



## Prison Population Projections 2020 to 2026, England and Wales

This bulletin presents prison population projections for England and Wales from September 2020 to September 2026. It is produced to aid policy development, capacity planning and resource allocation within the Ministry of Justice (MoJ) and Her Majesty's Prison and Probation Service (HMPPS).

### Main points

**Long term prison population is expected to increase particularly because of the recruitment of an extra 20,000 police officers**

Over the 6-year projection horizon the prison population is projected to increase to 98,700 by September 2026. This is in large a result of the recruitment of an extra 20,000 police officers, which is likely to increase charge volumes and therefore increase the future prison population.

**There is considerable uncertainty around the presented central projection**

Projections account for best available evidence, but there is considerable uncertainty around how the courts will recover from COVID-19, and the impact of the additional 20,000 police officers. Any differences in assumptions for upstream factors such as crime, sentencing and future policies will all result in variation from these projections.

**The projected future population is higher than in the 2019 published projection**

The higher projection is predominantly because of the recruitment of 20,000 additional police officers. There are also increases in the remand and recall populations.

**Populations of adult males, adult females and children are all expected to increase over the projection horizon**

The prison population of adult males, adult females and children (15-17 year old) are all expected to increase over the projection horizon.

## Introduction

This bulletin presents prison population projections for England and Wales from September 2020 to September 2026. It is produced to aid policy development, capacity planning and resource allocation within the Ministry of Justice (MoJ) and the HM Prison and Probation Service (HMPPS). The latest published useable operational capacity (20<sup>th</sup> November 2020) is 81,377.<sup>1</sup>

This is a regular annual publication, which has been delayed this year due to the COVID-19 pandemic. The prisons model used to generate this projection is simpler than that used in the last publication, because the COVID-19 pandemic has resulted in more uncertainty regarding the short-term case mix. It has therefore not been possible to provide the breakdowns usually provided, such as by age group.

The projection is produced using a model of flows of offenders into and out of prison which counts the resulting prison population each month. The COVID-19 pandemic has restricted the courts' ability to process cases recently, and assumptions have had to be made around how the courts will recover. There is considerable uncertainty around these assumptions, so the population is likely to differ to what has been projected which is illustrated in the section on uncertainty. The projections incorporate the anticipated impacts of agreed policy, such as the recruitment of the additional 20,000 police officers<sup>2</sup>. They also include the estimated impact of policies included in the Sentencing White Paper, such as provisions for increasing the release point for violent and sexual offenders sentenced to a standard determinate sentence of 4-7 years. It does not, however, attempt to estimate the impact of any other future Government policies that have not received Royal Assent in Parliament.

The latest statistics and commentary on the current and historic prison population are published in the Offender Management Statistics Quarterly publication. This is available online on GOV.UK at: [www.gov.uk/government/collections/offender-management-statistics-quarterly](http://www.gov.uk/government/collections/offender-management-statistics-quarterly)

The Story of the Prison Population provides a summary of what happened to the prison population between 1993 and 2020 and the major factors contributing to these changes: <https://www.gov.uk/government/statistics/story-of-the-prison-population-1993-to-2020>

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<sup>1</sup> [www.gov.uk/government/collections/prison-population-statistics](http://www.gov.uk/government/collections/prison-population-statistics)

<sup>2</sup> This analysis includes the impact of an additional 3,400 officers already recruited through precept funding, alongside the 20,000 police officer uplift programme.

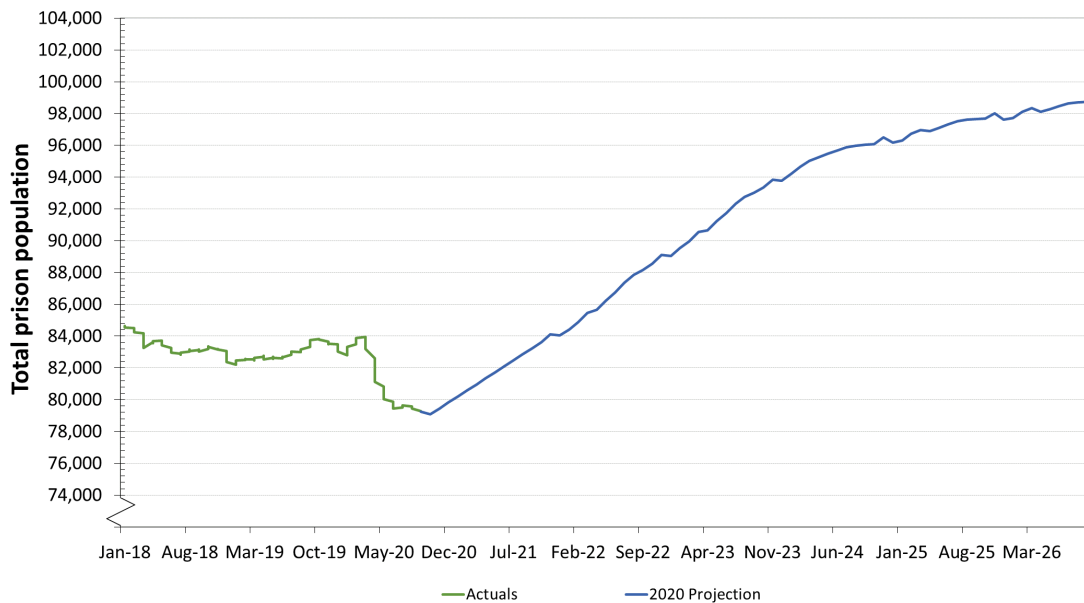
## 1). Total prison population projection and custody type breakdown

The prison population was 78,838 as of Friday 20th November 2020. It is projected to increase in the short term to a pre-COVID-19 level of 83,200 by September 2021, then to keep increasing steadily to reach 98,700 offenders by September 2026.

