

PROJECTIONS OF LONG TERM TRENDS IN THE PRISON POPULATION TO 2009 14/02

England and Wales

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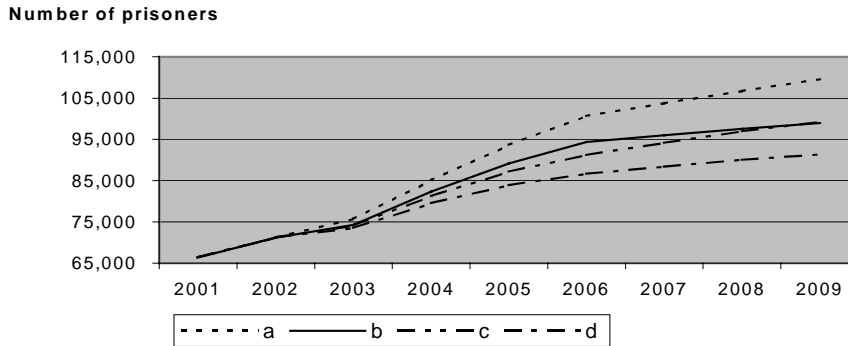
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MAIN POINTS

This bulletin presents the latest projections of the prison population. The projections are based on assumptions about future sentencing trends and the implications of new policy initiatives with an agreed timescale. They do not include any estimates of the effects of the Criminal Justice Bill which is about to be laid before Parliament. All scenarios include the same estimates for policy initiatives except for narrowing the justice gap where 2 options for achieving an additional 185,200 offences brought to justice by 2006 are used. Four scenarios covering a range of possible trends in sentencing are given:

- a: The assumption that custody rates increase at 2.5% per year for males and 5% for females to 2005, with the increase halving thereafter, and that sentence lengths increase annually by 3% for males and 9% for females to 2005, with the increase halving thereafter. Narrowing the justice gap option 1. This leads to a prison population of 109,600 in June 2009.
- b: The assumption that custody rates increase by 1.25% per year for males and 2.5% for females to 2005, with the increase halving thereafter, and sentence lengths increase annually by 1.5% for males and 4.5% for females to 2005, with the increase halving thereafter. Narrowing the justice gap option 1. This leads to a prison population of 98,900 in June 2009.
- c: Sentencing assumptions as for scenario b. Narrowing the justice gap option 2. This leads to a prison population of 99,300 in June 2009.
- d: The assumption that custody rates and sentence lengths remain at 2002 levels. Narrowing the justice gap option 2. This leads to a prison population of 91,400 in June 2009.

Chart 1: Alternative scenarios for the prison population projections:

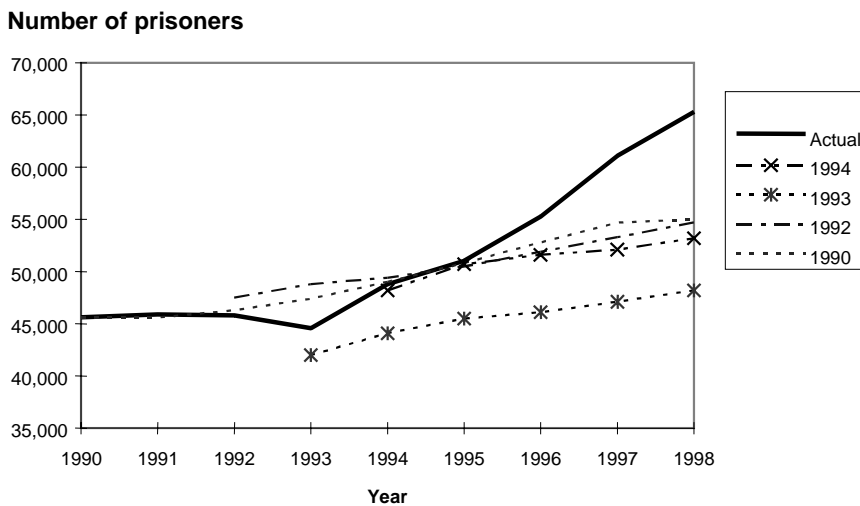


INTRODUCTION

1 This bulletin presents the latest prison population projections for England and Wales up to the year 2009. The last projection of long term trends was published on 23 May 2001 (Home Office Statistical Bulletin 8/01). Prison population projections are produced to aid Prison Service planning and resource bidding. They are used as a modelling tool for policy development and provide information to help improve the management of risk across the Criminal Justice System.

