Electronic Monitoring in England and Wales

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Acronyms and abbreviations

BASS	Bail and Support Scheme
EM	Electronic Monitoring
EMS	Electronic Monitoring Services (the contractor)
GPS	Global Positioning System
HDC	Home Detention Curfew
HMCTS	Her Majesty's Courts and Tribunals Service
HMP	Her Majesty's Prison
MAPPA	Multi-Agency Public Protection Arrangements
MoJ	Ministry of Justice
MOPAC	Mayor's Office for Policing and Crime
NOMS	National Offender Management Service (Government organisation responsible for the contract management of electronic monitoring)
NPS	National Probation Service
PID	Personal Identification Device (Tag)
RF	Radio Frequency

Executive summary

England and Wales was the first European jurisdiction to deploy electronic monitoring (EM) technology in 1989 and its use has since grown both in terms of numbers and modalities. England and Wales remains one of the largest and most enthusiastic users of EM in the world. At the time of writing, EM is used mostly to enforce curfew requirements and is deployed as a condition of bail, a requirement of community and suspended sentence orders and as a form of early release under the Home Detention Curfew scheme. The use of GPS technologies are limited to a few high-risk cases and voluntary schemes run by the police. At the time of the research, pilots of alcohol monitoring and bi-lateral victims monitoring were taking place. There was, also, a government commitment to increasing the use of EM and an expectation that EM's role in criminal justice would expand to encompass different technologies (GPS and alcohol monitoring) and new uses. At the same time, growth and developments had stalled because of a protracted procurement process which had delayed the deployment of new technologies and different ways of working. Consequently, the private sector contractor was operating a legacy system largely using previous contractors' equipment and systems. Consequently, the research was undertaken at a time of uncertainty and optimism about the future of EM in England and Wales.

The research formed part of a broader European Commission funded project which was the first empirical comparative study of EM to be conducted. The aim of the project was to compare law, policy and practices in five European jurisdictions focusing particularly on EM's capacity to act as an alternative to custody and to identify best practices to enhance its effectiveness and ensure that EM is used legally, creatively, ethically and humanely (Hucklesby et al, 2016). The research undertaken in England and Wales included an extensive literature review alongside 18 days of observations and 68 interviews with policy-makers, practitioners and managers and operational staff from the EM contractor. The main findings were:

- Electronic monitoring (EM) has become a credible tool of criminal justice.
- EM has universal appeal with many purposes identified. Chief amongst these was its perceived ability to bring about cost savings by operating as an alternative to prison.
- The recent development of EM has been hampered by problems with the procurement process.
- Radio frequency and GPS technologies have complimentary and distinct uses.
- The use of EM is highly structured, uniform and routinized, reducing the potential for its creative application to enhance its effectiveness.
- Private sector involvement in EM is accepted.
- EM remains largely disconnected from the wider criminal justice system.
- Policies and practices to ensure that EM is applied and used fairly with diverse populations are ineffective.
- Only limited data relating to EM are available restricting knowledge and understanding of EM.

It is recommended that consideration should be given to:

- changing the eligibility criteria for HDC to remove the automatic exclusion of prisoners with a history of recall;

- the way in which HDC decisions are presented as the individual responsibility of prison governors;
- the legal regulation of GPS technologies for criminal justice purposes to ensure appropriate and proportionate use;
- piloting and evaluating new uses of EM such as bi-lateral victims' monitoring;
- ways to better tailor the use of curfews to the circumstances of individuals and cases to maximise compliance and completion;
- implementing mechanisms to incentivise compliance including structured phased reductions in curfew hours and ending orders earlier than planned;
- simplifying procedures to enable amendments to be made to monitoring requirements as a result of changes in individuals' circumstances;
- introducing new technologies and ways of working to improve the efficiency and effectiveness of EM such as 'plug and play' and biometric identification;
- ways to provide general support and advice unrelated to EM to monitored individuals;
- developing policies and procedures to ensure staff safety including effective communication of risk information and training;
- introducing consistent breach thresholds across EM modalities;
- developing mechanisms to improve awareness and appropriate use of EM amongst criminal justice practitioners;
- implementing mechanisms to improve joint working and lines of communication between the contractor and criminal justice agencies;
- implementing measures to ensure effective and timely data sharing between EM contractors and criminal justice agencies;
- introducing measures to ensure fair and consistent treatment of individuals from diverse communities; and
- reviewing contract requirements to ensure their workability, manageability and effectiveness for criminal justice agencies and the EM contractors.

1. Introduction

Electronic monitoring (EM) is used at all three stages of the criminal justice process in England and Wales: pre-trial as a condition of bail, as a sentence and in early release from prison (Home Detention Curfew). It is used with adults and juveniles but this research focused on adults only. The principles behind the use of EM at each of these three stages are the same. Defendants/offenders are subject to a curfew, which means they are required to stay in at a particular address, for a fixed number of hours. Radio frequency (RF) technology is currently used for these programmes, which operate under the auspices of the Ministry of Justice contracts. Parallel developments have taken place more recently in police forces which have begun to use GPS technology to track offenders who are released from prison on a voluntary basis. Offenders, primarily prolific offenders (often convicted of multiple burglaries), are GPS tracked 24 hours a day. In the summer of 2014, a pilot of alcohol monitoring, so called sobriety bracelets, began in London by the Mayor's Office (Pepper and Dawson, 2016). The pilot was extended to cover the whole of London in the Spring of 2016 in anticipation of a national rollout (Ministry of Justice, 2016a).

Electronic monitoring under the control of the Ministry of Justice was undergoing a period of change at the time of the research (2015-16). The Ministry of Justice contracted the end to end operation of EM to private contractors, and had done since its introduction in the late 1980s. At the time of the research, Electronic Monitoring Services (EMS) operated the contracts for all uses of EM which are under the remit of the Ministry of Justice (bail, sentences and Home Detention Curfew (HDC)). EMS is part of Capita, who took over the contracts from G4S and Serco in the Spring of 2014. Interim contracts were in place at the time the research was undertaken resulting in EM operating largely as it had since previous contracts were implemented in 2005. The implementation of new contracts, which would involve different models of working, had been delayed for at least 12 months (Hansard, 2015). The delays occurred because of issues with procurement including a scandal with the previous contractors (see below), difficulties with the initial preferred equipment provider and subsequent delays with the introduction of new monitoring equipment. As a result a 'business as usual' model or 'legacy' system was operating at the time of the research. However, work had begun on elements of the new contracts (e.g. the case management and new scheduling systems had been developed) but little had been operationalised.

All previous EM contracts were divided up according to geographic regions with EM suppliers providing an integrated end-to-end service in their areas including the network, equipment and monitoring services. The new contracts altered this arrangement and split the organisation of the operation of EM into four horizontal lots (network, equipment, systems, monitoring services and a service integrator) which were to be provided nationally. The procurement process has been significantly delayed to the extent that an interim contract was implemented at the conclusion of the previous contracts and continued to operate throughout the research period. Three lots were awarded before the research commenced - Capita is responsible for monitoring, Airbus Defence and Space will provide the systems and Telefonica will supply the network. Capita also won the contract to integrate the systems to facilitate a seamless service. There have been ongoing difficulties with sourcing the equipment. The original plan was to procure bespoke equipment. The first preferred bidder was Buddi who later withdrew from the process with the contract subsequently being awarded to Steatite. This caused significant delays to the development of new equipment with knock on

consequences for the implementation of other lots. In February 2016, the government announced that the contract with Steatite had been cancelled resulting in further delays in the procurement process. (Raab 2016). The Government proposed instead to purchase existing equipment. At the time the research was concluded (April 2016) the procurement process for an equipment provider had not begun and there was no confirmed start date for the new contracts.

Interviewees were generally critical of the way in which the procurement process had been managed. They were concerned about the architecture of the new contracts stating that dividing it into four lots was overly complicated and complex potentially leading to gaps in service provision and unclear areas of responsibility. A national contract was preferred over the previous regional one although the police and Police and Crime Commissioners were in favour of local contracts which were viewed as providing them with the flexibility and control over the use of EM. By contrast, a national contract would provide consistency and integration across police force boundaries. EMS managers were clearly of the view that a more efficient process would have been created if contracts had been awarded to one provider who had responsibility for subcontracting and managing all four lots. As one explained:

> I personally think it's far better if you've just got one lot owning it, reporting straight into the MoJ [Ministry of Justice] and saying this is this and this is happening and from the MoJ's point of view it's a lot easier because they go well what are you going to do, sort this lot 3 problem out … whereas at the moment I'm going what are you going to do to sort the lot 3 problem out so you know I just think it's from my point of view it's a better way of managing the contract (Interview 23: 10).

From the National Offender Management Service (NOMS) perspective, the new organisational model would result in cost savings, greater flexibility and more centralised control. Its representatives suggested that the new contracts had delivered on all of these areas producing a lower unit cost for RF tagging and improved service delivery and had enabled NOMS to plan the introduction of wider range of technologies and applications. At the same time, new ways of working had led to a degree of inflexibility and problems with the implementation of EM (see below).

NOMS is responsible for managing the contracts. Interviewees suggested that NOMS managed the contracts much more closely than previously as a result of the problems with the previous contracts. Most visibly NOMS contract managers are based in the monitoring centres and in the words of an EMS representative are 'embedded' into their operation. The closer working relationship between NOMS and EMS was welcomed by both organisations who characterised it as positive, open and cooperative. Some frustrations were voiced by EMS mainly relating to the delays in the implementation of the new systems and the lower than anticipated number of individuals being monitored. On a formal level, the contracts stipulate service levels in relation to monitoring activities including how and within what timescale equipment must be fitted, how violations and calls must be responded to. Failure to meet the agreed service levels under the new contracts will result in financial penalties, although no such penalties were reported to have been incurred during the period of the interim contracts. Despite the contracts clearly stipulating required service levels they remain open to interpretation. This was identified as one of the contributory factors to the problems which arose with the previous contracts (see below).

The fact that EM is operated by the private sector in England and Wales provides an important context to its development and use. From its inception in the 1980s, the Probation Service refused to be involved with the implementation of EM. This decision meant that the government had little choice but to ask the private sector to operate EM. The Probation Service's antithesis to EM has had long-term consequences not least that it is largely separate from, and runs in parallel to, other areas of criminal justice (CJJI, 2008). Communication between the private sector and criminal justice agencies has been continually highlighted problematic (CJJI, 2012; 2008). The separation between EM and probation was regarded as an advantage by some participants, who considered it to have a positive effect on the credibility of EM.

Private sector involvement in EM has also damaged EM's credibility. Almost all media coverage of EM is negative (Nellis, 2005). The causes of this are complex and may relate to public scepticism of community sentences more generally and concerns about the technology. There is little doubt however, that private sector involvement is a contributing factor which led to a greater level of public scrutiny of EM. There have been a number of scandals involving EM. These include several cases in which serious offences have been committed whilst individuals have been tagged (HM Inspectorate of Probation, 2006). Arguably the most serious scandal was not resolved at the time of this research. Both G4S and Serco were under investigation by the Serious Fraud Office for over-charging the government for EM services (Comptroller and Auditor General, 2013). They are accused, *inter alia*, of claiming fees for monitoring offenders who were not actually being monitored. The allegations have led to a number of reviews of EM and the wider contracting landscape in criminal justice (Nellis, 2014; Comptroller and Auditor General, 2013; Ministry of Justice, 2013). This investigation links to broader concerns about the price charged by G4S and Serco (Geoghegan, 2012) which utilised evidence provided by the right-wing think-tank Policy Exchange that it was significantly higher than that charged by these and other contractors in the US. The accusation is that the private contractors have been reaping large profits at the expense of tax-payers.

Despite the controversies surrounding the involvement of the private sector in EM, it looks set to continue into the future and reflects a move within criminal justice more widely towards an increased role for the private sector. In relation to EM, one clear reason for this is that knowledge of EM operations lies within the private sector and has done so since its introduction. One NOMS policy maker explained this as follows:

> I think we've moved down that route a long time ago. Not just electronic monitoring. We've got prisons that are operated privately. We've now got probation … I think that debate's gone to be honest. I think in this country that's not where anyone is. Yes, there [is] resistance to it but I think generally … the boat has sailed. We wouldn't have the capacity or the capability to do this [in the public sector] now. We'd have to upskill and learn and the only place we'd be able to get most of the capability would be from the same people who are bringing it for us from the private sector. (Interview 43: 19)

The use of EM is developing in several areas in England and Wales and spans over two government departments. Policing is the responsibility of the Home Office, although operational policing policy falls under the remit of the Police and Crime Commissioners and Chief Constables. The Ministry of Justice is the Government's

lead department for EM as they are responsible for prisons, probation services and courts. The courts are responsible for imposing bail and community sentences and prison governors decide when to impose EM following prison sentences, subject to eligibility criteria set by NOMS. Curfew hours and lengths are decided by the agency which imposes EM. Once this decision has been made, information is sent to EMS, who install the equipment, monitor the curfew and inform agencies of violations which reach the breach thresholds. Courts make the ultimate breach decisions where they imposed EM (bail, community orders and suspended sentence orders) and the Public Protection Casework Section of the Prison Service make breach decisions for HDC. The police arrest defendants/offenders for bail and HDC returning them to court or prison respectively. The National Probation Service (NPS) are responsible for the breaches of community sentences. Process maps of the monitoring process can be found in the appendices. They highlight the complexities of the processes which led the Joint Inspectorate to use the title 'It's complicated' for its thematic inspection of EM (CJJI, 2008).

1.1 The structure of the report

The report provides a comprehensive overview of the findings of the research conducted in England and Wales. A summary of this report, a briefing paper and report detailing the findings of the comprative research alongside reports covering each jurisdiction inlcuded in the project are available at: http://emeu.leeds.ac.uk/. After summarising existing research from England and Wales and describing the research design, the first sections of the report identify the legal and policy framework in which EM operates, identifies target groups and examines available data on the deployment of EM. It then goes to explore issues related to equipment and technologies. The objectives of EM are then discussed followed by EM regimes and the monitoring process. The final sections cover issues related to compliance and breach, data relating to EM, diversity issues and staffing before ending by considering each jurisdiction's compliance with the Council of Europe recommendation on EM (Recommendation CM/Rec (2014) 4) and possible futures of EM.

2. Previous research on electronic monitoring

EM lacks an evidence base in England and Wales as it does Europe generally (see Hucklesby et al., 2016; Graham and McIvor, 2015). Very few empirical studies have been undertaken since it was introduced in England and Wales. Most of the research carried out so far has been undertaken and/or funded by the Home Office/Ministry of Justice. The focus of these studies have been the evaluation of pilots or new uses of EM (Bottomley et al, 2004; Walter, 2002; Dodgson et al, 2001; Sugg et al's, 2001; Airs et al., 2000; Dodgson and Mortimer,1999; Mortimer and May, 1997; Mair and Nee, 1990). Very little independent research has been conducted (see Hucklesby, 2011a; 2009b; 2008 for an exception). The main issues highlighted by research have been:

- Low take-up - each pilot has identified that EM has not been used as much as expected although its use did increase overtime during the lifetime of pilots (Airs et al, 2000; Dodgson and Mortimer, 1999; Mair, 2005; Mair and Mortimer, 1996; Mortimer and May, 1997).
- Tariff position of EM – research relating to curfew orders suggests that sentencers are unclear about where EM sits in the tariff. It was originally introduced as a high tariff alternative to custody but it is also used in relatively

low level offences. For example, Walter et al. (2001) found that most practitioners they interviewed for their study viewed curfew orders at the top end of the tariff but some also recognised its flexibility in terms of its use and tariff position. Interviewees suggested that curfew orders were particularly useful for offending which was linked to specific times and places.

- Does EM operate as an alternative to custody? - There are only limited and rather dated data on sentencers' views on whether they use EM as an alternative to custody. During the pilot of curfew orders, magistrates 'seriously considered' EM curfews, but did not impose one in 24 cases (Mortimer and May, 1997: 25). In these cases, magistrates reported that EM was a genuine alternative to custody yet only seven of the 24 cases resulted in a custodial sentence. When an EM curfew was imposed, the alternatives thought about by sentencers included custody in 12 of 19 cases. Airs et al. (2000) concluded in their bail pilot study that bail curfews were used as a true alternative to custody in half of cases but that net-widening had also occurred.
- Standalone/combined orders – interviews with criminal justice practitioners early in the history of EM clearly identified a preference for combining EM curfews with other requirements such as supervision or unpaid work (Walter, 2002; Walter et al., 2001). By contrast, some practitioners identified the value of EM curfews as punishment.
- The relationship between EM and probation - early research suggested that the Probation Service and its staff did not engage with EM. They were reluctant to recommend EM in pre-sentence reports (Walter, 2002; Mortimer and May, 1997). Research in the early 2000s found that although probation attitudes towards EM had improved, resistance to it remained and was one of the contributing factors to low take up (Bottomley et al., 2004).
- Equipment - technology has improved since the first pilots and it is reliable (NAO, 2006). Defendants/offenders reaction to EM equipment has been mixed. Some have found it to be stigmatising, especially women (Holdsworth and Hucklesby, 2014) whilst others have suggested that it is used as a trophy or status symbol. Holdsworth's (2014) research also indicates that the equipment is uncomfortable for women to wear.
- Is EM a punishment? - EM is usually viewed by offenders as preferable to prison (Mortimer and May, 1997; Hucklesby, 2005). The evidence relating to whether it is viewed as a punishment is more mixed. Some offenders clearly viewed it as a punishment whilst others did not (Holdsworth and Hucklesby, 2014; Hucklesby, 2005). Whether a curfew was perceived to be a punishment appears to be related to lifestyle, and whether curfew periods disrupts working and social life. Those offenders who are usually 'at home' during curfew hours are more likely to report that EM is not a punishment. However, recent research suggests that this interpretation might be simplistic. Hucklesby (2005) found that even if curfews did not impact directly upon the lives of offenders, the mere fact that the choice of whether or not to go out was removed was viewed as a constraining and as a punishment.
- EM provides structure and may be 'habit breaking' - research suggests that the structure provided to offenders' lives by EM can be helpful in the desistance process (Hucklesby, 2008; Mair and Nee, 1990). Hucklesby (2008) argues, based on interviews with 78 offenders, that EM provides an opportunity for offenders to keep away from the people, places and activities which lead to their offending and in this way can be 'habit-breaking'.

- Families and EM - the research evidence on the impact of EM on families is complex. For some family relationships become strained and there have been some reports of increases in domestic violence associated with EM (Mair and Nee, 1990). There is also evidence to suggest that family arguments can be a trigger for non-compliance (Hucklesby, 2009b). Conversely, families have also been reported to be supportive of offenders, assisting them to comply and reminding them of curfew times and so on (Hucklesby, 2009b). EM has also been shown to improve family relationships with offenders reporting that spending more time at home has assisted with rebuilding or establishing better relationships with families including children. Hucklesby (2008; 2009b) suggests that if relationships are already strained prior to EM being imposed then relationships are more likely to deteriorate. Successive research (Hucklesby, 2005; Walter, 2002) has found that the information provided to families is limited and that they often feel uninformed about EM curfews. A relationship between these findings and violence against monitoring staff has been suggested (Hucklesby, 2005).
- Employment - the impact of EM on employment is also contradictory. For some offenders, EM enables them to become more job ready because they have more settled lives (Hucklesby, 2008). By contrast, research has suggested that employment can be disrupted by EM despite the fact that courts are supposed to consider patterns of employment when setting curfew times (Hucklesby, 2008). Finding employment whilst electronically monitored might be challenging with offenders believing that employers are unlikely to hire them (NAO, 2006).
- Substance use - research on the impact of EM on substance abuse suggests it can decrease use in some cases and increase it in others (Hucklesby, 2008). For example, some offenders describe reduced use of alcohol because they were unable to go out whilst others drank more at home whilst under curfew. In terms of drugs, some reduced their use, others increased use whilst others use remained unchanged (Hucklesby, 2008). Offenders did report reduced use of stimulants and ‘dance drugs’.

2.1 Compliance and reconviction

Research has suggested that the number of violations of EM is high for bail, curfews and HDC (Airs et al, 2000; Dodgson et al, 2001; Hucklesby, 2009b; NAO, 2006; Walter, 2002). Most violations are in the less serious category (time violations, equipment tampers etc) which do not result in immediate breach. No official data on breach rates are published. Dodgson and Mortimer (1999) which was the first study of HDC found that 95 per cent of offenders complied. Breaches of conditions (mainly problems with addresses and withdrawal of consent) was the primary reason why 5 per cent (n=656) of offenders were recalled. Only seven offenders were recalled because they posed a risk to the public. In Dodgson et al’s (2001) study, 68 per cent of the 1,100 offenders were recalled to prison because they breached their curfews. A further quarter was recalled because of changes in their circumstances.

The existence of HDC appears to have impacts within the prison system more generally. Dodgson et al (2001) found that 37 per cent of offenders said the possibility of being granted HDC affected their behaviour and 21 per cent said that the opportunity of early release encouraged them to participate in education or work in prison.

In terms of curfew orders, Sugg et al's (2001) study found that 80 per cent of the 261 offenders subject to electronically monitored curfew orders, for whom reconviction data were available, completed their orders successfully. It is important to note however, that successful completion does not equate to no violations or indeed no breaches because orders are able to continue if courts deem offenders to be suitable. Similarly, Walter's (2002) study of curfew orders during the first year after national roll-out reported a completion rate of 83 per cent. Of these, 65 per cent completed without breach and 17 per cent with breach. A third of the sample were breached for absences (35 per cent), being out for the whole curfew period (29 per cent) and 11 per cent for equipment tampers. Of these, 45 per cent had their orders revoked and were sentenced to imprisonment with a further 23 per cent being given another curfew order. Breaches have been found to be more common for longer rather than shorter curfew orders (Hucklesby, 2005; Walter, 2002). Hucklesby (2005) also identified that curfews of less than the maximum available hours (10 hours or less) and those which finished earlier in the morning (6am rather than 7am) were less likely to be breached. Breaches occurred earlier rather than later on in the orders (Hucklesby, 2005).

Airs et al's (2000) study of the bail pilots found high violation rates in their sample of 198 curfews imposed on 173 defendants. Two thirds of defendants violated their bail curfews but for 95 defendants the violations were less serious and did not result in breach action. A total of 42 individuals were breached with just over half (n=24) being remanded in custody. The team knew of another three serious violations which did not result in breach and seven defendants were rearrested by the police for alleged offending. In total, 142 defendants completed their curfews. Six per cent of their sample absconded which was lower than published absconding rates.