In the period to September 2021, the projected rise in the prison population is primarily due to an increase in receptions of determinate sentenced offenders. This is because courts are assumed to build up capacity to pre-Covid levels and beyond, in order to clear the trial backlog that built up when trials could not take place because of COVID-19 restrictions.

Over the full projection horizon (beyond September 2021) the population is projected to continue to increase. This is predominantly because of the recruitment of 20,000 additional police officers, which is likely to increase charge volumes and therefore increase the future prison population. Also included is the additional 3,400 officers already recruited through precept funding<sup>3</sup>. The impact of the additional police officers is estimated to start building up from December 2020. The impact on prison places is expected to increase continuously up until the end of the projection period. The population is expected to be 14,200 higher in September 2026 as a result of the extra police officers.

**Figure 1.1: Total Prison Population Projection, September 2020 to September 2026.**



<sup>3</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/882076/police-officer-uplift-quarterly-update-to-march-2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/882076/police-officer-uplift-quarterly-update-to-march-2020.pdf)

Table 1.1 presents the prison population projection at a sub-population level, measured at an end of September position – September is typically a stable point that allows robust year on year comparison.

**Table 1.1: Total prison population by type of custody at end September 2020 and projections for September 2021 to September 2026**

	<b>Total</b>	<b>Remand</b>	<b>Determinate</b>	<b>Indeterminate</b>	<b>Recall</b>	<b>Non-Criminal</b>	<b>Fine Defaulters</b>
September 2020	<b>79,235</b>	12,274	47,991	8,840	9,250	861	19
September 2021	<b>83,200</b>	11,400	52,300	8,800	10,000	700	50
September 2022	<b>88,100</b>	12,000	56,200	8,700	10,600	700	50
September 2023	<b>93,000</b>	12,500	60,000	8,600	11,200	700	50
September 2024	<b>96,000</b>	12,700	62,400	8,500	11,800	700	50
September 2025	<b>97,700</b>	12,700	63,600	8,400	12,200	700	50
September 2026	<b>98,700</b>	12,700	64,400	8,400	12,500	700	50

All figures are rounded to the nearest hundred, numbers below a hundred have been rounded to the nearest 50. Components may not sum due to rounding.

The indeterminate population is forecast to continue to decline over the period. This population consists of offenders who serve Imprisonment for Public Protection<sup>4</sup> (IPP) and life sentences. Offenders can no longer receive an IPP sentence due to its abolition in 2012, with current IPP offenders being released by the Parole Board. Any such released offenders subsequently recalled will be counted in the recall projection.

The remand population is projected to drop by September 2021 because trial capacity is expected to increase in the next year as the court system recovers from COVID-19, and so more remanded prisoners are expected to flow out of the remand population. After September 2021, the remand population is projected to increase due to the impact of the additional 23,400<sup>5</sup> police officers.

The recall population<sup>6</sup> is projected to increase above current levels, in part because of the impact of the additional 23,400<sup>7</sup> police officers, but also because of growth in the indeterminate sentenced recall population. This latter impact is due to an expected increase in the pool of offenders on licence, particularly as further IPP offenders are released, a proportion of which will be recalled to custody. The rate at which offenders from determinate sentences are recalled to prison is assumed to remain constant.

The non-criminal<sup>8</sup> population includes prisoners held for civil offences and immigration detainees held in prisons and in Morton Hall IRC. It is projected to decrease in September

<sup>4</sup> Sentences of Imprisonment for Public Protection (IPPs) were created by the Criminal Justice Act 2003 and started to be used in April 2005. Offenders sentenced to an IPP are set a minimum term (tariff) which they must spend in prison. After they have completed their tariff, they can apply to the Parole Board for release. The Parole Board will release an offender only if it is satisfied that it is no longer necessary for the protection of the public for the offender to be confined.

<sup>5</sup> This includes the planned recruitment of an additional 20,000 police officers, as well as the additional 3,400 officers already recruited through precept funding.

<sup>6</sup> Offenders are released from custody under licenced supervision, subject to a set of conditions such as living at an approved address. If the offender breaches the conditions of their licence they may be recalled into prison

<sup>7</sup> This includes the planned recruitment of an additional 20,000 police officers, as well as the additional 3,400 officers already recruited through precept funding.

<sup>8</sup> Non-criminal prisoners are held for civil offences or under the Immigration Act. A civil non-criminal prisoner is someone held in prison because of a non-criminal matter, for example, non-payment of council tax or contempt of court. The non-criminal population also includes immigration detainees that have finished serving

2021 because Morton Hall (an HMPPS operated Immigration Removal Centre) is due to cease operating as an IRC and be returned to use as a prison in late 2021. We also expect a small drop in the number of immigration detainees held in prisons, which is currently at a higher level than usual.

Changes in the prison population are expected as the result of a range of policies, including those already in effect but not yet fully represented in the population and those expected to take effect over the projection horizon. The projections include the estimated impact of policies included in the Sentencing White Paper. They do not attempt to estimate the impact of any other future Government policies that have not received Royal Assent in Parliament. The estimated impacts factored into the central projections include:

- The impacts of the Sentencing White Paper<sup>9</sup> proposals, which includes provisions for increasing the release point for violent and sexual offenders sentenced to a standard determinate sentence of 4-7 years;
- The impacts of the Statutory Instrument to increase custodial sentences for serious offenders with a custodial sentence of 7 years or more<sup>10</sup>.
- The impacts of the Domestic Abuse Bill 2020<sup>11</sup>, including extending extraterritorial jurisdiction over specified offences as necessary for ratification of the Istanbul Convention.
- The impacts of the Serious Crime Act 2015 which includes provisions for additional caseload and associated custodial sentences relating to new offences for controlling or coercive behaviour in an intimate or family relationship<sup>12</sup>;
- The expected impacts of the Offensive Weapons Act 2019, which provides the justice system with the powers needed to address serious violence and aims to limit the availability of knives, corrosive substances and firearms. The Act introduces several new offences as well as increasing the maximum sentence length for existing offences<sup>13</sup>.