2 As Chart 2 shows, the difficulty for projections of the prison population is that trends observed over a number of years can not be assumed to continue. Sudden changes to policy and sentencing, which significantly affect the prison population, cannot be predicted. This is illustrated below as the prison population increased sharply after 1993 following a period of stability.

Chart 2: Prison population projections from 1990, 1992, 1993, 1994 and out-turn



3 The number in custody on 30 September 2002 was 72, 315 (including 218 in police cells). This is an increase of 7% over the course of the year. Within the overall figure there has been an increase in the sentenced population of 6%, and an increase of 13% in the remand population. The female population has grown by 11%, to 4,403, and the male population by 7%, to 67,912. Young people (those aged under 21 years) accounted for 16% (11,683) of the number in custody on 30 September 2002. The 11,683 in custody was an increase of 6% over the year.

4 The main factors influencing the prison population are the custody rate at the courts, the average sentence lengths given and the number of cases passing through the courts. The Crown Court has the greatest impact on the prison population, although magistrates' courts also make a contribution. The custody rate is the proportion of those found guilty at court who are given a custodial sentence. Between 1992 and quarter 2 (April-June) 2002 the custody rate at the Crown Court rose from 44% to 64%. The average sentence length for adults also increased, from 21.0 months to 27.0 months. There was a decrease in the numbers sentenced at the Crown Court between 1992 and 2001, however, of 15%, down from 81,100 to 68,600. At the magistrates' courts the custody rate for indictable offences more than tripled from 5% in 1992 to 15.5% in quarter 1 (January-March) 2002. Sentence lengths for adults at magistrates' courts remained stable, but between 1992 and 2001 the numbers sentenced for indictable offences at magistrates' courts increased by almost 5%, from 243,400 to 255,200. Other factors such as the demographic make up of the general population from which the pool of offenders is drawn have been shown to affect the prison population (and are included in all the projections in this bulletin) but the size of the influence is relatively small.

5 It may not be possible to predict what the courts will do in future years but it is possible to make estimates of what would be the outcome if sentencing in the courts were to follow any of a number of alternatives. We are aided in this by the adoption of a method of projecting the prison population which was developed by the Economics and Resource Analysis Unit (ERA) of the Home Office Research, Development and Statistics Directorate.

6 ERA developed a model of offending which has been shown to make accurate 'predictions' of the prison population for the years leading up to 1996 when known parameters, such as custody rates, are specified in the model. If these parameters can be accurately foretold then the model should be able to successfully predict what the prison population will be in future years. Of course, the custody rates and sentence lengths in future years cannot be so easily estimated, but it is clearly possible to provide alternative projections for the prison population for a set of 'what if' scenarios, such as rising, stable or falling custody rates. A fuller account of the new model is given in the Methodology section, paragraphs 17-22.

RESULTS

7 We present in Tables 1 and 2, and in Chart 1, projections of the total prison population for each of 4 scenarios described below. These assumptions include future behaviour by sentencers which could be changed by the recent comment by the Lord Chief Justice and the Home Secretary to consider carefully the use of imprisonment.

- a) The assumption that custody rates increase at 2.5% per year for males and 5% for females to 2005, with the increase halving thereafter, and that sentence lengths increase annually by 3% for males and 9% for females to 2005, with the increase halving thereafter. Narrowing the justice gap option 1. This leads to a prison population of 109,600 in June 2009.
- b) The assumption that custody rates increase by 1.25% per year for males and 2.5% for females to 2005, with the increase halving thereafter, and sentence lengths increase annually by 1.5% for males and 4.5% for females to 2005, with the increase halving thereafter. Narrowing the justice gap option 1. This leads to a prison population of 98,900 in June 2009.

