</b>	<b>24,000</b>	<b>3,400</b>	<b>399,000</b>	<b>188,000</b>

Source: HO  
Notes:  
Figures may not sum due to rounding. Figures are rounded to the nearest £10 if lower than £1,000, £100 if lower than £10,000, and to the nearest £1,000 if greater than £10,000.  
a) Excludes intra-company transfer (ICT) applications.  
b) Excludes applications for less than 6 months.  
c) Includes other non-PBS workers, UK ancestry.

	<b>Nationals of Australia and New Zealand</b>		<b>All nationalities</b>	
	<b>Out of Country<sup>b</sup></b>	<b>In Country</b>	<b>Out of Country<sup>b</sup></b>	<b>In Country</b>
<b>Tier 1</b>	100	30	5,100	1,900
<b>Tier 2<sup>a</sup></b>	1,300	820	36,000	39,000
<b>Tier 4</b>	1,600	40	235,000	29,000
<b>Tier 5</b>	17,000	40	44,000	1,000

<sup>1</sup> This estimate only includes those visa products which the health surcharge applies to.

<b>Family</b>	1,419	1,000	34,000	45,000
<b>Other<sup>c</sup></b>	-	20	-	690
<b>TOTAL</b>	<b>22,000</b>	<b>2,100</b>	<b>354,000</b>	<b>117,000</b>
Source: HO				
Notes:				
Figures may not sum due to rounding. Figures are rounded to the nearest £10 if lower than £1,000, £100 if lower than £10,000, and to the nearest £1,000 if greater than £10,000.				
a) Excludes intra-company transfer (ICT) applications.				
b) Excludes applications for less than 6 months.				
c) Includes other non-PBS workers, UK ancestry.				

In addition, of all Tier 5 visas expected to be granted in that year, around 25,000 will be granted under the YMS<sup>2</sup>. Of these, nearly 70 per cent are granted to nationals from Australia and New Zealand. As above, it is assumed that volumes will remain constant over the appraisal period.

Due to the uncertainty about the accuracy of application projections, it is possible that a smaller (or greater) number of migrants may be affected by this policy. Hence, there is a risk that the expected impacts represent an over (or under) estimate of the actual impacts.

Furthermore, there may be an increase in applications from the affected groups prior to implementation of this policy, to avoid having to paying the surcharge. However, due to uncertainty about behavioural responses, it has not been possible to determine its likelihood and potential impacts.

### Duration of stay

The average duration of stay which has been used to estimate the impacts of these policy changes is shown in Table 3 below. As the payment of the health surcharge is to be pro-rated upwards to 6 months, the estimated lengths of leave granted have been calculated to reflect this. It has also been assumed that the average duration of stay will remain constant in future years. The uncertainty surrounding this assumption means that there is a risk that we have under or over estimated the impacts of this policy should the actual average duration of stay turn out to be longer or shorter than the level assumed in this IA.

<b>Table 3: Average Duration of Stay by Visa Category (Main and Dependents, months); 2014-15</b>		
	<b>Out of Country</b>	<b>In Country</b>
<b>Tier 1</b>	29	30
<b>Tier 2<sup>a</sup></b>	28	31
<b>Tier 4</b>	20	18
<b>Tier 5<sup>b</sup></b>	16	10
<b>Family</b>	34	32
<b>Other<sup>c</sup></b>	-	14
Source: HO analysis		
Notes:		
a) Excludes intra-company transfer (ICT) applications.		
b) Includes visas granted under the YMS. These are only granted for a period of 2 years.		
c) Includes other non-PBS workers.		

### Impact on application volumes

To date, there is no evidence that previous changes in visa application fees have had a statistically significant impact on application volumes. No statistically significant elasticity of demand has been found, suggesting that demand for products tested (T2, T4 and settlement visas) are not normally sensitive to small changes in price.

<sup>2</sup> HO analysis

In line with the IA for the implementation of the surcharge in April 2015<sup>3</sup>, this analysis has adopted the price elasticities of demand for other products using elasticity estimates from academic literature such as the wage elasticity of labour supply for work routes. The latest literature review was undertaken in 2010 and further details of the studies used can be found at Annex A. The application of these elasticities has not been tested in relation to visa fees or the scale of price increases analysed here and is unlikely to reflect the real elasticity in the specific circumstances. However, it is believed that these are the best available proxy measures.

- Removal of the exemption for nationals of Australia and New Zealand

#### *Supply of Labour*

Migrants demand visa products in order to supply labour in the UK. The wage elasticity of labour supply is the responsiveness of the supply of labour due to changes in the expected level of return from working in the UK. In terms of the proposed changes, this means that the removal of the exemption is likely to reduce the volume of applications made by Australians and nationals of New Zealand. The evidence suggests a range of elasticities between 0 ('low' scenario) and -1.1 ('high' scenario). This IA uses -0.5 as the central estimate.

#### *Demand for Higher Education*

Migrant students demand student visa products in order to purchase education in the UK. The price elasticity of demand for higher education is the responsiveness of the demand for higher education due to changes in the cost of studying in the UK. International estimates for the price elasticity for higher education are used, since no estimates are available for the UK. The evidence suggests -0.5 would be a rational estimate. However, this elasticity represents the response of an individual student to changes in the overall cost of education. It does not describe the response of international students in aggregate. The available evidence suggests that places at UK institutions are oversubscribed by international students and that the number of international students in higher education has continued to increase over time, despite increases in tuition costs, living expenses and visa fees. Given the small numbers affected, it has been assumed that there would be no impact on the education sector from these changes.

#### *Dependants of Points Based System (PBS) migrants*

For in-country PBS dependant applications, we assume no price sensitivity to changes in application costs in the 'central' scenario given they are already in the UK with their family member (the main PBS migrant), and that an increase in fee is unlikely to lead to a dependant leaving the UK while the main applicant remains. The 'high' scenario assumes an elasticity of -0.5 (based upon the elasticity of labour supply) to reflect the chance that some applications could potentially be deterred.

The elasticity for out of country dependents is assumed to be the same as the elasticity applied to the main applicant.

For the categories outlined above, the proposed changes in application costs and elasticities are applied to the expected earnings of the migrants over the expected duration of their stay in the UK to estimate the impact of the fees changes of application volumes. The expected earnings are assumed to grow in line with the OBR's forecast for growth in wages and salaries over the appraisal period. Historic application-grant rates are then used to estimate the impact on grant volumes. For in-country dependants of PBS migrants, the elasticity is applied to the potential earnings of the main applicant over their expected duration of stay as they are likely to pay for the cost of the dependant's fee.

- Introduction of a £50 concession for YMS visas

This proposal is to lower the surcharge rate applicable to the YMS, and therefore it is expected to result in increased demand for such visa product. Thus, price elasticities of demand is estimated to be of the same magnitude of the ones discussed above for the supply of labour, but of opposite sign. The central estimate used in this IA is therefore 0.5.