Several concerns have been raised about the process of dealing with non-compliance (NAO, 2006; CJJI, 2008). One, a lack of transparency has been identified in dealing with minor time violations resulting in defendants/offenders not being aware of when they were nearing the thresholds when formal breach action would be taken (CJJI, 2008). Two, delays in returning offenders to custody following breaches of HDC and in EM contractors notifying the courts about breaches of curfew orders have been identified (NAO, 2006). Three, differences in the way in which breaches of HDC and curfew orders were dealt with have been identified, with enforcement of HDC being 'overly assiduous' whereas enforcement of curfew orders was not strict enough (CJJI, 2008: 25).

No published data are available on reconviction rates but three studies have examined reconviction rates for particular uses of EM. Dodgson et al (2001) compared a control group of those who would have been eligible for HDC if it was available with a group released on HDC. They found no significant differences in reconviction rates between the groups during the six month follow up. A second reconviction study was published in 2011 (Marie et al., 2011). The sample was 63,584 prisoners released on HDC who were compared with those who were eligible but not released on HDC. It found that offenders released on HDC were no more likely to be reconvicted than those who were merely eligible. Sugg et al's (2001) study of the second year of pilots of curfew orders found that nearly three quarters (73 per cent) of offenders were reconvicted with two years – the same rate as a comparison group sentenced to other community penalties. Those sentenced to curfew orders had extensive criminal careers (average of eight years) and 40 per cent had previous experience of custody.

3. Research design

The empirical component of this research was conducted between May 2015 and February 2016. Three methods of data collection were used: administrative data provided by NOMS, observations of the EM process and interviews with policy makers, managers and practitioners involved in the provision of EM.

3.1 Administrative data

Published data on the use of EM are limited. At the time of the research, no data were published on the use of EM pre-trial. Data on the deployment of EM as a condition of community and suspended sentence orders were published but only for multi-requirement orders (i.e. those supervised by probation services). No data were published on the use of EM as a standalone order during the sentencing process. More data were published on HDC including the number of prisoners released and breach information but this still leaves significant gaps in knowledge about how EM is deployed.

One of the aims of the project was to create a detailed picture of the use of EM and to measure its effectiveness in terms of compliance and offending. It was not possible to undertake this work because data were unavailable. Data on all individuals subject to EM on one particular day and all those who commenced EM over a period of a year were requested from NOMS. These would have provided detailed information on the stock and flow of EM as well as demographic and criminal justice factors and compliance and breach information. The fact that NOMS were unable to provide these data is of concern. All data relating to EM are currently held by the private contractors. Consequently, NOMS is reliant on them to provide any data they request. Requests were made by NOMS to retrieve these data for this project but it proved largely impossible. Given the importance of EM to the government's criminal justice strategy this position is unsustainable. The lack of data reduces the transparency and credibility of EM. It is recommended, therefore, that data on the deployment of EM should be published routinely.

Limited statistical data were provided by NOMS. This comprised of the caseload of monitored people on 17th March 2014 and 30th November 2015, caseload data between June 2013 and October 2015 and new orders imposed during May 2015. Breach data were requested from NOMS but were unavailable. The project, therefore, provides only a partial picture of the use of EM and it was not possible to map the use of EM in any detail or draw any conclusions about its effectiveness. The lack of available data affected this project detrimentally and will continue to do so for future research unless an effective strategy is put in place for data storage and sharing between NOMS and the private EM contractors.

3.2 Observations

Observations of the monitoring process were carried out to provide a detailed picture of the operation of EM in practice. This included the implementation practices and the day to day operation of EM, focussing on the decision-making and interactions of key professional and non-professional participants in the process. The aim of the observations was to accurately describe the different phases in the operation of EM. They provided a comprehensive understanding the operation of EM and an in-depth

understanding of how EM works, why it works in the way that it does and identify successful and less successful practices. A common structured observation pro-forma was used across all jurisdictions to ensure that observations were comparable. Comprehensive fieldwork notes were also compiled.

A total of 125 hours of observations were undertaken in England and Wales in Spring/Summer of 2015. These included:

- 13 visits across 12 days at the monitoring centres in Manchester and Norwich for a total of 81 hours. These observations covered all aspects of the monitoring process at these sites and covered a 24 hour period albeit not in one session.
- Five shifts with fieldworkers who were visiting individuals to install and deinstall equipment, undertake equipment checks and investigate violations totalling 37.5 hours.
- A visit to the EMS central equipment store (1.5 hours in total)
- Two visits to Offender Management Units in two prisons (5 hours in total)

3.3 Interviews

Interviews were conducted with a wide range of individuals involved in EM. The participants were selected to cover the diversity of practices and different perspectives and experiences of EM. Interviews were semi-structured and used a common interview schedule although the content of interviews differed according the interviewees' roles and responsibilities. Interviews covered the following general areas: interviewees' perspectives on the role and influence of national and EU legal and policy frameworks on the operation of EM; the day to day operation of EM; the controversies and challenges of operating EM; how EM operates with members of diverse communities (race, gender, ethnicity, nationality); the role of the private sector in EM and the procurement process; conceptions and evidence of effectiveness; and the future EM. Interviews took place between summer 2015 and early 2016. On average interviews lasted around an hour. A total of 68 interviews were conducted and included: representatives from government departments (Ministry of Justice, Home Office and NOMS); probation services (NPS and Community Rehabilitation Companies (CRCs)); Public Protection Casework section of NOMS; prison staff involved in HDC decision-making; the police; Police and Crime Commissioners; directors, managers and employees of EMS; and other private sector providers.

4. Electronic monitoring modalities

The following section outlines the legal underpinnings for the various ways in which EM was deployed at the time of the research in England and Wales. This includes voluntary uses of EM and pilot projects, as well as areas where its use may develop in the future.

4.1 Pre-trial

EM is used to enforce curfews, which have been routinely imposed as bail conditions since the Criminal Justice Act 1967 first introduced them. The law relating to bail is now enshrined in the Bail Act 1976 (s. 6) which provides that defendants may be required, before release on bail or later, to comply with such conditions as appear to the court to be necessary to ensure that they surrender to custody; do not commit

offences on bail; do not interfere with witnesses or otherwise obstruct the course of justice and make themselves available for the purpose of enabling inquiries or court reports to be prepared. If conditions of bail are breached defendants can be arrested (s.7 of the Bail Act 1976) and brought back to court for their remand status to be reconsidered. The law does not indicate what conditions may be used or which conditions are relevant to each of the exceptions to unconditional bail and it is because of this that EM could be introduced to enforce curfew conditions without legislation. It also means that magistrates have wide discretionary powers to impose whatever conditions they see fit.

EM was first used as a bail condition during the first trials of EM which began in 1989 but which were not continued (Mair and Nee, 1990). Its use re-emerged around 2002 without legislative change. Its use as a bail condition developed from court use rather than being government led policy. EM had been made available for young people in 2002 as a result of the Criminal Justice and Police Act 2001 and this appeared to trigger and foster its use with adults. The Home Office published a circular in 2006 (Home Office, 2006) which stated that EM 'was available' for use in adult remand cases and that its use as an alternative to custodial remands was encouraged. The Circular sets out the arrangements for use of EM in bail cases involving adults which remain in place. There are no minimum or maximum hours although in practice courts largely stick with the standard 12 hour overnight curfew. EM is available for all adult defendants whether or not they are charged with imprisonable offences. It is used both in cases where there is no likelihood of pre-trial detention and in cases where pre-trial imprisonment is a clear possibility. Breaches are reported to the police who have the power of arrest. Breach action is instigated *inter alia* when defendants have missed a very short period of curfew – shorter than for other modalities of EM. EM is not available for police bail i.e. before suspects have been charged.

4.2 Sentences

Curfew conditions are one of 12 requirements which can be attached to community or suspended sentence orders under the Criminal Justice Act 2003. They can be used alone or in combination with other requirements such as unpaid work and supervision. The expectation is that multi-requirement orders are imposed where more serious offences have been committed although this is not stipulated in law. Standalone EM, i.e. single requirement orders, can be imposed following a wide range of offences from very minor to very serious. Originally curfew requirements could only be imposed for a maximum of six months for between two and 12 hours. They are now available for up to 16 hours a day and for a maximum period of 12 months (s. 71 Legal Aid, Sentencing and Punishment of Offenders Act 2012). Curfew requirements are monitored using Radio Frequency technology. Breach thresholds for time violations differ from pre-trial EM use when community sentences are imposed (see below). EMS and the NPS or CRCs are responsible for investigating breaches of single and multi-requirement community and suspended sentence orders respectively (NOMS, 2014a). Decisions to proceed with enforcement action are made by the NPS.

Probation services case manage multi-requirement community and suspended sentence orders and HDC but are not involved in single requirement orders. However, this does not mean that all multi-requirement orders involve supervision by probation staff. Supervision only takes place when stipulated as one of the other conditions of the community or suspended sentence orders. Most conditions do not directly involve

supervision or even contact with probation services for example, drug and alcohol treatment conditions. In other situations, people under EM may be receiving supervision from probation services because it is a requirement of another order which is running concurrently. For example, an individual subject to a bail curfew may also be serving a community order with a supervision requirement. Consequently, supervision and technological monitoring may sit separately but may take place simultaneously. EMS has no responsibility for supervision of monitored individuals other than to ensure that EM takes place although they have a duty of care to monitored individuals.

There is scope for probation services (NPS and CRCs) to become more involved with EM especially in the area of compliance. The Offender Rehabilitation Act 2014 required probation services to support compliance with *all* community requirements including EM. Interviews with NPS policy makers and operational staff identified the need for more detailed compliance data to be made available to probation services. This would facilitate offender managers discussing violations which have not led to breach with monitored individuals and potentially promoting future compliance. But there are challenges to providing these data. The volume of data are likely to be difficult to manage and probation staff would require training in how to interpret the information they received. They was some evidence that this was already a challenge and that providing information in an easily understandable format would be key to its effective use as one NPS policy-lead explained:

> And the problem is when you're inundated with lots and lots and lots of information, and lots of emails - you know - like one minute late, three minutes late, two minutes late - what ends up happening is that gets - it's an overload of emails. You just - it's too many. You don't read them. And then the danger with that is, obviously there could be one hidden in there, that's a real significant breach, but you've missed it because you're just getting [too many] ... And what we're going to need to work out as a service is - how do we manage the data? How do we control it? (Interview 52: 12).

Additionally, the number of violations would also make it difficult to act upon every violation, thereby potentially damaging the credibility of EM. This issue is likely to be more pronounced for GPS technologies than RF technologies given volume of data available and the requirement for daily charging of equipment. As explained by one interviewee explained in relation to the police:

> You don’t have to do anything to re-charge it [RF tags] whereas with tracking [GPS] tags they will have to be charged. This is going to be a new regime that none of the people who are used to wearing tags are going to be used to. By definition they won’t be necessarily as a rule society’s most compliant individuals, so the whole question of to what extent is those people going to comply with the requirement to keep the thing charged I think is a huge unknown actually. It could go either way; it might be that most people do because the sanction regime if they don’t is well nothing; what is going to happen if they don’t do it? So if you don’t charge up your thing you are going to get re-arrested and brought back before the court and what is the court going to say? It is a bit unlikely in a lot of cases in my opinion that the court is going to lock someone up in prison at that point. So where are the teeth is this question, not sure … if a large proportion don’t [comply] I think the

> MoJ [Ministry of Justice] has got a significant problem to try and deal with because you either persevere with loads and loads of people not doing it in which case they will run all sorts of risks around credibility, the system and all the other stuff that might go around that … (Interview 56: 6).

The same interviewee went onto explain the likely police reaction to breaches relating to charging the equipment:

> … especially if people don't comply with the requirement to charge because we can be absolutely certain, police forces around the country will not welcome being in a position where they are expected to go round and nick Joe Bloggs because Joe Bloggs hasn't actually bothered charging his charger (Interview 56: 16).

4.3 Home Detention Curfews

Home Detention Curfews (using RF technology) is a form of early release introduced by the Crime and Disorder Act 1998. Prisoners aged 18 or over are eligible to be released on HDC for a maximum duration of 135 days. All prisoners serving sentences of over three months but under four years are eligible for HDC with the exception of certain categories of prisoners such as violent and sexual offenders, offenders serving extended sentences and those who have failed to comply with HDC or licence conditions in the past. Officially there is an expectation that all eligible prisoners will spend the last part of the sentence on HDC (HM Prison Service, 2013). Curfew periods must not be less than nine hours but may be up to a maximum of 24 hours. In practice, however, 12 hour overnight curfews are the norm reportedly becoming established following an example provided in initial policy documentation. All prisoners released on HDC are on licences which contain a curfew condition lasting until the half-way point of the sentence.

The Public Protection Casework Section of NOMS is responsible for revoking the HDC licence if EM has been breached. The EM contractor informs them of any breaches. Proven breaches result in immediate recall to prison. Individuals who are recalled for breach of the EM element of HDC remain in prison until their original earliest release date, which is calculated on the basis of the length of the prison sentence imposed. HDC recalls unrelated to EM may result in prisoners being re-released within 14 or 28 days (PSI 30, 2014, NOMS, 2014b). Prisoners serving sentences of more than three months but less than four months must serve a minimum of 28 days in prison before release. Those serving a sentence of more than four months but less than 12 months must serve one quarter of their sentence, whereas prisoners given a sentence of 12 months or more must serve 135 days less than half the sentence in prison (NOMS, 2013). Additional time in prison is added only when there were delays in arresting monitored individuals and equates to the time between the breach and arrest i.e. when they were unlawfully at large. In other breaches of HDC, no additional time is added to prison sentences. Individuals who have breached HDC are ineligible for HDC at any time in the future. Historically HDC operated as a standalone measure but since 2015 all individuals released on HDC are supervised by probation services under the Offender Rehabilitation Act 2014.

4.4 Licence conditions

The Criminal Justice and Court Services Act 2000 introduced powers for the electronic monitoring of released prisoners as a licence condition. The powers were only piloted and were never introduced nationally (Bottomley et al., 2004). However, they remained on the statute book allowing for their use in a small number of cases where offenders are deemed to pose significant risk (i.e. violent and sexual offenders at MAPPA level 3). At the time of the research there were around 20 individuals who were categorised as high risk offenders who were GPS tracked under these arrangements. The cases are managed by NPS who specify curfew hours and inclusion and exclusion zones. EMS provides the day-to-day monitoring of the requirements using a separate IT system, known as Emsys and special arrangements are in place to manage these cases.

The Criminal Justice and Courts Act 2015 (s. 7) amends the Criminal Justice and Court Services Act 2000 to allow the whereabouts of offenders on licence to be monitored via tracking technologies either as a standalone measure or in conjunction with curfew requirements. Interviewees were aware that pilots of these measures were planned.

4.5 Alcohol Abstinence Monitoring Requirements

A pilot of EM to monitor alcohol abstinence was taking place in four areas in South London, under the responsibility of the Mayor of London's Office for Policing and Crime (MOPAC) during the research period. The pilot began in July 2014 and was originally scheduled to run for one year. It was extended for a further six months in July 2015 with a view to it becoming available nationally. The Government's election manifesto supported its national roll-out (The Conservative Party, 2015) and in February 2016, the Mayor of London's office announced its intention to extend Alcohol Abstinence Monitoring Requirements (AAMR) across London (Pepper and Dawson, 2016). The AAMR is imposed as a requirement of community or suspended sentence orders and the legislative framework is contained in s.212A of the Criminal Justice Act 2003 (amended by s.76 of the Legal Aid, Sentencing and Punishment of Offenders Act 2012). AAMRs can be imposed as a standalone measure or with other requirements, excluding alcohol treatment requirements (s.212A (11)). Other conditions which must be met before the requirement can be imposed are: the consumption of alcohol must be an element in the offence committed or have contributed to it (s.212A (9)), offenders must not be dependent on alcohol (s.212A (10)) and provision for alcohol monitoring must be available in the area where offenders are sentenced (s.212A(12)). Offenders are not permitted to drink any alcohol which is monitored via a tag fitted to the ankle, known as a sobriety bracelet, which measures the level of alcohol transdermally.

The equipment provider for the pilot is SCRAM (operating as Alcohol Monitoring Services), a US-based company. The day-to-day monitoring of individuals is undertaken by the main EM contractor, Electronic Monitoring Services. They are responsible for installing and deinstalling the equipment, checking the equipment during orders and monitoring and passing on daily e-mails from SCRAM providing details of violations and liaising with the AAMR team.

4.6 Bi-lateral victims' monitoring

A victims' monitoring pilot was taking place in Northumbria during the research period, funded by the Police and Crime Commissioner. The scheme is voluntary and aimed at defendants on bail for domestic violence offences. It involves the use of a GPS ankle tag which is fitted onto defendants and a handheld GPS device, which is carried by victims. Fixed exclusion zones are imposed usually encompassing victims' home and/or workplace, alongside mobile exclusion zones which follow the movements of victims. Defendants and victims are made aware of breaches of exclusion zones thus minimising the risk of contact between them. Victims were reported to be enthusiastic about the scheme and willing to take part but take up was reported to be low because of defendants' reluctance to participate.

4.7 Police-led GPS schemes

GPS EM was reportedly being used in at least 30 of the 42 police forces at the time of the research although no national data were available. Police-led schemes usually operate under the auspices of Integrated Offender Management (IOM) teams. IOM is a multi-agency partnership approach to reduce reoffending. Co-located teams work with offenders who pose a high risk of harm and reoffending, usually persistent offenders who commit serious offences, including burglary and thefts (Home Office, 2009; Senior et al., 2011). IOM is operationalised differently but most IOMs are police-led and it is the police who have spearheaded the use of GPS tracking in this context. The schemes are 'voluntary' requiring individuals to wear GPS tags and be tracked 24/7. The schemes fall outside of any legal framework so are not regulated. Consequently, individuals may be tracked indefinitely and there are no regulations relating to the use of data gleaned from tracking. In practice, both individuals under statutory supervision of probation services and those who have completed their sentences are tracked. The scale of police schemes is small with the number of individuals tracked in any one force being in the lower 10s. The largest scheme reportedly operated with a maximum of 70 GPS tags although most schemes were reported to have significantly lower numbers and a quantity of unused equipment.

4.8 Criminal Behaviour Orders

EM can be imposed as a requirement of Criminal Behaviour Orders. Criminal Behaviour Orders were introduced by the Anti-social Behaviour, Crime and Policing Act 2014 coming into force in October 2014 and replacing Anti-Social Behaviour Orders. These orders are imposed by courts when individuals are convicted of any criminal offence and when they are satisfied that they have engaged in behaviour that caused or was likely to cause harassment, alarm and distress to any person (Anti-Social Behaviour Act 2003 ss.22 (3)) and that imposing it will assist in preventing similar behaviour (s22 (4)). Both requirements and prohibitions may be imposed and the legislation does not specify what these might be. Failure to comply with orders results in criminal prosecution, carrying a maximum sentence of up to five years imprisonment. Several interviewees raised human rights and proportionality concerns with the use of EM as a part of these orders.

4.9 Sexual Harm Prevention Orders

Sexual Harm Prevention Orders replaced Sexual Offences Prevention Orders in March 2015 under the Anti-social Behaviour, Crime and Policing Act 2014. They are civil rather than criminal orders whose purpose is to protect the public from sexual harm in the UK or abroad. They can be imposed by courts on individuals who have been convicted of, or cautioned for, specified sexual offences and who pose a risk of sexual harm. Orders can be imposed at the time of sentence or later via an application by the police or National Crime Agency. Sexual Harm Prevention Orders prohibit individuals from doing anything which is specified in the order but cannot require individuals to comply with positive actions. The legal definition of a Sexual Harm Prevention Order is deliberately flexible so that it can be used in response to the requirements of individual cases (R v. Richards [2015] EWCA Civ 7) but the prohibitions must be necessary to prevent sexual harm and they must be tailored to the exact requirements of the case (R v Smith and Others [2011] EWCA Crim 1772). GPS tracking was used legally to monitor prohibitions under Sexual Offences Prevention Orders (R v Richards [2015] EWCA Civ 7) and it is expected that this case law will also apply to Sexual Harm Prevention Orders (Harris, 2015). The minimum term of Sexual Harm Prevention Orders is five years. Both the police and Home Office recognised the potential for GPS tracking to be used in such cases. Police interviewees were keen to use it but the Home Office was more cautious because of issues of proportionality.

5. Target groups

In England and Wales EM is available and used for a wide range of defendants and offenders. No criteria relating specifically to EM are provided in law for its use pre-trial or at the sentencing stage. Instead, EM is available to anyone who the courts consider are candidates for bail or community and suspended sentence orders. In theory, all defendants and offenders are eligible for EM. Specific criteria are applied in relation to HDC. Only prisoners serving sentences of between three months and less than four years and who have not convicted of violent or sexual offences and who have not previously breached HDC or other specified orders are eligible. The HDC eligibility criteria are complex, particularly because they refer to both historical and current offending and compliance. Identifying eligibility requires a significant amount of work which is only undertaken by individual prisons relatively late in prisoners' sentences. This reportedly leads to delays in the decision-making process and to some prisoners being released on HDC after their eligibility date has passed, if at all.

Individuals may also be excluded from EM because of their circumstances. A suitable address is required as well as an electricity supply. Individuals may not have a suitable address or they may be unable to return to their normal place of residence because it is linked with their (alleged) offending, for example, in domestic violence cases. In these circumstances, individuals may find alternative addresses themselves with family or friends. Accommodation is also available via the Bail Support and Accommodation Service (BASS) for individuals on bail or HDC (Strickland, 2015; Hucklesby, 2011a). Accommodation is provided in small shared units and numbers around 650 spaces nationwide. There are a number of exclusions including those charged or convicted of sexual offences. No data are available on the number of individuals excluded from EM on the basis on having no suitable accommodation nor are data published on the number of monitored individuals who are accommodated by BASS. Nevertheless, extending BASS, thereby making more accommodation

available, is likely to reduce the number of individuals excluded from EM because they lack an address and may be one vehicle for increasing the use of EM. EM also requires a mobile telephone signal but where this is absent alternative arrangements can be put in place.

The police tracking projects focus primarily on the Integrated Offender Management population i.e. prolific or persistent offenders. Many areas have focussed the project on those offenders who have a history of committing acquisitive crime especially burglary. The schemes are voluntary but have targeted both statutory (i.e. those on licence) and non-statutory offenders.