- c) Sentencing assumptions as for scenario b). Narrowing the justice gap option 2. This leads to a prison population of 99,300 in June 2009.
- d) The assumption that custody rates and sentence lengths remain at 2002 levels. Narrowing the justice gap option 2. This leads to a prison population of 91,400 in June 2009.

8 Further scenarios would be possible. The Statistical Bulletin 1/99 showed the effects of varying custody rates between 56% and 64% and of a range of changes to average sentence lengths.

Comparison with the previous projection

9 The scenario b) projection is for a prison population 5,400 more during 2003 and 20,900 more during 2008 than the central long term projection published in May 2001 (Home Office Statistical Bulletin 8/01). The main reason for this difference is the sharp increase in the prison population in the year to October 2002 and the new assumptions on the impact on the prison population for narrowing the justice gap. A range of revised legislation and policy changes, are also included in this projection. For more information see 'Legislative and Policy Change', below.

Categories of prisoner

10 The projections can be sub-divided further into different categories of remand prisoner and between young and adult sentenced prisoners, for males. Female remand and sentenced prisoners can also be shown separately. This is done in Table 3, but for reasons of brevity we limit this to scenario b and c. The table shows historical information on the prison population since 2001, together with projections for the different subgroups.

Financial years

11 Table A gives the average annual projections for financial years, for each scenario.

Table A Average population in custody: projections for financial years, by scenario
England and Wales

Financial year	Thousands of persons			
	Scenario a	Scenario b	Scenario c	Scenario d
2000/1 (actual)	64.5	64.5	64.5	64.5
2001/2 (actual)	67.5	67.5	67.5	67.5
2002/3	72.2	71.9	71.9	71.8
2003/4	78.4	76.6	76.1	75.2
2004/5	87.4	84.2	82.9	80.7
2005/6	95.7	90.7	88.3	84.7
2006/7	101.5	94.8	92.0	87.1
2007/8	104.6	96.5	95.0	88.9
2008/9	107.6	98.0	97.6	90.4

LEGISLATIVE AND POLICY CHANGE

12 These projections take into account known changes in policy and legislation, where there is believed to be an impact on the prison population. A list of major policy changes between 1989 and 2000 which have affected the size of the prison population can be found on pages 192 to 197 of Prison statistics, England and Wales 2000 (Cm 4805, The Stationery Office).

13. The legislative and other changes that are included in the projection, with the estimated impact, are given below. The estimates assumed in the projections are in comparison to population size of the relevant subgroups at the end of August 2002.

'Narrowing the Justice Gap' This is one of the delivery targets for the Criminal Justice System. The projections include 2 options for the additional prison population estimated as a result of narrowing the justice gap. Both options assume that the target will be met and 1.2 million offences will be brought to justice by March 2006. This means an additional 185,200 offences brought to justice. Option 1 (used in scenarios a and b) indicates that, assuming current conviction and sentencing patterns, this will add 12,800 to the prison population by 2006-07 and remains at that level thereafter; option 2 (used in scenarios c and d) assumes that magistrates' courts will take a greater proportion of cases in earlier years than the Crown Court and estimates an additional 10,000 by 2006-07 rising to 12,500 by 2008-09.

Minimum custodial sentences of three years for third-time domestic burglars (s4 of Crime (Sentences) Act 1997) The effect of this change is a build up of 1,600 additional prisoners by 2009; 400 extra prisoners are expected by 2004.

Automatic life sentences for serious repeat offenders have been estimated at 50 by March 2004, and 200 by March 2009 (CSA 1997).

The recall of short sentence prisoners released on licence (s103 of the Crime and Disorder Act 1998) The expected result of this section of the Act is an extra 100 prisoners by March 2003.