Table 4 below provides an indication of the expected changes in volume of migrants by visa product due to these policy changes. The net impact on migrant volumes of these proposals is expected to be

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<sup>3</sup> Available at: [http://www.legislation.gov.uk/ukia/2015/65/pdfs/ukia\\_20150065\\_en.pdf](http://www.legislation.gov.uk/ukia/2015/65/pdfs/ukia_20150065_en.pdf)

negative, albeit very small compared to the overall number of migrants in the UK, and therefore it is estimated that these proposals would have a minimal impact on the application and grant volumes.

		2016-17	2017-18	2018-19	2019-20	2020-21
<b>Out of Country</b>	<b>Tier 1</b>	0	0	0	0	0
	<b>Tier 2<sup>a</sup></b>	3	3	3	3	3
	<b>Tier 4</b>	0	0	0	0	0
	<b>Tier 5<sup>b</sup></b>	60	60	60	60	50
	<b>Family</b>	10	10	10	10	10
	<b>Other<sup>c</sup></b>	-	-	-	-	-
<b>In Country</b>	<b>Tier 1</b>	0	0	0	0	0
	<b>Tier 2<sup>a</sup></b>	2	1	1	1	1
	<b>Tier 4</b>	0	0	0	0	0
	<b>Tier 5<sup>b</sup></b>	0	0	0	0	0
	<b>Family</b>	10	10	10	10	10
	<b>Other<sup>c</sup></b>	0	0	0	0	0
<b>TOTAL</b>		<b>90</b>	<b>80</b>	<b>80</b>	<b>80</b>	<b>70</b>
Source: HO Analysis						
Notes:						
Figures may not sum due to rounding. Estimates are rounded to the nearest 10.						
*In-country dependants excluded as their elasticity estimate is deemed to be zero. This is because the decision to apply or not rests on income of main applicant - this is not the case for out-of-country dependants (except those in Tier 2 who are also assumed to have zero elasticity) as consequence of not applying for in-country is sending dependant back to home country, whereas for out of country, consequence of not applying would be to remain in home country.						
a) Excludes ICT migrants.						
b) Estimates for Tier 5 include all nationalities participating in the YMS.						
c) Includes other non-PBS workers.						

The above estimates, however, are to be treated with caution as this analysis has not included other factors might affect people's decisions to apply for UK visas, such as their propensity to use health services. Everything else being equal, individuals who have a greater propensity to use health services are less likely to be deterred than those with a lesser one.

#### Public sector unit costs

Changes in the volume of applications received and processed by the Home Office are likely to affect Home Office income and costs. Application fees and processing costs vary depending on visa products. Average fees and unit costs by visa category are set out in Table 5 below.

	<b>Out of Country</b>	<b>In Country</b>
<b>Tier 1</b>	1,000 (225)	1,035 (445)
<b>Tier 2<sup>a</sup></b>	660 (155)	705 (280)
<b>Tier 4</b>	310 (185)	440 (275)
<b>Tier 5</b>	225 (325)	225 (325)
<b>Family</b>	955 (160)	650 (345)
<b>Other<sup>b</sup></b>	-	650 (310)
Source: HO analysis		
Notes:		

Figures may not sum due to rounding.  
Estimates are rounded to the nearest £5.  
a) Excludes ICT applications.  
b) Includes other non-PBS workers.

## Monetised and non-monetised costs and benefits of each option

In January 2012, the Migration Advisory Committee (MAC) published a report on the impacts of migration and recommended that migration policy impact assessments should concentrate on the welfare of the resident population. That is, the NPV should include the effects from any change in fiscal, public service, consumer and producer surplus and dynamic effects where practical and appropriate, but should exclude foregone migrant wages (net of taxes). In line with this, this IA does not discuss the impacts on the migrant of paying the health surcharge.

This IA identifies both monetised and non-monetised impacts with the aim of understanding what the net impact might be from implementing the options described above. All costs and benefits are compared against option 0 ('do nothing'). In addition, the appraisal has been conducted using the central estimates and assumptions set out above. Due to the uncertainty over modelling assumptions, a sensitivity analysis has also been undertaken.

The estimated volume impacts from the introduction of a surcharge are translated into monetary values for inclusion in the cost benefit analysis under two broad headings – direct costs and benefits, and indirect, wider, costs and benefits.

The **direct costs and benefits** are those that are clearly and immediately related to the introduction of a surcharge. The direct costs include, for example, the costs to Government of administering this scheme. The direct benefits, on the other hand, include income from the surcharge.

The **wider, or indirect, costs and benefits** are those that occur as a result of the direct impacts, including behaviour changes. They should be considered when the impacts are thought to be significant. The wider costs include a set of assumptions relating to the wider economy. The wider costs and benefits include the impact on UK public services if the volume of people applying for UK migration products is affected.

The following sections describe in more detail how costs and benefits have been calculated, and summarise the results. In general, the method is straightforward: total costs and benefits are the product of a change in volume and an estimated unit cost or benefit, adjusted for the particular impact being considered.

**Option 0** – 'Do nothing'. Nationals of Australia and New Zealand would continue to be exempt from paying the health surcharge, and the rate applicable to the YMS would continue to be £200 annually.

There are no additional costs and benefits under this option. As costs and benefits of this option are compared against themselves, the Net Present Value (NPV) is necessarily equal to zero.

**Option 1** – To remove the exemption for nationals of Australia and New Zealand, and lower the level of the surcharge applicable to the YMS from £200 to £150 annually.

### Direct impacts

#### Direct costs

*One-off implementation costs for the Home Office:* The Home Office would incur the additional cost of updating the visa application form and updating information available to prospective applicants around the new proposals. In addition, IT systems would need to be updated. These costs are estimated to be minimal.

*One-off training and familiarisation costs for the NHS:* Training and familiarisation costs for the NHS are expected to be minimal as the proposed changes are not to introduce new practices, and therefore Overseas Visitor Managers (OVMS) would not be required to change their processes.

*Administration costs for the Home Office:* Under the 'Do nothing' option (*status quo*), Home Office frontline staff are responsible for verifying whether migrants are subject to the surcharge, including those who are exempt on the basis of existing reciprocal agreements. Therefore, the additional costs arising from the increase in the volume of migrants who are subject to the surcharge would be limited to



confirming payments, issuing refunds, requesting underpayments, processing overpayments and dealing with cases which go to appeal. However, given the size of the increase in the number of migrants subject to the surcharge, the additional administrative burden to the Home Office is expected to be minimal. No administrative costs are expected to arise due to the change in the rate applicable to YMS visas.

*Administration costs for the NHS:* Under the current situation, NHS frontline staff are already required to identify whether a patient is covered by the health surcharge. The additional administrative burden, therefore, relates to having to identify those who are covered by the surcharge. However, given the small increase in the number of migrants who are liable to pay the surcharge resulting from this policy, additional identification costs are expected to be minimal.

