



An assessment of the economic costs and benefits of Circle's Meet at the Gate programme

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The views expressed in this report are those of the author and do not necessarily represent those of the Scottish Government or Scottish Ministers.

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Executive summary

Circle is a Scottish charity which provides community-based support to marginalised children and families using a whole-family approach. Circle has pioneered a range of early years and family support services that promote children's healthy development and potential. One of the programmes provided by Circle – the “Meet at the Gate” project - seeks to help mothers leaving prison, providing support and connecting them to additional services.

Circle’s “Meet at the Gate” programme is highly likely to be yielding social benefits worth considerably more than the programme costs. Our analysis shows that, given the 10-year societal costs per female reoffending are high; but the per-offender costs of Circle’s intervention (and any additional services offenders thereby access) are low; the programme only needs to have quite a small positive impact on female reoffending – of the order of 3-13 per cent - to generate net positive benefits to society. For every offender that Circle’s programme completely dissuades from reoffending, the benefits to society could be worth about 30 times more than the programme costs. This estimate includes only the benefits that other studies have been able to put monetary values on – mainly the costs to the criminal justice system. There are likely to be many other benefits to the wellbeing of the children and families that Circle supports and to wider society in the form of reducing fear of crime and reduced use of foster care that would greatly increase that ratio.

While data limitations prevent us from making a direct quantitative estimate of the impact of Circle’s programme, there is some support for Circle’s approach in previous research on reoffending programmes for women.

We recommend that Circle continues to monitor its programme by collecting further data on all participants of the programme and their outcomes. Circle may also consider undertaking or commissioning an alternative assessment as discussed in section 8.

Key findings in this paper are:

- Research suggests that female offenders will, on average, cost society £65,000¹ in the ten years following an index offence.
- Circle’s costs are low at an average of £2,200 per offender engaged with.

¹ This is an estimate of the Net Present Value over ten years based on a total cost over ten years of £76,000 by the Scottish Government

- There will be other costs attributable to the programme from Circles' clients' consequential use of support services such as housing, benefits and drugs misuse services. We have not been able to estimate these, and they will vary greatly across individual offenders.
- Although data limitations mean that the total benefit to society cannot be determined quantitatively, and the value of benefits to the individual have not been quantified or include, the analysis suggests that, using a range of assumptions, if Circle can have a *marginal positive impact* on the reoffending rates of its clients of approximately **3 - 13 per cent or more**, then their programme would represent **a net benefit to society**. This value is particularly sensitive to the assumed costs of other services that Circle clients go on to use.
- **However, given the high estimated social costs of reoffending, even small reductions in reoffending could lead to large benefits to society.**
- Because of data limitations, it has only been possible to carry out a limited 'breakeven analysis' of Circle's impact. In other words, given the costs of the service and the potential benefit to society from preventing one female from reoffending, how big Circle's success rate would need to be to make the programme result in a net social benefit has been calculated. The main reason it has not been possible to go further than this is that, from the available data, it is not possible to estimate quantitatively the impact of Circle's work on reducing reoffending.
- However, as section 9 sets out, there is some support in the literature for Circle's approach.

The 3 - 13 per cent figure should be interpreted as: If Circle treats 100 individuals and 3 – 13 of these individuals, who would otherwise have continued to commit a typical number of offences without treatment, completely desisted from reoffending in the future, then the scheme would be just about worthwhile. Alternatively, for a number of individuals treated, if the social cost of offences committed in the future falls by 3 - 13 per cent, then this would also mean that the scheme was worthwhile. Given the analysis suggests that the programme is highly likely to offer benefits that are many times greater than the costs, it is also likely to offer good value for money.

1. Overview and structure of paper

- 1.1 This paper provides analysis of the impact of the charity Circle's "Meet at the Gate" reoffenders programme, produced by Scottish Government economists through Pro Bono Economics.
- 1.2 The paper begins setting out the work that Circle does. This is followed by scoping out the economic and social costs of reoffending in section 3 and aggregate estimates of them in section 4. The paper then turns to analysis of Circle's data in sections 5 - 6. Section 7 explores alternative approaches to evaluations of reoffending programmes; section 8 provides a summary of evidence of what works in this area. Section 9 offers some conclusions. Section 11 is an Annex discussing analytical issues in more detail.

2. Outline of Circle's work

- 2.1 Circle is a Scottish charity which provides community-based support to marginalised children and families using a whole-family approach. Circle has pioneered a range of early years and family support services that promote children's healthy development and potential. See <http://www.circlescotland.org/>
- 2.2 One of the programmes provided by Circle – the "Meet at the Gate" project - seeks to help mothers leaving prison. Circle workers based in HMP Cornton Vale, HMP Greenock and HMP Edinburgh are responsible for identifying women who are eligible for the service and co-ordinate a handover to the Circle workers in the community, as well as offering direct support in some cases. A relationship is established with the mother while she is still in prison and support is then provided on a through-care basis.

