Economic Impact of a New Prison

Final Report

On behalf of

Ministry of JUSTICE

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Office Address: 16 Brewhouse Yard, Clerkenwell, London EC1V 4LJ
T: +44 (0)207 566 8600 E: london@peterbrett.com

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	Name	Position	Signature	Date
Prepared by:				
Reviewed by:				
Approved by:				
For and on behalf of Peter Brett Associates LLP				

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1 INTRODUCTION

1.1 Background

PBA Roger Tym (PBA) have been commissioned by the Ministry of Justice (MOJ) to update our 2009 study entitled "Economic Impact of a New Prison. The 2009 Study estimated the potential local economic impact of a new prison being built by the Ministry of Justice.

On 10 January 2013 the Secretary of State for Justice, Chris Grayling, announced that feasibility work would start on what would be Britain's biggest prison as part of a major programme of updating the country's prison estate. He stated that the new prison could hold more than 2,000 prisoners – around a quarter more than the largest current facility – and would likely be located in London, North West England or North Wales.

PBA specialise in planning and economic development and previously were commissioned by the MOJ to examine the economic impacts of four case study prisons in England. Each case study prison had differential characteristics relating to geography, size, security levels and operation (i.e. private or public). The case studies were used to model and calculate the impact on the labour, capital and goods and service markets in the district within which the prison is located, and to provide an expectation of what the standard prison might generate within an undefined number of prisoners, location, security level and operation.

With these case studies in mind, references to this evidence are used for making appropriate assumptions for estimating the impact of a new prison on the economy, including a local district economy where it might be located. We also note some of the more qualitative impacts relevant to new prisons like investment and job stability, length of the investment impacts, the diversity of jobs, and the training and opportunities for staff progression within them.

1.2 Study Objectives

This study aims to update and supplement the 2009 Study, providing an economic impact assessment of a new prison on an undefined local area where the prison might be located. In this study we have modelled the employment benefits relating to an investment of a new prison in line with previous work. These impacts relate to a typical local district area where a new prison might be located. The aim is to calculate the following:

Jobs created directly at the prison in the local area;

The turnover and jobs the prison creates in the local area through purchasing on goods and services; and

The turnover and jobs generated in the local area by spending on goods and services by prison employees and visitors.

Further unquantifiable impacts are also identified that have an effect on the local economy of the district and can play an important role on the district's and its residents' economic prosperity.

From previous evidence, together with the impacts identified in this study, we draw conclusions on the potential economic impacts that a new prison development is likely to have on its locality. We measure this in terms of jobs supported by income drawn into the local area.

1.3 Report Structure

The structure of the report is as follows:

Section 2 describes the key characteristics that are assumed for a new prison and which might influence the impact that the prison has in a local area.

Section 3 presents a summary of the evidence from previous studies to provide a source of reference for estimating future impacts of new prisons.

The key modelling assumptions used for quantifying the economic impacts of the new prison are set out in Section 4, followed by the estimated results.

Section 5 presents a qualitative investigation of the potential qualitative impacts that a new prison might bring to a local area and which cannot be quantified or are not captured in the quantitative analysis.

Finally, Section 6 draws together the key conclusions on the estimated impact that a new prison would have within a local district area.

2 CHARACTERISTICS OF A NEW PRISON

2.1 Introduction

In this section, we discuss the rationale for and the key characteristics of a new prison.

In 2013 the MOJ announced significant changes to the prison estate. Six state-run prisons (and parts of three others) have closed. Despite a decline in custody numbers last year (by nearly 3,000, compared to a year earlier), the National Offender Management Service (NOMS) predicted that overall capacity is unlikely to decline for long.

To ease the pressure on capacity, the Government plans to expand four other prisons. In addition, a feasibility study was announced for constructing a prison with a capacity of more than 2,000 prisoners. This would be the largest prison in the country.

Despite not knowing the exact location of all new prisons, assessing its impacts by generalising its location is still applicable since it would operate in the same manner if located elsewhere. Therefore, the type of impact generated would remain constant, but it is the extent which might vary. Nevertheless, this general approach provides a useful starting framework for forecasting the local economic impact of a new prison within the local district where it would locate.

PBA's assessment of four case study prisons (Belmarsh, Whatton, Forest Bank and Peterborough) in an earlier study provides evidence to form practical assumptions and conclusions for this work. But here we look at the characteristics of the new prisons relative to existing prisons to reflect differences in assumptions that may be required to improve accuracy of the final estimated impact.

2.2 New Prisons

3 SUMMARY EVIDENCE OF PRISON IMPACTS

3.1 Introduction

This section analyses the evidence of local economic impacts from prison developments, in general based on PBA's previous study on assessing four real case study prisons and their economic impact on the local economies where they are based. We have updated this based on the latest information received from case study prisons.

This and the previous sections provide the guideline for framing assumptions and calculations of the impact that new prisons might have.