*Cost to the Public Sector from paying commission on surcharge income:* Around 90 per cent of visa fees are collected via a third party private company who charge a commission for this service. It is assumed that this would be the case for the income raised from the surcharge. This is estimated to be around £4.2 million per annum in 2015-16 prices. If implemented, the proposed changes could result in an increase in the number of migrants subject to the surcharge, and, ultimately, in the level of income generated from the latter. As a result, the commission paid out by the Public Sector would also rise. Given the volume of applicants from Australia and New Zealand is minimal compared to the total number of migrants subject to the surcharge, the additional cost to the Public Sector is expected to be amount to around £0.2 million per year in 2016-17 prices.

*Loss in revenue to the Public Sector from lowering the level of surcharge applicable to the YMS:* The decrease in the level of health surcharge applicable to YMS visas would reduce Public Sector income by around £3 million per year (around £12 million in PV over 5 years) in 2016-17 prices.

#### Direct benefits

*Increased revenue from the removal of the exemption for nationals of Australia and New Zealand:* The removal of the exemption for nationals of Australia and New Zealand is expected to result in additional revenue to the Public Sector as an increased number of applications would now attract the surcharge. The additional income is estimated to amount to approximately £ 12 million per year (around £53 million in PV over 5 years) in 2016-17 prices.

*Increased Private Sector revenue from commission from the surcharge:* Around 90 per cent of visa fees are collected via a third party private company who charge a commission for this service. It is assumed that this would be the case for the income raised from the surcharge. This is estimated to be around £4.2 million per annum in 2015-16 prices. If implemented, the proposed changes would increase the number of migrants subject to the surcharge, and, ultimately, the level of income generated from it. As a result, the commission paid out by the Public Sector. Given the volume of applicants from Australia and New Zealand is minimal compared to the total number of migrants subject to the surcharge, the additional benefit to the Private Sector is expected to be amount to around £0.2 million per year in 2016-17 prices.

#### **Indirect impacts**

As discussed in the 'Risks and assumptions' section above, overall the proposed policy changes are expected to lead to a net reduction in demand for UK visas and, ultimately, in the number of migrants in the UK. The remainder of this section discussed potential impacts of such reduction.

- *Loss to the Exchequer from reduced fiscal contribution from migrants:* A drop in the volume of migrants in the UK would result in a reduction in the potential fiscal contribution of migrants to the Exchequer, which could have a negative impact on UK residents. The direct and indirect tax contribution of migrants have been calculated using their estimated average gross earnings, current income tax rates and assumptions around indirect tax rates (see Annex B for a detailed discussion).
- *Impact on the education sector:* If some of the migrants deterred would have applied for student visas, education institutions may lose international tuition fees. However, given the small number of students expected to be deterred and the available evidence around UK institutions being oversubscribed by international students, this IA assumes that the latter would be replaced by other international students, and that, therefore, there would be no impact on education institutions.
- *Reduction in the Home Office income from visa fees:* A fall in application volumes would result in lower revenue from visa fees. This decrease, however, would be partially offset by the administrative savings associated with the consequent fall in processing costs.
- *Reduction in the Public Sector from reduced public service and welfare provision:* If there is a reduction in the volume of migrants in the UK, then this could help reduce pressures on public services by reducing the volume of people eligible to utilise them. The cost of all services provided by the state can be allocated to each individual in the UK, on the assumption that consumption is the same as a UK resident of the same age. A more detailed discussion on the impact of migration on public services can be found at Annex C.
- *Increased employment opportunities for UK residents:* Following the publication of the cross-Governmental report on *Impacts of migration on UK native employment: an analytical review of the evidence*<sup>4</sup>, Government analysts have been working on revised displacement assumptions. These assumptions have been tentatively set at 15 per cent for low-skilled workers when the economy is growing (ranging from 0 per cent to 30 per cent). That is, under this assumption, 100 additional non-EU migrants would lead to a reduction in employment of 15 low-skilled native workers during periods of normal economic conditions. The analysis also finds that during normal economic conditions, there is likely to be no displacement of skilled native workers by non-EU migrants. In this analysis, skilled workers are assumed to be those main applicants from Tiers 1 and 2 and dependants from Tier 2, whilst dependants and main applicant workers in other tiers are taken to be low skilled. This IA assumes that the inverse of this finding is valid when the number of non-EEA migrants is reduced. It is assumed that this replacement occurs over three years for each year's inflow of migrants. This is because the average length of leave granted is approximately three years for most visa routes. See Annex D for a description of the findings and application in impact assessments. This option is likely to result in a drop in visa demand, which implies that jobs that would have gone to the migrant may become available to a UK resident. Given the small number of people expected to be deterred from applying for UK visas due to this policy, the number of additional jobs available to UK residents each year is also estimated to be small.

Based on the evidence set out in the 'Risks and assumptions' section above, the net overall cost of a reduction in the number of applications is not expected to exceed £1 million in PV over 5 years (in 2016-17 prices).

### Wider economic impacts

*Growth impacts:* A reduction in the number of migrants could potentially have an impact on economic growth. This is more likely to be at the higher skill level (for example, Tier 1 and Tier 2 applicants) rather than at the lower skill level due to the dynamic spill-over effects of specialisation and knowledge transfer. Although it has not been possible to quantify this impact, this is likely to be negligible given the number of people who are expected to be deterred relative to the size of the UK population.

### Impact on businesses

It is expected that there would be no direct regulatory cost to UK business as the proposed charges are not considered to be a new regulatory burden. Some UK businesses, however, may choose to pay for the surcharge if they are already paying for the application costs of employees coming to the UK from Australia or New Zealand. As the proportion of businesses that would choose to pay the surcharge is unknown, it has not been possible to monetise this impact.

<sup>4</sup> Occasional Paper 109: *Impacts of migration on UK native employment: an analytical review of the evidence* available at: [www.gov.uk/government/publications/impacts-of-migration-on-uk-native-employment-an-analytical-review-of-the-evidence](http://www.gov.uk/government/publications/impacts-of-migration-on-uk-native-employment-an-analytical-review-of-the-evidence)

## Summary of costs and benefits

The costs and benefits as outlined above are summarised in Table 6, which also shows the sum of PV costs and PV benefits to generate the NPV for option 1. Overall, this policy is estimated to have a positive NPV of around £41 million over 5 years (in 2016-17 prices). It is important to note that these figures are best estimates and that they are subject to uncertainty as the actual impact of this policy could depend on a number of factors which, due to uncertainty, have not been included in our analysis.