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their sentence and are being kept in prison by immigration authorities or those detained in HMPPS operated Immigration Removal Centres (IRCs).

<sup>9</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/918191/overarching-impact-analysis.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/918191/overarching-impact-analysis.pdf)

<sup>10</sup> [https://www.legislation.gov.uk/ukia/2019/155/pdfs/ukia\\_20190155\\_en.pdf](https://www.legislation.gov.uk/ukia/2019/155/pdfs/ukia_20190155_en.pdf)

<sup>11</sup> <https://publications.parliament.uk/pa/bills/cbill/58-01/0096/IAFEB2020.pdf>

<sup>12</sup> [www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/370943/Serious\\_Crime\\_Bill\\_-\\_Overarching\\_Impact\\_Assessment\\_-\\_Commons\\_Intro.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/370943/Serious_Crime_Bill_-_Overarching_Impact_Assessment_-_Commons_Intro.pdf)

<sup>13</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/717684/Impact\\_Assessment.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/717684/Impact_Assessment.pdf)

## 2. Uncertainty in the projection

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The COVID-19 pandemic, planned recruitment of an additional 20,000 police officers and the impact of an additional 3,400 officers recruited through precept funding<sup>14</sup> has all resulted in considerable uncertainty in our projections. It is therefore not possible to use historic deviations between projections and out-turn to estimate likely ranges of the future prison population relative to the central estimate (as has been done in previous publications).

Instead, we have modelled some extra scenarios to illustrate the impact of a faster court recovery and to illustrate how the impact of the additional 23,400<sup>15</sup> police officers could vary. These are not lower and upper bounds; they are examples of how the projections could vary. It is possible the population will be higher or lower than all scenarios modelled.

The prison population projections are informed by the latest available published data. They also reflect assumptions – accounting for the best available evidence at the time – as to future demand levels in the criminal justice system such as crime, charges, sentencing outcomes and uncertain policy impacts yet to come into effect. Unanticipated changes to government policy, as well as offender, police and sentencing behaviours, will inevitably mean the actual prison population in future years will differ to some degree from projections.

### Court Recovery Scenarios

Assumptions have had to be made around how the courts will recover from the COVID-19 pandemic, which has restricted the courts' ability to process cases. As a result, there is a lot of uncertainty around these projections, and we have modelled two scenarios to show how the profile of the prison population could differ depending on how quickly the courts can recover. These are just for illustrative purposes. How quickly courts can build capacity back up and work through the backlogs that have developed is very uncertain and is likely to differ to both of these scenarios.

Both scenarios assume social distancing restrictions will be in place until the end of May 2021, and the Magistrates court is able to recover within this period. When social distancing ends, we have tested two scenarios on how fast the Crown court is able to work through the jury trial backlog built up during COVID-19.

The two scenarios we have modelled are as follows:

- Central scenario – this shows what the prison population could look like if the courts system gradually worked through the backlog built up during COVID-19 restrictions. (by the end of March 2024).
- Fast court recovery scenario – this shows what the prison population could look like if the courts system worked through the backlog at a quicker rate than the central scenario (by the end of July 2021).

As shown in Figure 2.1, the speed of court recovery does not change how many people enter prison, only the profile of the prison impacts. A faster court recovery would lead to a faster rise in the prison population in the shorter term but lead to a lower population in the

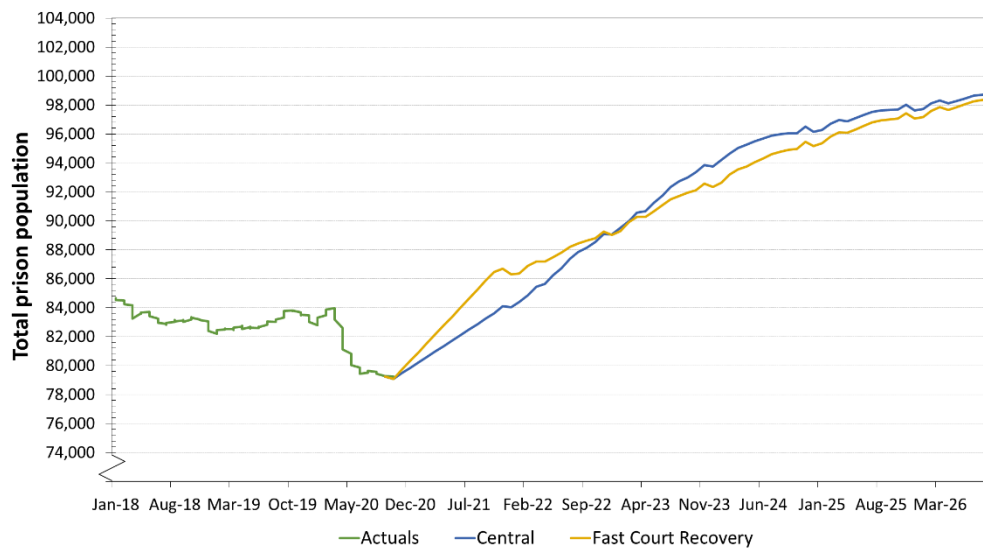
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<sup>14</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/882076/police-officer-uplift-quarterly-update-to-march-2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/882076/police-officer-uplift-quarterly-update-to-march-2020.pdf)

<sup>15</sup> This includes the planned recruitment of an additional 20,000 police officers, as well as the additional 3,400 officers already recruited through precept funding.

longer term. In the long term (slightly beyond the forecast period) there would be no difference between these scenarios.