The target group for the Alcohol Abstinence Monitoring Requirement pilot is much more clearly defined. It targets individuals whose offending is alcohol related but who are not dependent on alcohol. The initial target group were those who committed offences related to the night-time economy (Pepper and Dawson, 2016). However, from the start of the pilot in July 2014 until the end of October 2015, just under one quarter of orders (n=25) were linked to the night time economy (MOPAC, 2015b). The highest proportion of Alcohol Abstinence Monitoring Requirements were received for drink-driving (n=40) and violent offences (n=34) (MOPAC, 2015b). During interviews, it was suggested that the mismatch between the intended and actual target group may have been due to the eligibility criteria and the geographic areas of the courts in the pilot - offenders were required to live in the pilot areas so individuals who travelled into these areas from neighbouring boroughs and committed offences connected to the night-time economy were excluded. The use of Alcohol Abstinence Monitoring Requirement was uneven across the boroughs.

6. The use of electronic monitoring

The limited publication of EM data provides only a partial picture of the deployment of EM because no data are available on important uses including bail and standalone curfew requirements of community or suspended sentence orders. Data published prior to 2013 is also likely to be inaccurate, overestimating the use of EM because of data recording issues linked with the overcharging scandal. Coupled with the problems with obtaining EM data outlined above, it is not possible to identify long-term trends in the use of RF EM. Nevertheless, short term data provided exclusively for this project are presented in Figure 1. Figure 1 shows that the use of EM decreased by 11 per cent in an 18 month period, from 14,762 in June 2013 to 13,210 in October 2015. Despite this decrease, England and Wales remained the highest user of EM amongst the five jurisdictions involved in this study.

The impact of EM on the use of imprisonment is a complex question and no firm conclusions can be drawn from England and Wales. Figure 2 demonstrates that the prison population rose steadily between 2002 and 2014 mainly as a result of an increasing sentenced population, suggesting that the relatively high use of EM at both the sentencing and early release stages has not resulted in falls in the prison population. Indeed, England has one of the highest imprisonment rates in Europe at 147 per 100,000 population (IPCR, 2016) and is also a high user of EM suggesting that EM supplements rather than provides an alternative to imprisonment. Yet, EM alongside other community sanctions has never been defined primarily or legally as an alternative to prison. Its potential applications and uses extend beyond this limited role.

Nevertheless, there is no doubt that the prison population would be higher, albeit modestly, without HDC and potentially other applications of EM.

Figure 1: Number of adults subject to EM between June 2013 and October 2015

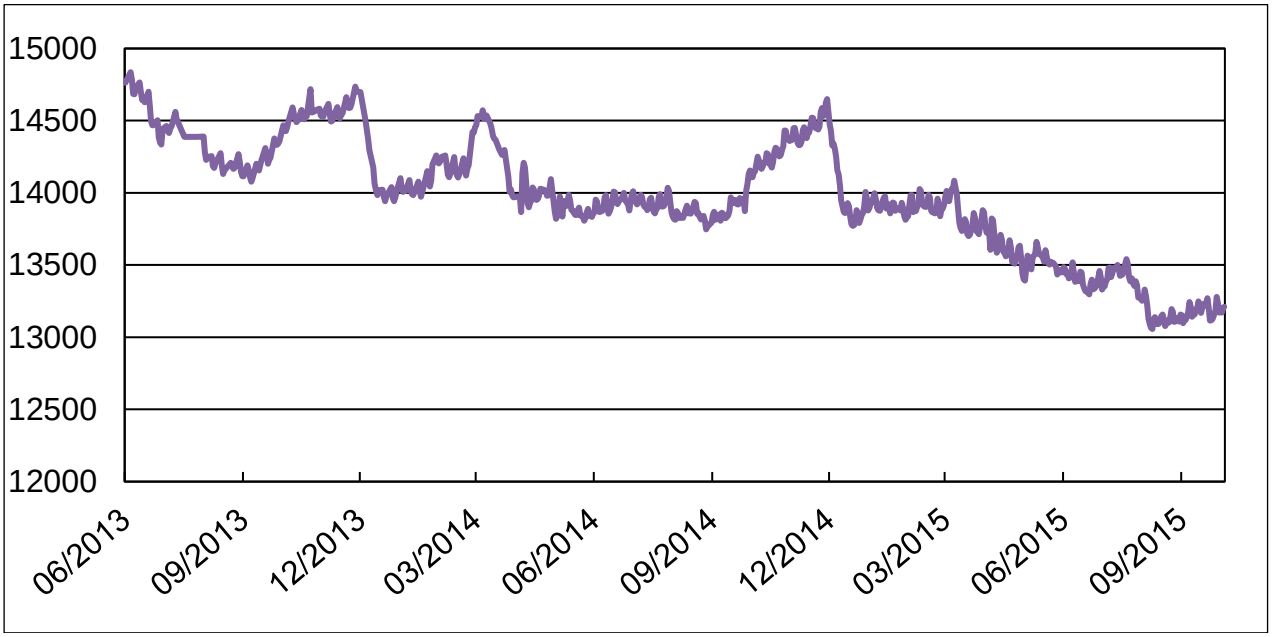
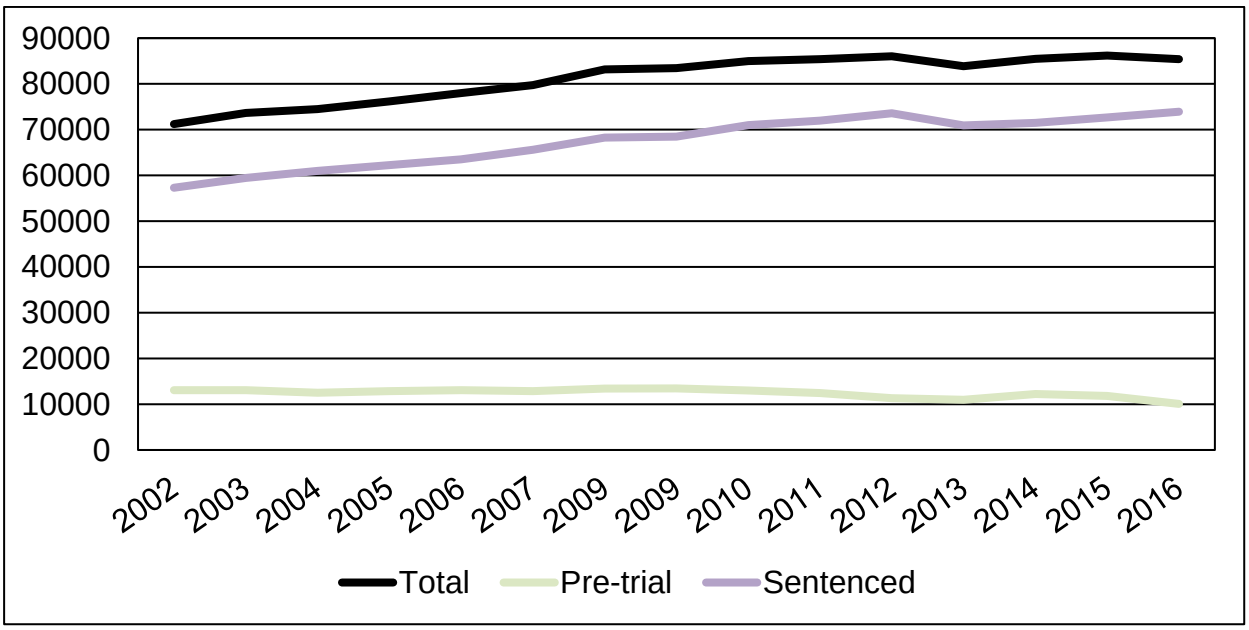


Figure 2 also shows that the pre-trial population has remained stable between 2002 and 2015 at a time when it could be expected to have increased as a result of legislative and policy change (Hucklesby, 2009a). It is possible, therefore, that the introduction of EM for this group has reduced the use of pre-trial imprisonment but this is impossible to prove.

Figure 2: Prison population England and Wales, 2002-15



Source: MoJ; 2014 (2002-2014); 2015b (2015); 2016b (2016): Table 1.1. All figures are for 30th June with the exception of 2016 which relate to 31st March.

Table 1 provides an overview of the total number of individuals over the age of 18 who were subject to RF EM on 30th November 2015 using data provided by the Ministry of Justice. It demonstrates that community sentences accounted for half of all EM use. Single and multi-requirement use of EM for community sentences was almost even at 2986 and 2931 respectively. Table 1 also shows that just under a third of use was at the pre-trial stage as a condition of bail with a fifth relating to early release under HDC. It should be noted that the data presented in Table 1 makes no distinction between requirements attached to community and suspended sentence orders. It proved impossible for NOMS to provide these data because of the way in which EMS records orders on its IT system.

Table 1: Number of adults subject to EM 30 November 2015

	Number	%
Bail condition	3617	31
Community sentence (community orders and suspended sentence orders)	5917	50
Home Detention Curfew (HDC)	2208	19
Total	11742	100

6.1 Community orders

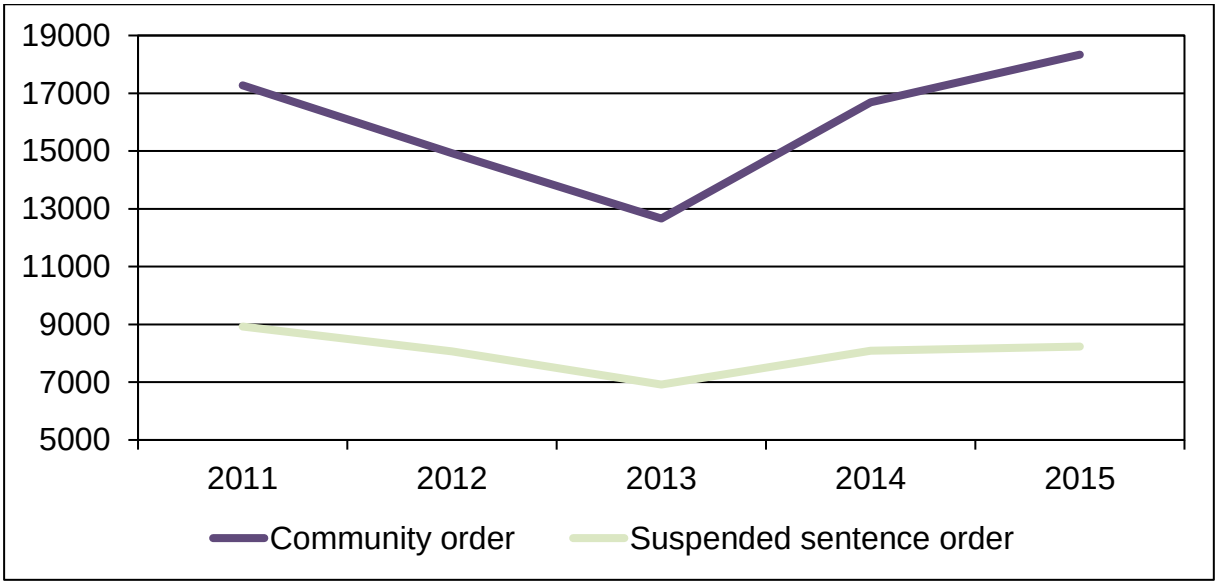
Data on the use of EM as a requirement of community and suspended sentence orders are only published by the Ministry of Justice for offenders subject to multi-requirement orders i.e. if orders are supervised by probation services. Standalone EM requirements attached to community and suspended sentence orders are not included in these data which therefore underestimate the number of individuals subject to EM at the sentencing stage. Consequently, there are significant gaps in published data.

Figure 3 shows multi-requirement community orders and suspended sentence orders which included EM curfew requirements and which began between 2011 and 2014. Data are published prior to 2011 but have not been included in Figure 3 because of concerns about their accuracy (see above). However, the statistics prior to 2011 suggest that the use of EM in multi-requirement orders at the sentencing stage has increased steadily since 2005. Figure 3 shows that the use of EM as one of at least two requirements of community and suspended sentence orders dropped between 2011 and 2013. Interviewees provided a range of potential explanations for this decrease in use of EM which included: reduced credibility of EM as a result of the overcharging scandal, although some interviewees suggested that this had made little or no difference; the cessation of work by EM contractors in courts to promote the use of EM; a reduced number of recommendations for EM from probation staff; changes to probation services; changes in sentencing guidelines; and an increase in offenders with unsuitable accommodation and chaotic lifestyles.

Figure 3 also shows that the use of EM as a requirement of multi-requirement community and suspended sentence orders began to recover in 2013. Between 2013 and 2015, the use of EM as part of a multi-requirement order increased by over two fifths for community orders (from 12,665 to 18,336) and around a fifth for suspended sentence orders (from 6918 to 8235) (MoJ, 2016b: Table A4.9). The increase in the

use of EM at the sentencing stage may simply be a bounce back to previous usage levels after EM has begun to recover its credibility. Alternatively, it may be explained by new legislation enshrined in the Crime and Courts Act 2013 (Schedule 16, enacted by S44) and enacted in 2013 which requires a punishment element to be included in all community sentences. Other potential explanations include sentencers preferring to use EM at a time of significant change in probation services or a shift from standalone EM to its use as part of multi-requirement orders or indeed elements of all or some of these explanations.

Figure 3: Number of multi-requirement community and suspended sentence orders commenced between 2011-2015 which included curfew requirements



Source: MoJ, 2016b: Table A4.9

Figures 1 and 3 suggest that the caseload of EM (the stock) has been falling at the same time as commencements of multi-requirement community and suspended sentence orders (the flow) have been increasing. There may be a number of explanations for this, none of which could be explored empirically because of the lack of available data. One, the use of EM as a bail condition has declined; two, there has been a shift from standalone to multi-requirement orders; three, the length of curfew requirements has decreased reducing the number of offenders on EM at any one time; and four, data are inaccurate. It is, however, plausible to suggest that the over-counting of individuals subject to EM, which took place prior to 2011, was most pronounced for pre-trial use. This is because individuals on bail may be more likely to be on multiple orders running concurrently, whether multiple counts of bail and/or a mixture of bail and community orders, and statistics counted the number of orders which included EM rather than the number of individuals thereby inflating EM usage figures.

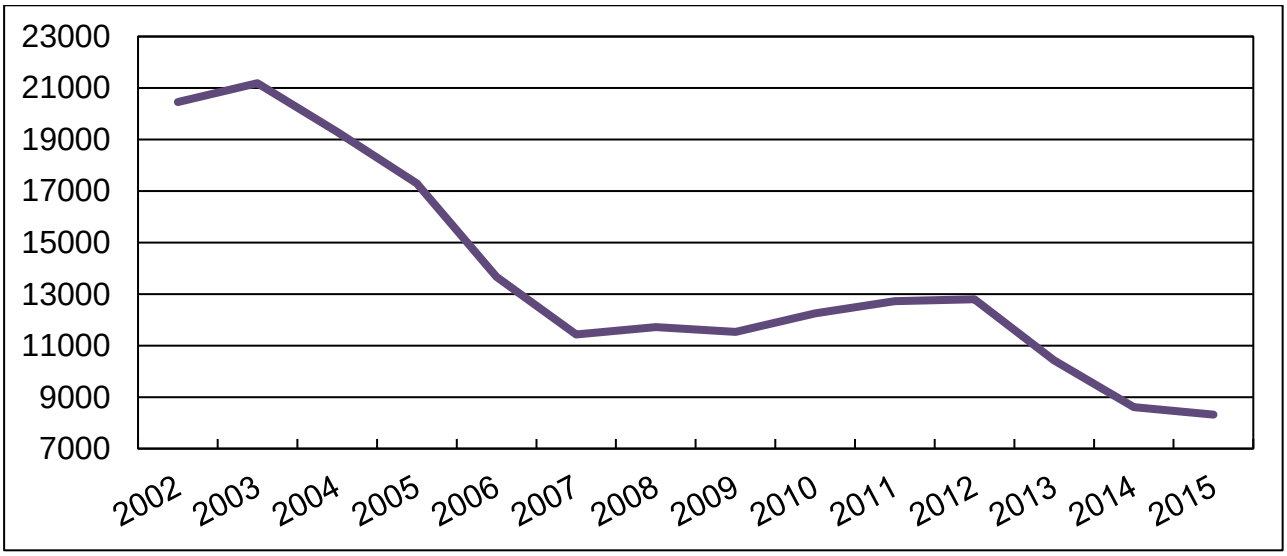
In 2015, a total of 91,224 community orders and 46,515 suspended sentence orders under the supervision of probation services (i.e. multi-requirement orders) were imposed (MoJ, 2016b: Table A4.2). Curfews are one of 12 nationally available requirements which can be imposed on community and suspended sentence orders. Curfews were the fourth most used requirement when deployed in combination with others. EM was imposed in 12 per cent of community orders in 2015, up from 8 per cent in 2013 indicating an increasing proportion of multi-requirement orders include

EM. The use of EM in combination with other requirements of suspended sentence orders was 10 per cent in 2015, up slightly from 9 per cent in 2013 (MoJ, 2016b: Table A4.9). Only very limited data are published on combination of requirements although the majority of community sentences consist of one or two requirements (MoJ, 2016b: Tables A4.8 and A4.10).

6.2 Home Detention Curfew

Much more data are published relating to HDC than other applications of EM. Figure 4 demonstrates that the use of HDC has decreased since 2002 dropping from a high of 21,188 per annum in 2003 to 8,319 in 2015.

Figure 4 Number of prisoners released annually on HDC 2002-2015



Source: MoJ, 2015: Table 3.3 (2002-2014); MoJ, 2016b: Table 3.4 (2015).

The decline in the use of HDC shown in Figure 4 is at least partially explained by a reduction in the eligible prisoner population. Three main groups of prisoners are ineligible for HDC. Nearly half of the prison population are ineligible for HDC because they are serving determinate sentences of 4 years or more (35 per cent, n=29,988 2016) or indeterminate sentences (13 per cent, n=11,505) on 31st March 2016 (MoJ, 2016b: Table 1.1). The growth in the number of prisoners serving four years or more in recent years has been significant. Similarly, an increasing proportion of the prison population were serving sentences for sexual (17 per cent, n=12,240) or violence (26 per cent, n=18,865) offences on 31st March 2016 (MoJ, 2016b: Table 1.2b). Together these offences comprise nearly half of the prison population rendering them ineligible for HDC. Recalled prisoners are ineligible for HDC and their numbers have been rising also. On 31st March 2016, the recalled population was 6564 representing a 15 per cent increase on 2015 and comprising around 8 per cent of the prison population (MoJ, 2016b: Table 1.1). Despite some overlap between these three groups, the proportion of the prison population who are ineligible for HDC is significant.

HDC decision makers identified a number of other factors which contributed to HDC being used less and made suggestions about how it could be implemented more effectively and used more widely. One, delays in the process to grant HDC were commonplace. The process itself involves various stages before decisions can be made and delays were reported to occur in all parts of the process. The time taken for

offender managers to make assessments of the suitability of accommodation was the most commonly cited reason for delays. Prisons are reliant on offender managers based in the community giving them no leverage to speed the process up. This is compounded by offender managers having no existing relationship with some prisoners and by other prisoners not having identified offender managers. As a result, prisoners reportedly regularly missed their eligibility date for HDC, which meant they remained in prison for longer than was necessary. HDC decision makers also reported occasions when the HDC period was missed entirely and prisoners were released on their original release date.

Two, the numerous and complex grounds for ineligibility contributed to HDC not being used as often as it could be. HDC decision makers stated that criteria were overly complex and restrictive. One example is the rule that prisoners who have previously breached HDC or some other forms of licence are ineligible for HDC forever. This inevitably reduces the number of eligible prisoners and increases the pool of ineligible prisoners over time. Breaches of any kind and at any time in the past, including of bail and community sentences, were also viewed as reasons not to grant HDC. An HDC decision-maker summed up these views:

> … I think in terms of the HDC process I think that it's very complex and I think it could be reduced in terms of the complexity. I think it should be more clear [sic] in terms of who is eligible or who is ineligible. The eligibility bit's the easy bit. It's the ineligibility bit which is the complicated part. I think that some of the breaches and recalls are unfair to make somebody ineligible (Interview 36: 30).

A policy-maker from NOMS supported this view:

> So we have over time brought in tighter and tighter controls in relation to who's eligible, who's not eligible. So if you have had a previous home detention curfew failure you can't get it again. I think that's a bit silly because surely the answer would be if you muck around, you breach the terms of your home detention curfew you get recalled to custody. That's teaching you a pretty hard lesson isn't it? I think it means more likely that you will comply next time you're out actually. But under the system currently you're stopped from ever having home detention curfew again. (Interview 42: 10)

Several interviewees also raised issues with some of the criteria for ineligibility relating to offences. In particular, the automatic ineligibility which arises from being convicted of carrying a bladed article as one decision-maker explained:

> I think there are some anomalies in there. I find it difficult to reconcile the fact that somebody who's been convicted of having a bladed article in a public place is automatically excluded and yet as we've seen there, some of the violent offences that can still come up such as assaults … so I think that's a little bit of an anomaly. I think we do need to send clear messages out and there are quite rightly offences that should preclude people from HDC, sexual offences and offences against children (Interview 39: 9).

Three, the risk averse approach to HDC decision-making reportedly results in a large proportion of eligible prisoners being deemed unsuitable for release. Interviewees in

one prison suggested that only around 50 per cent of eligible prisoners were granted HDC. Despite a presumption in favour of release in policy documents, it was clear from the interviews with decision-makers that they viewed HDC as a privilege and not a right. HDC was something which had to be earned through good behaviour whilst in prison and throughout individuals criminal careers. The assessment process was reported to be extremely rigorous with information and reports collected from a wide range of individuals and documents. Decision-makers suggested that they needed to ensure that every last piece of information was in place before they would make decisions. They reported often having to go back for additional information, adding to the length of time taken to make decisions. The overriding picture from the interviews was that decision-makers were looking for every reason not to grant HDC with only those prisoners posing a minimal risk being released. Given that HDC only enables prisoners to leave prison up to three and a half months earlier (but in practice often less) than their original early release date and that they will almost inevitably be released then, the assessment process appears to be very stringent and more a kin to parole decisions than HDC. It also adds to the time taken to make decisions and delays releases. The reason provided by decision-makers for the stringent decision-making processes was fear of getting it wrong and a serious incident occurring for which they would be held responsible and which would dent the credibility of the institution. This is fuelled in part by the context of EM in England and Wales and the fact that it operates against a backdrop of negative media attention and high-profile scandals. This may also be felt more keenly in private prisons which come under more public scrutiny than state run prisons.

Four, the decision-making criteria are much wider in reality than the HDC policy suggests. HDC policy indicates that compliance should be the focus of decision-making (HM Prison Service, 2013). In practice, however, all decision-makers interviewed focus on risk as the overriding criteria in their decision-making. Risk was defined differently by decision makers and often encompassed several risks. For example, one decision-maker stated when asked about their decision-making criteria:

> Just the three main ones … you know the risk of serious harm, the risk of re-offending and the risk of breach, they are the three main considerations that we would have … (interview 39: 5).