<b>Table 6: Summary of Costs and Benefits – Best Case</b>			
	<b>One-Off</b>	<b>Annual Average</b>	<b>Total (PV)</b>
<b>Costs</b>			
NHS Familiarisation Costs	*	-	*
HO Set-up Costs	*	-	*
NHS Admin Costs	-	*	*
HO Admin Costs	-	*	*
Loss from Lower Surcharge for YMS	-	£2m	£12m
Cost of paying commission (Public Sector)	-	£0.2m	£1m
HO Loss in Revenue from Fewer Applications	-	*	£0.2m
Exchequer Impacts from Fewer Applications	-	£1m	£5m
<b>Total</b>	-	<b>£3m</b>	<b>£17m</b>
<b>Benefits</b>			
Savings to HO from Processing Fewer Applications	-	*	£0.1m
Revenue from Surcharge from Nationals of Aus and NZ	-	£11m	£53m
Savings on Public Services	-	£0.6m	£3m
Revenue from Commission (Private Sector)	-	£0.2m	£1m
Increased Employment Opportunities for UK Residents	-	£0.3m	£1m
<b>Total</b>	-	<b>£12m</b>	<b>£58m</b>
<b>NPV</b>	-	<b>£8m</b>	<b>£41m</b>
Source: HO Analysis			
Notes:			
Figures may not sum due to rounding			
Rounded to the nearest £100k if lower than £1m or to nearest £1m otherwise.			
* denotes costs and benefits which are expected to be minimal.			
- indicates nil costs or benefits. A 5-year average is provided for ongoing costs and benefits.			

## Sensitivity analysis

The impacts of the policy under consideration have been re-estimated using different assumptions about elasticities and displacement effects. The 'low' scenario uses the assumptions which result in the lowest costs, and the 'high' scenario the highest costs. The 'low' scenario assumes zero elasticity of demand, that is any changes in visa application costs would not affect volumes, and therefore have no additional associated costs (net of benefits). The 'high' scenario, however, uses higher elasticities and no displacement of UK workers. This means that individuals are expected to be deterred to a greater extent than in the central case, and that no jobs would become available to UK residents as a result of the reduction in the number of migrants in the UK.

Tables 7 and 8 below present the re-estimated NPVs under the 'low' and 'high' scenarios, respectively. These results suggest that the estimated impacts do not appear to be particularly sensitive to modelling assumptions about elasticity and displacement effects.

<b>Table 7: Summary of Costs and Benefits – Low Case</b>			
	<b>One-Off</b>	<b>Annual Average</b>	<b>Total (PV)</b>
<b>Costs</b>			
NHS Familiarisation Costs	*	-	*
HO Set-up Costs	*	-	*
NHS Admin Costs	-	*	*
HO Admin Costs	-	*	*
Loss from Lower Surcharge for YMS	-	£2m	£12m
Cost of Paying Commission (Public Sector)	-	£0.2m	£1m
HO Loss in Revenue from Fewer Applications	-	*	-
Exchequer Impacts from Fewer Applications	-	-	-
<b>Total</b>	-	<b>£3m</b>	<b>£13m</b>
<b>Benefits</b>			
Savings to HO from Processing Fewer Applications	-	-	-
Revenue from Surcharge from Nationals of Aus and NZ	-	£11m	£53m
Savings on Public Services	-	-	-
Revenue from Commission (Private Sector)	-	£0.2m	£1m
Increased Employment Opportunities for UK Residents	-	-	-
<b>Total</b>	-	<b>£11m</b>	<b>£54m</b>
<b>NPV</b>	-	<b>£8m</b>	<b>£41m</b>
Source: HO Analysis			
Notes:			
Figures may not sum due to rounding			
Rounded to the nearest £100k if lower than £1m or to nearest £1m otherwise.			
* denotes costs and benefits which are expected to be minimal.			
- indicates nil costs or benefits. A 5-year average is provided for ongoing costs and benefits.			

<b>Table 8: Summary of Costs and Benefits – High Case</b>			
	<b>One-Off</b>	<b>Annual Average</b>	<b>Total (PV)</b>
<b>Costs</b>			
NHS Familiarisation Costs	*	-	*
HO Set-up Costs	*	-	*
NHS Admin Costs	-	*	*

HO Admin Costs	-	*	*
Loss from Lower Surcharge for YMS	-	£2m	£11m
Cost of Paying Commission (Public Sector)	-	£0.2m	£1m
HO Loss in Revenue from Fewer Applications	-	*	£0.4m
Exchequer Impacts from Fewer Applications	-	£2m	£11m
<b>Total</b>	-	<b>£5m</b>	<b>£23m</b>
<b>Benefits</b>			
Savings to HO from Processing Fewer Applications	-	£0.1m	£0.3m
Revenue from Surcharge from Nationals of Aus and NZ	-	£10m	£52m
Savings on Public Services	-	£1m	£7m
Revenue from Commission (Private Sector)	-	£0.2m	£1m
Increased Employment Opportunities for UK Residents	-	-	-
<b>Total</b>	-	<b>£12m</b>	<b>£61m</b>
<b>NPV</b>	-	<b>£7m</b>	<b>£37m</b>
Source: HO Analysis			
Notes:			
Figures may not sum due to rounding			
Rounded to the nearest £100k if lower than £1m or to nearest £1m otherwise.			
* denotes costs and benefits which are expected to be minimal.			
- indicates nil costs or benefits. A 5-year average is provided for ongoing costs and benefits.			

### Rationale and evidence that justify the level of analysis used in the IA (proportionality approach)

This policy is to make marginal amendments to current practices, not to introduce new practices. All assumptions and methodology are, therefore, in line with those presented in the IA for the introduction of the health surcharge in April 2015<sup>5</sup>, and, where possible, have been updated using the latest available evidence.

### Summary and preferred option with description of implementation plan

The costs and benefits of option 1 under the best scenario are summarised in Table 9 below.

Option	Costs	Benefits
1	£17 million (PV over 5 years)	£58 million (PV over 5 years)
Source: HO analysis		

The Government's preferred option is option 1 as it better meets its policy objectives. The Government also intends to implement the proposed changes in April 2016.

<sup>5</sup> Available at: <http://www.legislation.gov.uk/ukdsi/2015/9780111128473/impacts>

## Annex A: Elasticity Assumptions

Table A.1 below sets out the elasticities used to analyse the impact of the changes in fees on different types of products. Tables A.2 to A.3 set out the academic papers used to justify the inclusion of these elasticities. Elasticities used for dependant applications are not included in Table A.1 as these were not derived from academic literature. Rather, they were derived from Home Office analysis on the likely response by dependants from changes to dependant fees. Such responses were deemed to yield a best case and central elasticity of 0, and a worst case value of -0.5.