3.2 Prison Case Studies

The original PBA prison case studies covered four prisons, of different sizes, in different areas, with different security levels and split between being privately and publicly operated. The case study prisons were:

HMP Belmarsh, which is a high security, Category A and Category B prison located in the London Borough of Greenwich, close to the border of the London Borough of Bexley. The prison is publicly run and has been operational since 1991, primarily serving the Central Criminal Court and magistrate's courts in South East London. In early 2013, the average occupancy was 749 prisoners which is 83% of its operational capacity of 910 prisoners.

HMP Whatton, which is a publicly operated prison holding Category C adult male sex offenders. In early 2013 the average occupancy of Whatton was 831 prisoners which is 98% of its operating capacity of 841 prisoners. Unlike the other three case studies the prison is located in a rural area in Nottinghamshire.

HMP Forest Bank, which is a private prison, operated by Sodexo Justice Services. The prison is located in Salford, Greater Manchester and holds Category B adult male and un-convicted young prisoners aged between 18 and 20. In the three months to April 2013 the average occupancy of Forest Bank was 1,295 prisoners, which is 94% of its total capacity of 1,364 prisoners.

HMP Peterborough, which is a privately run prison also operated by Sodexo Justice Services. It is located within the urban area of Peterborough, just North West of the town centre. The prison houses both male and female Category B and C prisoners. In the three months to April 2013 the average occupancy of Peterborough was 825 prisoners, which is 82% of its total capacity of 1,008 prisoners.

While each of the case study prisons bears a variety of characteristics that impact on the economic impact of the prison, together they provide the range of characteristics that would be expected from a typical prison.

3.3 The case study database

The case study material used to model the economic impacts includes the following information:

- A detailed survey of four UK prisons including information regarding
    - the size of the prison (prisoners and employees);
    - prison expenditure on goods and services and wages;
    - the occupational structure of the prison;

  - average wages for each occupation;
  - information regarding employees' previous employment status; and
  - the number of prison visitors and visitor flows to the prison.

- A survey of 345 prison personnel regarding their

  - area of residence and travel to work;
  - household incomes;
  - level of spending and type of spending on local goods and services; and
  - previous employment/work status.

- A prison visitors survey undertaken at HMP Belmarsh aimed to estimate the local capture of visitor spending. Since the impact was considered minor (the average prison visit generated no more than £7 in local spend) further detailed modelling at the other case study prisons was unnecessary and the assumptions for Belmarsh were used for visits to each prison.

3.4 Findings

There are several key mechanisms by which a prison may impact the local economy and which we investigated in this study. Firstly, the direct impacts of the prison's local employment and the income this generates in the local economy. Secondly, the indirect effects of the prison which arise as a result of the prison's purchases of local goods and services. Finally the induced and multiplier effects, which are essentially further rounds of spending, stimulated by the jobs and incomes, generated at the prison.

Table 3.1 summarises the case study findings in terms of the net additional economic impact generated by each prison in its respective local area. By local area, we are referring to the surrounding district.

Table 3.1 Local economic impacts (£million, Jobs) in four case study prisons, 2007

Income £ million	Direct income	Indirect income	Induced income	Multiplier income	Local income (total)	Income per prisoner (£)
Belmarsh	5.67	0.45	3.10	0.07	**9.29**	**10,100**
Whatton	1.54	0.90	1.07	0.11	**3.61**	**4,400**
Forest Bank	n/a	n/a	2.08	0.10	**n/a**	**7,200**
Peterborough	n/a	n/a	3.12	0.24	**n/a**	**11,800**
Average	**3.62**	**1.04**	**2.35**	**0.13**	**7.13**	**8,400**
Jobs	**Direct jobs**	**Indirect jobs**	**Induced jobs**	**Multiplier jobs**	**Local jobs (total)**	**Jobs per 100 prisoners**
Belmarsh	278	8	21	1	**308**	**34**
Whatton	89	18	8	2	**117**	**14**
Forest Bank	192	7	16	1	**216**	**27**
Peterborough	312	32	25	3	**372**	**44**
Average	**218**	**16**	**17**	**2**	**253**	**30**

Source: PBA

Evidence shows that economic impacts vary significantly from prison to prison. This is because, like any economic agent, a prison has a set of unique characteristics, as will the location of the prison, which has differing impacts on the prosperity of a local area. Hence, for instance, there are different impacts which arise from Belmarsh as compared to Whatton, Forest Bank and Peterborough.

Overall we have found that the variability of the prison local economic impacts depends on three main factors, all of which we would have expected.

- Firstly, the size of a prison and its operations in terms of the number of prisoners held, the number of total jobs provided at the prison and the level of prison expenditure on goods and services. The more jobs a prison provides, the greater the economic impact of the prison.

- A second factor that explains the variability of the prison's impact is the average wage: the higher the wage level, the higher the impact on local resident working at the prison and their spending in the local economy.

- The third factor relates to the self containment rate of the prison which determines whether jobs created by the prison are occupied by residents or non-residents of the districts in which the prison is located. High levels of residents working at the prison would yield a larger local economic impact.