Extension of secure remands – s130 of Crime and Disorder Act 1998

This is expected to add an additional 140 to the remand population for juveniles by December 2002.

Early Release from Detention and Training Orders (DTOs)

It is assumed that the figure will build up to a reduction in the prison population of 180 by the end of October 2002, compared to 145 at the end of July 2002.

Intensive Supervision and Surveillance Programmes (ISSPs)

It is expected that the juvenile remand population will reduce by 25 places by November 2002.

Added days

Following a decision of the European Court of Human Rights on 15 July in the case of Eze and Conners, Governors can no longer impose added days on prisoners who commit disciplinary offences. Such punishments can only be imposed by independent adjudicators. Since 7 October, District Judges have been engaged as independent adjudicators to deal with the most serious cases, including those adjourned by Governors since 15 July. It is expected that this will increase the prison population by 100 by the end of March 2003.

Immigration Act Detainees

This will require a further 60 prisoners at end January 2003 and a further 60 prisoners at the end March 2003.

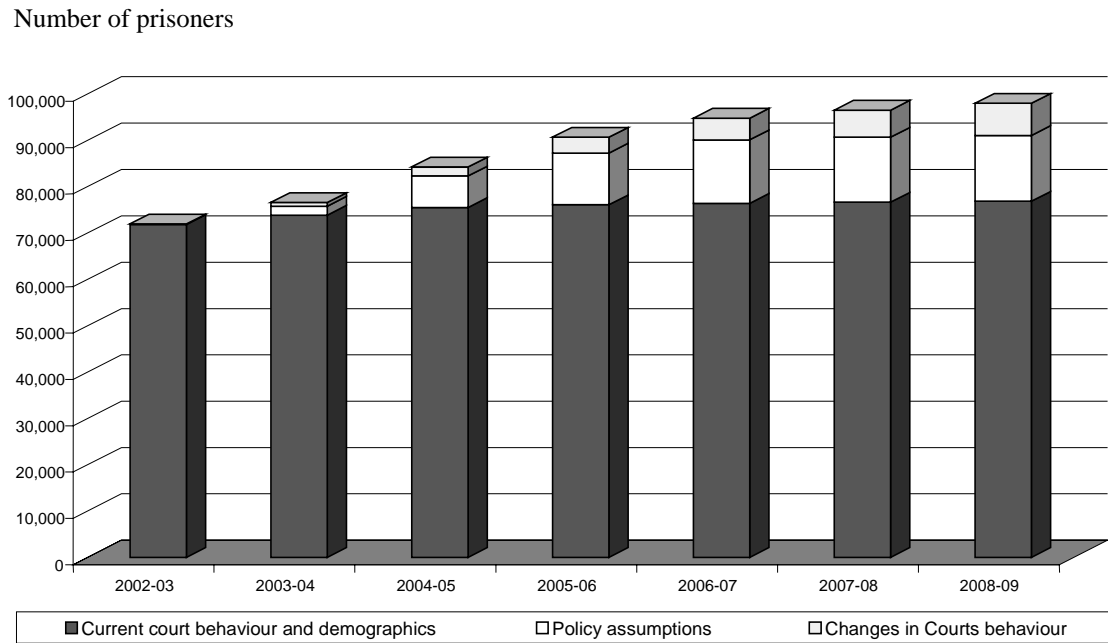
Extension of HDC

It is expected that increasing the maximum period on HDC to 90 days for those prisoners eligible on or after the 16th December will reduce the prison population by 600 by January 2003.

RELATIVE IMPACT OF POLICY AND COURTS BEHAVIOUR ON THE PRISON POPULATION

14 Chart 3 shows the contribution the policy and courts assumptions make to scenario (b).

Chart 3: Contribution of policy and courts behaviour to the prison population projections (scenario b)



METHODOLOGY

15 Peter Grove, John MacLeod and David Godfrey, of the Research, Development and Statistics Directorate of the Home Office, describe the methodology used for these projections in their article 'Forecasting the Prison Population - predicting the consequences of sentencing policy'¹.