Circle Case study A

Angela made contact with Circle in March 2012, near the end of a three-year prison sentence in HMP Cornton Vale. Her sentence was for serious assault and was linked to her addiction to drugs and alcohol.

Angela had a 10 yr old daughter Carol, living with Angela's adoptive father, and she wanted to regain care. Angela had become drug and alcohol free during her sentence and wished to remain so after her release. She identified a range of issues for which she required support, including practical support for housing, finances, and employment and emotional support for herself and in relation to

wider family relationships.

On release Angela was housed in a temporary flat. Initially she had contact visits with her daughter, which gradually built up to overnight visits. Circle supported Angela on a practical level to secure housing and also linked her into training and employability networks. She was supported on a relational level to strengthen her bond with her daughter whom she hadn't parented for three years, and to strengthen other relationships that had been damaged as a result of her drug and alcohol use, her offending and eventual imprisonment. She was supported with her recovery from drugs and alcohol through being linked into peer and other support networks. Finally, she was supported emotionally to address the many losses in her life. Angela rooted her fall into alcohol and then drugs in her discovery by accident at age 12 that she was adopted. Circle worked through the identity and loss issues associated with this, and with the further bereavement she suffered at the premature death of her adoptive mother.

18 months on Angela remains drug and alcohol free. She has a lovely secure home and has full time care of Carol. She also has a part-time job in a local factory and is considering other training and employment options for the longer term. She enjoys good relationships with family and friends and is emotionally stable.

Circle's work is not yet complete. Carol is now 12 and at an age where she is challenging her mother. Angela needs continued support for her parenting as Carol can say extremely hurtful things, constantly testing her mother's resolve. Additionally we are now doing 1:1 work with Carol to address the issues she has as a result of her mother's previous lifestyle and imprisonment.

Support to families with such complex histories is long-term and intense but the rewards are great.

2.3 The support Circle provides is holistic, focusing on the needs of the individual. It aims to provide intensive support from the moment the individual leaves prison. In particular, it helps to connect the individual to housing, benefits and drugs support. Circle will continue to provide support over the next few months for as long as the individual needs it.

2.4 Circle targets the whole family, aiming to improve outcomes for all members of the family. However, in order to evaluate its work, it is useful to focus on one particular element, perhaps as a proxy for social outcomes. In this note, the focus is on lowering reconviction rates of offenders, though this is by no means the only positive outcome of Circle's work.

2.5 Indeed, Circle's main focus is on strengthening families. A significant positive outcome of Circle's work is that following intensive support, children are rehabilitated to their mother's care. The children have usually been cared for by relatives or accommodated in local authority care. In addition to the human cost of separating children from their parents, this can have a huge financial cost to the public purse. £23,470 is the annual cost for a stable long-term foster

care placement, £56,226 for a child who needs several placements and residential care (Hannon et al. 2010). If children are placed with family members, the costs are significantly cheaper at around £2,600 annually. For those women who Circle worked with, 60 children in total were returned to their mothers' care post custody. All 60 had been cared for within a kinship care arrangement and 3 of these had additionally been in foster-care.

- 2.6 These additional benefits of intervention have not been monetised here but will be of considerable value to society.

3. The benefits of reducing reoffending - the economic and social costs of reoffending

- 3.1 One key benefit of Circle's work could be a reduction in costs associated with reoffending. Reoffending brings emotional and financial costs to the offender and their family, especially to children. But there are also considerable wider costs to society. There are costs to the victims of crime, to the criminal justice system related to prosecution, conviction and punishment, and to wider society in the form of higher insurance premiums and the detrimental impact of increased fear of crime.
- 3.2 Some of these costs will vary in direct proportion to the number of offenders. Others may be small for a marginal change in the number of offenders or crimes, but larger for a bigger change in the numbers. For example, a large reduction in the number of offenders may save the costs of a whole prison wing or prison. A small reduction will save the prison service very little money given the high fixed costs of building and staffing –perhaps the price of meals and laundry.
- 3.3 Generally, information on potential marginal cost-savings is not readily available. Most cost data are calculations of long run average costs. This means that most estimates of cost-savings will be at best an upper boundary estimate applicable only if programmes are fairly large-scale, highly effective and continued over a long enough time-period to enable savings to be fully realised. In general, cashable savings to the public purse in the short to medium term tend therefore to be much smaller than savings that can be realised over the longer term and at larger scales. However, cashable savings to the public purse are not the only – or even the best – measure of the overall value of a charitable programme.