Given the range of prison characteristics that were assessed, the local economic impacts from the four case studies provide a useful indication of the economic impact of a standard prison. We therefore use this for modelling and forecasting the impacts of a 'hypothetical' new prison that is proposed. However, it must be noted that these four case study prisons are of a smaller size, of varying categories and include private operated prisons. As a consequence, applying these ratios to a new prison without any adjustments or assumptions would be inaccurate. We look at these assumptions in the following two sections.

4 QUANTIFIED ECONOMIC IMPACTS OF A NEW PRISON

4.1 Introduction

As noted earlier, the new prison is a new concept and there are no existing new prisons to derive a measure of its impact. Therefore we estimate the likely impact based on broad evidence from the previous economic assessments of case study prisons, plus assumptions regarding the new prisons' operation and the district economy where it would be located. For this reason, we set out estimates of economic impacts under multiple sensitivities but suggest our preferred (best) estimate of local economic impact. However, caution is still required in examining the impacts due to the inherently differing context of new prisons relative to existing prisons.

The assumptions for this 'hypothetical' new prison are set out first and then we model the impacts using quantitative techniques to determine the effects on the economy and the local district economy where the new prison might locate.

4.2 Assumptions

The prison population

New prisons would respond to prison over-population and would be located close to the localities which have the largest supply and demand gaps and would therefore expected to be located in urban areas.

NOMS expect the new prison to accommodate 2,000 prisoners. Using the case study prisons referred to in Section 3, we assume that the new prison would provide service levels similar to Belmarsh Prison, Peterborough and Forest Bank .

Even though Whatton Prison accommodates Category C prisoners, its impacts will not be taken into account in estimating the impact of the proposed new prison. This is because some of the characteristics of its service level would be attributed to its rural location and its provision for sex offenders, and neither of these would likely to be applicable to the new prisons.

Jobs

The various roles of prison staff can be placed in broad occupation categories shown in Table 4.1. A new prison is assumed to include an equal proportion of the Belmarsh, Forest Bank and Peterborough prisons. We use this assumption to calculate the estimated staff to prisoner ratios at a new prison which is given in the last column of Table 4.1

Table 4.1 Staff to Prisoner ratio by broad occupation category

Job Type	Belmarsh	Peter-borough	Forest Bank	Average (across 3 case studies)
Officers and OSGs	0.73	0.35	0.24	0.44
Managers	0.02	0.03	0.02	0.02
Instructional	0.01	0.02	0.02	0.02
Health Care and Psychology	0.01	0.04	0.03	0.03
Works and Kitchen	0.05	0.01	0.02	0.03
Admin	0.05	0.05	0.05	0.05
Total Jobs	0.87	0.51	0.38	0.59

Source: PBA

Economies of scale

Creation of the estimate requires assumptions about the ability of the new prison to realise a reduction in the long run cost of prisoners and services resulting from productivity gains partly through greater economies of scale. If the new prison did not achieve any economies of scale benefits, the staff to prisoner ratio would be approximately 0.59 to 1. Table 4.2 shows that the new prison, in this scenario, would operate with approximately 1,174 staff.

The “no economies of scale” scenario is essentially an estimate of jobs produced for three new independent prisons with independent management and facilities at the same site. In the no economies of scale scenario, the prison operates with more than one governor, more than one kitchen, and more than one administration office.

In the “low economies of scale” scenario shown in Table 4.2, reductions in the number of staff required for management, administration and kitchens reflect productivity gains associated with shared facilities. This assumes there would be a 20% reduction in each of these categories. The low scenario, in Table 4.2, shows that new shared facilities should enable a new prison to operate with approximately 1,135 staff. In this scenario, the staff to prisoner ratio remains relatively high, at 0.57 to 1; this reflects the limited reduction in the number of prison officers.

Combined facilities should offer productivity gains among officers and OSGs (Operational Support Grade staff), Instructional and Health Care workers. For example, in the low economies of scale estimate, enough staff has been provided to manage two gates but the new prison, in line with all prisons, would have only one, meaning less gate staff per prisoner. Other benefits such as improved lines of sight, and improved cell management technology could also contribute to reductions in the required OSGs and officers. Therefore we produce a “moderate scenario”, which assumes there is a 10% reduction of Officers and OSGs. The assumption of a 20% reduction across all categories except OSGs and officers was included to reflect potential benefits of shared facilities to all staff categories.

In a final “high economies of scale” scenario, the number of Officers and OSGs is reduced by 20%. This represents our estimate of the maximum reductions in staff that could be made through shared facilities without reducing services. The high scenario in Table 4.2 shows that the new prison would operate with about 939 staff. The staff to prisoner ratio falls to 0.47 to 1.

The “moderate economies of scale” scenario, in Table 4.2, shows that new shared facilities should enable a new prison to be operated with approximately 1,029 staff; this provides a staff to prisoner ratio of 0.51 to 1.