For some interviewees the risk related to the likelihood of reoffending was of overriding importance as explained by one decision-maker:

> In my decision making, a lot of my decisions are based around risk to the public and the continuing cycle of reoffending, if they're going to leave this facility and go straight out into that … but on the other hand if they've got a job, if they've got housing, if they've made good links, if they've maybe been working out on release on temporary license, if everything is in line … although we don't have that many released on temporary licenses at the moment. We have had people working outside facilities and some of those it's just natural progression and they deserve HDC because they've already proved to us. A little bit of what I also look for is where the individual is going out to, where their accommodation is, if their accommodation is slap bang in the middle of an estate where they have continuously been a victim of drug users et cetera and they're going back into the same group and they've got nothing supportive around them which will reduce reoffending. I'll also

> look at that as well because it's not just about risk to the public. It's about that individual actually, breaking that cycle … It may be good for the individual to actually say no not at this time (Interview 32: 4).

6.3 Gender, ethnicity, age and geographic differences

This section explores available data relating to gender, ethnicity, age and differences based on geography. It suggests that not all of the differences in the use of EM can be explained by legal factors but that can conclusions are limited by the paucity of data.

The majority of monitored individuals are men. Women comprised 9 per cent of adults on bail (n=311), 12 per cent of those on HDC (n=262) and 17 per cent of adults on community sentences (n=1005) on 30th November 2015. No data are available on the use of EM amongst minority ethnic groups and these data are routinely missing from court orders received by EMS. EM is used with men and women in all age categories, but a higher proportion of men were aged between 21 and 24 (24 per cent and 18 per cent respectively) for community sentences on 17th March 2014, compared to a higher proportion of women aged between 30 and 39 (29 per cent and 24 per cent respectively).

There are differences in the use of EM according to geography. A high number of orders are made by a small number of courts. For example, Table 2 demonstrates that over a quarter (26 per cent) of EM bail conditions being monitored on 17th March 2014 were imposed by 13 magistrates' and Crown courts which each imposed 50 or more EM bail conditions. Table 2 shows similar patterns of deployment in relation to community and suspended sentence orders but the use of EM is more widely spread. A total of 24 courts imposed 50 or more orders which were on the EM caseload on 17th March 2014 comprising a third of all orders. Some of the same courts appear as high users of EM both at the pre-trial and sentencing stages in Table 2. Yet, as Table 2 also shows nearly all the courts using EM as bail conditions most frequently are in London with only three large metropolitan courts (Birmingham and Nottingham magistrates' court and Birmingham Crown Court) having over 50 individuals on EM at any one time. By contrast, courts in large urban areas outside of London were the highest users of EM as requirements of community sentences.

The size of the courts may provide some explanation of the differences in the use of EM. However, this does not fully account for the varied use. Low levels of knowledge and understanding of EM and its potential uses was consistently highlighted by interviewees as a contributor to low and uneven use. The previous EM contractors had engaged in valuable work with criminal justice agencies including courts, explaining how the equipment works and how it could be used creatively. This work was reported to have ceased during the procurement process and EMS had not undertaken similar work since the interim contracts began. Consequently, awareness raising activities had not been undertaken for a considerable period of time, reportedly contributing to the limited knowledge of criminal justice personnel about EM and low and uneven use. Interviewees stressed the importance of this type of work recommencing to increase use and to ensure appropriate and creative use. They were, however, split about whether it was a legitimate role for the EM contractors or whether it should be undertaken by state agencies.

Table 2 Number of individuals subject to EM on 17th March 2014 by remand or sentencing court			
Court	On bail	Court	Under sentence
Westminster magistrates' court	185	Birmingham magistrates' court	143
Marylebone Road magistrates' court	111	Manchester City magistrates' court	135
Snaresbrook Crown Court	92	Bristol magistrates' court	108
Camberwell Green magistrates' court	77	Liverpool magistrates' court	107
Thames magistrates' court	73	Bristol Crown Court	85
North London LJA at Highbury Corner magistrates' court	68	Chelmsford magistrates' court	84
Birmingham magistrates' court	64	North London LJA at Highbury Corner magistrates' court	84
Birmingham Crown Court	63	Thames magistrates' court	82
Hendon magistrates' court	63	Nottingham magistrates' court	76
Isleworth Crown Court	56	Snaresbrook Crown Court	75
Woolwich Crown Court	56	Birmingham magistrates' court	143
Southwark Crown Court	55	Manchester City magistrates' court	135
Nottingham magistrates' court	52	Bristol magistrates' court	108

7. Equipment

Three types of equipment are currently in use in England and Wales: static location monitoring (RF), tracking technologies (GPS) and behaviour monitoring (alcohol monitoring). RF technology is contracted by NOMS and was supplied by G4S (and Serco in the first few months) at the time of the research. It consists of two pieces of equipment, a personal identification device (PID) which is fitted to the ankle and the Home Monitoring Unit which is connected to the electricity supply in accommodation of monitored individuals. The monitoring relies upon radio frequency signals and detects whether individuals are present or absent within the range set by monitoring officers. RF PID batteries have a maximum of 350 days use and they are non-rechargeable. PIDs are changed when batteries are 60 days from maximum usage, to avoid any disruption to monitoring. Intentional damage of equipment is a violation and may result in breach and/or individuals may be charged with criminal damage. PIDs can only be removed officially using specialist equipment which only the monitoring company have. Consequently, PIDs have to be cut off if they are removed by other

agencies including prisons after recall, the police when individuals are arrested and hospitals if individuals are admitted. PIDs are supposed to be retrieved from other agencies but several interviewees suggested that significant numbers remained uncollected.

Several different types of GPS technology were in use at the time of the research. NOMS equipment is supplied by G4S. Buddi supply the majority of Integrated Offender Management teams but other providers are also being used. All GPS equipment tracks offenders movements using GPS signals backed up by mobile signals when GPS is unavailable or weak. Location data are collected in real time but not generally accessed on this basis. As far as we are aware, active tracking does not routinely take place in England and Wales although it is technically possible. Currently, GPS equipment is usually used primarily to monitor exclusion or less routinely inclusion zones retrospectively. The G4S system works by sending alerts to responsible officers when exclusion zones have been breached. The tracking data are not routinely made available for analysis. The Buddi equipment also works on the basis of alerts but has a web-based interface allowing police and probation officers to access the tracks of those being monitored. This has the added value of allowing comparisons to be made between the movements of offenders and crime incidents. Police forces are routinely analysing tracking data to investigate crime and to gain intelligence and linking it with CCTV and ANPR records.

At the time the research took place, EMS used a software system for their operations called Integrity. The system was designed and is maintained by G4S who provide a sub-contracted service to EMS. EMS was unable to take over responsibility for the system because it is a shared platform across all G4S's UK operations including Northern Ireland and Scotland where they remain the EM providers. A new platform will be introduced when the new contracts go live.

The MOPAC AAMR pilot uses SCRAM equipment. The equipment consists of a transdermal ankle tag and a monitoring box. The tag samples skin perspiration to test for alcohol consumption every 30 minutes and downloads the information to the monitoring box twice a day at prearranged times (usually overnight). If valid reasons are provided for individuals not being at home then boxes may be moved to enable data to be downloaded at other locations. Tags are reportedly very sensitive and are able to pick up alcohol traces in the environment. The average number of tests during orders was reported to be 2,600 or approximately 45 per monitored day (Pepper and Dawson, 2016). The AAMR operates via a web based system, also known as SCRAM, which is based in the US. Data are sent digitally at regular intervals from base stations to SCRAM. Any violations are reported back to EMS on a daily basis.

7.1 Storage and cleaning of equipment

When equipment is removed from individuals, straps are removed and discarded. The remaining equipment is cleaned by field staff after every use. During observations, it was noted that the thoroughness of cleaning varied and it often took place in the boot of cars. Equipment was also reused on the same evening it was removed from individuals. Such practices raise health and safety as well as reliability concerns.

Fully functioning equipment is kept by the field staff until it is reused. Most field staff are now homeworkers and are required to take responsibility for equipment. Several

sets of equipment are kept by field staff to ensure that they have sufficient for their shifts. Equipment is dropped off and picked up from a network of secure lockers. Equipment in the procession of field staff should be stored in the boot of the car during shifts and kept in their homes between shifts. Officers have the option of having vehicles for personal use but are expected to remove the equipment from cars when not at work. In practice, however, equipment was not observed to have been removed and appears to be permanently stored in the boots of vehicles.

7.2 Electronic monitoring technologies

Since the late 1980s, the same RF technology has been used in England and Wales, although it has improved in terms of its capabilities and effectiveness. A GPS pilot took place between 2004 and 2006 involving mainly offenders released from custody (Shute, 2007). An evaluation of the pilot found significant problems: it was used less than expected; the breach rate was 56 per cent; in just over half of breach cases the technology played no part in the breach; the reconviction rate was 26 per cent; the amount of information generated was very large; there were technical problems with the technology; very little active tracking took place; and it was costly (Shute, 2007). As a result, the government made the decision not to roll out the scheme nationally and GPS has not been used again under the auspices of Ministry of Justice contracts (except for a very small number of exceptional cases (see above)). Some commentators have blamed the lack of technological innovation on the private sector companies (Geoghegan, 2012). But it is also true that until recently (and perhaps not even now) GPS technologies have not been sufficiently robust or cost-effective to be used on a large-scale and certainly do not perform to the very high expectations of some commentators. Nevertheless, the government originally envisaged that under the new contracts, RF would be replaced with multi-purpose ankle tags (MATS), which would use a hybrid technology which incorporated both RF and GPS. As discussed above, the Government has since changed its policy and instead will procure GPS only equipment which already exists in the market. The Government continues its commitment to greater use of GPS tracking in the future and pilots are scheduled to commence in the Autumn of 2016 to explore how they can add value to the EM programme (Cameron, 2016).

RF technology was viewed positively by most interviewees. Two interviewees summed up others views. A Ministry of Justice manager stated:

> I think there is a place for the current [RF] tags …That's what it says on the tin. It works. People trust it. I think that's going to remain a part of our solution for some time (Interview 42: 5).

A second interviewee concurred:

> I think for absolutely sure it does because it is relatively simplistic technology that is well proven and if you can't do anything else you can; basically curfew tags 'work' in the sense that by and large they do keep people in their houses. I mean okay there are plenty of exceptions but by and large it works. So I think that that is always going to be the fall back position (Interview 56: 20).

RF was seen as fit for purpose, robust and very difficult to circumvent without being detected. The length of time that RF technology had been used reflected its success according to many interviewees. It also meant that there was a clear understanding of how it worked and that any problems had been ironed out or accommodated. The simplicity, understandability and low cost of RF technology was also considered to be amongst its strengths. It also has the added value of providing structure to monitored persons lives when compared to GPS. A widespread view was that RF monitoring was a proportionate and effective response for the majority of individuals under EM and that additional functionality i.e. GPS tracking was disproportionate and unnecessary for most individuals. Many interviewees also acknowledged that RF technologies had not been improved incrementally and technological advances should now be incorporated into the technology.

There was general acknowledgement that GPS would be used more in the future particularly for targeted populations of offenders most notably sex offenders and other high risk groups. The police and Police and Crime Commissioners (PCCs) were the most enthusiastic about GPS technologies generally favouring their increased, and often exclusive, use. Without exception, the police and PCCs viewed current government contracting arrangements as restricting or preventing their use of GPS EM. The basis of their enthusiasm for GPS was the potential contribution of GPS technologies to policing particularly its ability to deter crime and reduce costs. Outside of these groups, however, interviewees were more circumspect about the current police use of GPS specifically and the use of GPS generally. In relation to the former, concerns were raised about whether the police were using GPS and the data gleaned from it appropriately because they were using it for matching individuals to recorded offences and for intelligence gathering. There were also concerns about the extent to which individuals freely consented to being tracked given that they were often asked to participate in criminal justice contexts, by the police and with inducements to consent.

In relation to the use of GPS more generally, interviewees outside of police circles viewed GPS as usefully supplementing, but not replacing RF technology. GPS has the advantage of being able to implicate or exonerate individuals from specific offences and monitor compliance with exclusion zones which were viewed as particularly useful in cases of domestic violence. Indeed, the potential for EM to be used in cases involving domestic violence and the introduction of bi-lateral victims' monitoring schemes was supported by a significant number of interviewees, although only with clearly defined and readily available back up to deal with critical incidents. The drawbacks of GPS, limited battery life and weak signals, were widely acknowledged as restricting its usefulness. Requirements to charge equipment were often viewed an onerous, attachable chargers would assist but individuals running down batteries, whether on purpose or by accident was viewed as a significant challenge for the credibility of GPS, its enforcement and cost-effectiveness. In particular, interviewees anticipated that a significant additional burden will be placed on police resources because police forces will be required to arrest monitored people for failing to charge their equipment in addition to the other breaches. Concerns were also raised over the unfamiliarity of GPS equipment among criminal justice practitioners and the potential impact for take-up. Low take up has dogged the implementation of new EM technologies and new uses of existing technologies (Bottomley et al 2004). Interviewees identified that a lack of understanding of how RF technology works

remains amongst some practitioners and expected this to be exacerbated with GPS technologies. A clear gap was identified between expectations of GPS equipment and its actual use relating to an expectation that real time active monitoring takes place when there are no plans to implement this form of tracking. Further misunderstandings arose from failing to appreciate the limits of the technology i.e. that tags can always be removed.

The delays in the implementation of 2013 contracts were inextricably linked to delays in the delivery of the promised new equipment which was to provide dual RF and GPS capability, thereby dealing with the perceived inadequacies of both technologies. Frustrations with the contract arrangements also related to their perceived inflexibility. Some interviewees pointed to different technologies (usually GPS but also alcohol and victims' systems) which could not be utilised under existing or new Ministry of Justice contracts. They derided the inflexibility of old and new contracts with one equipment provider over lengthy timescales echoing recent reports. They wanted to see much more flexible and responsive arrangements whereby different and new technologies could be 'plugged into' a national platform whenever necessary. Yet, there are significant questions about how viable such a system would be given the complexities of implementing and integrating the four lots of the new contracts, which was viewed as a significant challenge by those involved and problems arising from integrating hardware and software not initially designed to operate together. There were also mixed views about the relative merits of local and national contracting arrangements with perceived increased flexibility provided by the former with consistency and equipment and operational compatibility provided by the latter.

8. Objectives of electronic monitoring

EM was viewed as having multiple purposes. There was general agreement about what these were with most interviewees mentioning a variety of reasons for the use of EM but the emphasis placed upon each one varied according to interviewees' roles and the technologies discussed. Nevertheless, nearly all policy-makers and management level practitioners viewed EM as a mechanism via which criminal justice costs could be reduced. It was widely acknowledged that EM was substantially cheaper than prison and most, if not all, other community sentences. EM, therefore, was viewed a valuable tool particularly when government departments and agencies were required to make significant cuts in their budgets. As one NOMS policy-maker commented:

> I mean for me it's all about raw economics actually. It's what works, what is effective for the particular offender and what is most cost effective and within a world of limited resources, electronic monitoring has to have a place in that. (Interview 42: 14)

Calculating the actual costs of EM is difficult because much of the information required is unpublished and/or commercially sensitive. There are also a myriad of hidden costs related to the provision of EM by the private sector such as procurement and performance management costs and associated costs of probation and Prison Services' involvement. Nevertheless, the Ministry of Justice (2013) provide a breakdown of expenditure for all EM modalities. In 2012/13 the costs of EM per case was £1200 up from £974 in 2005/6.

Interviewees viewed cost reductions are inextricably linked to EM operating as an alternative to custody and a mechanism to stabilise or reduce the prison population. There was an evident ambition from NOMS and the Ministry of Justice and there was a clear sense that the increased use of EM may lead to the closure of prisons in the future. Available data suggest that EM is cheaper than imprisonment (NAO, 2006). In 2006, it was estimated that EM was on average £70 cheaper per day than prison (House of Commons Public Accounts Committee, 2006). Previous research has also sought to examine whether EM curfews result in financial savings for the Prison Service. Airs et al (2000) examined the cost of bail curfews and compared it to the costs of custodial remands. They concluded that the costs of EM outweighed that cost saving which would be available to the Prison Service. However, if EM curfews were used exclusively as alternatives to custodial remands they would result in cost savings to the Prison Service although the study suggested that only around half of EM cases were diverted from custody.

For the police in this study, GPS tracking was reported to result in significant cost savings. These arose from the savings brought about by reduced staff time spent physically monitoring individuals and decreased investigation costs because tracked individuals can be immediately exonerated or implicated in offences. Pre-trial use of RF EM also saved police resources by eliminating the need to monitor curfews physically or impose reporting conditions. As discussed later, however, additional criminal justice agencies' resources are needed to deal with breaches of EM.

Many interviewees identified the potential for EM, particularly GPS tracking, to reduce reoffending, primarily but not exclusively via deterrence thereby reducing the costs associated with dealing with suspects and offenders. Several police officers, however, questioned the effectiveness of RF EM as a deterrent especially in relation to bail because the courts were identified as rebailing too many defendants after breach. GPS was viewed as adding value, acting as a greater deterrent and providing criminal justice agencies with additional information about offenders' compliance. The police also pointed out the advantages of EM as an intelligence gathering tool. GPS was viewed as much a more effective tool in this regard, providing data not just on offenders but also their associates and wider criminal activities (such as houses where drug dealing takes place). RF technology was reported to be much less useful for intelligence gathering purposes but even it enabled the police to locate individuals who were wanted for other matters relatively easily and cheaply and had some deterrent value.

Whilst most of the comments about the purpose of EM focussed on cost and deterrence, a significant minority of interviewees mentioned that EM can aid rehabilitation. In particular interviewees identified that EM provided structure in individuals' lives, an opportunity to look for and secure work and continue with their lives rather than facing the disruption of prison. This reflects previous research findings on EM (Hucklesby 2008; 2009b). It was thought that RF technology would meet these objectives better than GPS. EM was also viewed as having the ability to strengthen ties with family members, which could facilitate desistance, although it was acknowledged that this depends on the circumstances and background of individuals. It was also regarded as a tool to break negative routines and relationships with others, which may be a contributing factor to offending (see also Hucklesby, 2008).

Despite EM being viewed officially as one of the ways to ensure there is an element of punishment in community sentences, interviewees generally made little, if any,

reference to this purpose. This may be because it was a 'taken for granted' goal. An exception was operational EMS staff, who have day-to-day contact with those who are monitored, viewed EM as a punishment because they experienced the restriction of liberty that it provided whilst acknowledging that the degree of punishment experienced is likely to differ according to individuals' lifestyles.

9. Creative use

The use of EM in England is highly structured and routinized with limited examples of creative use. These finding confirm earlier research which found that EM was used formulaically (Airs et al., 2000; Hucklesby, 2008; 2009b; Walter, 2002;). The following sections highlight two areas where EM could be used more creatively.

9.1 Duration and intensity of electronic monitoring

Table 3 shows the maximum and minimum duration of EM and the length of curfew hours for different modalities. It shows that at the pre-trial stage, as a condition of bail, EM can be used indefinitely. By contrast maximum durations are defined for sentence and early release modalities. Despite this, it is possible for individuals to be electronically monitored for longer than prescribed maximums due to multiple orders or bail periods being imposed consecutively and/or concurrently. Indeed, use of EM on multiple orders simultaneously was one of the practices highlighted by the overcharging scandal (Comptroller and Auditor General, 2013). Differences in duration and hours between modalities have the potential to cause confusion for monitored people. Such confusion is most likely to originate from differences in the duration of hours and breach practices between different modalities but may also occur when the modality is the same but different curfew hours are imposed.

Table 3: Duration of electronic monitoring and curfew hours

	Minimum duration	Maximum duration	Minimum hours	Maximum hours
Bail	Next court hearing		None	None
Community and suspended sentence order	None	12 months	2	16
HDC	14 days	4.5 months	9	None
Police GPS	None	None		
AAMR	None	120 days		

As Table 3 illustrates courts have considerable latitude in the curfew hours they can imposed. There are no core hours when individuals must be monitored, hours can be broken up during the day as many times as required and curfews do not have to be imposed seven days a week giving courts maximum flexibility to be creative and flexible. In practice, however, hours are routinized, almost always involving overnight curfews of 11 or 12 hours between 19.00 and 07.00 seven days a week. So routinized are practices that a recent increase in the legal maximum hours from 12 to 16 hours for community and suspended sentence orders was reported to have had little impact. These practices reportedly resulted from references to examples of curfew hours in

original policy documents and lack of knowledge and understanding of probation staff and judges and magistrates. However, standardised use is also easier and cheaper to manage for EM contractors and more diverse practices would increase operational challenges and costs. There is scope for EM to be used more creatively by imposing curfew hours which are more individualised, such as those which reflect a link between offences that had been committed and curfew hours and which take account of caring responsibilities.

Similarly legislation does not preclude curfew hours being changed during the lifetime of orders as a reintegrative or exit strategy or to reward compliance. In practice, hours remain unaltered until the end of orders unless the circumstances of monitored individuals change. Problems arising immediately after release from prison are well understood and include higher risk of death (Farrell and Marsden, 2007). There is a risk that similar behaviours take place when EM ends and that an exit strategy which reduces curfew hours and/or days may reduce the likelihood of harm and return to previous behaviours. Such practices would provide a structured phased return to liberty and assist with reintegration and resettlement. In the Netherlands, three levels of restrictions exist and offenders move to less restrictive curfew hours over the lifetime of their orders automatically if they remain compliant (Boone et al., 2016). In England, there is also no mechanism to end EM earlier than planned to reward compliance as already exists for community orders.

Table 3 also demonstrates that because the police IOM schemes fall outside of the legislative framework no maximum durations of GPS tracking are prescribed. Consequently it can be used indefinitely raising proportionality and ethical issues.

9.2 Variations to monitoring requirements

Monitored individuals are able to request permanent or one-off changes to curfew regimes at any time. The contractor has no authority to vary curfew regimes. All requests must be made to the agency that imposed EM i.e. courts or the Prison Service. The process is a departure from the previous procedure whereby the contractors were able to authorise temporary and minor changes to curfew hours without the involvement of the courts or prisons. Despite this change, monitored individuals continue to contact the monitoring centres requesting variations to curfew regimes suggesting limited knowledge of the policy and adding to the workload of the monitoring centres.