- 3.4 A similar difference between the smaller marginal cost-savings in the short run and bigger average cost-savings available in the long run can arise with other categories of cost. For example, in the short run, reduced reoffending may save very little in the costs of policing, but in the long-run police forces could be reduced. And the social costs arising from fear of crime, such as increased expenditure on security devices, higher insurance premia and reduced wellbeing from restricting activities such as going out after dark, are likely to be cumulative. Reducing these social costs is however unlikely to yield cashable savings to the public purse.
- 3.5 Re-offending is only the tip of the ice-berg of the costs of a crime. Offences are not always reported or do not lead to a conviction. For each reconviction, there will be a greater number of crimes for which there was no conviction or no record. Existing estimates of multipliers are used for the average number of offences per conviction to take account of this in aggregate estimates, as it is usually only information on number of convictions that are available.
- 3.6 Not all convictions will lead to the same criminal justice costs. The costs of crime are dependent on the details of the crime and vary widely. The costs reported below are therefore only broad illustrative indications of typical costs. Not all of these costs are included in the Home Office or Scottish Government aggregate cost of crime estimates presented in section 5.

Costs in anticipation of crime

- 3.7 In anticipation of crime, society might increase expenditure on security and insurance. For example, the Home Office puts the average cost of additional anticipatory expenditure at £110 per crime.
- 3.8 Wider society may suffer an increased fear of crime due a perceived threat of being a victim of crime if criminality is increasing. This may be seen as a cost in itself. It may also lead to a loss of confidence and activity or changes in behaviour. For example, somebody may turn down accepting a job in an area of a city they perceive to have high crime, reducing overall economic activity. This type of effect is difficult to identify and quantify and is generally not included in existing estimates of the costs of crime.

Costs as a consequence of crime

- 3.9 Victims of crime will be subject to direct costs including loss of possessions, the cost of hospitalisation for victims of violent crimes or repairing criminal damage. Victims may also require further services such as counselling. As an example, a 2003/04 Home Office report puts the average direct monetary costs of crime at around £1,000. This ranges from just over £200 for attempted theft of a vehicle to over £0.5m for homicide.
- 3.10 Victims of crime may suffer increased physical and emotional impact. These costs are generally estimated through surveys of victims of crime. Home Office estimates range from £150 for being the victim of theft to over £1m for those affected by homicide. The average cost of physical and emotional impact is estimated at nearly £2,000.
- 3.11 In addition to the direct monetary costs of a crime, a victim might experience longer term monetary costs, such as a loss of earnings due to disruption to a business or loss of personal confidence. The extent of this effect is difficult to measure and is not generally included in cost of crime measures.

Costs in response to crime

- 3.12 The public sector will face many costs as a result of crime. This includes police time costs, court costs, legal costs and prison and probation costs. A Scottish Government paper, Costs and Equalities and the Scottish Criminal Justice System 2005/06 (Scottish Government 2008) provides estimates of some costs of the criminal justice system. For example, the average cost per case ranges from over £1,500 for a Sheriff summary case to over £17,000 for a case in the High Court. The costs of keeping an individual in prison varies widely. The 2011/12 Scottish Prison Service Annual Report gives an annual average cost per prisoner place of £32,371.
- 3.13 Society may face additional costs as a result of imprisonment of offenders, for example due to the loss of earnings whilst an offender is imprisoned. An adult on minimum wage would expect to earn over £11,000 per year. This is considered a cost to society due to the lost output.

- 3.14 An offender and their family might suffer a number of longer term costs beyond the direct costs. After release, an offender might face difficulties finding work, leading to a longer term loss of earnings. Children may suffer long term permanent damage as a result of having a parent incarcerated including lower educational achievement, mental health problems and increased future criminality themselves, leading to many additional costs such as lower earnings and future crime. Whilst many children of parents who were incarcerated may have minimal additional needs, at the extreme end, a child with severe additional needs may cost over £1m in additional services over their lifetime²⁵. Even moderate additional needs in a child might cost the state over £150,000 over their lifetime.

4. Estimates of average and total costs of crime

- 4.1 For those individuals who have engaged with Circle, it is only possible to record the number of reconvictions. On average, for each reconviction, there will be a greater number of offences, possibly many times higher. Therefore, it seems reasonable to assume that any reduction in reconvictions is indicative of a reduction in reoffending.
- 4.2 There are a number of sources giving estimates of costs of crime for Scotland and the UK. These will not necessarily include all the costs outlined above, in particular they exclude the personal costs to the reoffender and their families, the very long term costs and the costs that apply very broadly to society such as fear of crime.
- 4.3 The Home Office publishes its cost of crime analysis *The Economic and Social Costs of Crime*. Aggregate costs are presented broken down by different types of crime for England and Wales. Costs by type of crime are likely to be similar in Scotland.
- 4.4 Internal Scottish Government analysis contains estimates of the average cost of crime over 10 years per female reoffender following an index offence²⁶ in Scotland. The analysis takes estimated average costs of individual crimes in England and Wales are available from Home Office Analysis. These have been mapped across to Scotland by applying Scottish convictions to offences multipliers to the Home Office analysis to estimate total costs of crime in Scotland. Reconviction frequency profiles give an indication of the number of convictions or offences a

²⁵ The financial impact of early years interventions in Scotland

²⁶ In Circle's case, the index offence is the first offence after which the individual came into contact with Circle. This is not necessarily the individuals first offence or conviction.

typical offender might be expected to receive over a period of time. Applying aggregate costs of crime to this provides an estimate of the cost of reoffending.