16 The article describes the development of a methodology for making long term projections of the prison population. It uses a flow model of offenders (into and out of prison) and allows for the effect of changes in court sentencing policy to be predicted.

17 At the heart of the methodology is a model of offending which allows the numbers of first time offenders to be predicted and takes into account the recidivism of those released from prison. A flow model was used since a substantial proportion of the current prison population consists of long sentence prisoners. There is good information available about the release dates for these prisoners, which implies that at least the contribution that this component makes to the future prison population can be predicted. Since the recidivism rate for custodial sentences, i.e. the proportion of offenders who return to prison after release, is known to approach 70% for those who have been in prison at least twice², it is possible to predict on the basis of past data what numbers will return to prison and when.

¹ OR Insight Vol. 11, Issue 1, January-March 1998.

² Statistics on reconvictions were published in Chapter 9 'Reconvictions of Prisoners Discharged from Prison in 1995' in 'Prison Statistics England and Wales 1998', Home Office,

18 The major uncertainty is among offenders arriving in prison for their first custodial sentence. This has been estimated from statistics of the prison population to be of the order of 15% of the prison population.

19 Grove, MacLeod and Godfrey carried out analyses of cohorts of offenders using the Home Office database called the Offenders Index³. On empirical grounds they have identified two populations of offenders, one with a high rate of recidivism and the other with a low rate. The proportion who re-offend after each offence for each population is a constant independent of the number of previous offences and of their previous history.

20 The subsequent implementation of the model involves taking the prison population at a specific time, adding in each quarter the new intake consisting of recidivists and those receiving prison sentences for the first time, giving them sentences based on current sentencing information and subtracting the numbers released. By manipulating the values of the sentencing information the various scenarios are generated. The method also takes into account projected demographic changes in the general population.

21 The methodology has been used to produce estimates of the prison populations through to 1997 starting from notionally empty prisons in 1950. From 1970 onwards such 'projections' have been shown to be very close to actual figures for each year, if use is made of the available statistics on sentencing.

22 The new methodology has provided us with a useful tool to investigate the consequences of sentencing practice and the results are presented in this bulletin. There is no best estimate of the future population, however, since we have no certain intelligence as to what future sentencing policy is likely to be.

1999 Cm 4430 and also in the Statistical Bulletin 19/99 'Reconvictions of Offenders Sentenced or Discharged from Prison in 1995, England and Wales' October 1999.

³ The same source used for 'Reconvictions of Prisoners Discharged from Prison in 1995', contact Julian Prime, 020 7273 3177 for enquiries about the Offenders' Index.

SHORT TERM PROJECTIONS (all scenarios)

23 More detailed short term projections are produced separately. These take into account the current prison population, known information about the likely release dates for that population, projected numbers of receptions and projected rates of discharge from those receptions. They make use of seasonal adjustment to provide month end projections for up to two years ahead. Using the latest available provisional data from the courts at the time the projection was made (through to first quarter of 2002 for magistrates courts' and the second quarter of 2002 for the Crown Court), the following four scenarios were modelled for the short term projection:

- a. The assumption that custody rates remain stable for young males and increase at 2.5% per annum for adult males. For female prisoners, custody rates are assumed to increase by 1.5% for young prisoners, and increase by 5% for adults. Average sentence lengths increase by 5% for young males, 3% for adult males, 10% for young females and 9% for adult females. Narrowing the justice gap option 1.
- b. The assumption that custody rates decrease by 1% per annum for young males and increase at 1.25% per annum for adult males. For female prisoners, custody rates are assumed to increase by 0.75% per annum for young prisoners, and increase by 2.5% for adults. Average sentence lengths increase by 2.5% for young males, 1.5% for adult males, 5% for young females and 4.5% for adult females. Narrowing the justice gap option 1.
- c. Sentencing assumptions as for scenario b. Narrowing the justice gap option 2.
- d. The assumption that custody rates fall by 2% per annum for young males and remain stable for all other groups. Sentence lengths remain stable for all groups. Narrowing the justice gap option 2.