**Figure 2.1 shows the prison projections for two court recovery scenarios**



## Police Impact Scenarios

The government's commitment to the recruitment of 20,000 new police officers in addition to increases from the police precept is likely to increase the future prison population. It is not possible to predict exactly what the impact on charge volumes will be, but our central estimate assumes the current ratio of police officers to charge volumes continues. Similarly, it is not possible to predict with certainty any changes to the future case mix as a result of the extra officers. Our central estimate assumes that case mix stays the same as 2018/19. However, we have modelled two extra scenarios to show the impact on the prison population of a 20% higher/lower throughput from the police which could be as a result of different charge volumes per officer and/or a different case mix. These are for illustrative purposes and it is possible that the projections could vary by more than this.

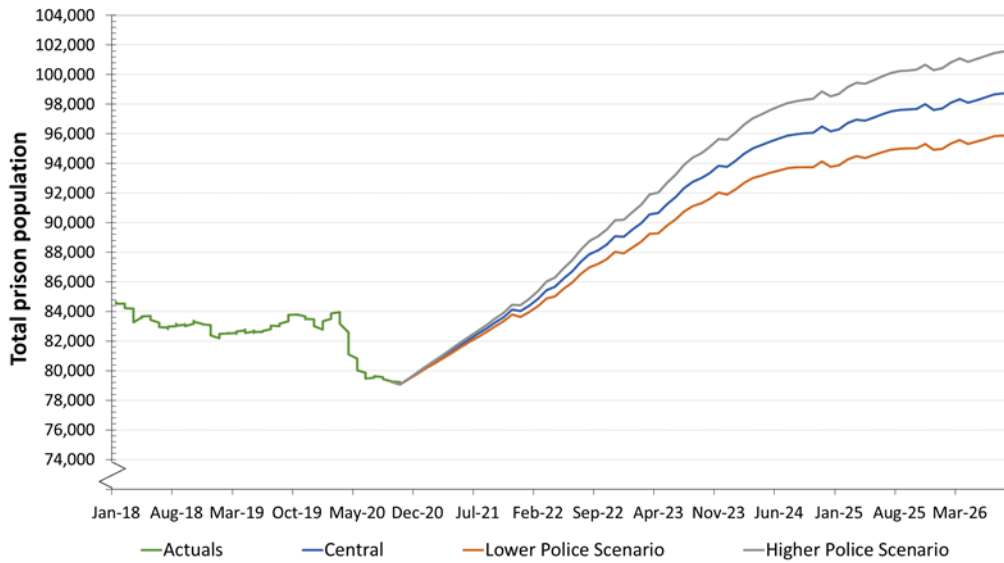
The three police impact scenarios we have modelled are as follows:

- Central scenario – this is the central court recovery scenario. It assumes the current ratio of police officers to charge volumes, and that case mix stays the same as 2018/19.
- Lower police charges scenario – this shows the impact of demand from the additional police being 20% lower than the central scenario
- Higher police charges scenario – this shows the impact of demand from the additional police being 20% higher than the central scenario

**Figure 2.2** shows the three police impact scenarios that have been modelled. These are not lower and upper bounds; they are examples of how the projections could vary. It is possible the population will be higher or lower than all scenarios modelled.

**Figure 2.2 shows the prison projections for all three police impact scenarios.**





**Table 2.1 Projected prison projections for all four scenarios.**

	Central	Lower Police Scenario	Higher Police Scenario	Fast Court Recovery
September 2020	79,235	79,235	79,235	79,235
September 2021	83,200	83,000	83,500	85,900
September 2022	88,100	87,200	89,100	88,600
September 2023	93,000	91,300	94,700	91,900
September 2024	96,000	93,800	98,300	94,900
September 2025	97,700	95,000	100,300	97,000
September 2026	98,700	95,900	101,600	98,400

All figures are rounded to the nearest hundred. Components may not sum due to rounding.

The COVID-19 pandemic and the impact of the additional 23,400<sup>16</sup> police has increased the uncertainty in our projections, compared to previous publications. In particular, the modelling methodology has had to be refined to take into account the delays in processing cases through the courts. It is therefore not possible to use the performance of previous projections (e.g. measures of actual population relative to projected levels) to estimate likely ranges of the future prison population relative to the central estimate. It is also not possible to provide the breakdowns we usually provide by age group.

<sup>16</sup> This includes the planned recruitment of an additional 20,000 police officers, as well as the additional 3,400 officers already recruited through precept funding



### 3. Comparison against 2019 total population projection

As of September 2020, the prison population was 2,700 places below the previous 2019 projection.

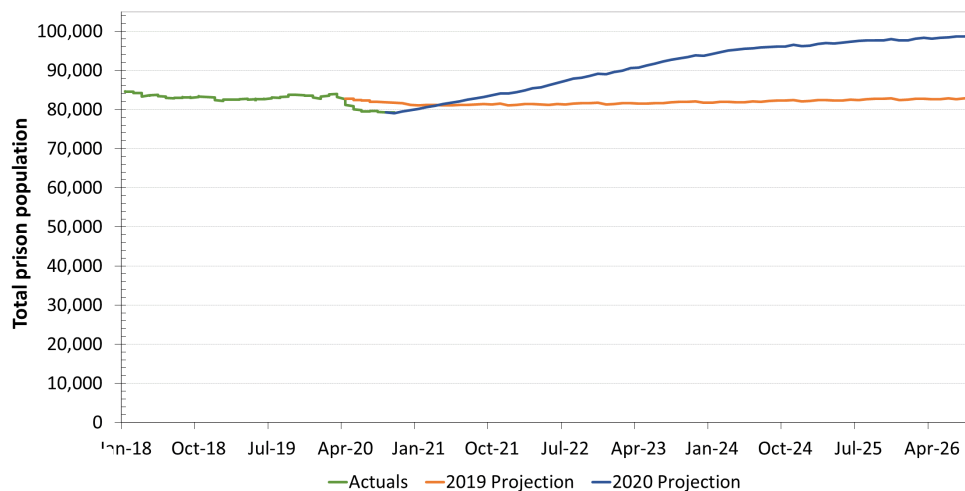
The 2020 projection is 13,000 higher than the 2019 projection in March 2024 (the last projected month in the 2019 publication).