- 4.5 For female offenders, Scottish Government analysts have estimated this is at **£76,000 over ten years**. This figures indicates an average cost to society of reoffending of female offenders after an index offence, over a period of ten years²⁷.
- 4.6 These estimates include a mix of average and marginal costs of crime. It is not possible to say what the split is between average and marginal costs. In the short run, only those costs that are marginal will be realised as a saving to society due to a reduction in reoffending. However, given sufficiently long time periods, over which the wider system is able to adjust to changes in reoffending levels, average costs become marginal. This means that the full benefits identified may only be realised over longer periods of time.

5. Circle's costs

- 5.1 Circle estimates its costs to be £2,451 per offender per year. This includes staff costs, travel, taxes, training, office equipment, rent and other general office costs. Individuals tend to engage with circle for varying lengths of time, from just a few months to years. Circle's data show that, to date, the average length of engagement with Circle has been around 11 months. This suggests a cost per offender of £2,200.
- 5.2 It is important to note that this cost does not include the additional costs of services that Circle clients are referred to, over and above those they would have received anyway. Every woman supported by Circle through the Meet at the Gate Project has a history of drug or alcohol misuse and many are still using. Circle's first goal is to ensure the right support is in place for women who are already drug and alcohol free or stable on a substitute prescription, in order to aid their on-going recovery. To this end Circle links women into support groups such as Alcoholics Anonymous and Narcotics Anonymous to provide peer support, and to other agencies if more intensive counselling or therapy is required.
- 5.3 For women who are still using alcohol or illicit drugs, Circle's goal is to stabilise them on a substitute prescription, or if preferred, plan for detox and rehabilitation. To this end Circle

²⁷ For further information on what this estimate includes and how it's derived, see the presentation Economic and Social Costs of Crime (Scottish Government).

works closely with GPs and prescribing agencies to access substitute prescriptions and with local authority drug and alcohol teams to access detox and rehab services. Circle also links with children and family services to ensure that support with child care can be put in place that enables the woman to access appropriate treatment. Many of these women are likely to have found their way to drug and alcohol services eventually, so the additional cost of Circle clients is likely to be no more than incurring them earlier in the course of their post-release period and therefore relatively small.

6. Analysis

- 6.1 Journeys to desistance are complex. Individuals tend to desist from crime over time as they get older. An intervention from Circle may not reduce an individual's future reoffending from a high level to zero. However, small improvements in outcomes can make big differences. Given the high estimated costs of reoffending, even small reductions in reoffending could lead to large benefits to society.
- 6.2 The costs and benefits of the programme occur over different periods of time. £1 in the future is generally considered to be worth less than £1 today, and its value must therefore be discounted. In order to compare costs and benefits over different time periods, it is necessary to convert estimated figures into a common value for comparison. This is done by calculating the Net Present Value (NPV) of a stream of costs and benefits²⁸.
- 6.3 Circle's costs are assumed, for a typical client, to all occur in the first year that a client is engaged with Circle. This means that the NPV of costs simply equals the average cost per offender of £2,200. However, if Circle directs clients to additional services they would not otherwise have used, then this incurs additional costs. These additional costs will be diverse and particular to each client.
- 6.4 The Scottish Government research above gives an estimated average cost of reoffending for women of £76,000 over ten years. This is not distributed evenly over time but instead diminishes over the period. Discounting as described above gives an NPV of £65,000.

²⁸ At the HMT Green Book discount rate of 3.5%.

- 6.5 Comparing these figures can suggest a level of reduction in reoffending necessary for Circle to achieve in order to break even. At this point, the benefits to society of the programme would be equal to its costs. Beyond this, the programme would be generating a net benefit to society. As some of the cost-savings are average rather than marginal, some of these benefits may only be realised over sufficiently long periods of time.
- 6.6 The analysis suggests that if Circle can reduce reoffending in its clients by **3.4 per cent or more**, then this would represent **a net benefit to society**.
- 6.7 That is, if Circle can reduce the cost of reoffending in its clients by 3.4 per cent below the level that would have happened without the intervention, then the programme overall would represent a net benefit to society.
- 6.8 However, this point estimate does not include the costs of other services Circle clients may be referred to. Circle will refer to a very broad range of services including housing agencies; supported accommodation; food banks; work programmes; GPs; adult mental health services; Legal Support; and rehabilitation centres. These costs should only be included in the analysis if offenders would not otherwise have used the service without the intervention.
- 6.9 The costs of these services vary widely depending on the type, intensity and duration of the support. Some indicative costs are available from a variety of sources. The Home Office Drug Treatment Outcomes Research Study (DTORS) provides an estimate of the average cost of drugs treatment at £6.1k. A report for the National Audit Office by Accenture found average costs of treatments (commencements) in 5 probation areas as:

Requirement	Average cost per commencement		
	Average cost	Highest probation area	Lowest probation area
Unpaid Work	£779	£1,009	£589
Accredited Programmes	£1,791	£2,353	£1,234
Standalone supervision	£652	£809	£561
Specified activity	£747	£1,725	£304

Drug Treatment	£1,923	£2,901	£1,000
Curfew	£1,103	£2,039	£609
Alcohol Treatment	£1,670	£2,769	£571
Mental Health Treatment	£3,703	£5,064	£1,899

6.10 The last two paragraphs demonstrates that there exists a very broad range of the type of services that might be accessed by Circle clients and that these services will have a very broad range of costs per referral. One client may be referred to more than one service. It has not been possible to assess the average cost of these additional services for Circle clients.

