

Justice Data Lab analysis: Reoffending behaviour after support from Willowdene Residential

April 2025

This analysis looked at the reoffending behaviour of 109 women who started receiving support from Willowdene Residential between June 2013 and December 2022. The overall results show that women who received support from Willowdene Residential took longer to reoffend than those who did not take part. This result was statistically significant.

Willowdene Residential is a Ministry of Justice funded centre that supports women across England and Wales. They provide tailored therapeutic trauma-informed programmes across a range of different pathways including holistic support to break cycles of trauma, abuse and reoffending.

The headline analysis in this report measured proven reoffences in a one-year period for a 'treatment group' of 109 female offenders who began receiving support some time between June 2013 and December 2022, and for a much larger 'comparison group' of similar offenders who did not receive it. The analysis estimates the impact of the support from Willowdene Residential on reoffending behaviour.

Overall measurements of the treatment and comparison groups

For **100** typical women in the **treatment** group, the equivalent of:

31 of the 100 women committed a proven reoffence within a one-year period (a rate of 31%), **4 women fewer** than in the comparison group.

168 proven reoffences were committed by these 100 women during the year (a frequency of 1.7 offences per person), **8 offences fewer** than in the comparison group.

149 days was the average time before a reoffender committed their first proven reoffence, **39 days later** than the comparison group.

For **100** typical women in the **comparison** group, the equivalent of:



35 of the 100 women committed a proven reoffence within a one-year period (a rate of 35%).



176 proven reoffences were committed by these 100 women during the year (a frequency of 1.8 offences per person).



110 days was the average time before a reoffender committed their first proven reoffence.

Please note totals may not appear to equal the sum of the component parts due to rounding.

Overall estimates of the impact of the intervention

For **100** typical women who receive support, compared with **100** similar women who do not receive it:



The number of women who commit a proven reoffence within one year after release could be lower by as many as 13 women, or higher by as many as 5 women. This is not a statistically significant result.

- The number of proven reoffences committed during the year could be **lower by as many as** 80 offences, or higher by as many as 64 offences. This is not a statistically significant result.
- On average, the time before an offender committed their first proven reoffence could be **longer** by between 5 and 73 days. This is a statistically significant result.

√ What you can say about the one-year reoffending rate:

"This analysis does not provide clear evidence on whether support from Willowdene Residential increases or decreases the number of participants who commit a proven reoffence in a one-year period. There may be a number of reasons for this and it is possible that an analysis of more participants would provide such evidence."

What you cannot say about the one-year reoffending rate:

"This analysis provides evidence that support from Willowdene Residential increases/decreases/has no effect on the reoffending rate of its participants."

√ What you can say about the one-year reoffending frequency:

"This analysis does not provide clear evidence on whether support from Willowdene Residential increases or decreases the number of proven reoffences during a one-year period. There may be a number of reasons for this and it is possible that an analysis of more participants would provide such evidence."

What you cannot say about the one-year reoffending frequency:

"This analysis provides evidence that support from Willowdene Residential increases/decreases/has no effect on the number of proven reoffences committed during a one-year period by its participants."

√ What you can say about the time to first reoffence:

"This analysis provides evidence that support from Willowdene Residential lengthens the average time to first proven reoffence for its participants."

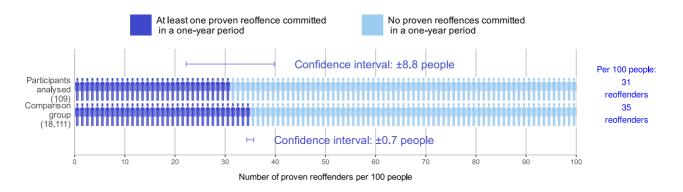
X What you cannot say about the time to first reoffence:

"This analysis provides evidence that support from Willowdene Residential shortens/has no effect on the average time to first proven reoffence for its participants."