The September 2020 prison population is lower than we previously projected because of the COVID-19 pandemic, which has restricted the courts' ability to process cases.

The recruitment of 20,000 additional police officers and the additional 3,400 officers recruited through precept funding<sup>17</sup> results in a higher projection in March 2024.

A comparison of the 2019 projection against actuals to date and the latest 2020 projection is presented in **Figure 3.1**.

**Figure 3.1 shows the comparison of August 2019 total population projection against actuals and latest November 2020 projection**



The 2020 projection reflects more recent data available on court receipts, the prison population, prison receptions and discharges<sup>18</sup>. The modelling methodology has been refined to take account of delays in processing cases through the courts due to the COVID-19 pandemic. The prisons model used to generate the population projection is simpler than that used in the last publication, because the COVID-19 pandemic has resulted in more uncertainty regarding the short-term case mix, which depends on how the courts prioritise cases.

Charges for sex offences fell after 2017. Given the government ambitions to improve outcomes for these cases and an ongoing review, it has been assumed charges for sexual offences will increase by 20% over 2020/21 and remain at this higher level for the rest of the projection period.

<sup>17</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/882076/police-officer-uplift-quarterly-update-to-march-2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/882076/police-officer-uplift-quarterly-update-to-march-2020.pdf)

<sup>18</sup> Details of the data which has been used are described in Annex TG3

The 2020 projections include the estimated impact of policies included in the Sentencing White Paper as well as the Statutory Instrument to increase custodial sentences for serious offenders with a custodial sentence of 7 years or more. The impact of the Sentencing Whitepaper on prison places is expected to increase up until the end of the projection period in September 2026, where the population is expected to be around 400 higher as a result of these policies. The biggest impact is the increase in the release point for violent and sexual offenders sentenced to a standard determinate sentence of 4-7 years. The Statutory Instrument is expected to increase the prison population by around 900 places by September 2026.

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The recall population has increased from 7,400 offenders at the end of June 2019 to 9,300 at the end of September 2020 and thus the 2020 projection for this sub-population starts from a higher baseline compared to 2019. The impact of the additional 23,400 police officers also results in the recall population projections being higher than the 2019 projection. The recall population is projected to rise to 11,200 at the end of June 2023 (2019 projection: 8,300 at June 2023).

The number of people currently on remand has increased since our 2019 projection, mostly because of the delays in court trials as a result of the COVID-19 pandemic. While this is only expected to be a short-term effect until courts recover, in the longer term our 2020 projections are also higher due to the impact of the additional 23,400 police officers, and because people are spending longer on remand.

For the indeterminate population, the slightly higher projection is driven by a combination of slightly higher observed indeterminate prison receptions combined with slightly slower parole release rates.

**Table 3.1 Comparisons between 2019 and 2020 projections (September figures), by type of custody<sup>19</sup>**

	Remand			Determinate		
	2019	2020	Difference	2019	2020	Difference
2020	9,163	12,274	34%	55,119	47,991	-13%
2021	9,200	11,400	24%	54,800	52,300	-5%
2022	9,200	12,000	31%	55,200	56,200	2%
2023	9,200	12,500	36%	55,700	60,000	8%
	Indeterminate			Recall		
	2019	2020	Difference	2019	2020	Difference
2020	8,799	8,840	0%	7,929	9,250	17%
2021	8,500	8,800	4%	8,100	10,000	24%
2022	8,200	8,700	6%	8,200	10,600	29%
2023	7,900	8,600	8%	8,400	11,200	34%
	Non-Criminal			Fine Defaulters		
	2019	2020	Difference	2019	2020	Difference
2020	832	861	3%	55	19	-66%
2021	800	700	-17%	50	50	-21%
2022	800	700	-19%	50	50	-17%
2023	800	700	-19%	50	50	-17%
	Total					
	2019	2020	Difference			
2020	81,898	79,235	-3%			
2021	81,400	83,200	2%			
2022	81,600	88,100	8%			
2023	82,000	93,000	13%			

All figures are rounded to the nearest hundred, numbers below a hundred have been rounded to the nearest 50. Components may not sum due to rounding. 20

<sup>19</sup> Figures for fine defaulters differ to the 2019 publication because they have been rounded to the nearest 50.

<sup>20</sup> Non-criminal prisoners are held for civil offences or under the immigration act. A civil non-criminal prisoner is someone held in prison because of a non-criminal matter, for example, non-payment of council tax or contempt of court. The non-criminal population also includes immigration detainees that have finished serving their sentence and are being kept in prison by immigration authorities or those detained in HMPPS operated Immigration Removal Centres (IRCs).

## 4. Projection of age and gender cohorts

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The overall prison population is projected to increase over the projection horizon, with the population of children, female adults and male adults all following the trend projected in the overall prison population.

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The cohorts for children and female adults make up a small proportion of the total population. The projections for these cohorts are based on historical proportions from the overall population, split by sentence length bands. They therefore take account of historical differences in sentencing for these cohorts.