In the absence of further information, the preferred conservative estimate is for “moderate economies of scale”. However, because there is uncertainty regarding the amount of possible

economies of scale benefits at a new prison, we also present a "low economies of scale" scenario in the following analysis.

Table 4.2 Estimated direct jobs at a new prison dependent on economies of scale

	Economies of scale			
Job Category	**No**	**Low**	**Moderate**	**High**
Officers and OSGs	877	877	789	702
Managers	48	39	39	39
Instructional	35	35	28	28
Health Care and Psychology	60	60	48	48
Works and Kitchen	57	45	45	45
Admin	99	80	80	80
Total	1,174	1,135	1,029	939
Staff to prisoner ratio	0.59	0.57	0.51	0.47

Source: PBA

Occupation structure

The majority of the jobs at the new prison would be within operational and uniformed occupations following the structure in Table 4.2. There are significant variations amongst prisons in occupational profiles. Some prisons are more likely to provide catering and specialist provision such as learning and health in-house and others will outsource to specialists, which has an impact on the number of jobs directly created at the prison. The new prison model allows for this by inclusion of out-sourced services within the estimate of "indirect prison impacts".

Earnings

The evidence from the prison case studies indicated that the income earned by prison employees was found to be heavily dependent on the prison's location. Across the four case-study prisons, an average prison employee earned £18,400 a year[1], net of taxes and national insurance. This amount, as at the other prisons, closely resembled the median workplace earnings for their locations.

Local employment

The degree to which a new prison would recruit from the local population would depend on its location within the district, connections and transport, the supply of labour (the availability and skills of local residents) and the quality of jobs offered. To estimate the general impact of a new prison, we make some broad assumptions about local employment based on what is known about new prisons and the real case study prisons.

- In the case studies, district employment containment rates varied significantly, from as high as 70% to as low as 20%; the average employee containment in these prisons was 54%. (According to the 2001 census travel to work statistics, the average district level employment containment rate was approximately 58% in 2001.)
- Local resident employment (referred to as containment) at a district level is very high where neighbouring districts are relatively rural.
- The Ministry of Justice's consultation paper indicates that the prisons should be placed in relatively urban areas with good transportation links. This would increase the distance that people could travel to work, and would therefore reduce the likely prison employee containment rate.

[1] Based on financial data provided by the four case study prisons as at December 2012

- It is understood that prison jobs offer high job security. Employees would expect to be employed at the same location for a relatively long time, and we would expect higher proportion of the employees attempting to find housing near their workplace than in less secure jobs. This would contribute to an increase in the employee containment rate.

The inclusion of a containment rate is necessary for estimating a local impact estimate which recognises that not all new prison employees would live in the local district. The average employee local containment rate in the prison case studies was 54% which is similar to the all districts' average rate for all jobs which was 58%. We use the lower containment rate estimate for new prisons; although it is appreciated that this may underestimate the local impact.

Prison spending on goods and services

Prisons are important contributors to the local economy not only through their provision of jobs at the prison but also as a result of the jobs they support by spending on goods and services. From detailed supply information from each of the four case study prisons, including individual supplier's names, address and spend for the year 2006/07, suppliers' sector of activity and the type of good/service provided, we estimate the potential expenditure pattern of a new prison.

Spending did not vary significantly in the case study prisons. The lowest spend was approximately £5 million, while the highest was approximately £6 million per year. The spending was independent of the prison size. This appears to be explained by the degree to which smaller prisons out-source services compared to larger prisons.

Similar to the calculation of employee containment, we must assume how much of the spending on supplies might be anticipated to occur in the local district. Based on the information provided by the case study prisons, we found that many services and goods were sourced centrally which reduced the potential for money entering the local economy. In the previous study, the average prison generated approximately £1 million in the local area through its spending on local goods and services.

Based on local spending per prisoner from the previous case study, the local spending by a new prison on goods and services would be approximately £1.9 million.

It is reasonable to assume that with significantly more prisoners in a new prison, it is more viable to source goods and services locally rather than from national distribution centres as currently happens. For example, with more spending available as a result of extra prisoners, more entrepreneurial/competitive activity would establish itself closer to the prison strictly to cater to it; meaning more local jobs. However, other factors such as the breadth, depth and dynamism of a local economy would need to be known to truly estimate this; so for now we assume no additional local spending.

To calculate the number of indirect jobs supported by new prisons' suppliers, we use sector turnover per employee estimates from UK Plc data[2]. We use turnover per employee by sector to reflect the income that would be needed to support an additional job (which is more than just salaries).

Prison employee spending patterns

Prison employees, particularly those living locally, would spend their incomes on local goods and services. This is a further impact, known as the "induced" employee impact.

To calculate the potential induced impact from employees spending we use the prison staff survey results at Belmarsh, Peterborough and Forest Bank prisons which identified their typical spending habits.

[2] UK PLC (2011), *A Financial Analysis of Corporate Britain,* Hampton, The Prospect Shop.