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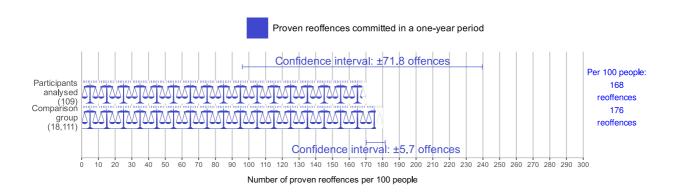
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One-year proven reoffending rate after support from Willowdene Residential



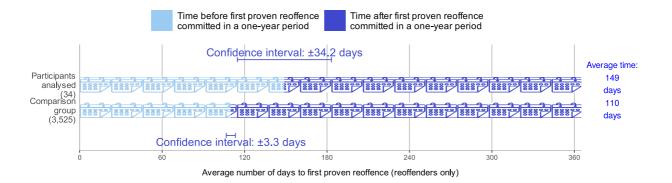
Non-significant difference between groups

One-year proven reoffending frequency after support from Willowdene Residential



Non-significant difference between groups

Average time (days) to first proven reoffence after support from Willowdene Residential



Significant difference between groups

Willowdene Residential in their own words

"Willowdene Rehabilitation stands as a pioneering Social Enterprise in the West Midlands, delivering comprehensive day and residential services through its specialised facilities in West Mercia. As a co-commissioned centre funded by the Ministry of Justice, OPCC, OHID, and local authorities, Willowdene has established itself as a trusted provider of rehabilitation services for women across England and Wales since 2013.

At the heart of Willowdene's approach is a gender-specific, trauma-informed residential therapeutic program spanning 7-12 weeks across diverse pathways. The programme centres on intensive one-to-one therapeutic sessions designed to identify, address, and break the destructive cycles of trauma, neglect, abuse, substance misuse, and reoffending. This holistic approach empowers each woman to reclaim her life regardless of birth or life circumstances. Courts and sentencers have expressed strong confidence in Willowdene's programs, utilising them as direct alternatives to custody, license requirements upon prison release, diversionary interventions, Home Detention Curfew placements, and alternatives to custody for recall or breach of Suspended Sentence Orders.

Residents benefit from purpose-built accommodation featuring single ensuite bedrooms in three-person units with access to communal areas. Each woman receives personalised support through Willowdene's Care and Recovery Plan—a living document jointly managed by the resident and her keyworker throughout her journey.

The program thoughtfully incorporates family connections, providing regular physical and virtual access to children at a dedicated family assessment centre. For those requiring it, targeted medically managed detoxification is available on-site in collaboration with their prescribing recovery service.

Willowdene's structured program combines twice-weekly therapeutic sessions with supported independent living and purposeful skills training. Residents can earn qualifications ranging from Entry Level to Level 2 Diplomas across diverse areas including employability, catering, horticulture, animal husbandry, carpentry, problem-solving, and interpersonal skills. This comprehensive approach, delivered through blended learning with literacy and numeracy support, equips women with the practical skills and emotional resilience needed for successful reintegration into society.

Through this robust, holistic approach, Willowdene continues to transform lives and break cycles of reoffending with proven effectiveness that courts and justice partners consistently rely upon."

Response from Willowdene Residential to the Justice Data Lab analysis

"Thank you for sharing the statistical analysis of our residential provision. Willowdene Rehabilitation has reviewed these findings thoroughly and, while we appreciate the effort invested in this evaluation, we believe several important factors warrant further consideration to fully understand the impact of our services.

We are encouraged to see that women accessing Willowdene's residential program demonstrate a lower reoffending rate (31%) compared to the comparator group (35%), along with a longer time to reoffend. This aligns with our experience that trauma-informed therapeutic interventions require time to take root and create sustainable change in complex lives.

However, we raise several aspects about the comparator group selection:

First, with documented reoffending rates for women leaving prison after short-term sentences at approximately 58%, the comparator group's 35% rate raises questions about whether it truly represents the complexity of women referred. Most women accessing Willowdene would have received custodial sentences without our residential alternative, and many are diverted to our programme specifically to avoid prison recall following breach proceedings.

The analysis does not consider a comparator group which is primarily comprised women serving community orders versus those that could have received a custodial sentence. The residential requirement aspect of many community sentences at Willowdene represents a crucial distinction that may not be captured in the comparison data.

Additionally, excluding approximately one-third of our treatment cohort due to the six-month index-to-intervention window criterion eliminates an important subset of our population—women released early from longer sentences specifically to address trauma as part of HDC or license conditions. We would welcome deeper investigation.

The current analysis also treats all treatment group participants equally, regardless of program completion. This includes women who exited within the first week (often due to detoxification challenges) alongside those completing the full 12-week program. We recommend analysing reoffending rates in relation to treatment duration to better understand the correlation with reoffending.

While reoffending rates provide valuable metrics, we emphasise that they should not be viewed in isolation. Women at Willowdene are addressing profound past trauma and making significant progress in rebuilding lives, restoring family connections, and developing prosocial skills—outcomes that extend beyond binary reoffending measures.