**Table 4.1: Prison population by age group and gender, September 2020 actuals and projected September 2020 to September 2026**

	<b>Total</b>	<b>Children</b>	<b>Female 18+</b>	<b>Male 18+</b>
September 2020	<b>79,235</b>	395	3,217	75,623
September 2021	<b>83,200</b>	600	3,800	78,900
September 2022	<b>88,100</b>	600	4,100	83,500
September 2023	<b>93,000</b>	700	4,300	88,100
September 2024	<b>96,000</b>	700	4,400	90,900
September 2025	<b>97,700</b>	700	4,500	92,500
September 2026	<b>98,700</b>	700	4,500	93,500

All figures are rounded to the nearest hundred. Components may not sum due to rounding.

The female population projection does not explicitly include any population impact attributable to the Female Offender Strategy, as the impacts are not robustly quantifiable and thus not eligible for inclusion in the baseline projection.

The population of children covers only offenders held in HMPPS estates and includes males in the 15-17 age group. This population is projected to increase from 400 as of September 2020 to 700 by the end of the projection period. Note that the projections do not cover those young offenders held in Secure Children's Homes or Secure Training Centres.

## 5. Links to related Ministry of Justice statistics

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For further information on:

- The latest statistics on court receipts visit:  
[www.gov.uk/government/collections/criminal-court-statistics](http://www.gov.uk/government/collections/criminal-court-statistics)
- The latest statistics on the criminal justice system, including information on sentencing, visit:  
[www.gov.uk/government/collections/criminal-justice-statistics-quarterly](http://www.gov.uk/government/collections/criminal-justice-statistics-quarterly)
- The latest statistics and commentary on the prison population visit:  
[www.gov.uk/government/collections/offender-management-statistics-quarterly](http://www.gov.uk/government/collections/offender-management-statistics-quarterly)
- The Story of the Prison Population 1993-2020 visit:  
<https://www.gov.uk/government/statistics/story-of-the-prison-population-1993-to-2020>
- Weekly prison population and capacity figures visit:  
[www.gov.uk/government/collections/prison-population-statistics](http://www.gov.uk/government/collections/prison-population-statistics)

## TG1. Modelling methodology

The prison projections model is part of wider suite of models within the Ministry of Justice used to model the criminal courts and offender management, driven by common projections of demand for the Ministry of Justice's services. Two key components of this suite are used to develop these projections, a custodial sentencing model and a prison population projection model.

The custodial sentencing model is driven by projections of numbers of defendants entering the criminal courts. To project volumes of defendants being given a custodial sentence, it also takes into account:

- the court type and court route defendants have come through;
- resources required to process cases through the courts; and
- the sentences which concluded cases attract.

The prison population projections model takes projections of custodial sentences, converts them to projections of prison receptions and then models the amount of time that offenders spend in prison to calculate the resulting prison population. The benefits of this method are that it allows us to:

- explicitly project custodial sentences (rather than just sentences);
- understand the criminal justice system factors which contribute to change in the prison population, such as time served, sentences given, changes to court processes or shifts in defendant demographics; and
- more easily model the impact on the prison population of specific Ministry of Justice and other criminal justice agency policy changes relating to criminal courts as well as specific offences or specific sentences.

The assumptions informing these projections, and therefore the projections themselves, are subject to uncertainty. We have modelled some extra scenarios to show how these projections may vary, but these are for illustrative purposes and we have not estimated what range the actual population is likely to be within.

The projection model is based on latest available data from various sources including court proceedings and performance data and sentencing data. Latest P-NOMIS extracts, referenced in offender management statistics, are utilised to model prison receptions and population data.

The method used for generating projections of the prison population in England and Wales for the 2020-2026 projections has changed from the approach used to generate the 2019-2024 projections published on 29 August 2019, to take account of the delays in processing cases through the courts because of the COVID-19 pandemic.

Sections TG2 and TG3 provide further details of the methods used to produce the prison population projections and the assumptions behind them.

## **TG2. Caveats on prison population projections**

The projections presented reflect the impact of trends in sentencing, in the age band, sex, and offence of defendants entering the system and in the flow of defendants through the courts. The impacts of publicly announced changes to legislation and guidance which took place before November 2020 and views of future parole hearing frequency and outcomes for indeterminate sentence prisoners have also been accounted for.

The projections do not reflect the impact of legislative, policy, operational or procedural change or guidance for which there is no definite timetable for implementation. The projections therefore provide a “baseline” against which the impacts of future changes can be assessed.

The COVID-19 pandemic, planned recruitment of an additional 20,000 police officers and the impact of an additional 3,400 officers recruited through precept funding has all resulted in considerable uncertainty in our projections. Even without these, the actual future prison population may not match the projection. Changes to criminal justice processes could influence the numbers of offenders being brought to the point of sentence or the way that offenders are managed. Changes to sentencing behaviour may also be different from those modelled. Finally, both sentencing behaviour and criminal justice processes, as well as policy decisions, can respond to a multitude of environmental factors which cannot be anticipated, such as high-profile criminal cases, events like the August 2011 public disorder events, and public debate.

Assumptions for modelling were agreed through consultation with policy and operational experts at the Ministry of Justice, Her Majesty’s Prison and Probation Service, Home Office and Crown Prosecution Service. The assumptions are based on analysis (where reliable data are available) and on expert judgement from policy makers, key deliverers and system influencers. The assumptions are therefore likely to be more robust for those measures and processes that have a well-defined boundary than for those that do not.