The process now involves courts (bail and single requirement community orders), probation services (NPS or CRCs) (multi-requirement community orders) or prisons (HDC) or any combination of these if individuals are monitored on more than one order. This adds complexity and the potential for confusion which may also arise if individuals are subject to different EM modalities at the same or over time. The procedures through which requests for variations are made also differs according to order type and may compound levels of complexity. Variations are requested by monitored individuals or their solicitors, directly to courts in relation to standalone community or suspended sentence orders or bail. For HDC or multi-requirement community or suspended sentence orders requests for changes to curfew regimes are made to prisons or courts respectively via offender managers.

The extent to which variations are granted depends on the modality, reasons for the request and the evidence provided. Variations are reportedly more likely to be granted for community and suspended sentences orders than bail or HDC. For example, variations to accommodate a holiday (which normally has to be pre-booked at the time of sentencing) or a particular social occasion may be accommodated for community or suspended sentence orders but not for bail or HDC. Applications were most likely to be successful if they are work-related, for example changes to accommodation shift patterns.

Two issues of concern with the procedures for requesting variations were identified by the research. One, the time taken for requests to be processed was raised as a concern. The length of the process made it inflexible and unresponsive particularly to circumstances which may change at short-notice such as work shift patterns or as a result family illness or death. The delays resulted in difficult situations for staff who could not sanction changes in circumstances even when they expected that they would be agreed. It also heightened the likelihood of non-compliance and the instigation of breach proceedings which are later withdrawn. Two, delays in notifying the contractor of changes to monitoring requirements resulted in breach action commencing when variations had been granted. Both issues result in additional costs for the criminal justice process. Legal issues may also in relation to bail and HDC. Once breach proceedings commence, the police must attempt to arrest monitored individuals and detain them to appear at court (bail) or return them to prison (HDC). If variations have been approved by the courts or prisons but the contractor has not been made aware of the amended regime, there is a risk of unlawful arrest and imprisonment. This not only has cost implications but also brings the credibility of EM into question.

10. The monitoring process

The monitoring process is operated exclusively by the private sector. It is regulated via contracts between the government and private sector contractors with payments and fines linked to specified activities. The contractor, EMS, is responsible for installing and deinstalling equipment, responding to queries from monitored individuals, investigating breaches for single requirement orders and preparing breach cases to pass to probation services. The operation is supported by two monitoring centres which operate 24 hours every day and are accessible by telephone to monitored individuals and criminal justice agencies at all times. It is the role of field staff called field monitoring officers to install and deinstall EM equipment and visit individuals at their place of residence in the event of suspected breaches.

10.1 Installation and deinstallation of equipment

Equipment is installed by field staff in the property where the monitoring will take place. Monitored individuals receive a booklet, which provides information on curfews and how to contact the contractor using the monitoring unit or telephones. The installation involves attaching the tag to the ankle of the individuals and setting up the monitoring box. The equipment is then ‘ranged’ to ensure that the signal from the tag to the box can be received in all areas of the accommodation. This process involves individuals walking around the perimeters of the property. The authorised area does not usually include gardens or outbuildings. Unrestricted movement is normally only internal to the property and the contractors has no discretion to change it. The contract stipulates strict deadlines for installation and failure to meet them results in financial penalties.

Orders received by EMS before 15:00, must be installed between the start of curfew periods and 23:59 of the same evening. Any bail or sentence orders received after 15:00 may be installed the following evening again between the start of curfew periods and 23.59. All HDC orders must be installed by 23:29 on the first day of curfew. Installations can only take place during curfew hours resulting in short timeframes to complete all installations, often no more than five hours. This causes considerable logistical challenges for the contractor which were exacerbated by inaccurate and illegible paperwork received from the courts. An alternative approach where the equipment is fitted at courts or prisons, known as 'plug and play', could remove the logistical difficulties and be more cost efficient. This could be facilitated by ensuring that monitoring box contained GPS trackers allowing individuals to be tracked from courts to prisons to their residence.

Similarly the deinstallation of equipment requires visits to monitored individuals' properties. Equipment relating to community or suspended sentence orders is deinstalled between the start of the curfew period and 23.59 of the last curfew period. Monitored individuals are required to remain in their accommodation until midnight. The deinstallation visit lasts approximately five minutes, during which time field staff make contact with the monitoring centre either electronically or by telephone to inform them that equipment is being removed and request that equipment numbers are disassociated with individuals on the IT system. Monitoring units are unplugged and removed and PIDs are removed from individuals by cutting straps with scissors. Alternatives, including requiring individuals to attend courts or prisons to have equipment removed are used in other jurisdictions with no apparent downsides.

The process for ending periods of EM as a bail condition is different from other modalities and has changed in recent years. Originally equipment was removed on the evening before court appearances and reinstalled if bail was reimposed thereby complying with the legal status of bailed individuals. Now, however, equipment is not removed for court hearings, instead staying in place as long as defendants are on bail and until contractors are told to remove it by the court. Communication difficulties between the courts and the contractors were highlighted resulting in contractors being unaware that individuals are no longer on bail. This was reported to result in individuals being monitored illegally, confusion about payments due to contractors and unnecessary breaches.

10.2 Communication with monitored individuals

There are currently two monitoring centres which can be contacted by monitored individuals (or their friends and family) at all times. The ability to contact the monitoring centres 24/7 is a clear strength of the EM operation in England and Wales. They can be contacted via a freephone number or via the monitoring boxes. Individuals contact monitoring centres regularly and typically call for three reasons: one, to explain absences during curfew periods or other violations; two, to seek clarification and reassurance about curfew related matters such as the timing of visits or details about the monitoring process which were either not provided or not digested at the start of the order; and three, to seek general support. A similar range of issues were reported and observed to be raised with staff during visits. Whilst staff are trained to deal with curfew related queries they are not trained to respond to unrelated matters, yet it is clear that more general support is required. It is common for calls to be received from monitored individuals in difficulty including threatening suicide or self-harm and the

monitoring centres act as a social service in this respect. These types of calls are dealt with on an individual basis. Staff alert the emergency services where it is deemed necessary. Where possible, staff transfer calls through to relevant third sector organisations and they are provided with a list of contacts to facilitate this. However, there are times when it is not possible to do so because the monitored individuals do not want to speak to another organisation or the organisation is unavailable. In these circumstances, staff spend as much time as is necessary on the telephone until the situation is resolved. Operational managers at the monitoring centre all agreed that the ability for individuals to contact the centre 24/7 hour contact was necessary, both to ensure that any issues were responded to as soon as possible and that monitored individuals had a point of contact if they had any problems. One manager explained their role:

> … we've got a sense of responsibility as well … if a curfewee needs advice or support or anything, whatever time of the day, there's somebody here to do that. Whether they need assistance or emergency help, sometimes it's just somebody to talk to because they need someone to talk to … If they want to phone here at six o'clock in the morning then that's what they do and I think that's part of the service we provide. (Interview 6: 6)

The monitoring centres initiate contact with monitored individuals only in prescribed circumstances. No contact is made if individuals are fully compliant, although this is rare. Most contacts result from minor time violations or problems with the equipment. Individuals are contacted if they have not left their address for five consecutive days but no visits are routinely undertaken to check on monitored individuals' well-being despite research suggesting the important role of contact in improving compliance (see Hucklesby, 2009b). Consequently, routine support is only available by telephone and when initiated by monitored individuals. Visits take place only when problems arise and are mainly conducted to investigate problems with equipment or potential breaches. Text messages are sent to alert individuals of impending visits by field staff but mobile telephone numbers are only available in approximately half of cases and they can reportedly cause confusion and anxiety for monitored individuals.

10.3 Consent

Unlike the other jurisdictions involved in this project, obtaining consent from monitored individuals is not regarded as an important part of the monitoring process in England and Wales. Consent is assumed rather than actively sought. Monitored individuals are asked to sign to confirm that the monitoring process has been explained to them but this is to avoid any repercussions in the event of breach. Individuals are able to withdraw their consent at any time by cutting off tags, leaving their accommodation during curfew periods or removing equipment from their property but there are consequences for doing so. Householders are also able to withdraw their consent at any time during the monitoring process but this involves either writing to EMS or requesting they visit to remove the equipment or taking the monitoring box to a police station. Several interviewees raised concerns about the potential for householders to feel coerced into accepting that individuals could be monitored in their homes and the potential repercussions of withdrawing consent.

11. Compliance, enforcement and breach

EM provides certainty and evidence of breach and this was viewed as its major strength over other forms of community sentences. Violation reports (detailing when monitored individuals leave and enter their addresses for RF EM or enter and leave exclusion/inclusion zones for GPS) can be produced but are not routinely available. The sensitivity of the equipment means that minor violations are common. All violations are followed up via the monitoring centres with the contractor contacting and, where necessary, visiting monitored individuals. The system for dealing with alerts resulting from violations is highly automated so that both incoming and outgoing calls are randomly assigned to monitoring centre staff, thereby maximising the speed and efficiency with which they can be dealt with.

Violations of RF EM are related to equipment (power loss and damage or interference with equipment), curfew hours (missing part or all of a curfew period), and behaviour towards monitoring staff (violence or threats to staff). The most common violation is time violations and it is rare that individuals will not have at least some time violations during their order. Time violations are recorded when monitored individuals return to their accommodation after the start of their curfew, leave before it has ended, go out during a curfew period or miss the whole of a curfew period. Thresholds when time violations constitute a breach vary across the different modalities. The breach threshold for bail is very short. Breach thresholds relating to time violations for other modalities (community sentences and HDC) are significantly longer. Two hours of time violations can be accumulated over the whole length of EM imposed as part of community sentences or HDC. The variations in breach thresholds are potentially confusing for monitored individuals who may be subject to different modalities of EM simultaneously or at different times. The fact that monitored individuals are not informed of the breach thresholds relating to accumulated time violations, despite these being publically available (CJJI, 2008), has the potential to add to any confusion and to precipitate and spread myths about enforcement practices which dent the credibility of EM.

In bail cases all violations are immediately breachable. For other modalities (community sentences and HDC) violations are split into two levels according to seriousness which dictate formal responses. More serious violations, including removing tags, missing whole curfew periods or more than one set of maximum accumulated time violations and threating staff, result in immediate formal breach action. Less serious violations, including one instance of accumulated time violations, power failure and tampering with equipment result in warning letters on the first occasion and then formal breach action. Breaches resulting from monitored individuals' behaviour towards staff are rare. Aggressive behaviour over the telephone was reported to be common but breach action is not usually taken. Staff have the option of ending the contact, either by telephone or in person in the event that someone becomes aggressive or abusive towards them.

Violations of Alcohol Abstinence Monitoring Requirements (AAMR) occur when the equipment detects traces of alcohol in the perspiration of monitored individuals, when tags are removed or an obstruction is placed between tags and the skin. The provider detects the violation and notifies EMS retrospectively by email on a daily basis. EMS notifies supervising officers in probation services, who will decide upon action to take. Individuals subject to AAMR agree to be in the vicinity of the base station installed in

their homes twice daily for data to be retrieved from tags and uploaded to the central system. There are, however, no formal consequences for individuals not being present for this to take place because no curfew is imposed.

11.1 Breach procedures

Breach policies for EM are highly regulated and routinized. Procedures to deal with breaches are precisely set out in NOMS documents (Home Office, 2006; NOMS 2013, 2014a; 2014b). The procedures were overhauled in 2015 when responsibility for enforcement of single requirement community and suspended sentence orders changed from contractors to probation services (NOMS, 2014a; CCJI, 2008). To facilitate this, around 60 individuals who undertook these tasks were transferred from the employment of the contractors to the NPS. All enforcement of EM is now undertaken by NPS.

The NOMS procedures set strict timescales for the contractor to inform responsible officers of breaches of community and suspended sentence orders and HDC. In the event of a breach, statements are prepared by the contractor and sent to responsible officers who are either CRC or NPS offender managers (multi-requirement community sentences) or the Public Protection Casework Section (PPCS) of the Prison Service (HDC) (NOMS, 2014a). The EM contractor is the responsible officer for single requirement EM orders and these are dealt with by a small team based at one of the monitoring centres. In terms of bail, the police are then responsible for arresting individuals and returning them to court. Short timescales are specified for paperwork to arrive at its destination. For example, the police should be informed of time violations relating to EM bail within an hour and breaches relating to community sentences must be reported to the relevant probation service by 10.00 on the morning following violations.

In relation to community sentences, responsible officers (either probation services for multi-requirement orders or the contractor for single-requirement orders) contact monitored individuals to seek explanations for breaches who have five days to respond. Employment, health and serious family circumstances are most likely to be viewed as acceptable reasons for missing curfew periods. If explanations are not forthcoming or are deemed to be unacceptable, cases are passed to enforcement officers based at NPS to prosecute. In the past it has been suggested that breaches of single requirement community or suspended sentence orders were more rigorously enforced than those for multi-requirement orders because offender managers used their discretion to allow EM to continue whereas monitoring companies were more stringent. The new breach procedures do not militate against such inequalities continuing, and despite this research being unable to explore this issue in any depth, several interviewees suggested that the differential approach may continue:

> … I've certainly been involved in phone calls to electronic monitoring to say well actually don't breach right now because you know we need to give a warning because it might disrupt something else that's happening, say it's in the middle of a programme or something, we might say actually we're giving a warning on this case whereas if it was another scenario we might have gone and put instant breach or instant recall (Interview 54: 9).

Under the current regime, cases must be listed at court by the enforcement officer within 10 working days. The contractors must be informed of the outcome of hearings within one working day.

Courts make final decisions relating to alleged breaches of bail and sentences. In bail cases, breaches result in a reconsideration of bail and may result in a remand in custody or on bail with the same or different conditions. Courts also make the final decisions in relation to community sentences which can result in community and suspended sentence orders being revoked and replaced with any sentencing option including custody or additional punishment such as a fine or added days/hours under curfew. In both cases, interviewees were critical of the leniency with which courts dealt with breaches.

In terms of HDC, the Public Protection Casework Section (PPCS) of the Prison Service is responsible for making breach decisions. The contractor sends warning letters to monitored individuals in the event of less serious violations and may be requested to send a second letter by PPCS. Recall decisions are made on an individual basis and based on the nature of breaches and the surrounding circumstances. Once breach decisions have been made, the police are required to arrest individuals and return them to the nearest suitable prison.

11.2 Number of breaches

No data are available for breaches of bail and community sentences. However, the number of individuals recalled to prison as a result of breaching HDC is published. Table 4 shows the number of HDC recalls from 1999 until 2014. The number of breaches had increased to 3,003 in 2004 but has since reduced significantly to 842 in 2014. Table 5 provides further detail for the reasons for recalls which relate to HDC between 2011 and 2014. Figures for earlier years are unavailable.

Table 5 shows the number of HDC recalls that were related to EM curfews. It demonstrates that the number of EM related recalls has been decreasing since 2012 when 690 recalls were EM related compared with 601 in 2014. However, the proportion of recalls relating to EM has remained relatively constant since 2012 indicating that the decrease in number of curfew related HDC recalls is explained by a fall in the number of HDC recalls overall. NOMS has revised its recording of HDC recalls since 2015 after the introduction to supervision arrangements for prisoners serving sentences of less than 12 months. Consequently, no comparable data are available. However, what data are available indicate the just over half (n=310; 55 per cent) of recalls of prisoners released in 2015 on HDC, which took place before 31st March 2016, were curfew-related (MoJ, 2016b: Table A3.6i).

Table 4: Number of HDC recalls 1999-2014		
Year	Number on HDC	Number of recalls
1999	14,847	700
2000	15,510	769
2001	13,649	673
2002	20,456	1,479
2003	21,188	2,716
2004	19,294	3,003
2005	17,296	2,627
2006	13,666	2,184
2007	11,428	1,654
2008	11,721	1,442
2009	11,534	1,441
2010	12,250	N/A
2011	12,727	1,363
2012	12,803	1,202
2013	10,419	895
2014	8,614	842
2015	8,608	N/A

Source: MoJ, 2009: Tables 9.4 and 9.9 (1999-2009); MoJ. 2015: Table A3.4 (2011-2014); MoJ 2016b: Table A3.4 (2015).

Table 5: Number of HDC recalls 2011-2014			
	Number of recalls	Recalls for breach of curfew	
	Number	Number	%
2011	1363	789	58
2012	1202	836	70
2013	895	690	77
2014	842	601	71

Source: MoJ 2015: Table A3.4 (2011-2014).

Table 6 provides details of the reasons for curfew-related HDC recalls. Inability to monitor is not included in the recall totals probably because individuals were not deemed to be at fault because it may relate to problems with accommodation.

Table 6: Recorded reasons for HDC recalls related to EM 2011-2014										
	Recalls for breach of curfew	Time violations		Equipment tamper		Failed induction		Threats to staff		Inability to monitor
	N	N	%	N	%	N	%	N	%	N
2011	789	592	75	135	17	59	7	3	>1	129
2012	836	594	71	181	22	57	7	4	>1	99
2013	690	511	74	134	19	44	6	1	>1	47
2014	601[1]	453	75	105	17	42	7	1	>1	49

Source: MoJ, 2015: Table A3.5. 1. Seven cases were recorded as multiple reasons and have not been included in later columns.

Table 6 shows that remarkable consistency in EM related reasons for individuals being recalled. It also demonstrates that three-quarters of EM related recalls are time violations with equipment tampers accounting for around a fifth of recalls. As reported during observations and interviews very few individuals are recalled after threatening staff. Data are unavailable for 2015 although the number of cases in which individuals were recalled because of 'inability to monitor' has more than doubled to 110 cases (MoJ, 2016b).

11.3 Issues with the breach process

Various issues were raised relating to enforcement and breach. One was the volume of breach notifications received by responsible agencies. Contracts require EMS to notify responsible authorities each time breach thresholds are reached during different curfew periods, regardless of whether notifications have been sent previously. Consequently, multiple sets of paperwork are prepared by EMS and sent to agencies if individuals violate EM during more than one curfew period. This results in agencies being overwhelmed with breach statements relating to multiple breaches for individuals. These may strengthen the case to instigate formal breach action but agencies were adamant that they only required one breach notification and that subsequent notifications served little or no purpose. Agencies clearly stated that they only need to receive one statement per person. One NPS interviewee explained:

> … it's only when it hits a certain point that you start the breach action when it hits that two hour limit and I think also, I think that's where our communication is not the best so we're not always going back to the enforcement provider and say yes we've instigated breach so you can stop sending them now please or actually we've given a warning in this particular instance because and I think we're not always as good as we should be at doing that … you kind of get bombarded with bits of paper and the trouble is then you kind of lose things … (Interview 54: 11)

The breach threshold for bail exacerbates the problem for the police. The high number of statements sent to them daily reportedly made it difficult for them to respond to all notifications and required significant police resources. Police interviewees recognised the considerable resources required to arrest individuals and acknowledged that it can take time to apprehend defendants and that this group are not always a priority in terms

of resource allocation. This leads to some concerns from EMS about the response of agencies to breaches although they recognised that the situation was improving as one operational manager explained:

> It is very hit and miss really about what they do and when they will action things. It is getting better, the relationship; we have got some Information Sharing Agreement set up with some of them but we still have a few occasions where they won't action things. [One police force] won't action any absences less than one hour even though our contract says we have to report them at fifteen minutes (Interview 8: 12).

By contrast, criminal justice agencies were unaware of the reasons why multiple breach documents were sent resulting in frustrations with EM contractors.

Two, the strict breach policies result in the police receiving a significant number of breach statements including for relatively trivial breaches such as moving of monitoring boxes and equipment tampers. They questioned the value of these notifications and whether it was necessary and proportionate to arrest individuals in these circumstances. Specifically, they called into question whether making arrests for tampering with equipment when monitoring was able to continue was appropriate especially because courts were unlikely to remand individuals in custody as a result. Notifications may have some utility, for example reinforcing messages about the importance of compliance and making individuals aware that the equipment works, but current procedures waste resources, increase tensions between contractors and the police and result in a significant mismatch between expectations and reality.

Three, the breach process relies upon EMS informing responsible officers of breaches. Yet, EMS reported that they were often not notified of their identity, delaying the instigation of breach proceedings. Four, responsible officers are required to inform EMS of the outcome of breach proceedings but delays were reported in notifying EMS. The same operational manager also explained:

> …some of the ones we have got on the cases at the moment are literally months, twelve or eighteen months that are outstanding cases. And it doesn't mean that they haven't done anything with them but we have just not got the notification back to say what they have done. And then I think there is a bit of, well it is too late now anyway so we won't send it (Interview 8: 12).

In these circumstances, EMS is unable to close cases and continues to monitor individuals. The police also questioned the accuracy and quality of some of the breach statements they received stating that some individuals were no longer on bail at the time of the alleged breach. Inaccurate and/or delayed paperwork was a broader concern. Multiple examples were provided of cases in which breaches were notified by EMS but variations had been agreed or orders had ended. In the case of bail, this may have serious implications leading to claims for unlawful arrest. In addition, breach statements provided by EMS were sometimes inaccurate so they could not be relied upon in court proceedings. For all these reasons, the Metropolitan police reported that they manually 'quality assured' all breach statements before taking any action. The volume of breach notifications and the inaccuracies in paperwork had reportedly contributed to the police losing confidence in RF EM. There are also potential

unwanted consequences for monitored people and their significant others. The following example taken from observations illustrates one of the consequences of delays in information flows between the contractor and the courts:

> An automated phone call was made to a monitoring unit following a time violation. A male answered the phone identifying himself as the father of the monitored individual. He said his son had not breached his curfew because the order had been revoked by the court the previous week and that he had paperwork to confirm this. He reported that the police had come to arrest his son for breach of bail but he had not been arrested because the court information had been shown to them. The son was reported to be still wearing the tag because he did not want to remove it for fear of being prosecuted for criminal damage. The father complained that the endless phone calls were having an impact on his health and every time EMS rung, they say that they would 'make a note of it', but no action seemed to have taken.

Interviewees identified concerns about the ability of the police and other agencies to deal with the level of breaches expected if GPS is more widely used. Given the short battery life of GPS tags and the experiences reported with the voluntary IOM schemes, interviewees expected the number of breaches particularly resulting from failures to charge equipment to increase significantly. They voiced concerns about the level of resources which will be required to deal with them.