**Table A.1: Elasticities used to analyse the impact of changing fees**

Elasticity	Justification	Products	Magnitude		
			Best case	Central	Worst case
Wage elasticity of labour supply	Migrants demand Home Office products in order to <u>supply</u> labour in the UK. The wage elasticity of labour <u>supply</u> is thus used to estimate the impact on volumes of the proposed fee changes. e.g. an increase in fee is a reduction in expected wage, so should reduce labour supply.	<i>Tier 1</i> visa, in-country, extensions; <i>Tier 1 Post-Study</i> visa, in-country and extensions; <i>Tier 2 General</i> visa, in-country, extensions; <i>Tier 2 ICT/Sports/MOR</i> visa, in-country, extensions; <i>Tier 5</i> Youth Mobility and Temporary Worker visa, in-country, extensions.	0	0.5	1.1
Price elasticity of demand for higher education	Migrant students demand Home Office student products in order to purchase education in the UK. Price elasticity of demand for higher education is used as a proxy for migrant price elasticity of demand for all types of education accessed through Tier 4.	Tier 4 visa, in-country, extensions	0	-0.5	-1

**Table A.2: Empirical studies of the wage elasticity of labour supply**

Source	Estimate of wage elasticity of labour supply*	Measure
R. E Lucas and L. A. Rapping, "Real Wages, Employment and Inflation", <i>Journal of Political Economy</i> , 77 (1969).	Short run: 1.12 – 1.13 (95% significance) Long-run: -0.07 – 0.58	Change in real wages on labour supply using US data 1929-1965
Y. Chang and S. Kim, "On the aggregate labour supply", <i>Federal Reserve Bank of Richmond Economic Quarterly</i> Volume 91/1 Winter 2005.	1.0	Aggregate labour supply elasticity
L. Osberg and S. Phipps, "Labour Supply with Quantity Constraints: Estimates from a Large Sample of Canadian Workers", <i>Oxford Economic Papers</i> , New Series, Vol. 45, No. 2. (Apr., 1993), pp. 269-291.	Between +0.1 and -0.1	Wage elasticity of labour supply in the Canadian Labour Market
P. Bingley and G. Lanot, "The Incidence of Income Tax on Wages and Labour Supply", <i>National Centre for Register-based Research (NCRR)</i> , Version 5.002 31 October 2000	-0.4	Elasticity of labour supply in the Danish Labour Market

\*Note that the estimated wage elasticity of labour supply includes negative values indicating backward sloping or backward bending labour supply curve. This is due to the income effect outweighing the substitution effect. For a higher wage, individuals can decrease labour supply and enjoy the same level of consumption.

**Table A.3: Empirical studies of the price elasticity of demand for education**

Source	Estimate of price elasticity of demand	Measure
Tuition Elasticity of the Demand for Higher Education among Current Students: A Pricing Model Glenn A. Bryan; Thomas W. Whipple The Journal of Higher Education, Vol. 66, No. 5. (Sep. - Oct., 1995), pp. 560-574.	Between -0.12 to -0.3	Elasticity of demand for HE in a small private liberal arts college in Ohio, from increases in tuition fees between \$6000 to \$8000
Campbell, R. and B. Siegel. "The Demand for Higher Education in the United States, 1919-1964." American Economic Review, (June, 1967), pp. 482-94.	-0.44	Aggregate demand for attendance in 4-year institutions in the US from 1927 – 63
Hight, J. "The Supply and Demand of Higher Education in the U.S.: The Public and Private Institutions Compared." Paper presented to the Econometric Society, December, 1970.	Between -1.058 and -0.6414	Used Campbell and Siegel's data and split up for public and private sectors
Hoernack, S., W. Weiler, and C. Orvis. "Cost-Related Tuition Policies and University Enrollments." mimeo., Management Information Division, University of Minnesota, 1973.	Between -1.811 to -.837	Private demand for the University of Minnesota, using longitudinal data from 1948-72.

## Annex B: Methodology for calculating fiscal and income losses

The IA quantifies the impact of lower fiscal contributions to the UK exchequer from fewer migrants entering or remaining in the UK.

The fiscal contributions associated with various types of migrants, calculated on the basis of the latest available gross income and spending data, are set out in Table B.1 below. The remainder of this Annex sets out the approach and relevant assumptions used to calculate these figures in further detail.

<b>Table B.1: Exchequer Impacts from Reduction in Fiscal Contributions (£ per year, per migrant)</b>	
Family route to settlement	£2,800
Tier 1 – Entrepreneur, standard – Main	£4,700
Tier 1 – Entrepreneur, standard – Dependant	£2,400
Tier 1 – Investor, standard – Main	£41,800
Tier 1 – Investor, standard – Dependant	£2,400
Tier 1 - Exceptional Talent Postal - Main	£8,700
Tier 1 - Exceptional Talent Postal - Deps	£2,400
Tier 1 Graduate Entrepreneur Route - Main & Dependents	£4,700
Tier 2 General, ICT – Long-Term Staff, Sport & MOR – main applicant	£20,000
Tier 2 General, ICT – Long-Term Staff, Sport & MOR – dependants	£2,400
Tier 2 ICT Short-Term Staff, Graduate Trainee or Skills Transfer – main applicant	£14,400
Tier 2 ICT Short-Term Staff, Graduate Trainee or Skills Transfer – dependants	£2,400
Tier 2 General, ICT over 3 years EC – Long term staff – main applicant	£20,000
Tier 2 General, ICT over 3 years EC – Long term staff – dependants	£2,400
Tier 2 – Shortage Occupations: Up to 3 years EC – main applicant	£14,900
Tier 2 – Shortage Occupations: Up to 3 years EC – dependants	£2,400
Tier 2 – Shortage Occupations: over 3 years EC – main applicant	£15,100
Tier 2 – Shortage Occupations: over 3 years EC – dependants	£2,400
Tier 5 Temp Work	£4,300
Tier 5 YM	£7,600
Tier 5 Dependants	£2,400
LTR Non Student Postal Main	£8,700
Employment LTR outside PBS Postal - Main	£8,700
Tier 1 – Entrepreneur, standard – Main	£4,700
Tier 1 – Investor, standard – Main	£41,800
Tier 1 - Exceptional Talent Postal - Main	£8,700
Tier 1 - Graduate Entrepreneur Postal - Main	£4,700
Tier 2 - Sport & MOR (In-UK) - main applicant	£2,400
Tier 2 - General (In-UK) - main applicant	£13,300
Tier 2 - ICT (In-UK) - main applicant	£28,300
Tier 2 ICT – Short term staff, Graduate Trainee or Skills Transfer standard – main applicant	£19,700
Tier 2 General, ICT over 3 years leave to remain – Long-Term Staff – main applicant	£20,000
Tier 5 - Postal Main	£4,300



Source: HO analysis

Note:

Estimates are in 2016-17 prices

Estimates are rounded to the nearest £100

Only the categories which have shown a decrease in the number of migrants as a result of the increase in application costs are included.

## Methodological Approach

The expected 'direct' and 'indirect' tax contributions are calculated based on estimates of the average gross incomes or spending of the different migrant groups, using tax rates provided by the ONS and HMRC, as well as evidence from previous papers, such as the MAC (2014) review of investment thresholds and the economic benefits of the Tier 1 investor route, on the exchequer impact of immigration.