24 These short term projections have been incorporated in the present projections. Adjustments have been made to all the scenarios to provide consistency between the short term levels.

NOTES

1. Prison Service establishments report information daily on receptions and discharges, and weekly and monthly on the numbers held in the establishments. The various returns provide the basis for detailed analysis of receptions and population published annually in "Prison statistics, England and Wales". The latest issue is for 2000 (Cm. 5250) and was published in August 2001. More recent data is published each month in the "Prison Population Brief". The latest issue is for June 2002. Both publications can be found on the RDS Internet Site (details below).
2. Note that the components within tables may not add to the totals because they have been rounded independently.
3. This bulletin has been prepared by members of the Offending and Criminal Justice Group of the Home Office Research, Development and Statistics Directorate.
4. If you have any enquiries about figures in this bulletin, you should contact John Simes on 020 7217 5055. If you wish to write the address is:

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or by Internet email publications.rds@homeoffice.gsi.gov.uk

The RDS Internet site is at <http://www.homeoffice.gov.uk/rds/index.html>

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Table 1 Alternative scenarios for the prison population projection, male and female prisoners projected through to 2009.

England and Wales		Numbers of persons								
Scenario:		2001	2002	2003	2004	2005	2006	2007	2008	2009
a: high										
Total	66,400	71,200	75,800	85,100	93,600	100,700	103,800	106,700	109,600	
Male	62,700	66,800	71,100	79,800	87,300	93,300	95,900	98,300	100,500	
Female	3,700	4,400	4,700	5,300	6,400	7,300	7,900	8,400	9,100	
b: central (option 1)										
Total	66,400	71,200	74,300	82,400	89,200	94,400	96,000	97,600	98,900	
Male	62,700	66,800	69,700	77,400	83,500	88,200	89,600	90,900	92,000	
Female	3,700	4,400	4,600	5,000	5,700	6,200	6,500	6,700	6,900	
c: central (option 2)										
Total	66,400	71,200	74,100	81,300	87,200	91,200	94,100	97,000	99,300	
Male	62,700	66,800	69,600	76,300	81,600	85,200	87,800	90,300	92,300	
Female	3,700	4,400	4,500	5,000	5,500	6,000	6,400	6,700	6,900	
d: low										
Total	66,400	71,200	73,600	79,500	83,900	86,700	88,400	90,100	91,400	
Male	62,700	66,800	69,100	74,800	78,900	81,500	83,100	84,700	85,900	
Female	3,700	4,400	4,500	4,700	5,000	5,200	5,300	5,300	5,400	

Table 2 Alternative scenarios for the prison population projection, remand and sentenced prisoners projected through to 2009.

England and Wales		Numbers of persons								
Scenario:		2001	2002	2003	2004	2005	2006	2007	2008	2009
a: high										
Total	66,400	71,200	75,800	85,100	93,600	100,700	103,800	106,700	109,600	
Non-criminal	1,100	800	1,100	1,100	1,100	1,100	1,100	1,100	1,100	
Remand	11,100	13,100	14,200	14,800	15,500	16,000	16,000	16,000	16,000	
Sentenced	54,200	57,300	60,500	69,300	77,100	83,600	86,700	89,600	92,500	
b: central (option 1)										
Total	66,400	71,200	74,300	82,400	89,200	94,400	96,000	97,600	98,900	
Non-criminal	1,100	800	1,100	1,100	1,100	1,100	1,100	1,100	1,100	
Remand	11,100	13,100	13,300	13,900	14,600	15,100	15,100	15,100	15,100	
Sentenced	54,200	57,300	59,900	67,400	73,500	78,200	79,900	81,400	82,800	
c: central (option 2)										
Total	66,400	71,200	74,100	81,300	87,200	91,200	94,100	97,000	99,300	
Non-criminal	1,100	800	1,100	1,100	1,100	1,100	1,100	1,100	1,100	
Remand	11,100	13,100	13,300	14,000	14,700	15,300	15,300	15,300	15,300	
Sentenced	54,200	57,300	59,700	66,200	71,400	74,800	77,800	80,600	82,900	
d: low										
Total	66,400	71,200	73,600	79,500	83,900	86,700	88,400	90,100	91,400	
Non-criminal	1,100	800	1,100	1,100	1,100	1,100	1,100	1,100	1,100	
Remand	11,100	13,100	13,300	14,000	14,700	15,300	15,300	15,300	15,300	
Sentenced	54,200	57,300	59,200	64,500	68,100	70,300	72,000	73,700	75,000	