## **TG3. Detail of models and assumptions**

### **The modelling approach**

The prisons model used to generate this projection is somewhat simpler than that used in the last publication, because the COVID-19 pandemic has resulted in more uncertainty regarding the short-term case mix (which depends on how the courts prioritise cases). The total time to be served in prison by projected future prisoners is based on distributions of (i) custodial sentence lengths and (ii) the percentage of custodial sentence served. These distributions are derived from the 12 months of data prior to the COVID-19 pandemic (March 2019 – February 2020).

### **Overview of the modelling approach**

Central to the modelling approach is the Prison Population Stock-Flow model. Projections of future custodial sentences are fed into this model and outputs are adjusted to account for the impact of changes in legislation and process on the prison population, as shown in Figure TG1, and described below.

#### **1) Producing projections of defendants coming into court**

Projections of defendants proceeded against at court are chosen as the entry point to the modelling system because this is the entry point of defendants into the Ministry of Justice's area of responsibility. In projecting future demand, we make the following assumptions:

- Over the period of the pandemic we assume demand into courts remains flat at recently observed levels,
- Demand gradually returns to the levels observed in the court in the run up to COVID-19 (6 months to end Feb-20) once restrictions ease (assumed end May 21).

Cases received (in addition to current outstanding caseload) are then projected to be heard based on broad assumptions to reflect scenarios on available capacity and the listing process in courts. This results in a projection of completed prosecutions by case type, plea and remand status.

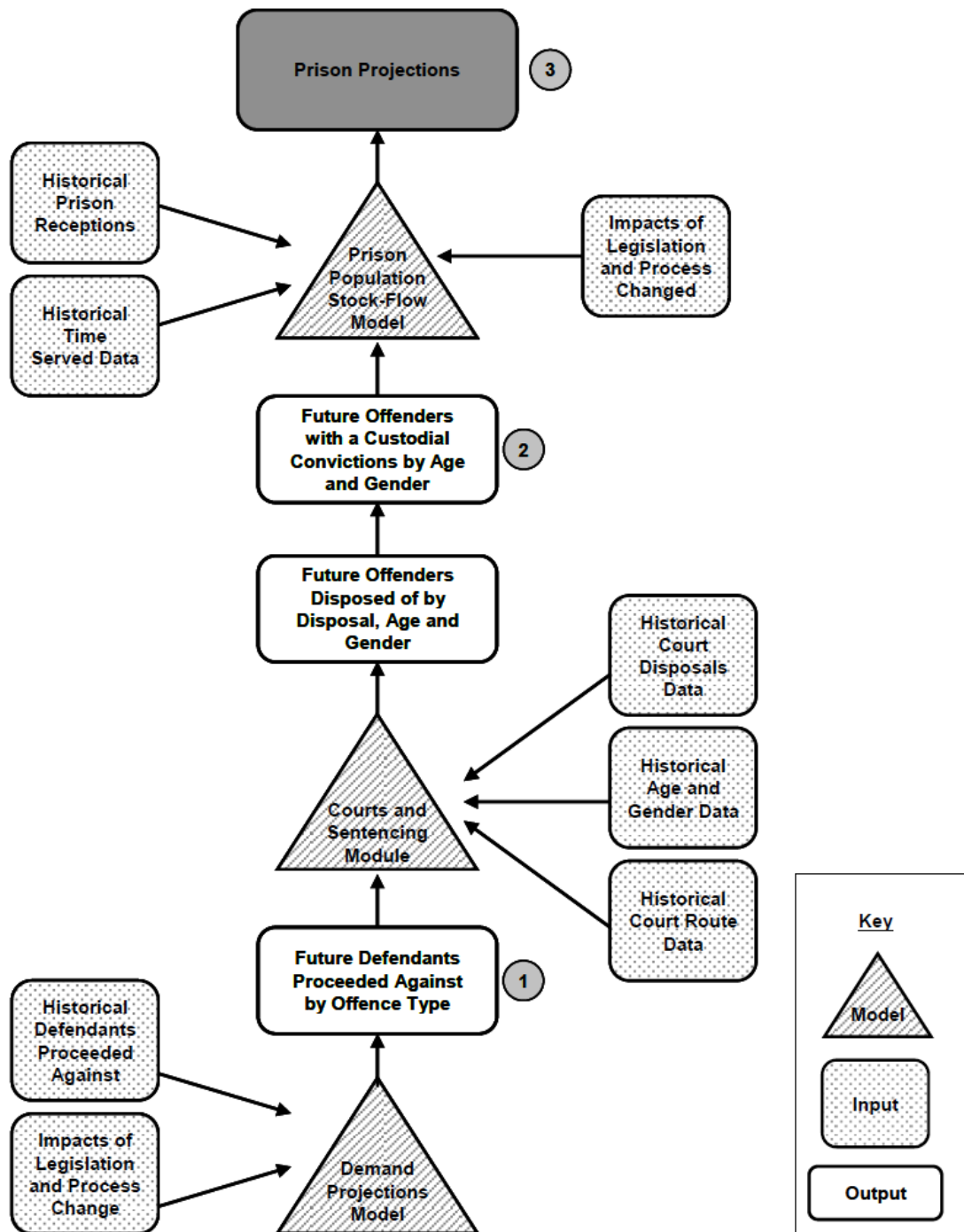
COVID-19 has had a significant impact on the courts with social distancing placing a number of additional constraints on available capacity in the court e.g. the number of court rooms able hold socially distanced jury trials in the Crown Court and the number of people each court can accommodate at any one time. These constraints are reflected in modelling over the social distancing period, along with an assumption that social distancing measures lead to an increase in the length of a hearing.

Added to this we have factored into our central projection the following upstream risks:

- the impact of an increase in sex offence court receipts throughout 2020/21
- the impact of recruiting an additional 23,400 extra police officers, on the assumption that once trained and fully operational, the new recruits behave as existing officers in terms of charge rate and type of crimes brought to charge.