Direct taxes include Income Tax, National Insurance Contributions (NICs) and Council tax. Both income tax and NICs contributions have been calculated based upon estimates the average earnings of working migrants and then applying the relevant tax and NIC thresholds outlined in HMRC (2015)<sup>6</sup>. Where relevant, council tax contributions are estimated based upon the income decile of the main applicant's earnings (ONS, 'The effect of taxes and benefits on household income 2013-14', 2015).

Indirect taxes are those paid on items of expenditure. They include VAT, duties paid on specific products (alcohol, fuel) and any other duties, licences (e.g. driving, television) and intermediate taxes. In reality, indirect tax contributions will depend upon tastes, preferences and characteristics. However, robust data on the specific expenditure of migrants is not available and there is significant uncertainty about their spending patterns. Since these are not known, the indirect tax contributions for some migrant groups are inferred from the average income of the group (adjusted to account for their estimated remittances) by considering the income decile within which their (remittance-adjusted) gross income falls and then applying the relevant estimates from ONS, 2015, 'The effect of taxes and benefits on household income 2013-14'.<sup>7</sup> For international students, whose income is expected to be a poor predictor of expenditure, indirect tax contributions are estimated based upon measures of the cost of living facing these groups. The estimates of the exchequer contribution of migrants only include direct and indirect tax contributions from migrants themselves. They do not account for any impact that migrants may have on the exchequer contributions of resident workers. For example, this may occur through the impact of migrants on the productivity and wages of resident workers or through the impact of any displacement of resident workers that may result from migration.

## Data and specific assumptions

The gross incomes or spending for each migrant group have been calculated and applied to each of the visa products in Table B.1 as follows:

- The fiscal contributions of Tier 1 investors are inferred from the indirect taxation on their spending in the UK. This is because it is not entirely clear what direct tax contribution these migrants would make. The indirect tax estimates used are based upon research by the Migration Advisory Committee (MAC) on the economic impact of Tier 1 investors.<sup>8</sup>
- In the absence of Home Office management information for the salaries of Tier 1 migrants, the gross incomes for Tier 1 entrepreneurs, Tier 1 graduate entrepreneurs and Tier 1 exceptional talent migrants are assumed to be in line with the median salaries of self-employed individuals in the UK, based upon analysis of the Family Resources Survey by the Institute for Fiscal Studies (updated to account for wage inflation).<sup>9</sup>

<sup>6</sup> Tax threshold values are available at <https://www.gov.uk/government/publications/rates-and-allowances-income-tax/income-tax-rates-and-allowances-current-and-past>

<sup>7</sup> Estimates of remittances are taken from ONS, (2012) "Understanding Society" and updated to 2015 levels using UK CPI.

<sup>8</sup> MAC report available at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/285220/Tier1investmentRoute.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/285220/Tier1investmentRoute.pdf)

<sup>9</sup> Institute for Fiscal Studies (February 2015:57) "Green Budget" available at: <http://www.ifs.org.uk/publications/7530>.

- Gross incomes for Tier 2 and Tier 5 migrants have been obtained from 2014-15 Home Office management information. This is the latest available data, and the data for Tier 2 migrants was used by the MAC in its report on the review of Tier 2 salary thresholds.<sup>10</sup> Tier 5 salaries are calculated as the median salary of the subset of those tier 5 migrants which report that they earn a salary during their visit.
- The fiscal contributions for Tier 4 migrants are inferred from measures of the 'cost of living' for international students rather than their gross income. The direct tax contribution of international students is assumed to be zero because the earnings of international students typically fall below the threshold which would make them subject to direct taxation. Income measures are a poor predictor of expenditure for international students, therefore measures of the 'cost of living' are used to proxy for the indirect tax contribution of international students.

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<sup>10</sup> MAC report available at [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/452805/Review\\_of\\_Tier\\_2\\_-\\_Analysis\\_of\\_salary\\_thresholds.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/452805/Review_of_Tier_2_-_Analysis_of_salary_thresholds.pdf).

## Annex C: Impact on Public Services

Home Office IAs have previously attempted to estimate the impact of migrants on health, education, criminal justice and welfare benefits using a bottom-up approach which aims to identify consumption of specific services. However, these estimates present only a partial picture of the impacts and may be biased in that unidentified consumption may substantially alter the picture. For this reason a top-down approach, which aims to allocate all public spending to each person in the UK, is preferred. This Annex sets out the preferred approach, which aims to estimate the impact on public services a change in the number of migrants arriving or remaining in the UK. This figure can be used to quantify the change in migration in IAs.

The public service costs associated with various types of migrants, calculated on the basis of 2014-15 data, are set out below.

**Table C.1: Estimates of the typical public service costs associated with various migrants (2014-15)**

	£ per head - Low case	£ per head - Central case	£ per head - High case
<i>All migrants</i>	5,300	7,000	8,800
<i>Non-EEA migrants</i>	5,400	7,100	8,900
<i>Migrant in last 10 years</i>	4,500	6,300	8,100
<i>Migrant in last 5 years</i>	4,300	4,300	4,300
<i>Non EEA - Those who came to work;</i>	5,300	7,100	8,800
<i>Non EEA - Those who came to study;</i>	4,600	6,400	8,200
<i>Non EEA - Those who came for family reasons;</i>	5,500	7,200	9,000
<i>Non EEA - Those who came as a dependant;</i>	5,400	7,100	8,900
<i>Non EEA - Those who came to seek asylum.</i>	5,700	7,500	9,200

Source: HO calculations based upon ONS mid-year population estimates (2014), HM Treasury's Public Expenditure Statistical Analyses (PESA), (2015:Table 5.2), and the Annual Population Survey (Jan-Dec 2013).

Figures are rounded to the nearest £100

This Annex sets out the approach and relevant assumptions used to calculate these figures in further detail.

### Allocation of Public Expenditure

A top-down approach to allocating public spending to individuals assumes that consumption is broadly similar for all individuals included in the calculation. This approach has been documented in the relevant literature. (Glover et al, 2000 and NIESR, 2011) HM Treasury document total levels of public spending (total managed expenditure (TME)) in the Public Expenditure Statistical Analyses (PESA) 2011. This documents the total level of public spending categorised into the following categories of function of government spend: General public services; Defence; Public order and safety; Economic affairs; Environment protection; Housing and community amenities; Health; Education; Social protection and EU transactions.

### Simple calculation

Public expenditure per person can be allocated to each individual in the UK by dividing total spending by the total number of individuals in the UK. This assumes that the consumption of public services is broadly similar for all individuals in the UK. PESA (2015) suggests that the total managed expenditure in the UK was £735 billion in 2014-15. The ONS population estimates (2014) suggest that there were 64.5 million individuals in the UK. Therefore, the simple calculation yields an estimated spend per person, including children, of £10,700 per person - 'Estimate A' in Table C.2 below.

**Table C.2: Per person public expenditure (2014-15)**

	£
Estimate A: Total spend per capita	10,700
Estimate B: Total excluding public goods	8,700
Estimate C: Total excluding public good and welfare	5,200
Estimate D: Wider services (<5 years)	1,400
Estimate E: Wider services (>5 years)	4,900

Source: HO calculations based upon ONS mid-year population estimates, 2014, and Public Expenditure Statistical Analyses (PESA), HM Treasury, Table 5.2, 2015.