6.11 As the cost of client referrals cannot be estimated, sensitivity analysis is used to produce a range of break-even points based on a reasonable range of average additional referral costs per client. The lowest end of this range is to assume no additional referral costs. An upper end of the range might be to assume that the average client is referred to say 3 additional services at the more expensive end of the services range. For example, if an average client is referred to mental health treatment (cost £3,700), drugs treatment (cost £1,900) and given unpaid work (cost £800), this would suggest an upper limit of around £6,500. This would allow for some clients to have yet more expensive referrals, but with the average at £6,500. Recall that this is the additional cost of referrals due to intervention by Circle. If offenders would have used the services anyway without referral by Circle, then the costs are not marginal additional costs of the intervention. This limits the upper range of the costs somewhat.

6.12 At the lowest end of this range, assuming no additional referral costs on average, the breakeven point as described above would remain at 3.4 per cent. At the upper end of the range, an average additional cost of £6,500 per client is assumed. This gives a total average cost per client of £8,700. This produces an estimate of the breakeven point of 13.4 per cent.

6.13 Using this sensitivity analysis approach, the true break-even point is expected to lie in the range 3.4 per cent - 13.4 per cent, depending on the marginal costs of Circle's referrals.

6.14 It is not possible to measure the level of reoffending of Circle's clients as many crimes go unreported or no conviction is made. However, assuming a stable relationship between

offending and convictions, if Circle can reduce reconvictions of its clients of 3 - 13 per cent, this would be indicative of a reduction in reoffending over 10 years of 3 - 13 per cent

- 6.15 The 3 - 13 per cent figure assumes an equal distribution of reduction in reoffending over the ten year period. However, the pattern of desistance leads to lower average reoffending in future years and a lower weight placed on costs in these years due to discounting. This means that the same outcome could be achieved by reducing reoffending in the first year after contact by 17 per cent (with equal reoffending in future years), or by 10 per cent in the first two years.
- 6.16 Similarly, this reduction in reoffending does not have to be spread equally across all individuals. It is not possible to know what pattern of future offending any particular Circle client would have had if they had not engaged with Circle. As discussed in the Annex, some individuals may not have offended in the future anyway before engaging with Circle. However, given this caveat, it is possible to estimate the benefit of complete desistance from crime for an average offender. Assuming that an individual would have followed the typical pattern of offending over ten years as set out above if they had not engaged with Circle, if Circle could get this individual to desist completely from crime, the benefits would be great. For this one hypothetical individual, benefits to society would outweigh costs over 30 times.
- 6.17 This analysis suggests that a small number of big successes, that is where a small number of women who would otherwise have gone on to have a typical path of reoffending instead desist completely from offending, could make the whole programme economically worthwhile even if the majority of women Circle works with do not change their offending behaviour at all.

7. Alternative approaches to assessment

- 7.1 Not being able to conduct a robust statistical evaluation is a common problem with reoffending programmes. Small sample sizes and sample selection bias are common issues. This section explores alternative approaches to assessing a programme like Circles. Such a process will not deliver a single number. Instead, it draws together all the available evidence, in a logical manner, and shows how it is linked to the programme. The Scottish Government

provides advice on assessing the impact of services to reduce reoffending in Scotland. The Scottish Government recommends a 3- step approach.

- 7.2 Firstly, it is important to demonstrate that each element of the intervention is evidence-based and should work if faithfully-implemented. There is a wealth of literature available on what works well based on research conducted in many different countries. For example, see *What works to reduce reoffending* (Scottish Government, 2011) for a discussion of some of the literature particular to Scotland. Some of this is discussed in section 8 below.
- 7.3 Secondly, to understand in detail how the programme will work, a logic model of the programme should be drawn. This will clearly set out how the programme will achieve its outcomes. It will show the journey of an individual with Circle, how and when engagement will take place, relationships that will be established etc. A template and guidance to this can be found from University of Wisconsin (see references).
- 7.4 Finally, a process evaluation based on the logic model should be carried out. This will show how resources were used to set up evidence-based activities and assess how well they were delivered. This could include measures of the level of user engagement and whether offenders' criminogenic needs were met by the programme. Case studies can be used to illustrate examples of who the service worked for and did not work for and why that might be. Further information on process evaluations can be found in the Magenta Book (HM Treasury).