12. Multi-agency working and communication

The involvement of multiple criminal justice agencies alongside a private sector contractor makes EM a 'complex business' (CJJI, 2012; 2008). Previous research highlighted a lack of integration of EM into the criminal justice process, suggesting that it runs in parallel to, rather than in partnership with, the other agencies involved (Bottomley et al, 2004; Mair and Mortimer, 1996; Mair and Nee, 1990). This research found that there were still problems with joint working. Whilst some areas of multi-agency working had improved other aspects had deteriorated. As one interviewee from NPS explained:

> … it can be quite difficult because I know at times probation aren't always as good as they should be at feeding back to electronic monitoring providers about what's happening, there's needs to be that very close communication, sometimes that doesn't always work because our two [IT] systems aren't linked … I think for those that are multiple requirements, obviously because that's when the communication is absolutely key is that it becomes the decision of the responsible officer managing that case [whether to breach individuals] and I don't think probation is always as good as it should be about letting the electronic monitoring company know what's going on and making sure that they know what the outcome of that breach actually is. (Interview 54: 9-10).

The expert knowledge of EM lies with the contractor and particularly amongst members of staff, mainly middle management, who have worked with EM over a number of years. Broader knowledge of EM across the criminal justice system was reported to be patchy and in some cases extremely limited. In this respect, little has changed since

EM was first introduced in England and Wales. A central role of the contractor(s) has always been to inform other agencies about EM. Previous contractors had invested significant resources in awareness raising and their work with courts, probation services and the police was well established. But this work ceased once the tendering process had begun and had not been restarted to any significant extent. As one EMS manager explained:

> … the [liaison] hasn't been as much because of the … break from G4S to Capita. So it all kind of stopped for a while with G4S because we were going through the bid and then we went through the transfer and we had some people leave so we didn't have the same relationship management team. And then, just as we were starting to recover from that and look at putting things in place probation went through their own changes, so that side of it stopped then. So it is probably only the last four or five months that we have got back into having meetings with them and starting to look at how we build up the relationships again and how we set the processes. (Interview 8: 19)

Several interviewees suggested that this may explain, at least partly, the drop in use of EM, whilst also limiting the potential for messages about more creative deployment to be conveyed. EMS attributed the continued lack of liaison work with criminal justice agencies to the delays in implementing the new contracts, but expected it to resume once they were operational.

Communication problems between contractors and other criminal justice agencies highlighted by previous research (CJJI 2012, 2008), continued, causing a range of operational challenges for EMS. EMS was operating without being fully aware of information relating to monitored individuals including basic details such as addresses, curfew hours and so on. Information was regularly missing from paperwork received from the courts or was inaccurate, for example, no curfew hours were provided, details of conflicting addresses or addresses which did not exist were supplied or details of conflicting curfew dates were provided in the same document. EMS has a strict deadline of two hours to notify courts or prisons of any errors or omissions in orders but courts and prison have no deadline by which to return the correct information. EMS has procedures in place to ensure that omissions are identified promptly and further information or clarification is requested and in practice, these often involved repeated requests for information before it is supplied. EMS reported that they had been working to improve information exchange with the courts and managers were optimistic that the process for rectifying errors had improved but it still does little to address the fact that orders are still received initially without being correctly completed. As one EMS manager explained:

> I don't know if there has been a reduction in errors, but we get responses a lot quicker, so even if there is an error we have got an escalation process in place that now gets us an answer quicker because something could have sat for weeks upon weeks with no answer, but now we have got a three day escalation process and if at the end of that three days no action has been taken by the courts then it goes to the MOJ [Ministry of Justice], so that is good. So they are the things that we are seeing come in, which might not improve the actual information from the other end, but at least gives us the opportunity to get someone on tag quicker than what it used to, so that is a good thing (Interview 7: 12).

Missing information had operational implications for EMS and for EM generally. For example, errors in information relating to addresses may result in failures to install equipment. In reality, very few of the errors deriving from information initially received from the courts were reported to lead to situations in which individuals were not monitored but they add cost and complexity to the EM operation and reduce its efficiency.

Of equal concern was the lack of information provided to the contractor relating to risk. This has been a longstanding problem whereby the EM contractor are not provided with information routinely available to criminal justice agencies. For example, they do not receive details of offences even if these might put staff at risk. Nor do probation services or prisons routinely provide risk information related to past or current behaviour. Consequently, the contractor is required to send staff into potentially difficult, and sometimes risky, situations with prior knowledge putting staff at risk.

Initiatives were reportedly being developed to improve lines of communication. Regular user group meetings between EMS and other agencies involved in EM, including probation services, police and magistrates. Such meetings were viewed as good opportunities to share any risk information. At the time of the research, a portal was being developed which will enable information relating to individuals to be accessed and updated by all relevant practitioners. Specific details were still being developed during the research particularly in relation to which agencies would have access to which information. However, there was a general view amongst interviewees that the police should not be given routine access to the portal because of concerns about how they might use it. Unsurprisingly the police believed that it was both necessary and proportional for them to have unfettered access to the information the portal contained. There was general agreement amongst interviewees that the portal would improve communications particularly with courts and they were generally complementary about the development process which had canvassed the views of stakeholders. The portal was, however, one of the elements of the new contracts which had been delayed and it was unclear when it was likely to be implemented.

13. Diversity

Knowledge and understanding of diversity issues arising from the use of EM were limited. Policy-makers awareness was particularly scant but it flowed through many of the interviews as this quote from a senior operational manager at EMS demonstrates: ‘It has never really occurred to me, you know, gender, diversity, ethnicity’ (Interview 25: 15). A field manager’s response was very similar:

> It almost seems like it never occurred to me …, [its] not even in the criteria that I think about that, that never crossed my mind so yeah it’s the first time you’ve made me think about it (Interview 21: 29).

The interviews with operational staff suggested that the message they had received was that they should treat everyone the same i.e. that equality was important and several mentioned attending courses which covered this, although most of these recalled that these had taken place before the contracts had been taken over by EMS. There was, however, very little awareness of difference and the ways in which demographic, cultural and situational factors may impact upon the ways in which EM

is experienced and the importance of taking such factors into account. As EMS manager stated during interview:

> In operation training we don't talk about it very much. There is a lot of focus of not segregating subjects in the sense that everyone is one baton away from being on target at any point. So that sort of thing, but there is not much in terms of diversity of race or anything like that. It doesn't necessarily affect how they [frontline staff] interact with subjects so it is not something that we would cover on the initial training. (Interview 13: 9)

A second strand of comments suggested that some managerial staff believed that the responsibility for ensuring that diversity was taken into account lay with probation services and courts, thereby suggesting that diversity issues were related to only or primarily to curfew hours. An EMS manager commented when asked about diversity:

> … EM is a product that can work for different people in different situations so in terms of sharing ideas and case studies around sentence planning they [probation and courts] can take into account areas of diversity, they can take into account people's backgrounds, their religion, factors that they may need to associate with, so in terms of when we're engaging with agencies we can share some of those case studies and those examples of things that have worked well for people and their backgrounds and diversity. So things like religion and structuring curfew hours around things that are appropriate to that person in terms of their religion and not impacting on those, again talking to agencies allows us to be able to share some of those things as opposed to being able to create a twelve hour curfew that restricts that so indeed we do. We talk locally with agencies around diversity and around using curfew hours in a flexible way that don't inhibit people's appropriate backgrounds (Interview 27: 13)

Awareness and knowledge of issues arising from cultural factors particularly race, ethnicity and religion were especially poor. There was slightly more appreciation of issues relating to women. A number of interviewees including policy-makers and operational staff discussed issues of childcare and clothing in relation to women. Otherwise, diversity issues were only raised when it impacted directly upon the ability to monitor individuals. For example, aspects of physical disabilities and deafness were discussed by some interviewees. For most interviewees, who were not frontline staff, this was the extent of their knowledge of and engagement with diversity.

Frontline staff were generally more aware of diversity issues because they had to manage them on a daily basis. Their accounts suggested that they generally coped well with situations when they arose but it was also clear that they relied on common sense and their own experience and initiative rather than policies and/or training they had received. Indeed, despite senior managers stating that all staff had received diversity training, only one monitoring officer mentioned attending a relevant course since EMS had taken over the contract. This officer also made an important distinction between attending a course and training and clearly articulated that they had not been trained.

There are a number of specific issues relating to diversity raised by this research. One, visiting the places of residence of people from diverse cultures raised concerns for field

staff. Most field staff discussed situations when they had visited monitored individuals when they or other household members were praying or taking part in other religious activities. They explained how they had learned not to walk across prayer mats and only enter rooms when invited. Interviewees also explained how religious activities sometimes conflicted with their work, for example visiting homes during iftar and Eid celebrations. In such circumstances it was unclear whether they should go ahead with the tasks they were required to complete or accede to monitored individuals requests to return at another time. Although they coped with these situations they were unsure whether their approach was correct and said that they would welcome further training. Current practices also raise issues relating to consistency of treatment of those being electronically monitored.

Two, it is standard procedure for monitored females to be visited by crews of at least one female officer. Although this policy appears to make allowances for women's experiences, interviews with EMS staff indicated that the policy was primarily about protecting the contractor and its staff. A male monitoring officer explained:

> … if we go into a house on our own with a female, then they could say anything about inappropriate behaviour, so it is mainly for our safety that we don't go to females on our own ... I am quite happy to fit the equipment, but I am not happy to go walking around with a female on my own, I would prefer the female officer to go and do a walk around … that is personal choice … you are alone with the female and they could say anything, so I would rather make sure that there was someone with me at all times … [In] extreme circumstances if the tag was coming off, there was nobody, it was absolute less resort, then yes I could go, but I could only go as far as the doorstep, I couldn't go into the property, but I could take it off [at] the doorstep that is it, but it is for our own protection more than anything, you know, if we go into a house on our own with a female, then they could say anything about inappropriate behaviour, so it is mainly for our safety that we don't go to females on our own, but females can go to anybody (Interview 17: 8).

Three, resources were in place to deal with situations where monitored individuals were unable to understand English. A telephone translation service, contracted by Capita and deployed across all its operations, was used. The service is utilised both for telephone conversations and home visits. Interviewees had mixed views about how effective the system was in practice. The translation service was reportedly used as a last resort. There was a general consensus that when possible family and friends were used to assisted with communications because it was easier and facilitated better and more natural communication. In the monitoring centres, the process for accessing the service was a barrier to its effective use because it cannot be used via the automated dialer system. As a result, initial calls have to be ended and individuals rung back manually which was reported and observed to be time consuming and difficult, especially during busy periods and when staff have performance targets to meet.

EMS operational managers reported that written information was available in different languages. However, monitoring officers themselves stated that these were not available and therefore never used. As a result, individuals may not fully aware of the obligations of being electronically monitored which may compromise enforcement. NPS enforcement officers recognised that in the event of breaches, individuals could

argue that information was not provided in an accessible format resulting in proceedings being dismissed.

Four, measures are in place to respond to issues relating to disabilities. Where individuals have disabilities which mean they are unable to wear tags on their ankle, they can be fitted on their wrist instead. The same equipment is used but there are specific wrist straps available in small sizes. During interviews, monitoring officers explained their concerns of fitting PIDs to removable prosthetic limbs, following two incidents that had taken place some years previously which received media attention. It was clear from these conversations that they were more concerned about losing their jobs than addressing any disability issues.

Relevant data and information relating to diversity issues are sparse and no diversity monitoring appears to take place routinely. Court paperwork provided to the contractor makes provision for such information to be recorded including sex, age, the need for language interpretation and the language spoken, special needs and any additional requirements. In practice these data are often missing making it difficult for contractors to plan strategies to deal with issues such as disabilities and language support. Information on diversity is generated by EMS throughout monitoring period and retained for future use. It is this EMS generated data that is generally searched and relied upon by the contractor not only in relation to diversity but also risk.

14. Electronic monitoring data

EM produces a significant amount of data. GPS technologies collect considerably more detailed data on individuals' movements but both RF and GPS technologies collect data 24/7. Data collected via EM are stored indefinitely and the amount of data are significant given the number of individuals monitored and the length of time EM has been used in England. The data are owned by government but are stored on servers belonging to private sector companies including those who are no longer contracted to provide services. The Ministry of Justice do not currently have routine access to these data, instead they have to request information from the private contractors. This process proved difficult during this research will only limited data being provided after considerable delays.

Data protection concerns were mainly discussed in relation to the police use of GPS tracking and the ways in which they may be utilising data. One of the advantages of the Buddi equipment (widely used by the police) frequently mentioned by police interviewees was that they had unfettered access to the data created. This allowed them to routinely match GPS tracking data with crime data and Google maps. These practices raise significant data protection issues which were of concern to many interviewees outside of the police. By contrast, government GPS schemes limit access to data by working with a system of alerts/alarms when restrictions are violated which was viewed as a more acceptable approach.

The police regularly request and are provided with data relating to monitored individuals under Ministry of Justice schemes. The process is regulated to ensure that they only have access to information relating to specific individuals and circumstances. Criminal justice agencies provides lists of named individuals known as special points of contact. Information is provided to these contacts via passwords. Any information provided must relate to either breach statements which has been prepared or activity

within curfew periods. Other individuals must submit a written request outlining the specific information required including specific dates and times. The contractor provides the information or ask for Ministry of Justice approval. These processes take time and this according to the police may impact upon the usefulness of the information.

Generally, police interviewees were frustrated that they did not have greater and more routine access to EM data which they viewed as an important intelligence tool. EM data including those gleaned from RF can be used in a number of ways to assist the police with their criminal investigations. GPS technologies provided details of the movements of individuals. RF technology is also valuable providing data on compliance with curfew requirements, individuals' presence or absence at their home and to a more limited extent, individuals' movements outside their homes and who they associate with. The latter two functions are enabled by monitoring units which pick up, not only details of the relevant individual's tag, but also any other tags that are within range. Police forces have recognised the value of these data for intelligence and crime fighting as well as locating individuals who they may want to trace. From the police perspective, timing of data access is also key to its utility.

Interviewees from the Ministry of Justice and Home Office were generally concerned about police having greater access to data and were content with current arrangements. They were cautious about how much data should be made available to police and what uses are acceptable for it. They envisaged that the information shared would need to be compatible with data protection legislation. From the police perspective, they argued that their use of EM data are unhindered by data protection, due to its use in reducing and fighting crime. Their desire was for the data from all EM programmes to be made available to them almost instantaneously.

The use of SCRAM (a US based company) technologies in the MOPAC alcohol abstinence monitoring pilot raises issues about the storage of data outside of the European Union where data protection legislation does not apply. Additional safeguards have been put in place to ensure legal compliance. Only anonymised data leaves the UK and individuals are only matched up with their data by probation staff once data are returned to the UK. These additional steps to ensure that personal data are not identifiable increase the complexity and costs of dealing with violations and are unlikely to be viable for large groups of individuals. This example illustrates that issues relating to the storage and use of EM data are becoming more urgent. Consequently consideration should be given to a thorough review of data protection policy particularly relating to uses outside of Ministry of Justice contracts.

Despite the significant amounts of data produced by EM, accessing data in a format useful for the research was challenging. In England, even basic statistical data are unavailable which enabled only a partial picture of EM use to be constructed. Very little data relating to EM are published and none in relation to its use as a condition of bail or a single requirement of a community sanction. This inevitably impacts upon levels of knowledge and understanding of EM and reduces its transparency and credibility as a penal measure. It is understood that plans were in place to publish data relating to EM and it is recommended that this is implemented without delay.

The lack of data, published or otherwise, hampered the current research and will inevitably limit future research activities as well as the public's understanding of EM. It

also precluded any conclusions being drawn about the effectiveness of EM based on statistical analysis of quantitative data.

15. Staffing

All staff involved in the day-to-day management of EM are employed by the private sector contractor, Capita. Many of the middle managers in EMS had worked in EM for many years and had worked for previous contractors. They had extensive knowledge and experience of EM. Their expertise was relied upon by the senior management team, whose expertise lay in the running large and complex organisations efficiently and not in EM.

Frontline staff are split between those who work in the two monitoring centres located in the North and South of England and field monitoring officers. Monitoring centre staff undertake a range of roles relating to the process, including answering phone calls from monitored individuals, their families and friends and criminal justice and other agencies, responding to suspected violations and preparing breach paperwork for the relevant prosecuting authority. This work is supported by operational and senior managers based at the monitoring centres. Staff are not assigned to specific cases but work according to a call centre model, whereby they deal with the next task allocated to them irrespective of what it is or who is relates to. There is no continuity of contact with particular individuals. Contacts are exclusively by telephone or e-mail. Staff work shifts which are organised around fluctuations in work volumes related to curfew hours but the monitoring centre is staffed at all times.

Home visits are carried out by field monitoring officers, the majority of whom are home-based. They also work shift patterns, generally from early evening to the early hours of the morning reflecting peaks curfew hours and contract requirements for installing and deinstalling equipment. All field officers have personal electronic devices which provide them with work-related information. EMS managers recognised the limitations of current devices and there was an expectation that these devices would be replaced once new contracts became operational. Field officers communicate with the monitoring centre predominantly by text message and telephone with specific queries. Field officers are supervised and supported by field managers who are also home-based. Field staff are able to contact managers during shifts. Although some field officers have always been home-based, until recently there were branch offices geographically dispersed across England and Wales where monitoring officers were based. By the end of the research period most of the branches had closed with only two remaining and these were expected to close. Branches were used as a base so that staff always started their shifts from them, picking up cars and equipment at the start of their shifts and returning them at the end ensuring that they were stored securely and maintained. This meant that the bulk of equipment was stored at branches facilitating cleaning and maintenance and that staff had the opportunity to meet with colleagues and discuss any issues with supervisors and managers who were located in the branches. The advantages of a homeworker model is that it logistically easier to cover large geographic areas reducing travel times and costs, increases flexibility, is more efficient and the costs associated with the running of branches are saved. Home-working, however, presents additional challenges in relation to ensuring the security of equipment, data and staff and the effective supervision of staff.

Although we were denied access to information about staff, it was clear from our observations and interviewees that the majority of workers are female. Indeed one manager referred to actively recruiting women as field staff because more women were needed as a result of the restrictions which exist on the gender of staff who can carry out visits. Front-line staff are not probation or social work trained. Those interviewed came from a wide range of previous employment sectors, the majority of which were outside criminal justice. Many members of staff had basic educational qualifications reflecting previous research findings (Hucklesby, 2011b). The training of field staff was reported to focus on technical installation despite their roles involving extensive interactions with monitored individuals and their families. During interviews, field officers provided different accounts of the purpose of their role, with some focussing on technical roles and others regarding the provision of support and information as equally important reflecting previous research on monitoring officers in England and Wales (Hucklesby, 2011b).

The contractor has policies and procedures in place to deal with staff safety. Most visits are undertaken by lone field officers unless individuals are known to have committed high-risk offences or live in areas deemed to be high risk. Risk, i.e. risk of harm to staff, is, therefore assessed on the basis of offence type, geographic location i.e. postcodes and property type. The agency responsible for imposing EM has a duty to provide relevant information relating to offences and risk which should be included in information received by the contractor. In practice risk information including offences is regularly missing from new orders. Consequently, the contractor has no information on which to assess risk other than that available from previous orders. Missing information may lead to inappropriate staffing in the field, for example lone field staff visiting individuals accused or convicted of serious sexual offences and several examples were provided by interviewees.

As a result of the limited information available on risk, field staff are required to undertake 'dynamic risk assessments' i.e. continuous assessments of risk at all times. Field staff stated that they received training on risk assessment and had the discretion not to enter properties or leave if they felt unsafe, even if this resulted in jobs not being completed. Safety procedures are in also in place where field staff are faced with emergency situations. All field staff carry handheld devices which are GPS tracked and have emergency buttons connects to the monitoring centres. But these safety mechanisms rely on strong GPS signals and staff being able to activate the emergency procedures respectively. In addition, a lone worker service provided by an external contractor, Communicare, is in place. Field staff are required to contact an automated service to leave the details of every visit and provide an estimated time of completion. At the end of visits, they are required to send text messages to confirm that jobs have been completed. If they fail to book off a job by the estimated time, two text messages are sent at five minute intervals. If there is still no response after a further five minutes, field staff receive a call from Communicare who establishes whether they need assistance. In an emergency, Communicare are able to locate the whereabouts of field staff and contact the emergency services for assistance if necessary. Field staff were critical of this system and questioned whether it would function effectively in an emergency particularly due to the time taken to receive a telephone call (15 minutes). They thought that the level of protection offered by the system was very limited. They also questioned its effectiveness in situations where they became separated from their handheld devices. The unpredictability of visits and the lack of faith in risk procedures

meant that field staff relied on their ability to know when situations were becoming risky and to leave premises before it escalated to dangerous levels. This was explained by one officer:

> I think at the end of the day you are on your own because no matter what happens, by the time you have rung anybody to get somebody there and somebody actually get[s] on site to help you, [it] could be quite a long period of time. So if somebody is out to harm you there is not going to be a policeman knocking on the door within thirty seconds. I think it could help, but it is more down to yourself to try and get away from it before it gets to that situation and usually it is just best to leave if you need to before it even escalates to that point. You can tell when someone is really, really upset with you and it is best to turn and walk away. (Interview 18: 15)

These findings mirror those of a previous study which raised questions about the safety of EM staff and its impact on the operation of, and compliance, with EM (Hucklesby, 2011b).

16. Compliance with the Council of Europe recommendation on electronic monitoring

The Council of Europe adopted a recommendation on EM in February 2014 (CM/Rec(2014) 4) (Council of Europe, 2014). The aim of the recommendation is to set out basic principles to ensure the just, proportionate and effective use of EM. The recommendation has six parts relating to basic principles, conditions of execution of EM at different stages of the criminal process, ethical issues, data protection, staff and work with public, research and evaluation. Interviewees were asked if they were aware of the recommendation, its usefulness and whether it had impacted upon their thinking or work involving EM. Interviewees were generally unaware of the recommendation. Exceptions were two Ministry of Justice policy-makers who knew about the recommendation. One of whom had been involved directly or indirectly in the drafting process. One of these interviewees commented on its general usefulness but also lack of enforceability:

> … It's recommendations isn't it? And I think one of the things I picked up … was well some feel more bound to them than others. They're happy to show where they are compliant but if they're not then it's a bit of a shrug shoulders, oh well. It's a bit of a shame really because there's some good principles in that Council Europe document (Interview, 43: 26).

The same interviewee recounted that an exercise to check compliance had not taken place in England and Wales. Another interviewee implied that such an exercise would be unnecessary because the nature of the recommendation was so broad that compliance was almost automatic, whilst also acknowledging its purpose and use. They stated when asked if England and Wales complied with the recommendation:

> It is hard isn't it? … Reading the Council of Europe instrument that was adopted back in February of last year, are we compliant? … My sense is yes, that we are. It is not binding as I understand it, but we were engaged throughout the [process] … It's helpful as rearticulation of some of the key

> principles, so as with all legislation it is about making sure that purpose is set out … So, as part of the back history, as part of the landscape it is a very useful instrument (Interview 45: 20).