In modelling the flow of these additional cases through the CJS we assume both the CPS and courts are resourced to process these defendants at 2019 levels of performance, the cases flow through the system and the behaviour of defendants and sentencers remains unchanged from what was observed in 2019.

Figure TG3.1: Key components of the prison projections modelling system



## 2) Converting the demand projections into custodial sentences

A Courts and Sentencing Module converts the demand projections into a set of projections of disposals by disposal type (including custodial convictions). These projections are used as a key input for the Prison Population Stock-Flow model.

The Courts and Sentencing Module is a combination of the magistrates' and Crown Court Workload Models and the Sentencing Module. The demand projections (1 above) are used

as an input into a magistrates' Workload Model, which uses historical data to split defendants into court routes and tracks their flow through the system. These are:

- Those tried and sentenced in the magistrates' court;
- Those tried in the magistrates' court and sentenced in the Crown Court;
- Those tried in the Crown Court.

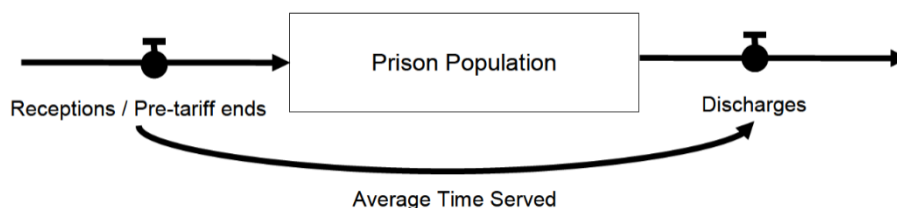
The Crown Court workload model takes these forecasts of demand and assigns various attributes (e.g. early guilty plea and bail remand status) to estimate likely hearing times. Combining this with court resources produces estimates the resulting flow of cases through the system.

The Sentencing Module takes cases disposed of in the magistrates' Workload Model and the Crown Court Workload Model and applies sentencing splits based on analysis of historic court proceedings data.

### 3a) Producing prison population projections

Prison population projections are produced using the Prison Population Stock-Flow Model. The principal sub-populations in prison – determinate sentence, life sentence, imprisonment for public protection (IPP) and recalls – are modelled using stock-flow structures based on the generic structure shown in **Figure TG3.2**. The stock-flow structures model the flow of offenders into and out of prison and count the resulting prison population at the end of each month.

**Figure TG3.2: Generic stock-flow structure in the Prison Population Stock-Flow Model**



For the **determinate population**, the monthly inflows to prison are based on the custodial sentence projections described above. These custodial sentences include offenders that may already be serving a sentence for a previous crime or those who would serve their whole custodial sentence on remand, meaning that they would not be a new reception to prison. To convert from custodial sentences to prison receptions a conversion ratio derived from the historical proportions of custodial sentences is applied to prison receptions averaged over 19<sup>th</sup> January – 8<sup>th</sup> March 2020. Monthly outflows for the determinate population are based on observed distributions of time spent in custody.

The methodology for forecasting the **remand population** has been revised since the 2019 publication to reflect the shock to the system provided by the COVID-19 pandemic. The model uses a pair of linear regressions to predict remand inflows based on forecast courts activity, with one (based on data since March 2020) covering the current period and the other (based on data from the start of 2017 until March 2020) for the period after the pandemic (when forecasts predict that the magistrates' court has cleared the additional backlog of cases created by the pandemic). Similarly, the amount of time prisoners spend on remand is assumed to be equal to the average time spent by prisoners leaving remand between 16<sup>th</sup> October and 6<sup>th</sup> November 2020 during the pandemic period, and to the average time spent by prisoners during February 2020 for the period after the pandemic.

**IPP and life sentence** prisoners have an extra section in the stock-flow structure which models the indeterminate nature of their sentence lengths. Outflows for IPP and life sentence prisoners depend on the tariff lengths they receive and on the frequency and outcome of Parole Board hearings. The values of these parameters are set and calibrated to reflect the most recent management information on Parole Board outcomes.

Indeterminate recalls are treated explicitly based on data and assumptions around future release and recall rates, and conditional on Parole Board capacity as per the indeterminate population. Determinate recalled offenders are projected by estimating the size of the eligible pool of offenders subject to licence conditions, split by sentence band, and applying a monthly 'rate of recall' to this pool to estimate new recallees. A profile of average time spent in custody recalled is then applied to estimate re-releases, and thus simulate the determinate sentenced **recall population**.

The **non-criminal population** is projected based on the average population over the last three months, adjusted for any planned changes to capacity for Home Office detainees or Immigration Removal Centres.

The population of **fine defaulters** is projected to gradually increase to the 6 months average prior to the COVID-19 pandemic (September 2019 - February 2020) and to then remain flat.

The population in prison at the end of each modelled month is sub-divided by age band (child and adult) and gender using historical splits of the prison population by sub population.

### **3b) Accounting for the impacts of circumstance, legislation, and for seasonal effects**

The raw, unadjusted prison population projections are subject to model adjustments to show the impact of certain policy impacts. Model adjustments are also used to account for seasonal variation in the population.

Seasonality was measured in the historical prison population and applied as a series of percentage adjustments to the final population projections. Seasonal factors for the determinate population were identified for each month by measuring statistically significant deviations from a centred 12-month average.

## Further Information

### National Statistics Status

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is the Ministry of Justice's responsibility to maintain compliance with the standards expected for National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained and reinstated when standards are restored.

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**Next update:** August 2021

**URL:** [www.gov.uk/government/statistics/prison-population-projections-ns](http://www.gov.uk/government/statistics/prison-population-projections-ns)



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