Table 4.3 shows average current spending by prison employees adjusted from 2006/7 figures to current rates.[3] This assumes that the district's residents employed by the new prison current spend would be £13,600 a year on local goods and services and non-residents spend £2,400 on local goods and services within the districts.

Table 4.3 Prison employees' local annual spending

	Estimated resident spend		Estimated non-resident spend	
	2006/2007	Current	2006/2007	Current
Cafes and Restaurants	650	787	204	247
Bars, Pubs and Clubs	651	788	120	146
Supermarkets	2,953	3,573	482	583
Local traders	588	711	93	113
Clothing and shoe stores	689	773	260	292
Parking - other transport costs	588	712	122	147
Recreation venues	303	367	48	58
Rent (not mortgage payments)	2,362	2,857	-	-
One-off large purchases	1,017	1,230	497	602
Other	1,495	1,809	215	260
Total	**11,300**	**13,600**	**2,000**	**2,400**

Source: PBA

Prison visitors local spending patterns

Prison visitors also generate additional local income and employment through their spending in the local area. On average, each case study prison had 33,000 visits per year, or some 37 visits per prisoner, and the Belmarsh visitor survey results identified that the average visit generated £7 of spend in the local area in 2007. The same ratio is assumed for new prison's prisoner numbers. The visitor spend used is grossed up by (CPI) inflation, giving a current estimated visitor spend of £8.50.

4.3 Estimated Economic Impact of a New Prison

The above assumptions are used in generating an estimate of the new prison's overall economic impact through the following model mechanisms:

- The **direct impacts** resulting from residents gaining employment at the new prison (direct jobs) and the income generated by that employment;
- The **indirect impacts** of the new prison that result from purchases within local goods and service markets;
- **Induced impacts** that arise in the local district by prison employees and visitors spending locally which in turn supports local jobs; and
- Second round **multiplier impacts** which are the effects of consequent rounds of spending from the initial injection in the local economy.

These components estimate the 'additional' impacts that new prisons will make to the current performance of the regional and local economies where the new prison will be located.

[3] Based on the consumer price index (CPI).

Direct impacts

The direct employment impact of a new prison is estimated to generate approximately 1,029 to 1,135 jobs in a local district area.

Based on average workplace containment, we assume that 54 percent of these jobs go to local residents. 555 to 613 of these direct jobs would be filled by the local district's residents.

The direct local income from the prison is generated from paying salaries (net of tax and national insurance) to the jobs filled by the local district's residents.

Based on the above, the proposed new prison would be expected to directly generate between £18.9 and £20.0 million per annum through net[4] salary payments to support 1,029 to 1,135 employees. Local district residents would be expected to fill 555 to 613 of these jobs, therefore the direct (salary) income captured in the district is between £10.2 and £11.3 million per annum. The results are summarised in Table 4.4.

Table 4.4 New prison direct local impacts dependent on economies of scale

	Low	Moderate
Total jobs	1,135	1,029
Local resident jobs	613	555
Total income	£20,890,800	£18,928,100
Local income	£11,281,000	£10,221,200

Source: PBA

Indirect impacts

Indirect impacts arise from the new prison's spending on goods and services in the economy. Based on spending per prisoner findings from the prison case studies, the modelled estimates are that the new prison would spend £13.4 million on goods and services, with some £2.6 million of this being captured by the local district economy.

This spending would support approximately 229 jobs, including 45 local jobs based on turnover per employee figures weighted across ten sectors. Some 38 of these jobs would be expected to be taken by local residents.

Table 4.5 New prison indirect impact

Assumptions	Value
Indirect spending per prisoner	£6,700
Prisoner no.s	2,000
Total spend	£13,431,000
Local spend	£2,600,000
Total jobs	227
Total local jobs	45
Jobs filled by district residents	38

Source: PBA

Induced impacts

Induced impacts would be generated by the spending of new prison's employees and visitors. The spending in the local area supports businesses, contributes to local wages and covers material overheads. Table 4.6 shows the total annual spending by new prison employees

[4] After discounting 25% for tax and national insurance.

would be between £13.7 and £15.1 million, which would support some 100 to 110 jobs (using 2009 average sales per employee per sector weighted across ten sectors, grossed up by RPI).

We assume that no additional spending at the regional level would occur from prison visitors because spending would only shift from one location to another with no overall increase.

Table 4.6 Induced regional employee impacts dependent on economies of scale

	Low	Moderate
Induced employee spend	£ 15,134,300	£ 13,712,500
Induced jobs	110	100

Source: PBA

In the district economy surrounding a new prison, Table 4.7 shows the prison employees would be expected to spend between £8.7 and £9.6 million in the local economy and new prisons' visitors would contribute a further £622,900 of additional local spending.

Based on weighted sales per employee figures, this would support some 74 to 81 jobs in the local economy. After allowing for a workplace containment rate of 54% (in line with the all districts and all sectors average rate), we estimate that some 41 to 45 of these jobs would be occupied by local district residents.