After observations and reviews of relevant legislation and policy documents were complete, data were scrutinised to assess the extent to which England and Wales complied with the Council of Europe recommendation. The general conclusion is that England and Wales complies with most of the elements of the recommendation but this is more as a consequence of the vagueness of the recommendation rather than a positive commitment to, or endorsement of, its principles. Consequently, England can be said to comply with the letter rather than the spirit of the recommendation. There are however, some elements of the recommendation where England and Wales clearly do not comply. For example point 2 requires that decisions to impose or revoke EM are made by the judiciary. Whilst EM's use at the pre-trial and sentencing phases complies, Home Detention curfews are imposed by prison governors. Point 10 requires that all relevant information regarding private sector involvement in EM is transparent but much of this information is not publically available and is treated as commercially sensitive. There are other points on which it is impossible to make concrete assessments because data are unavailable. For example, point 7 states that there should be no discrimination on the grounds of gender, race, colour, nationality, language, religion, sexual orientation and so on.

17. The future of electronic monitoring

Electronic monitoring has gained universal appeal in the criminal justice field. Without exception interviewees expected and welcomed the expansion of EM in the future in terms of the number of people monitored and the introduction of new technologies and target groups. The Government has signalled its intention to use EM more extensively via its 2015 manifesto commitment (The Conservative Party, 2015). Its plans were followed by announcements to introduce a pilot of using GPS technologies (Cameron, 2016) and to extend the London Alcohol Abstinence Monitoring pilot in terms of duration and geographic coverage (Pepper and Dawson, 2016). Whilst one focus has been on the introduction of new and different technologies, there was also an almost universal expectation that RF location monitoring would comprise the bulk of EM for the foreseeable future.

The deployment of EM is likely to expand beyond existing Ministry of Justice uses. Interviewees from the police and Police and Crime Commissioners (PCCs) were enthusiastic about EM and wanted to exploit it further for policing purposes, particularly because of its value in managing increasingly stretched police resources. It was clear that the police planned for EM to play a much more prominent role in their work in the future in a number of ways. One, they wanted the ability to require individuals to wear GPS tags rather than sustaining its purely voluntary use. They expected compulsory programmes to be equally successful as the current scheme but also recognised some potential downsides. These included handling the volume of data generated and managing the inevitable increase in non-compliance. They also recognised that questions about the proportionate use of GPS would become more prominent if compulsory schemes were introduced. Two, they were keen to exploit EM, and particularly GPS, with populations subject to Criminal Behaviour orders and Sexual Harm Prevention orders. The deployment of EM technologies for immigration purposes was reported to be actively under consideration as was an expanded use of EM in

counter-terrorism. Within criminal justice, there was an expectation that bi-lateral victims' schemes would be introduced or at least piloted and this was broadly welcomed although concerns existed about its effectiveness. The experience of Northumbria suggested that this would require legislative change so that defendants/offenders were compelled to participate.

There was a clear confidence that EM had the potential to be a credible and cost-efficient tool to support and enhance the work of the criminal justice (and immigration) system and to reduce the use of prison (and immigration detention centres) but that this had been hampered by the way in which the procurement of new contracts had been managed. This has contributed to credibility deficit in national procurement amongst the police and PCCs, who favoured local procurement arrangements. Allowing localised control over the use of EM they argued enables diverse uses and facilitates creative solutions to particular local/regional challenges. Other groups of interviewees were more circumspect suggesting that local contracts would result in fragmentation which would be inefficient and potential lead to operational challenges. By contrast, a national contract would be more coordinated, effective and cost effective as long as it procured and managed well.

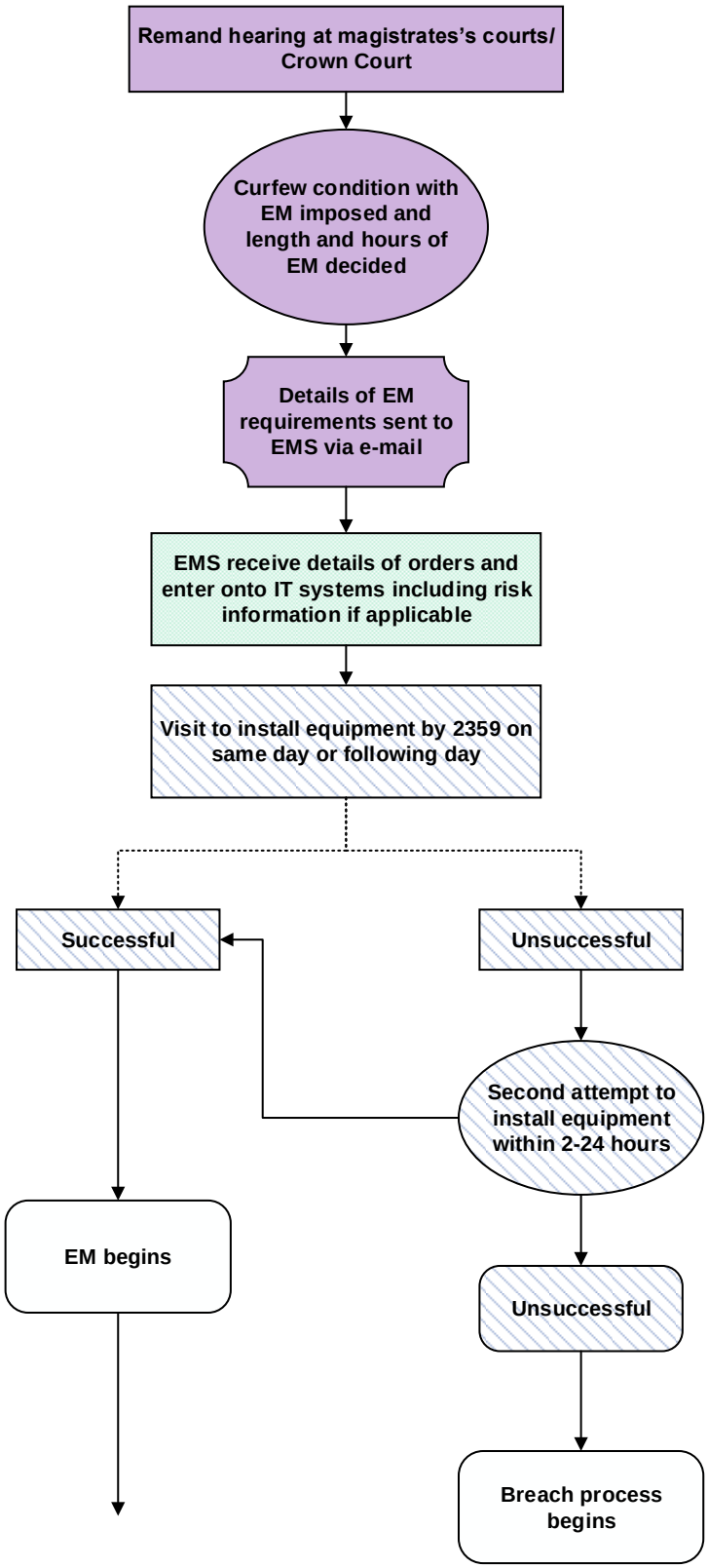
For some interviewees a pre-condition for more extensive use of GPS EM was changes in technology particularly in relation to increasing battery life which was viewed as a major downside of current GPS tags. Several interviewees also expressed a wish to see smaller, lighter and less intrusive tags. Some interviewees discussed the usefulness of having multi-purpose tags which could monitor different things at the same time. For example combining RF/GPS capability with alcohol monitoring which would prevent the current situation whereby a small number of individuals are wearing more than one tag at a time. High of many individuals wish list was a tag to remotely measure drug use. The promise that EM technologies had to offer was summed up by one Ministry of Justice interviewee who said:

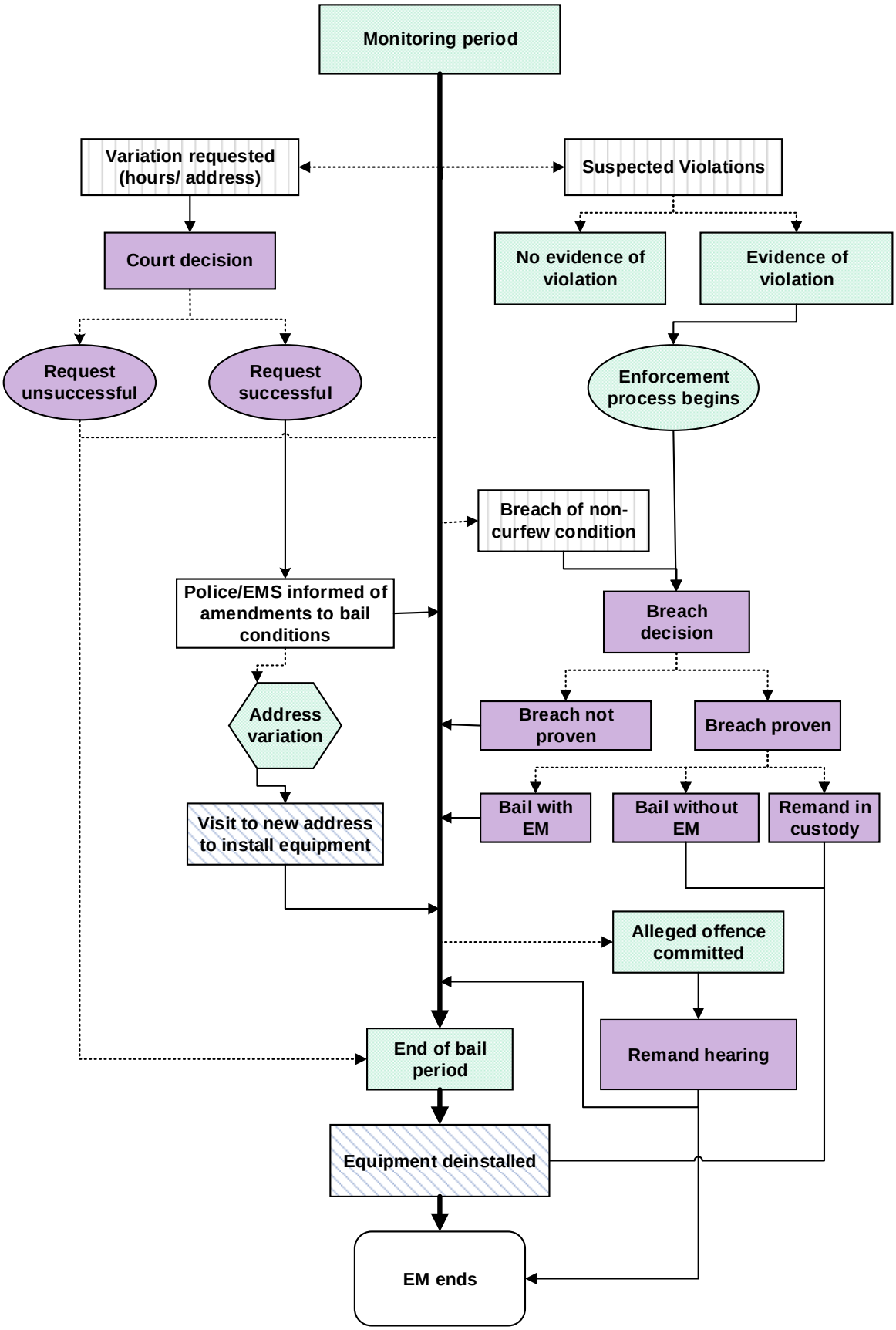
> So I think there is a challenge around that [technological innovation]. But in relation to the capability I would want the technology to be pushed as far as it can to do different things that enable us to use it as flexibly as you possibly could (Interview: 42: 31).

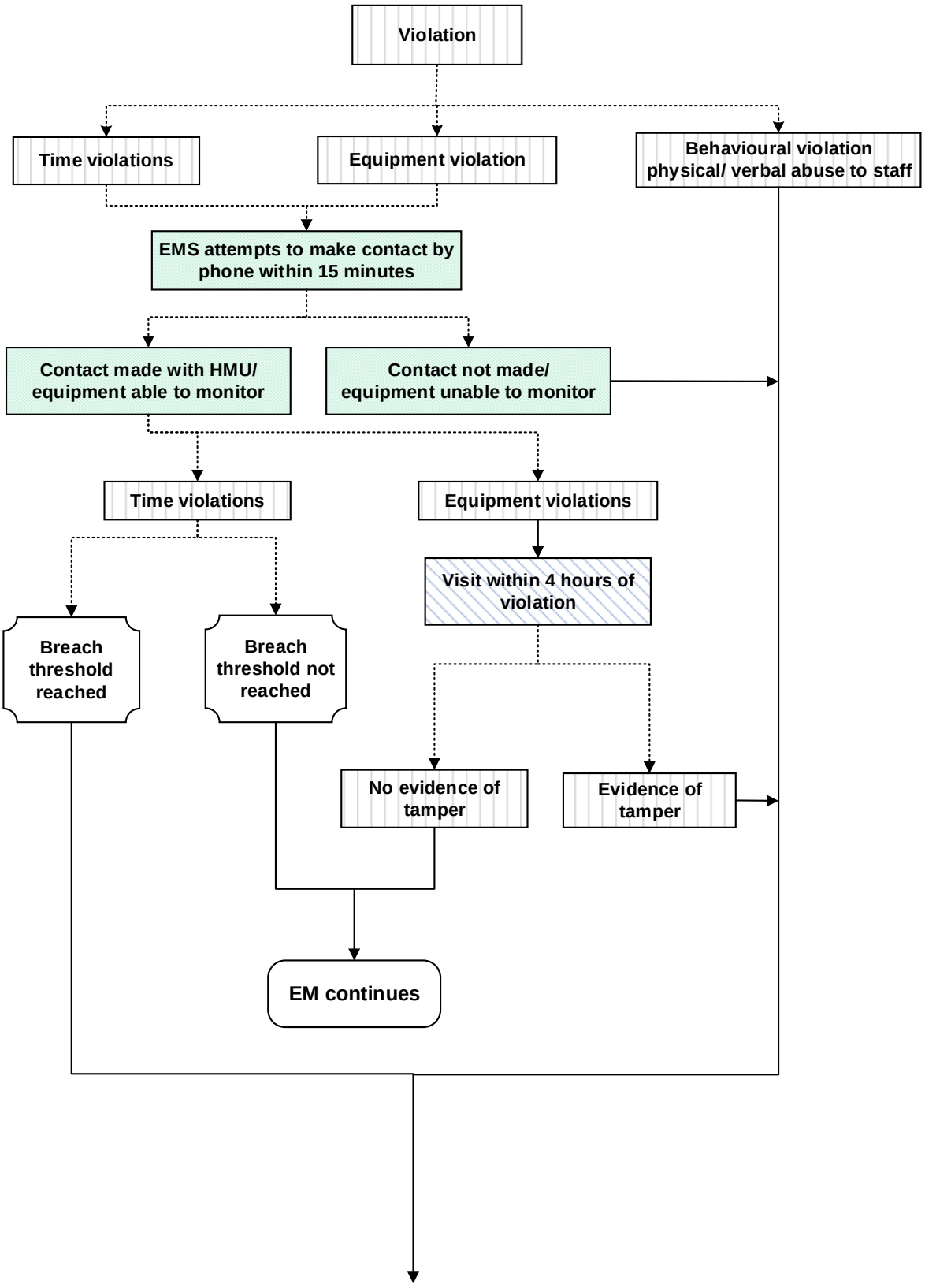
The main driver for increased use was the widespread view that EM technologies were an important and cost effective instrument for managing some of the most urgent problems facing the criminal justice system and particularly for stabilising or reducing the prison population. EM was seen by policy-makers as a valuable mechanism for both preventing individuals from going to prison in the first place and managing them more effectively when released. Importantly there was also a widespread commitment to ensure that EM was used proportionately.