Rounding: nearest £100

### Public Goods

However, this figure includes public goods, which means it may not be reasonable to assume that excluding a migrant from the UK could have a marginal impact of £11,100 on public finances. Instead it is sensible to exclude costs associated with public goods, as the cost of extending or removing coverage to one additional migrant is zero as public goods are not attributable to any one individual in the population.

Public goods are defined as non-rival and non-excludable. To be non-rival it must be that the consumption of a good by one individual does not reduce the ability of others to consume that good. A non-excludable good means that once the good is provided it is impossible for any individual to opt out. An example of a public good may be national defence. Once national defence is provided for the country an individual is unable to opt out of it. Whether they wish to be defended or not, they will be defended as it is not possible to protect the country without also protecting everyone in it. However it is also true that one individual who receives the protection of national defence, does not reduce the defence of others. Thus the good is non-rival and non-excludable.

The characteristics of a public good mean that the marginal cost of providing the good to one additional person is zero. As such it is sometimes debated that the cost of that good, which is attributable to a single individual, should also be zero. For this reason estimate B in Table C.2 provides the estimated cost of public spending per person excluding those goods deemed to be public goods. The excluded spending includes items such as general public spending, research and development, defence, pollution and other environmental spending, and street lighting.

In addition to excluding these public goods, spending on public debt transactions and EU payments have also been excluded. This is because these are obligations which cannot be opted out of and are not always directly attributable to the current population. Thus on a similar principle to a public good they are not incurred on a per person basis and would not be affected by one additional migrant. Removing these categories reduces the average impact of a marginal individual in the UK to £9,000 per year. However, this does not control for differing characteristics of migrants and how these characteristics may affect use of public services.

The exclusion of public goods from the cost calculation is one that could be contested. It is possible to suggest that the migrant population in total is non-marginal and therefore the costs of migrants as a whole are not zero. However, as the IA approach is to estimate the impact of a marginal change in migrant volumes, the use of a zero marginal cost would be more appropriate. Similarly some previous methods have not excluded debt transactions, or have only excluded part of them. The reasoning in these methods is that there is still some benefit gained from the large infrastructure projects that incurred the debt. However, this is complex to calculate the remaining benefit and apportion the debt payments appropriately and it is doubtful whether the presence of migrants per se has affected the demand for such capital investment, so debt transactions have been excluded.

Removing the public goods, public debt transactions and EU payments categories reduces the average impact of a marginal individual in the UK to £8,700 per year ('Estimate B' in Table C.2).

### The treatment of welfare and benefit payments

'Estimate B' includes welfare payments. However, the majority of non-EEA migrants are not eligible to claim welfare and benefits until they have been in the UK for at least five years and they have been formally granted settlement in the UK. For this reason it is deemed prudent to exclude spending on

welfare and benefits for migrants who have not been in the UK for less than five years and so are ineligible to claim.

'Estimate C' in Table C.2 provides an estimated cost per person excluding public goods and welfare of £5,200 per person – this implies that the average cost per person of welfare is £3,500 – estimate B minus estimate C.

### **Public services: health, education and personal social services**

This top-down approach assumes that consumption of public services is the same for both migrant and native individuals. However, since the consumption of public services is likely to vary by age, gender, family composition and other factors such as income and ethnicity, the migrants and the native population are not necessarily likely to exhibit identical patterns for all the categories of public service consumption.

NIESR provided top down estimates of public service expenditure on health, education and social services for different migrant groups in 2011. These estimates account for the differing characteristics of different migrant groups and the native population in the UK. These estimates therefore provide a more accurate picture of the average level of spending on these categories of expenditure for different migrant groups.

For this IA, estimates of the health, education and social service expenditures for each migrant group have been calculated by applying the NIESR (2011) methodology to the most recent Annual Population Survey, 2014-15 – see Table C.2 for these estimates.

### **Total Public Services adjusted for migrants**

In order to obtain estimates of the total cost to public services to migrants, the cost of welfare and other services ('wider services') need to be added to Table C.3 estimates of the cost of health education and personal social services. The total cost of these wider services was obtained by subtracting PESA estimates of health education and social services from estimate B above. The total difference was £4,900, including £3,500 welfare costs. Estimate D therefore in Table C.1, the cost of wider services for those less than 5 years is £1,400 (excluding welfare payments). Estimate E is the full cost including welfare payments.

For migrants in the majority of categories, each of the estimates in Table C.3 are then added to 'Estimate D' to generate the estimates in the 'low case' in Table C.1, and added to 'Estimate E' to generate the estimates in the high case in Table C.1. The resulting estimates in Table C.1 give the overall per head impact of an additional migrant in the cases where the migrants are ineligible to claim benefits (the low case) and are eligible to claim benefits (the high case), respectively. The central case, uses the mid-point between estimates D and E as a basis for the calculations.

**Table C.3: Summary of the per head cost of health, education and personal social services consumed by a migrant (2014-15)**

	£ per head (Education, Health and Personal Social Services)
All migrants	3,900
Non-EEA migrants	4,000
Migrants arriving in last 10 years;	3,100
Migrants arriving in last 5 years;	2,900
Non EEA - Those who came to work;	3,900
Non EEA - Those who came to study;	3,200
Non EEA - Those who came for family reasons;	4,100
Non EEA - Those who came as a dependant;	4,000
Non EEA - Those who came to seek asylum;	4,300

Source: Annual Population Survey Jan-Dec 2013 household dataset  
Rounding: nearest £100

For migrants residing in the UK for less than 5 years, welfare payments are excluded in each of the low, central and high cases.

## Annex D: Displacement Assumptions

### Displacement

Labour market displacement occurs when employment opportunities in the UK that could be filled by UK natives (UK born or UK nationals) are instead filled by migrants (foreign born or foreign nationals). The Government commissioned the Migration Advisory Committee (MAC) to analyse the impact of displacement on the UK labour market, culminating in a report<sup>11</sup> in January 2012. Building on this, the Home Office and Department for Business, Innovation and Skills (BIS) published a review on the impacts of migration on UK native employment<sup>12</sup>. This annex sets out how these reports' findings have been applied in this IA.

The assumptions that are used in this IA, and described below, and have been tentatively agreed across government.

### Rate of Displacement

This IA uses displacement assumptions building on those derived from MAC (2012), which sought to estimate the association between migration and the native employment rate in Great Britain, between 1975 and 2010, using the Labour Force Survey. Natives were defined as UK-born individuals. The headline result, suggests that a one-off increase of 100 in the inflow of working-age non-EU born migrants is associated with a reduction in native employment of 23 people (this is based on analysis of data spanning 1995 to 2010). The MAC report implied that this result holds in all periods, including both economic growth and contraction.