Table 4.7 Induced local employee and visitor impacts dependant on economies of scale

	Low	Moderate
Induced employee spend	£9,591,600	£8,690,500
Induced visitor impact	£622,900	£622,900
Total induced spend	£10,214,500	£9,313,400
Induced employee impact jobs	77	69
Induced visitor impact Jobs	4.5	4.5
Total induced jobs	81	74
Jobs filled by local residents	45	41

NB: Some numbers may not sum due to rounding

Source: PBA

Construction

The building of the new prison would generate additional spending and employment. No construction figures have been provided to this report, which makes an accurate assessment difficult. However, MOJ estimate construction spend for a 2,000 place new prison would be about £248 million

While construction is temporary, it is possible to estimate a comparable value for this impact. The construction sector has an annual turnover per employee of £221,000[5], which based on the total cost of building the new prison would support some 1,122 job years. To quantify the impact HM Treasury has in the past offered guidance that 1 permanent job = 10 construction years. Therefore constructing the new prison supports some 112 (permanent equivalent) jobs.

With the combination of off-site construction techniques and the amount of specialist skills that would be required to build a new prison, we assume that a small fraction of these construction

[5] This uses RPI grossed up 2012 figures based on 2009 sales per employee by sector information from UKplc, *Op Cit (2011).*

jobs would be filled by the local district's residents. Assuming this to be 10%, then this would support an equivalent of some 11 local residents in construction jobs.

Multiplier impacts

Multiplier impacts are the additional jobs and incomes created because of an initial injection in the economy. We do know that multipliers vary according to the characteristics of the locality and the depth of its economic base, but also they are difficult to assess. However, there are numerous studies that aim to calculate multipliers at the local level.

As an aid to economic assessments in the UK, the former English Partnerships provided a best practice guide with standard multipliers that can be applied to estimate multiplier impacts. We use the EP multipliers to estimate the multiplier impacts from supplier and visitor spending. The EP multipliers range from 1.05 to 1.15 at the neighbourhood level and 1.3 to 1.7 at the regional level. We apply a second round multiplier of 1.5 for regional impacts and 1.1 for local district impacts to the indirect and induced spend and jobs. We are aware that additional income and jobs on the regional and local level would be created through the secondary multiplier effects of the construction spend. However, this was not included because there is no established method of calculation.

The multiplier of 1.1 implies that for each induced supplier and visitor related job supported, a further 0.1 jobs would be supported. As a test, we found a similar multiplier value in the findings derived from the case study prison staff surveys.

Table 4.8 shows that the further rounds of spending from secondary multiplier impacts generate some £13.8 to £14.5 million in further income, supporting a further 166 to 172 jobs. Locally the multiplier would be worth £1.2 to £1.3 million, supporting 12 local jobs. Around half of these jobs are likely to be filled by local residents.

Table 4.8 Secondary multiplier impacts dependent on economies of scale

	Low	Moderate
Multiplier spend	£14,513,700	£13,802,800
Multiplier jobs	172	166
Local multiplier spend	£1,284,150	£1,194,040
Local multiplier jobs	12.6	11.9
Jobs filled by local residents	6.8	6.4

Source: PBA

4.4 Summary

Table 4.9 summarises the estimated total impact that a new prison would have on the economy based on our broad estimates. Construction spending was not included in the total economic impact because it was a one-off total expenditure as opposed to an annualised spend. Depending on the amount of economies of scale achieved and local employee wage rates, it is forecast that a new prison would be expected to generate between £60 and £64 million in annual revenue to a regional economy where it would be located. This revenue supports between 1,524 and 1,646 jobs.

Additionally, constructing the new prison is expected to support a further 112 (permanent equivalent) construction jobs.

Table 4.9 New prison summary total economic impact by economies of scale

	Low	Moderate
Total spend (£)		
Direct new prison staff salaries	20,890,800	18,928,100
Indirect new prison purchasing	13,431,000	13,431,000
Induced staff spending	15,134,300	13,712,500
Second round multipliers	14,513,700	13,802,800
Total regional spend	**63,738,800**	**59,643,400**
Total jobs supported (no.)		
Direct new prison staff	1,135	1,029
Indirect new prison purchasing	227	227
Induced staff/visitor spending	110	100
Second round multipliers	171	166
Total regional jobs	**1,643**	**1,521**

Source: PBA

Table 4.10 summarises the local impact at a district level. A proposed new prison would be expected to generate between £23.4 million and £25.4 million in annual revenue to a district economy area where it would be located. This revenue supports between 1,160 and 1,274 local jobs within the local district. And we would assume some 673 to 739 of these jobs to be filled by local residents.