8. Research into similar reoffending programmes

- 8.1 There is some support in the literature for Circle's approach.
- 8.2 The 2011 Commission on Women Offenders report recommendations include that:
- One-stop shops are established for women offenders to access a range of services;
 - Coordinated multi-disciplinary teams are used (e.g. health worker, addictions worker etc) with a named key worker for each woman; and
 - Intensive mentoring should be available to high-risk women.

8.3 The Scottish Government 2011 paper “What Works to Reduce Reoffending” notes that desistance is a highly individualised process and that one-size-fits-all interventions do not work. Offenders value getting personalised support to solve practical problems, being listened to and believed in. Interventions that help offenders find employment, develop pro-social networks, enhance family bonds and increase level of self-efficacy and motivation to change are more likely to have the strongest positive impact on the risk of reoffending. For women in particular, the study recommends a few particular elements:

- A comprehensive and holistic approach aimed at addressing young womens’ multiple needs in a continuum of care;
- Gender-specific programme models and services that address the specialised needs of young women who offend (for example, abuse, relationship skills, self-esteem, self-harm and substance misuse);and
- Resources that utilise the skills and experiences of young women themselves; and positive relationships between young women and staff.

8.4 It is encouraging to note that Circle’s approach and ethos appear to closely reflect these recommendations.

Circle Case Study B

Circle met Sandra during a 6 week sentence. Sandra has had several prison sentences for shoplifting, linked to her heroin addiction. Sandra wanted to become drug-free and to turn her life around.

It is to Sandra’s credit that she has not relapsed as so many events happened that could have taken her back to her previous lifestyle. Before her release from prison Sandra found out she was pregnant. Sandra was concerned about her capacity to parent a new baby, while planning to resume care of her 11 year old son Kevin who was with his father during her imprisonment.

On her release, Sandra found that her imprisoned partner’s younger brother had trashed her house with his friends. This was a blow for Sandra, but she managed to stay calm and got on with restoring her house, with very hands-on support from Circle.

Kevin’s father was obstructive in arranging for Sandra to have contact with Kevin. Circle helped Sandra see that this was understandable given the chaotic lifestyle Sandra had been living and encouraged her to continue to show how she had changed and thereby gain Kevin’s father’s trust.

During her pregnancy, Sandra’s baby was found to have Klinefelter’s syndrome, whereby babies may have weaker muscles and reduced strength, and as they grow older, may have less muscle control and coordination than other boys their age. Sandra took this news badly. Throughout this time,

Sandra was subjected to several child protection social work visits and meetings as there was concern about her ability to parent. Circle supported Sandra throughout this process. No child protection measures were required as Sandra was well engaged with Circle.

Prior to the baby's birth Sandra was doing really well. Her house was lovely, Kevin was spending time equally between Sandra and his dad, and Sandra was engaging with different supports, including counselling for early childhood trauma which Circle linked her to.

Brad was born end August and Klinefelter's syndrome was confirmed. Circle supported Sandra to understand the impact of this and Brad's additional care needs. Sandra's partner, Brad's father, died soon after. It was an accidental death, caused by solvents abuse. Circle supported Sandra through this bereavement and it is to her credit that she did not relapse.

Sandra has continued to engage and is very stable. Brad and Kevin are both thriving. Recently Sandra was filmed about her experience of Circle's support and said:

"Any appointments, anything, one-to-one, she's always there. My son has a condition called Klinefelters, she got me all the information and she comes to all the appointments for that so that's a really good support for me, it's really worked for me. And at times if I'm feeling down and I'm feeling I might slip back a wee bit, I know she's just at the other end of the phone and she'll just come over".

Together Women

8.5 "Together Women" (TW) is a similar programme to Circle on a larger scale across 5 centres in England. It provided intensive, holistic community-based support to women at risk of offending. Unfortunately, even with its relatively large sample size of 660 women, the evaluation results suggested that TW did not have a statistically significant impact on proven re-offending among those women referred to a centre with a recent criminal conviction²⁹.

8.6 However, as discussed at length in the Analytical Issues Annex, an evaluation of TW would have experienced many of the same problems as Circle. Statistical significance can be a high bar to pass. Many individuals involved with TW had positive experiences. Due to the low cost of such programmes and the high potential benefits, very small reductions in reoffending could have positive outcomes, even if these cannot be quantified.

²⁹ Links provided at end of this report.

St Giles Trust – Through the Gates

- 8.7 Another similar programme is the St Giles Trust's programme called "Through the Gates". A 2009 evaluation of Through the Gates by Pro Bono Economics found that the programme had a cost benefit ratio of 10:1, that is, for each £1 spent on the programme, there was around £10 of benefit to society³⁰.