The further Home Office/BIS literature review concluded that:

There is relatively little evidence that migration has caused statistically significant displacement of UK natives from the labour market in periods when the economy is strong.

However, in line with some recent studies, there is evidence of some labour market displacement, particularly by non-EU migrants in recent years when the economy was in recession. This is consistent with the idea that labour market adjustment is slower during a recession, and with wider international evidence.

Displacement effects are more likely to be identified in periods when net migration volumes are high, rather than when volumes are low – so analyses that focus on data prior to 2000 are less likely to find any impacts.

There has been little evidence so far in the literature of a statistically significant impact from EU migration on native employment, although significant EU migration is still a relatively recent phenomenon and this does not imply that impacts do not occur in some circumstances.

Where displacement effects are observed, these tend to be concentrated on lower skilled natives.

the evidence also suggests that where there has been a displacement effect from a particular cohort of migrants, this is likely to dissipate over time – that is, any displacement impacts from one set of new arrivals will gradually decline.

The review also suggests that the nature of the available empirical data makes it difficult to reach definitive conclusions with regard to displacement, but at present, and notwithstanding the various caveats, the most reliable data set for assessing these changes remains the LFS.

Further analysis has led to the working assumption that an inflow of 100 low skilled working-age migrants could displace 15 native workers from employment (15 per cent of such migrants take jobs

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<sup>11</sup> MAC (2012) Analysis of the impacts of migration.

<sup>12</sup> Occasional Paper 109 *Impacts of migration on UK native employment: an analytical review of the evidence* available at:

[www.gov.uk/government/publications/impacts-of-migration-on-uk-native-employment-an-analytical-review-of-the-evidence](http://www.gov.uk/government/publications/impacts-of-migration-on-uk-native-employment-an-analytical-review-of-the-evidence)

that would otherwise have gone to native workers) and that 100 high skilled migrants are not likely to displace any native workers from employment.

Table D.1 below lists the full set of displacement assumptions currently used in Home Office analyses.

**Table D.1 – Tentative displacement rate assumptions for different migrants in different economic circumstances**

Time Period	Migrant Type	IA Scenario		
		Lower bound	Best estimate	Upper bound
In an economic downturn	Skilled workers	Zero (0%)	Zero (0%)	Low (10%)
	Lower skilled workers	Low (10%)	Medium (30%)	High (50%)
In an economic upturn	Skilled workers	Zero (0%)	Zero (0%)	Zero (0%)
	Lower skilled workers	Zero (0%)	Low (15%)	Medium (30%)

### Length of Displacement

In implementing the volume of displacement, a key consideration is the tentative association in MAC (2012) that only those migrants who have been in the UK for less than 5 years are associated with displacement, not those who have been in the UK for over five years. Practically, this is not directly applicable to IAs, which show impacts annually. Therefore, without further evidence to suggest otherwise, displacement is assumed to diminish equally each year over a five year period, for each particular cohort of migrants. It is also assumed that those who choose to leave the UK instead of extending their leave, having already spent a period of time here, may be associated with a lower level of displacement. However, the length of time here is not known. It is assumed that migrants would have been in the UK for between 0 and 5 years.

### Displacement by Cohort

It is important to note that this tracking over time of displacement is measured per cohort of immigrants. In any year that there is an inflow of migrants, these are classed as one cohort specific to that year (or any other time period being analysed). The following year, there will be another inflow of migrants, and whilst these add to the existing stock of migrants, they are an individual cohort specific to year 2. When displacement is measured over time, it is done so per cohort. This means that moving from one year to the next, there will be a new cohort arriving, but the previous year's cohort will have its own diminishing effects still occurring.

### Illustrative Example

This can be seen in Table D.2, which sets out a very basic approach as an illustrative example to analysing the impact of displacement, over time, per cohort:

Working through Table D.2: each year, from year 1 through to year 6, sees a number of workers entering the UK; the number of workers entering in year 1 (200) belong to cohort year t (t reflects a cohorts first year); so looking **only** at year 2, the number entering in year 2 (300) belong to cohort year t (as this is their first year), and the cohort which entered in year 1 become part of cohort t-1; in year 3, those who entered in year 2 will become part of cohort year t-1, and those who entered in year 1 will become part of cohort year t-2; as the effect of displacement declines over time, a particular years cohort will displace fewer UK natives as that cohort progresses through time; so the 200 migrants in year 1 will displace 30 natives in year 1, 24 in year 2, 18 in year 3, 12 in year 4, 6 in year 5, and 0 in year 6.

**Table D.2: Illustrative Example of the Impact of Displacement**

Immigrants per year						
Cohort Year = t	1	2	3	4	5	6



T	200	300	250	600	400	200
t-1		200	300	250	600	400
t-2			200	300	250	600
t-3				200	300	250
t-4					200	300
t-5						200
<b>Assumed Displacement per year (%)</b>						
Cohort Year = t	1	2	3	4	5	6
T	15%	15%	15%	15%	15%	15%
t-1		12%	12%	12%	12%	12%
t-2			9%	9%	9%	9%
t-3				6%	6%	6%
t-4					3%	3%
t-5						0%
<b>Assumed Displacement per year (number of people)</b>						
Cohort Year = t	1	2	3	4	5	6
T	30	45	37.5	90	60	30
t-1		24	36	30	72	48
t-2			18	27	22.5	54
t-3				12	18	15
t-4					6	9
t-5						0

NB – volumes are purely illustrative.

## Replacement

Whilst the above outline of displacement is considered to be a cost, a benefit would arise if measuring the impact of migrants leaving the UK. This is known as a *replacement* effect. MAC (2012) tentatively suggests that any reduction in native employment associated with migrant inflows is equal to an increase in a native employment associated with equivalent migrant outflows.

## Application to this IA

The policy changes considered in this IA result in both a reduced inflow of migrants, and an increased outflow of migrants currently residing in the UK. Thus there will be the occurrence of replacement. The assumption is that from the number of immigrants that leave the UK that were employed, 15 per cent of the employment vacated will be filled by UK natives.

Table D.3 outlines how the replacement methodology is applied to this IA:

**Table D.3: Replacement Applied**

	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
	0	1	2	3	4	5	6	7	8	9
Volumes deterred from arriving or leaving the UK	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460	1,460
<b>Increased employment - UK residents</b>	200	330	400	400	400	400	400	400	400	400

Table D.3 outlines the volumes deterred from coming to the UK or leaving the UK each year. The increased employment for UK residents as a result takes into account the replacement rate of 15 per cent and also factors in the diminishing rate of replacement each year for cohorts from the previous years – this is progressively cumulative, as recall that cohorts from previous years have an impact that declines over time. In other words, 15 per cent of employment vacated by outgoing migrants in a

particular year will be filled by natives; the following years will see some more natives taking up employment vacated by that particular cohort of leaving migrants, but at a reduced rate. Overall, this results in increased employment for UK residents.