Table 4.10 New prison summary local economic impact by economies of scale

	Low	Moderate
Local spend (£)		
Direct new prison staff salaries	11,281,000	10,221,200
Indirect new prison purchasing	2,600,000	2,600,000
Induced staff/visitor spending	10,214,500	9,313,400
Second round multipliers	1,284,200	1,194,000
Total local spend	**25,377,000**	**23,325,900**
Local jobs supported (No.)		
Direct new prison staff	1,135	1,029
Indirect new prison purchasing	45	45
Induced staff/visitor spending	81	74
Second round multipliers	13	12
Total local jobs	1,274	1,160
Total jobs filled by district residents	739	673

Source: PBA

PBA's preferred estimate, summarised in Table 4.11, is the "moderate economies of scale" scenario. We therefore conclude that the new prison might be expected to generate some £59.6 million in overall income per year, which supports an additional 1,521 jobs. Within the district where a new prison would be located, it can be expected that the new prison would generate an annual income of £23.3 million, which supports an additional 1,160 jobs within a local area; with some 673 jobs being taken by the district's residents.

Additionally, the building of the new prison is expected to create a further 11 (permanent equivalent) construction jobs filled by local residents.

Table 4.10 Summary of a new prison's economic impact based on a preferred estimate (i.e. moderate economies of scale)

	Spend	Jobs	Jobs filled by district residents
Total impact	£59.6	1,521	673
Local impact	£23.3	1,160	673

Source: PBA

5 QUALITATIVE ECONOMIC IMPACT OF A NEW PRISON

5.1 Introduction

This section aims to provide a qualitative analysis of the economic impacts which might arise in a district following the development of a new prison within its boundaries. This covers impacts which cannot easily be quantified and are not captured through the quantitative analysis. The identification of these benefits partly draws on the previous assessments carried out by PBA[6].

5.2 Employment Impacts

The prime direct impact that the new prison would have on the local economy where it would be located, would be the generation of new employment opportunities. Prison workers would be required to carry out the day-to-day operations of the prison, ranging from security to healthcare. We are informed that the new prisons would employ similar types of prison staff but they might also expand the type of job within a local area by attracting supporting services to co-locate within the prison complex.

In terms of the new prison direct jobs, it is expected that the range and levels of employment would be similar to existing prisons; although the number on the basis of per prisoner ratios, may differ.

Skills fit

Table 5.1 shows the job types identified from the case studies looked at in the previous section. This shows a wide range of job types and different skill levels within each employment category. Within a number of these employment categories, no or minimal qualifications exist as a pre-requisite for the job, and the case study findings found that prison workers often progressed to higher levels through internal training. Therefore, even with a low skill and qualification starting base, the internal training offered by the prison leads to personal development for the workers and, importantly, provides opportunities for progression within the Prison Service.

Table 5.1 Diversity of jobs in prison

Employment Categories	Example Job Types
Administration	Various levels (grades)
Agricultural, Catering, Building & Allied Trades	Kitchen staff, Cleaners, etc.
Chaplaincy	Chaplains (various religions)
Finance & procurement	
Healthcare	Healthcare staff (various levels)
Instructional Officers	Various trades/specialisms
Intensive Development Scheme	
Managerial	Various levels
Operational Support	Various levels (grades)
Prison Officer	
Pyschologist	

Source: HM Prison Service

Within our case study prisons, just under three quarters of jobs were in Officer and Operational and Operational Support Grades (OSGs), about 9 per cent in administration. As seen in our previous survey, prison officers or OSGS continue to be highly sought after. There are no vacancies for prison officers or OSGs in the UK.

[6] RTP (2007), *Op. Cit.*

Generally speaking, these positions have low entrance requirements and would be accessible to the high share (some 40%) of the working age population without accredited skills. Moreover, people lacking qualifications are more likely to be unemployed or economically inactive. According to the UK Commission for Employment and Skills[7], nationally 70% of unemployed people had no or low qualification levels in 2010. Among the economically inactive, 86% of people had no or low qualifications. Our study found that some 3% to 5% of entrants at Belmarsh, Forest Bank and Peterborough were previously unemployed.

Within these low entry jobs the evidence from the case study research found high levels of internal training, some of which being accredited up to NVQ level 3 or equivalent, as shown in Table 5.2.

The remaining 15% or so of jobs within prisons are likely to require some form of entrance qualifications, ranging from NVQ2 to NVQ4+ or equivalent. These jobs include Healthcare and Psychology, Finance and other administrative and management positions.

Table 5.2 Prison jobs by broad category

Category	Share of Jobs	Average Skill Level at Entry
Officers and OSGs	72%	NVQ1 & less
Senior Managers	4%	NVQ4+
Instructional	4%	NVQ4+
Health Care and Psychology	5%	NVQ4+
Works and Kitchen	6%	NVQ1 & less
Admin	9%	NVQ2 to NVQ 4+

Source: MOJ

Table 5.3 shows that in England last year, 16% of working age people had only entry (NVQ 1) level qualifications, and 10% had a non-recognised or no qualifications.

Table 5.3 Qualifications profile across England, 2012

	Share of Working Age Residents
NVQ 4+	34%
NVQ 3+	55%
NVQ 2+	72%
NVQ 1+	84%
Other qualification	10%
No qualification	10%

Source: ONS, Annual Population Survey

Similarly, as shown in Table 5.4, some 65% of the unemployed across England are seeking employment within occupations with low or no requirements for entry qualifications.