9. Conclusion

- 9.1 Due to data limitations and small sample size, it has not been possible to carry out a full cost benefit analysis. This limitation in no way reflects the quality of Circle's work.
- 9.2 By collecting data on the costs and evidence on the potential benefits of Circle's programme, this paper presents an estimated break-even point for Circle's work of a reduction in reoffending of 3 - 13 per cent.
- 9.3 As has been discussed, it is not possible with the current programme to estimate whether this level of reduction has been achieved in practice. The datasets, sample sizes and time series required are not available to do this. However, qualitative analysis, such as case-study descriptions of the interaction with Circle and its clients, can shed light on the immediate impact on individuals. Robust quantitative studies that have attempted to measure the effects of similar programmes can help to provide evidence of efficacy.
- 9.4 The high costs of female offending, combined with the low costs of the programme, suggest achieving even a small improvement in reoffending could have a significant net positive impact on society.

³⁰ Links provided at the end of this report.

10. Annex – Analytical issues

- 10.1 This annex provides an overview of analytical issues in evaluating Circle’s ‘Meet at the Gates’ programme, assisting female offenders leaving prison. The note sets out issues that would arise with any evaluation of the programme.

Circle’s data

- 10.2 When looking at reoffending, we would ideally want to know whether or not a participant in the Circle programme would ever reoffend again. This is clearly not practical as we cannot observe offences (only convictions) and we cannot know how many more convictions any participant of the programme would have for several decades after the intervention. Therefore, an arbitrary cut-off point is required, i.e. no further reconvictions for x years.
- 10.3 The available Circle data has records of 57 women. Of these, 51 have been released from their ‘index offence sentence’ (i.e. the sentence during which they first came into contact with Circle). The remaining 6 women are still in custody. Of the 51 women who have been released and have received treatment, 12 have since received further custodial sentences in the relatively short time period for which data are available – around 3 years. This is a custodial reconviction rate of **24 per cent to date**. These 12 individuals have between them received 18 custodial sentences since their index offence, giving a custodial conviction frequency for the group of 35 per cent within 3 years³¹.
- 10.4 Population level Scottish Government data on reoffending show that 22.3 per cent of female offenders released from custody in 2009-10 went on to a custodial reconviction within one year. This cannot be compared directly to the reoffending figure from the Circle data for many reasons. Firstly, this is a one- year figure whereas the Circle data is over a number of years. In addition, the Circle sample group is unlikely to be representative of the wider population. Further analysis of reconviction rates and frequencies are available in the Economic and Social costs of crime (Scottish Government) report linked to below. It shows female reconviction frequencies over longer time periods than one year. However, insufficient data are available for Circle to make comparisons.

³¹ For a given population, the reconviction rate is the number of individuals who have received a conviction out of the population. The reconviction frequency is the total number of convictions received out of the population. Therefore, reconviction frequency is always at least as great as reconviction rate, and it is possible for the reconviction frequency to be greater than 100%.

- 10.5 People tend to desist from crime as they get older. Data published by the Scottish Government (one-year reconviction rates, Scottish Government) on reoffending by different age groups show that female offenders over 30 have a lower reoffending frequency on average than those under 30. Since 1997, Female offenders over 30 have an average reconviction frequency of 35 per cent. This compares to 56 per cent for those 26-30 and 64 per cent for those 21 to 25. The average age of first contact with Circle is 30. This means that participants could already be on the road to desistance when they meet with Circle and in the following years compared to the population as a whole.
- 10.6 After controlling for age, it is likely that those with more prior convictions are more likely to reoffend than those with less convictions. Participants have an average of 1.5 custodial convictions prior to their first contact with Circle, with custodial sentences averaging 6 months. Those participants who have not reoffended to date have an average of 1.1 prior custodial convictions and 4.6 months of custodial sentences compared to an average 2.5 prior convictions and 11.4 months custodial sentences for those who have been reconvicted.
- 10.7 These two examples from the data show the difficulty of making comparisons across age groups and convictions history.

Scoping an analysis of the Circle programme

- 10.8 In order to evaluate the success of Circle's programme and the associated value to society, we would need to first isolate and then estimate the marginal impact it has on reducing reoffending. The reduction in reoffending achieved by Circle could then be multiplied by estimates of economic and social cost of crime to arrive at a benefit to society value. However, there are several difficulties with such evaluations. Though it may be possible to find ways around these problems individually, taken together it would not be possible to conduct a robust evaluation.

Sample size

- 10.9 In order to evaluate the success of any trial, a sufficient sample size is essential to ensure that the observed results aren't simply due to chance, or a small number of cases where things

happened to go well. The sample size must be large enough that we can be reasonably confident that the same results would be achieved in the population as a whole as in the sample.

10.10 For reoffending reduction programmes, MOJ: Lart et al (2008) suggest that a sample size of 325 would be needed to validate a difference in reconviction rates of 10 percentage points as statistically robust³². A number of studies with samples of over 100 individuals struggle to find statistically significant and robust results.

10.11 As of October 2011, 59 women have gone through the Circle programme in the three years since the programme began. There is no way to increase sample size save for waiting for several more years of data to be available. The programme may be expanded to help more women per year, but this is unlikely to be done purely for reasons of evaluation. One particular problem of waiting for several years of data is that the nature of the programme is likely to drift or develop over time, so treatments and outcomes may not remain constant.