Willowdene welcomes further collaboration with the JDL team and would be pleased to provide additional longitudinal data to support a more detailed review focused specifically on women receiving residential treatment as an alternative to custody."

Results in detail

One analysis was conducted, controlling for offender demographics and criminal history and the following risks and needs: accommodation, employment history, education, financial history, relationships, mental health, thinking skills, drug and alcohol use, and attitudes towards offending.

1. **National analysis:** treatment group matched to offenders across England and Wales using demographics, criminal history and individual risks and needs.

The sizes of the treatment and comparison groups for reoffending rate and frequency analyses are provided below. To create a comparison group that is as similar as possible to the treatment group, each person within the comparison group is given a weighting proportionate to how closely they match the characteristics of individuals in the treatment group. The calculated reoffending rate uses the weighted values for each person and therefore does not necessarily correspond to the unweighted figures.

Analysis	Treatment group size	Comparison group size	Reoffenders in treatment group	Reoffenders in comparison group (weighted number)
National	109	18,111	34	3,525 (6,369)

Three headline measures of one-year reoffending were analysed, as well as four additional measures (see results in Tables 1-7):

- 1. Rate of reoffending
- 2. Frequency of reoffending
- 3. Time to first reoffence
- 4. Rate of first reoffence by court outcome
- 5. Frequency of reoffences by court outcome
- 6. Rate of custodial sentencing for first reoffence
- 7. Frequency of custodial sentencing

Tables 1-7 show the overall measures of reoffending. Rates are expressed as percentages and frequencies expressed per person. Tables 3 to 7 include reoffenders only.

Table 1: Proportion of women who committed a proven reoffence in a one-year period (reoffending rate) after support from Willowdene Residential compared with a matched comparison group

Number in treatment group	Number in comparison group	Treatment group rate (%)	Comparison group rate (%)	Estimated difference (% points)	Significant difference?	p-value
109	18,111	31	35	-13 to 5	No	0.38

Table 2: Number of proven reoffences committed in a one-year period (reoffending frequency - offences per person) by women who received support from Willowdene Residential compared with a matched comparison group

Number in treatment group	Number in comparison group	Treatment group frequency	Comparison group frequency	Estimated difference	Significant difference?	p-value
109	18,111	1.68	1.76	-0.8 to 0.64	No	0.83

Table 3: Average time (days) to first proven reoffence in a one-year period for women who received support from Willowdene Residential, compared with a matched comparison group

Number in treatment group	Number in comparison group	Treatment group time (days)	Comparison group time (days)	Estimated difference	Significant difference?	p-value
34	3,525	149	110	5 to 73	Yes	0.03

Table 4: Proportion of women supported by Willowdene Residential with first proven reoffence in a one-year period (reoffending rate) by court outcome, compared with similar non-participants (reoffenders only)

Number in treatment group	Number in comparison group	Court outcome	Treatment group rate (%)	Comparison group rate (%)	Estimated difference (% points)	Significant difference?	p-value
34	3,518	Either way	53	74	-39 to -3	Yes	0.02
		Summary	41	20	4 to 39	Yes	0.02

Table 5: Number of proven reoffences in a one-year period (reoffending frequency) by court outcome for women supported by Willowdene Residential, compared with similar non-participants (reoffenders only)

Number in treatment group	Number in comparison group	Court outcome	Treatment group frequency	Comparison group frequency	Estimated difference	Significant difference?	p-value
34	3,518	Either way	3.82	3.98	-1.97 to 1.66	No	0.86
		Summary	1.24	0.74	-0.06 to 1.06	No	0.08

Table 6: Proportion of women who received a custodial sentence for their first proven reoffence after support from Willowdene Residential, compared with similar non-participants (reoffenders only)

Number in treatment group	Number in comparison group	Treatment group rate (%)	Comparison group rate (%)	Estimated difference (% points)	Significant difference?	p-value
34	3,518	38	44	-23 to 12	No	0.52

Table 7: Number of custodial sentences received in a one-year period by women who received support from Willowdene Residential, compared to similar non-participants (reoffenders only)

Number in treatment group	Number in comparison group	Treatment group frequency	Comparison group frequency	Estimated difference	Significant difference?	p-value
34	3,518	3.03	2.79	-1.19 to 1.67	No	0.73

The standard acceptable level of statistical significance to demonstrate impact is 0.05. This means that for the difference between the treatment and comparison groups to be considered statistically significant or impactful, the p-value in the tables above must be 0.05 or lower, indicating that the probability of the result occurring by chance is 5% or less.