[7] Working Futures 2010-2020, Evidence Report 41, UKCES, August 2012

Table 5.4 Sought occupations of unemployed residents in England, March 2013

	No.	%
Managers and Senior Officials	10,665	5%
Professional Occupations	8,850	4%
Associate Professional and Technical Occupations	6,110	3%
Administrative and Secretarial Occupations	12,400	5%
Skilled Trades Occupations	21,220	9%
Personal Service Occupations	21,825	9%
Sales and Customer Service occupations	12,505	5%
Process, Plant and Machine Operatives	62,680	27%
Elementary Occupations	17,410	8%

Source: ONS Claimant Flows

Another important employment opportunity to consider is the construction jobs generated during the building of the new prison. These jobs are often requiring minimal qualifications providing jobs for construction labourers are currently among the most sought after jobs in England. More than 39,000 people (making up nearly 17% of all claimants) are seeking jobs in construction labour.[8]

Stability of jobs

What is distinct about the jobs at the new prison will be the employment stability it provides. The new prison would be expected to remain functional within a particular district for a long period. In addition because they are supported with public funds, they are not exposed to typical market conditions and the 'boom and bust' cycles present in the business world. Instead, new prisons would be likely to generate a stable supply of jobs for the longer-term.

The development of a new prison would provide employment opportunities to the people on the lower end of the skills base within their particular district, people who are most vulnerable to business cycles and who face a great deal of difficulty in finding jobs with their existing skill set.

5.3 Further Impacts

House prices

In a previous study[9], PBA was asked to determine the effect of prisons on house prices. The effects were determined by analysing house prices over time and by assessing house building activity in the local area.

Our starting hypothesis was that a prison may cause house prices to fall and have a negative effect in the short term, but in the long run to have a positive effect and cause prices to rise above the national average. The negative effect could be caused by the perceptions that a prison is a "bad neighbour" or because of negative externalities and disturbance when the prison is being built. On the other hand, when the prison is operational, it may also have a positive effect due to increased employment and increased local income from the prison.

From our research we found that there is insufficient evidence to say definitively that the location of a prison in the immediate vicinity of residential areas has an impact of the attractiveness of the area to rent and buy residential properties. It is extremely difficult to make a clear link between house prices and such a local factor as a new prison. The reason is that house prices are a composite result of a multitude of factors, most of which being external to the local area. But for each case study we analysed house prices in the postcode area immediately surrounding the prison and compared them with the wider postcode area and the

[8] ONS Claimant Count, October 2012

[9] PBA Roger Tym & Partners (2008), *The Effect of Custodial Properties on House Prices.*

region/city and the national prices and found no obvious price differential. The majority of local agents we spoke with have indicated that prisons do not deter people from renting or buying properties.

Developing a brownfield site

In general, local authorities prefer to first redevelop Brownfield land as opposed to releasing Greenfield sites. The development of new prisons would be on brownfield sites, which provides local authorities with an opportunity to redevelop such land which other developers are unwilling to consider. This may have a positive impact on the local economy through better land utilisation and increased economic activity.

6 CONCLUSION

6.1 Overall Conclusion

This paper has sought to provide a local economic impact analysis of a new (2,000 place) prison that the Ministry of Justice (MOJ) is proposing.

Details regarding the location and function of the prisons are not yet finalised. PBA has provided a range of potential impacts, and these estimates have relied heavily on findings from PBA's study of the local economic impact of four existing prisons[10].

These broad estimations have been derived using information provided by the MOJ, four case study prisons and the assumptions presented in this report. In the absence of full details on the operation and location of the new prison, the study and conclusions presented here can only be considered indicative of the local impact.

PBA estimates that a new prison would generate some £23.3 million in annual revenue to the local economy, supporting some 1,160 local jobs with 673 jobs filled by the local district's working age residents. This is derived on the following estimates.

- 11 permanent local jobs for residents would be created in constructing the new prison;
- 1,029 of the jobs would be created directly at the prison;
- The local area may expect to capture approximately £2.6 million of prison spending, providing 45 additional local jobs;
- Spending by resident and non-resident employees in the local district economy would support approximately 69 additional local jobs;
- The jobs generated by spending on local goods and services by prison visitors would support 5 additional jobs; and
- Further spending through secondary multiplier effects would support another 12 local jobs.

In addition to the above quantitative points, a new prison would also be likely to provide:

- Stable long term income and jobs, less susceptible to lifetime business cycle fluctuations.
- Diversity of jobs, ranging from high NVQ 4+ to no or low entrance requirements, providing suitable jobs across a wide skill base. The largest job category is Prison Officer and OSG which offer relatively highly paid employment opportunities for those lacking formal qualifications, especially the unemployed.
- No adverse effects on house prices.

[10] RTP (2007), *Op. Cit.*

Appendix A