**Table 3 Average population in custody by type of prisoner and year, 2001 - 2009
scenario b:**

England and Wales		Numbers of persons (thousands)								
		Projected								
Type of prisoner		2001	2002	2003	2004	2005	2006	2007	2008	2009
Remand prisoners										
Male	Untried	6.4	7.4	7.5	7.8	8.2	8.5	8.5	8.5	8.5
	Convicted unsentenced	3.9	4.7	4.9	5.1	5.2	5.4	5.4	5.4	5.4
Female		0.8	1.0	1.0	1.0	1.1	1.2	1.2	1.2	1.2
Total remand prisoners		11.1	13.1	13.3	13.9	14.6	15.1	15.1	15.1	15.1
Sentenced prisoners										
Male	Young offenders	8.3	8.4	9.0	10.5	11.1	11.6	11.8	11.8	11.9
	Adults	43.0	45.6	47.4	53.0	57.8	61.5	62.8	64.0	65.1
Female		2.9	3.3	3.5	4.0	4.6	5.1	5.3	5.6	5.8
Total sentenced prisoners		54.2	57.3	59.9	67.4	73.5	78.2	79.9	81.4	82.8
Non-criminal prisoners		1.1	0.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Total population		66.4	71.2	74.3	82.4	89.2	94.4	96.0	97.6	98.9
Of which										
Total male		62.7	66.8	69.7	77.4	83.5	88.2	89.6	90.9	92.0
Total female		3.7	4.4	4.6	5.0	5.7	6.2	6.5	6.7	6.9

Table 3 Average population in custody by type of prisoner and year, 2001 - 2009
scenario c:

England and Wales		Numbers of persons (thousands)								
		Projected								
Type of prisoner		2001	2002	2003	2004	2005	2006	2007	2008	2009
Remand prisoners										
Male	Untried	6.4	7.4	7.5	7.9	8.3	8.6	8.6	8.6	8.6
	Convicted unsentenced	3.9	4.7	4.9	5.1	5.3	5.5	5.5	5.5	5.5
Female		0.8	1.0	1.0	1.0	1.1	1.2	1.2	1.2	1.2
Total remand prisoners		11.1	13.1	13.3	14.0	14.7	15.3	15.3	15.3	15.3
Sentenced prisoners										
Male	Young offenders	8.3	8.4	9.0	10.3	10.8	11.0	11.4	11.7	11.9
	Adults	43.0	45.6	47.2	52.1	56.2	58.9	61.2	63.4	65.2
Female		2.9	3.3	3.5	3.9	4.4	4.9	5.2	5.5	5.8
Total sentenced prisoners		54.2	57.3	59.7	66.2	71.4	74.8	77.8	80.6	82.9
Non-criminal prisoners		1.1	0.8	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Total population		66.4	71.2	74.1	81.3	87.2	91.2	94.1	97.0	99.3
Of which										
Total male		62.7	66.8	69.6	76.3	81.6	85.2	87.8	90.3	92.3
Total female		3.7	4.4	4.5	5.0	5.5	6.0	6.4	6.7	6.9