Profile of the treatment group

Willowdene Residential receives referrals for women across England and Wales with the programme being based in Shropshire, West Midlands.

	Participants included in analysis (109 offenders)	Participants not included in analysis (107 offenders with available data)
Sex		
Female	100%	100%
Ethnicity		
White	96%	93%
Black	3%	4%
Asian	1%	0%
Unknown	0%	3%
UK national		
UK nationality	98%	94%
Unknown nationality	2%	5%
Foreign nationality	0%	1%
Index disposal		
Community order	35%	
Suspended sentence order	34%	
Prison	20%	
Fine	4%	
Caution	4%	
Other	2%	
Conditional discharge	2%	

Please note totals may not appear to equal the sum of the component parts due to rounding.

The individuals in the treatment group were aged 18 to 64 years at the beginning of their one-year period (average age 34).

Information on index offences for the 107 participants not included in the analysis is not available, as they could not be linked to a suitable sentence.

For **38 people**, no personal information is available as they could not be identified in our databases.

Information on individual risks and needs was available for 109 people in the treatment group (100%), recorded near to the time of their original conviction. This information is not complete for all 109 women across all risks considered for this analysis. For those where information is known for specific risks, some key findings are shown below.

- 87% had evidence that their thinking and behaviour was linked to offending
- 70% had evidence that drugs have been misused
- 61% had evidence that their financial issues linked to offending behaviour

Matching the treatment and comparison groups

The analyses matched the treatment group to a comparison group. A large number of variables were identified and tested for inclusion in the regression models. The matching quality of each variable can be assessed with reference to the standardised differences in means between the matched treatment and comparison groups (see standardised differences annex). Over 95% of variables are categorised as green on JDL's traffic light scale, indicating that the matching quality achieved on the observed variables was very good.

Further details of group characteristics and matching quality, including risks and needs recorded by the Offender Assessment System (OASys), can be found in the Excel annex accompanying this report.

This report is also supplemented by a general annex, which answers frequently asked questions about Justice Data Lab analyses and explains the caveats associated with them.

Additional information on the dataset

Index dates

The index date is the date at which the follow up period for measuring reoffending begins.

- For those with custodial sentences, the index date is the date they are released from custody.
- For those with a court order (such as a community sentence or a suspended sentence order), the index date is the date when an offender begins the court order.
- For those with non-custodial sentences such as a fine, the index date is the date when the offender received the sentence.

Participants excluded from the analysis

Some individuals have participated in the programme following their release from prison or after they have received a court order or non-custodial sentence. A maximum inclusion criterion of six months between the index date and intervention start date has been applied to these individuals to ensure the analysis captures any 'treatment effects'. Any participants with intervention dates more than six months from the index date are therefore excluded from the analysis.

Numbers of people in the treatment and comparison groups

254 records were submitted for analysis by Willowdene Residential



38 (15%) records were excluded from the analyses because they could not be identified on the Police National Computer (PNC), or did not have the relevant adjudication result*



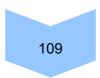
11 (4%) records were excluded because they did not have a record in the reoffending database that corresponded to their period of participation with Willowdene Residential



85 (33%) records were excluded because they did not meet inclusion criteria for analysis, or they had previously been convicted of a sexual offence **



11 (4%) records were excluded because they did not match during the Propensity Score Matching stage



National treatment group: 43% of the participants submitted (Comparison group: 18,111 records)

^{*}Adjudication results must be guilty to be considered for analysis, as an individual must have committed an initial offence and have been convicted for it in order for the reoffending rate to be measured.

^{**}Inclusion criteria such as setting a maximum of 6 months between index date and intervention start date.

Further information

Official Statistics

Our statistical practice is regulated by the Office for Statistics Regulation (OSR).

OSR sets the standards of trustworthiness, quality and value in the Code of Practice for Statistics that all producers of official statistics should adhere to.

You are welcome to contact us directly with any comments about how we meet these standards.

Alternatively, you can contact OSR by emailing regulation@statistics.gov.uk or via the OSR website.

Contact

Press enquiries should be directed to the Ministry of Justice press office.

https://www.gov.uk/government/organisations/ministry-of-justice/about/media-enquiries

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