Creating a comparison group

10.12 To understand the impact that Circle has on reconviction, we would ideally want to know what reconviction rates people treated by Circle would have had if they had not been treated. This is of course impossible as people cannot both be treated and not be treated. There are several ways around this problem which may be considered on a scale of 1 to 5, where 5 is closest to ideal and 1 is the least robust approach³³.

Standard	Description
Level 1	No comparison group
Level 2	Modelled or predicted reconviction rates for group compared to actual reconviction rates for intervention group

³² E.G. if in the control group reoffending rates were 50 per cent, and in the trial group reoffending rates were 40 per cent, a sample size of at least 325 would be necessary to ensure that this difference was not down to random chance.

³³ Adapted from MOJ: Lart et al 2008

Level 3	A comparison group is used without demonstrated comparability (e.g. national averages)
Level 4	Comparison group is matched to intervention group on theoretically relevant factors
Level 5	Random assignment of offenders to the intervention and control conditions.

10.13 A statistical study would create an artificial or actual control group to which the treated population can be compared. A level 3 analysis would do this by selecting a group that appears relevant, e.g. the population of female offenders, and might attempt to show that it is a relevant group through statistical techniques. Level 4 would use statistical techniques to match individuals in the intervention group to individuals in a wider group based on individual characteristics to create an artificial control group. Level 5 is the ideal of a randomised control trial (RCT) where individuals are randomly assigned to an intervention group and a non-intervention control group.

10.14 A **level 5** study would definitely not be possible in this case due to resource constraints and ethical considerations.

10.15 A **level 4** study would be data-intensive. Sufficient variables are needed for both the treatment group and on the control group. The more data that are available, the better the match that can be made. Matching data would ideally include:

- Past offending records including age of first conviction, type of offence, number of convictions and types of conviction;
- Demographic data including DOB, race, family, schooling and profession; and
- Any professional assessments

10.16 All of this data could be used to construct a statistically similar control group. In theory, the future offences and convictions of this artificial control group can be compared to the intervention group. However, this would not overcome the problem of selection bias (see below).

10.17 An initial look at available databases suggest that such variables are not available. For example, it is not possible to establish from available data whether or not an individual has children. It may be the case that individuals with children are far more likely to desist from crime than those individuals without children. Therefore, not including data on this variable would lead to significant biases in the results. In addition, performing such a tight matching exercise may greatly limit the size of the comparison group, again limiting statistical robustness.

10.18 A **level 3** study could be undertaken on broad national level populations, such as all female offenders. However, this group may well have a different offending pattern to the subgroup of female offenders with children. It is unlikely that such a study would be statistically robust.

Sample selection bias

10.19 The Circle programme makes robust statistical inference difficult in respect to sample selection for several reasons:

- **It targets a narrow type of offender relative to the population of offenders as a whole**, i.e. women with children. This makes the identification or construction of artificial control groups difficult, given the absence of administrative data on women offenders who have children.
- **The programme is voluntary**. Only those women who are more likely to desist in future anyway may choose to work with the programme. It is likely to be difficult to identify women of this particular type in the wider population.
- **Women are selected as appropriate for the programme**, which may include an assessment of whether the programme is likely to be an effective intervention for them. As above, it would be challenging to identify a similar non-intervention group in the wider population.
- **Some individuals self-select onto the programme**. Again, this distinguishes individuals on the programme from people not on the programme.

10.20 For the reasons above, comparing Circle results to that of the wider population (i.e. level 3) would be inappropriate.

Other analytical issues

10.21 **Isolating the treatment effect.** People working with Circle may also be participating in other programmes or schemes simultaneously. This makes it difficult to isolate the impact that Circle has, especially as a big part of its work is connecting participants to other services. This also applies to any comparison to the wider population or a control group, who may also be receiving a range of other treatments.

10.22 **Time period.** The Circle programme is still a live programme. 17 participants entered the programme as early as 2008, for whom we can observe post-treatment reconvictions for up to 4 years. 26 participants came into contact with Circle in 2009, 12 in 2010 and 1 in 2011 (so far). For these individuals, we may only be able to observe up to 18 months post-treatment reconvictions. This raises a couple of issues. Firstly, we will not be able to say whether any treatment effects are a permanent desistance from offending or only a temporary desistance due to the programme. Secondly, how to treat varying time periods in the data. We could either divide our sample into yet smaller sub-samples to make the most of the longer time period available for those who were treated earlier, or keep the sample as a whole and only consider further reconvictions up to say 18 months. Both approaches would further erode the robustness of the study.

Conclusion on analytical issues

10.23 Each of the analytical issues explored above would separately suggest caution when considering an evaluation of Circle's programme. However, it is the combination of these issues that rules out a full evaluation. The very small sample size could potentially be overcome *if* we could undertake a robust demographic matching exercise with a similar group. However, we have seen that this will not be possible. This therefore rules out an evaluation of the sort that would lead provide an effect-size estimate such as a 'percentage point reduction in reoffending as a result of the Circle programme' figure.

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