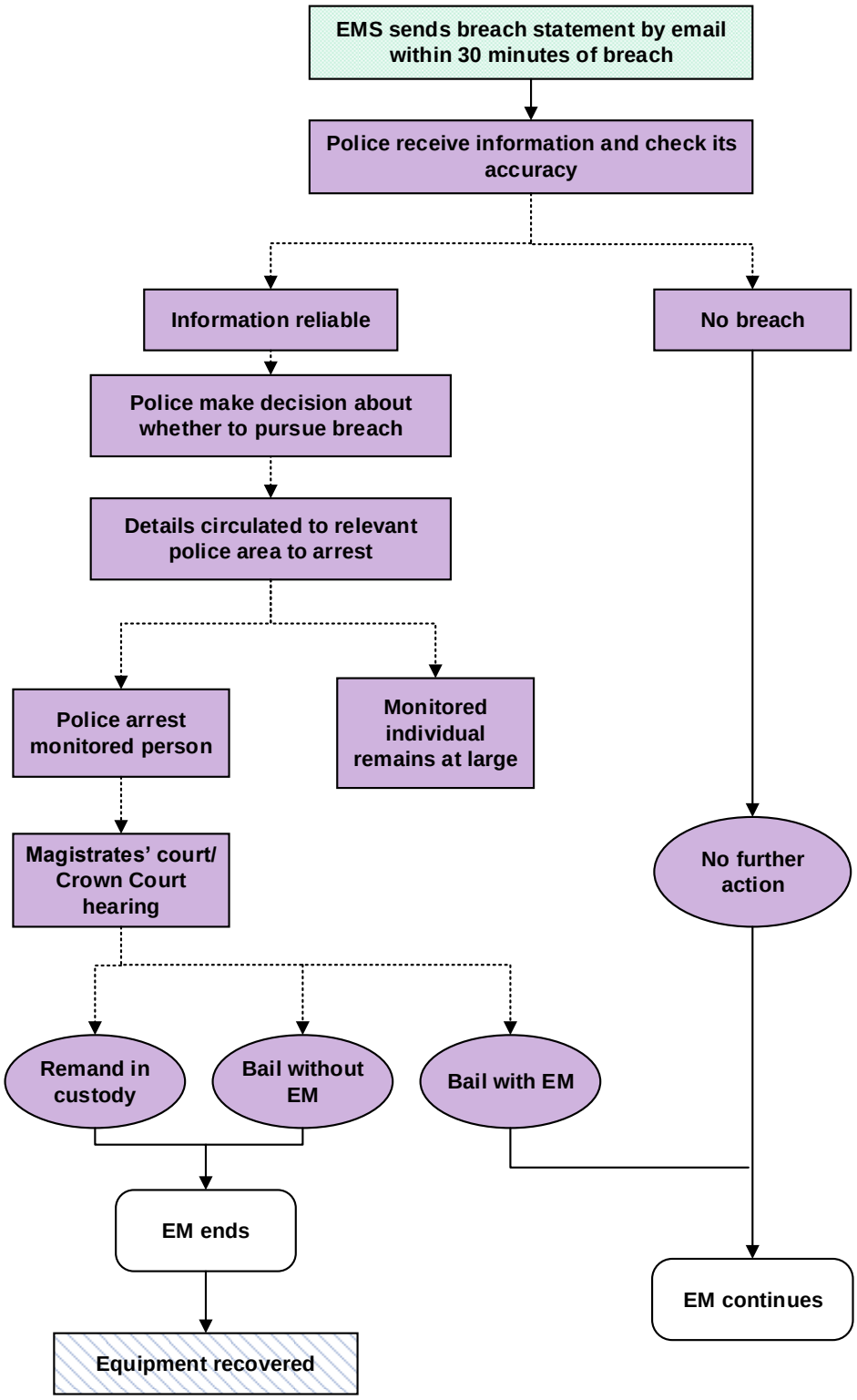
18. Appendices

Appendix one: Bail

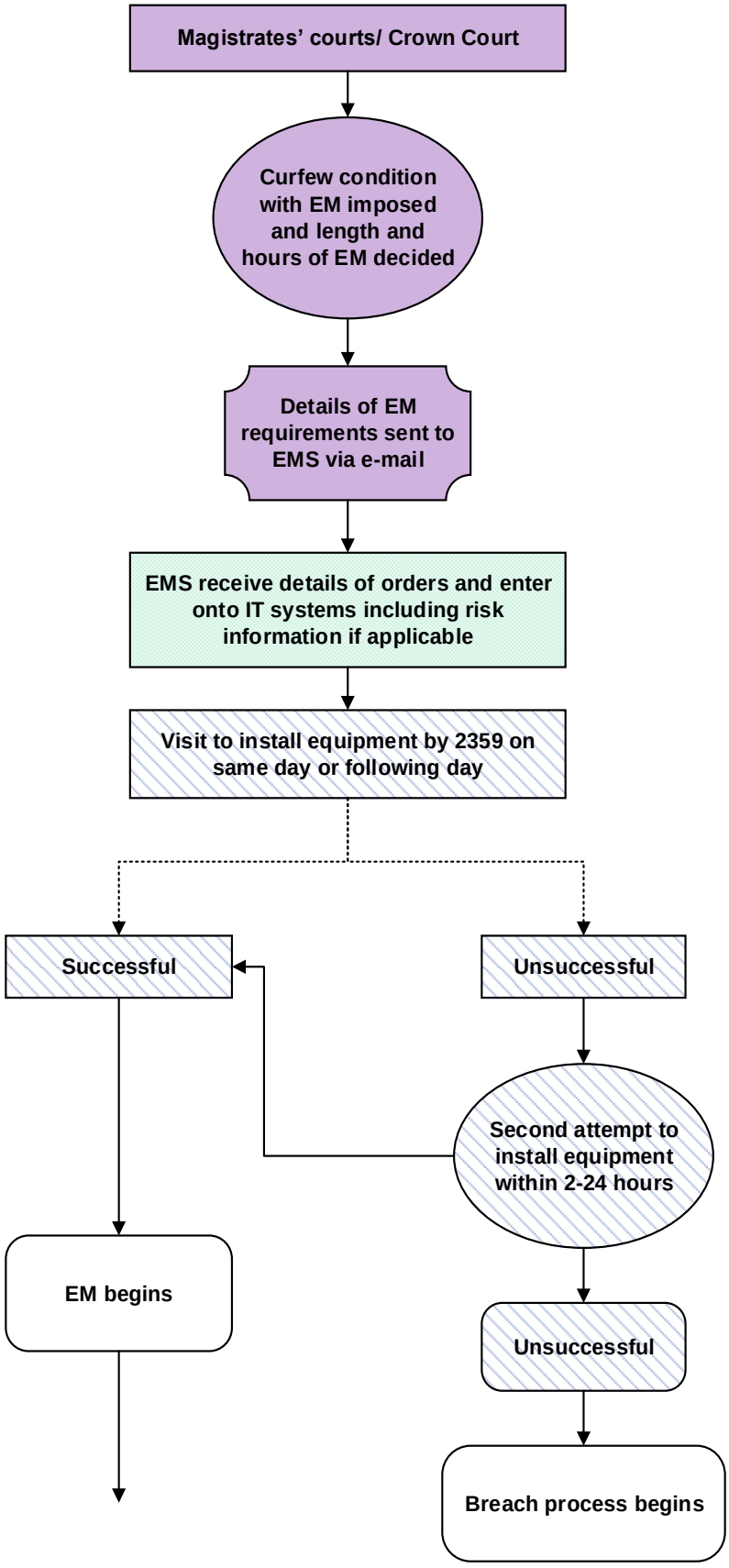


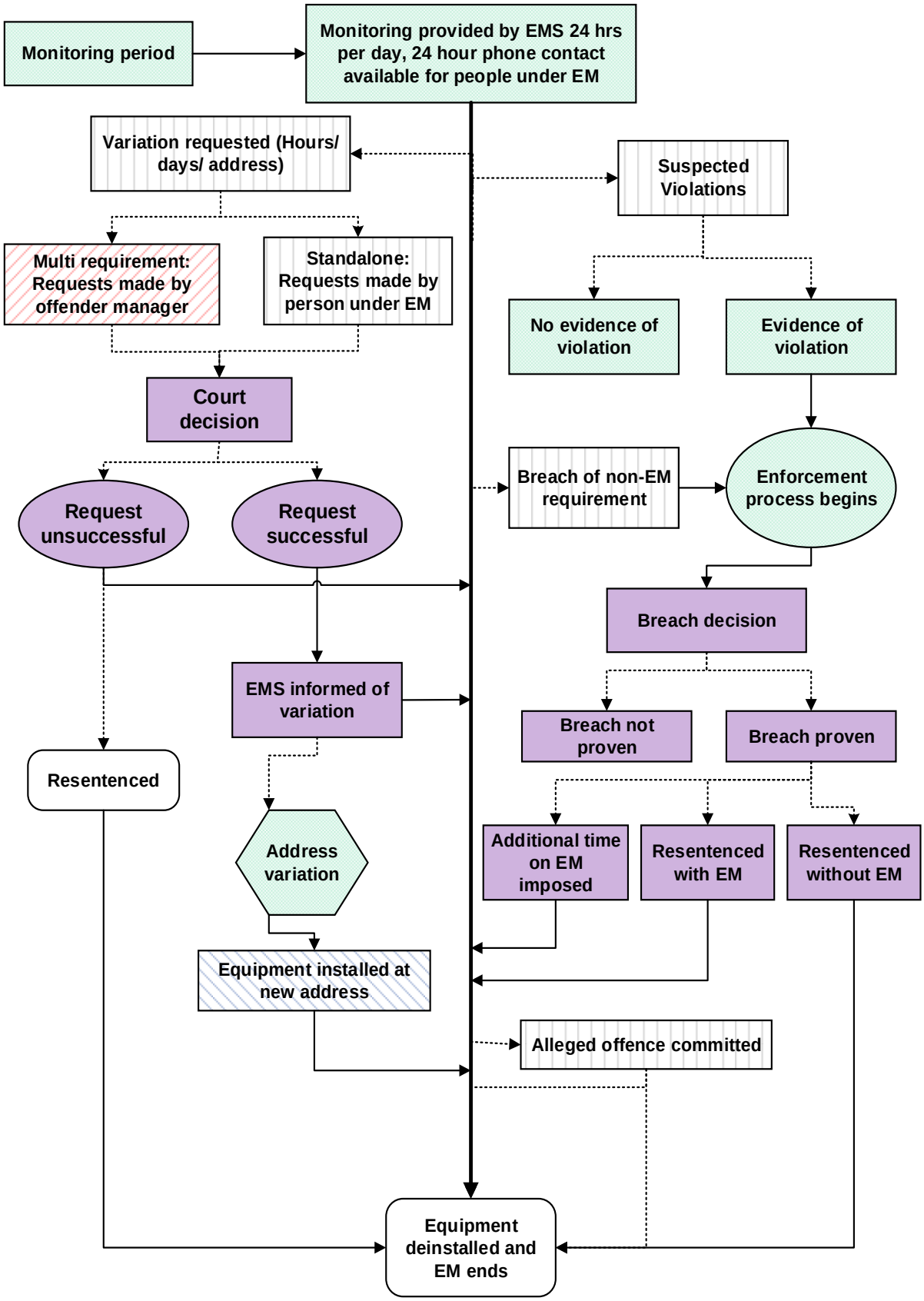

Monitoring period
Variation requested (hours/ address)
Suspected Violations
Court decision
No evidence of violation
Evidence of violation
Request unsuccessful
Request successful
Enforcement process begins
Breach of non-curfew condition
Police/EMS informed of amendments to bail conditions
Breach decision
Address variation
Breach not proven
Breach proven
Bail with EM
Bail without EM
Remand in custody
Visit to new address to install equipment
Alleged offence committed
End of bail period
Remand hearing
Equipment deinstalled
EM ends

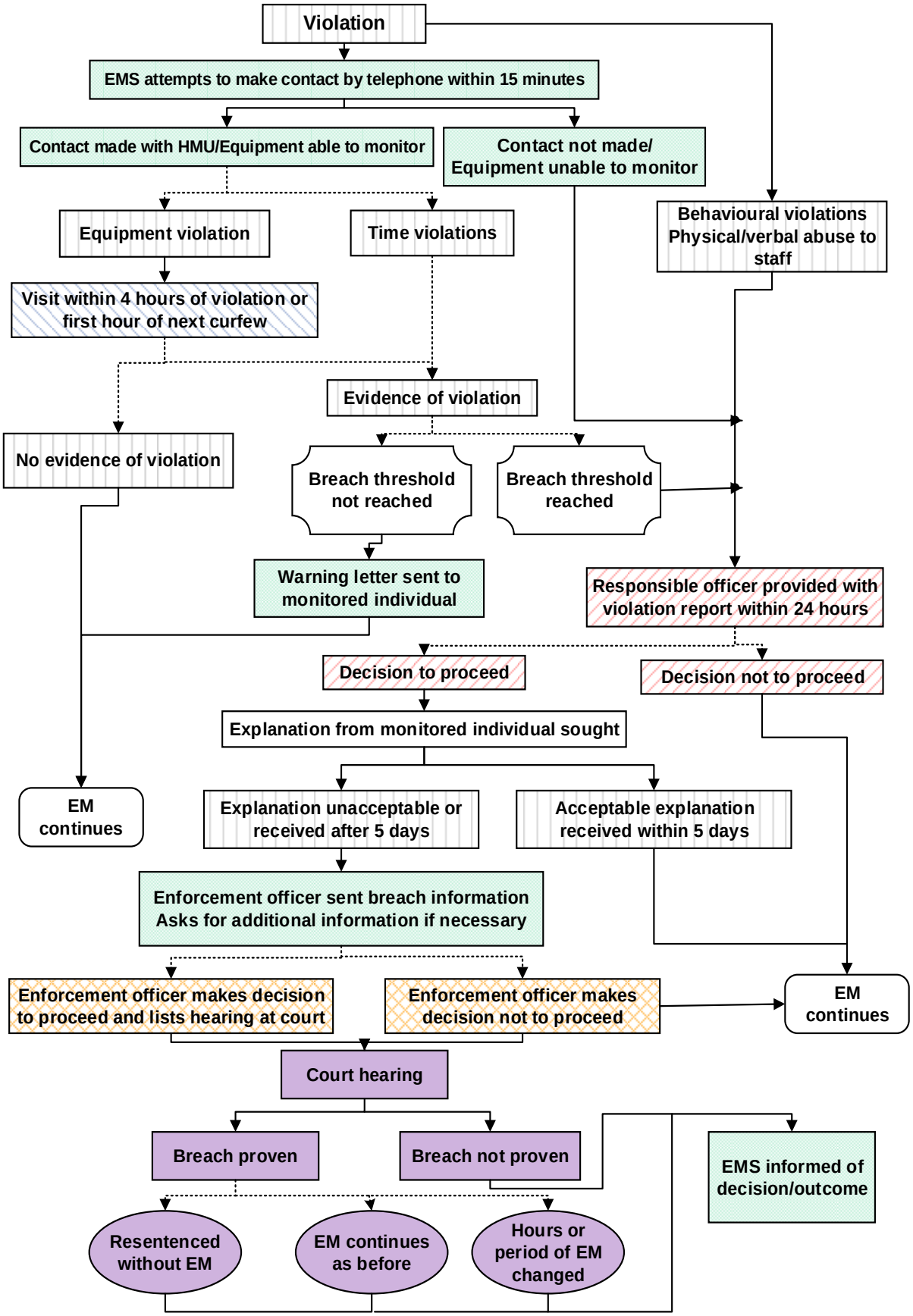

Violation
Time violations
Equipment violation
Behavioural violation physical/ verbal abuse to staff
EMS attempts to make contact by phone within 15 minutes
Contact made with HMU/ equipment able to monitor
Contact not made/ equipment unable to monitor
Time violations
Equipment violations
Visit within 4 hours of violation
Breach threshold reached
Breach threshold not reached
No evidence of tamper
Evidence of tamper
EM continues


EMS sends breach statement by email within 30 minutes of breach
Police receive information and check its accuracy
Information reliable
No breach
Police make decision about whether to pursue breach
Details circulated to relevant police area to arrest
Police arrest monitored person
Monitored individual remains at large
Magistrates' court/ Crown Court hearing
No further action
Remand in custody
Bail without EM
Bail with EM
EM ends
EM continues
Equipment recovered

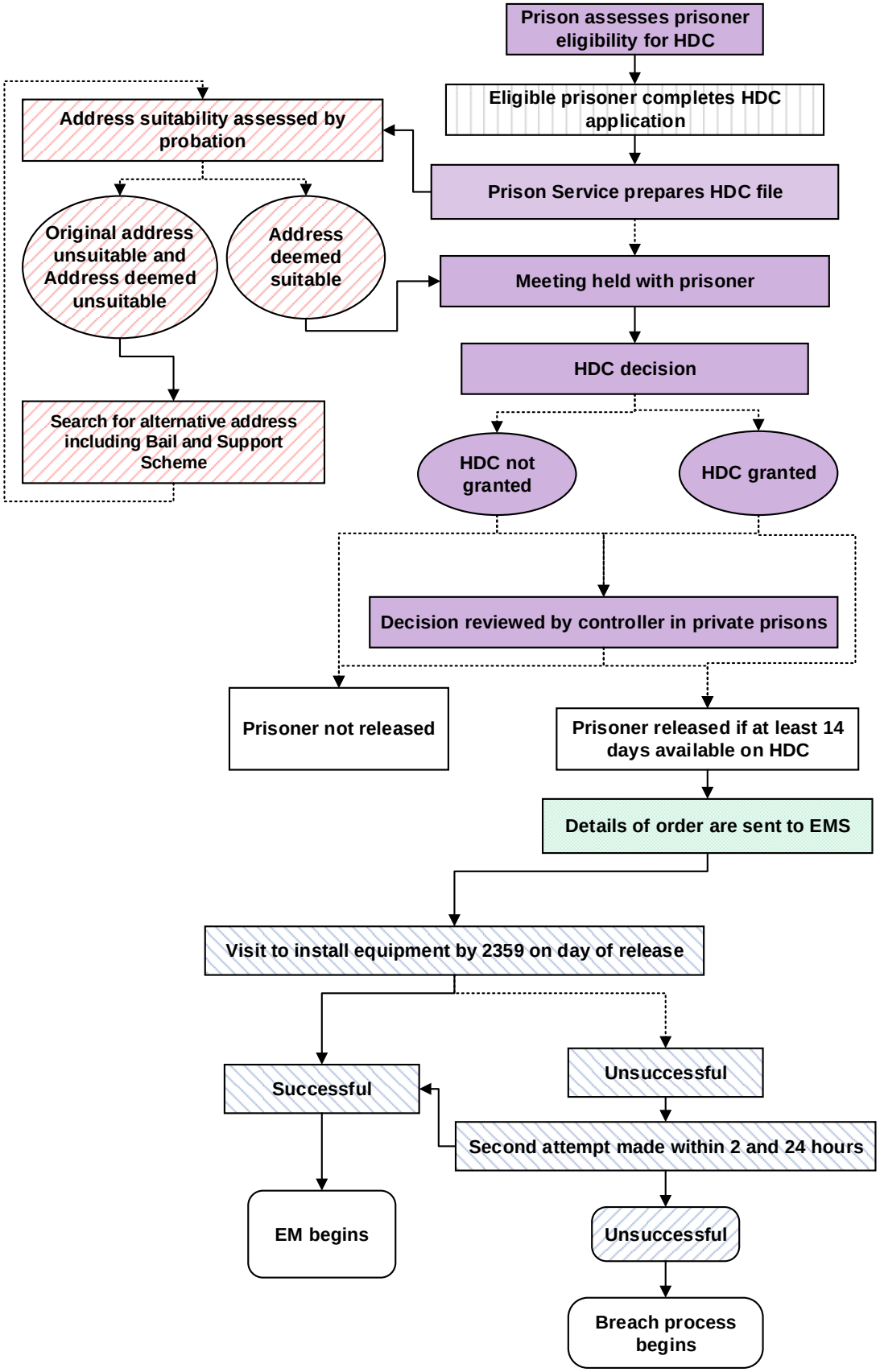
Appendix two: Community and suspended sentence orders

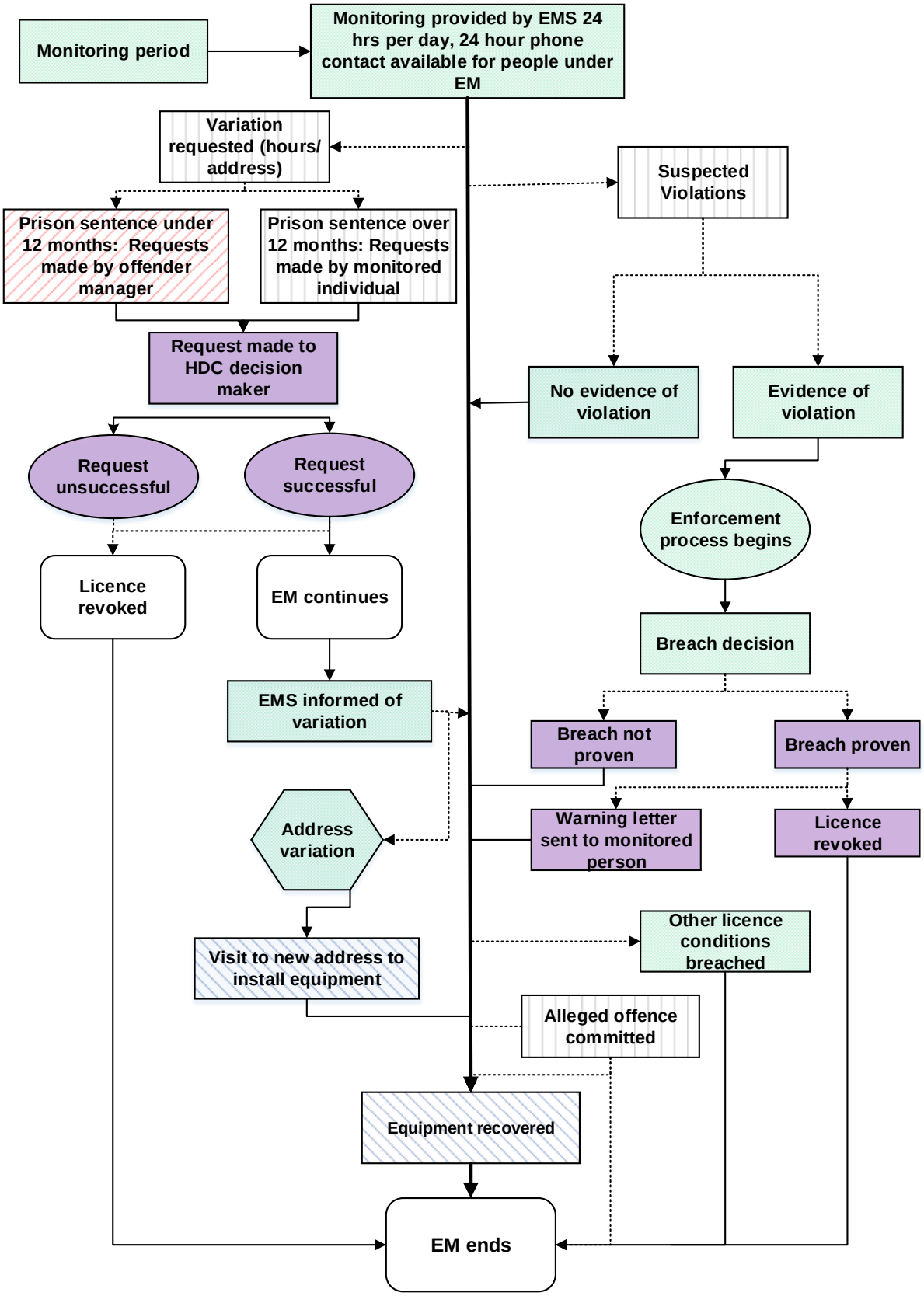


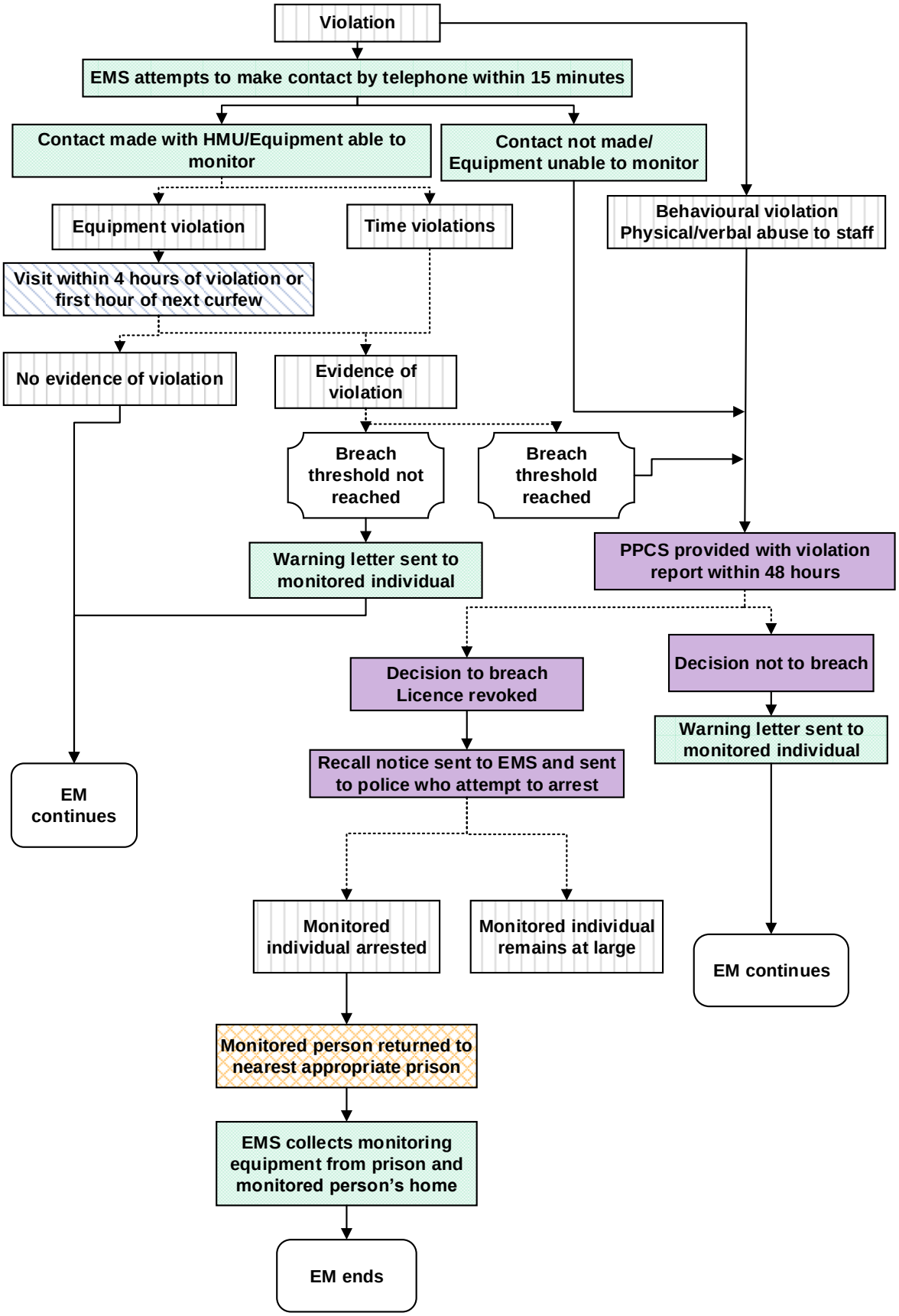

Monitoring period
Monitoring provided by EMS 24 hrs per day, 24 hour phone contact available for people under EM
Variation requested (Hours/ days/ address)
Suspected Violations
Multi requirement: Requests made by offender manager
Standalone: Requests made by person under EM
No evidence of violation
Evidence of violation
Court decision
Breach of non-EM requirement
Enforcement process begins
Request unsuccessful
Request successful
Breach decision
EMS informed of variation
Breach not proven
Breach proven
Resentenced
Address variation
Additional time on EM imposed
Resentenced with EM
Resentenced without EM
Equipment installed at new address
Alleged offence committed
Equipment deinstalled and EM ends


Violation
EMS attempts to make contact by telephone within 15 minutes
Contact made with HMU/Equipment able to monitor
Contact not made/ Equipment unable to monitor
Equipment violation
Time violations
Behavioural violations Physical/verbal abuse to staff
Visit within 4 hours of violation or first hour of next curfew
Evidence of violation
No evidence of violation
Breach threshold not reached
Breach threshold reached
Warning letter sent to monitored individual
Responsible officer provided with violation report within 24 hours
Decision to proceed
Decision not to proceed
Explanation from monitored individual sought
EM continues
Explanation unacceptable or received after 5 days
Acceptable explanation received within 5 days
Enforcement officer sent breach information Asks for additional information if necessary
Enforcement officer makes decision to proceed and lists hearing at court
Enforcement officer makes decision not to proceed
EM continues
Court hearing
Breach proven
Breach not proven
EMS informed of decision/outcome
Resentenced without EM
EM continues as before
Hours or period of EM changed

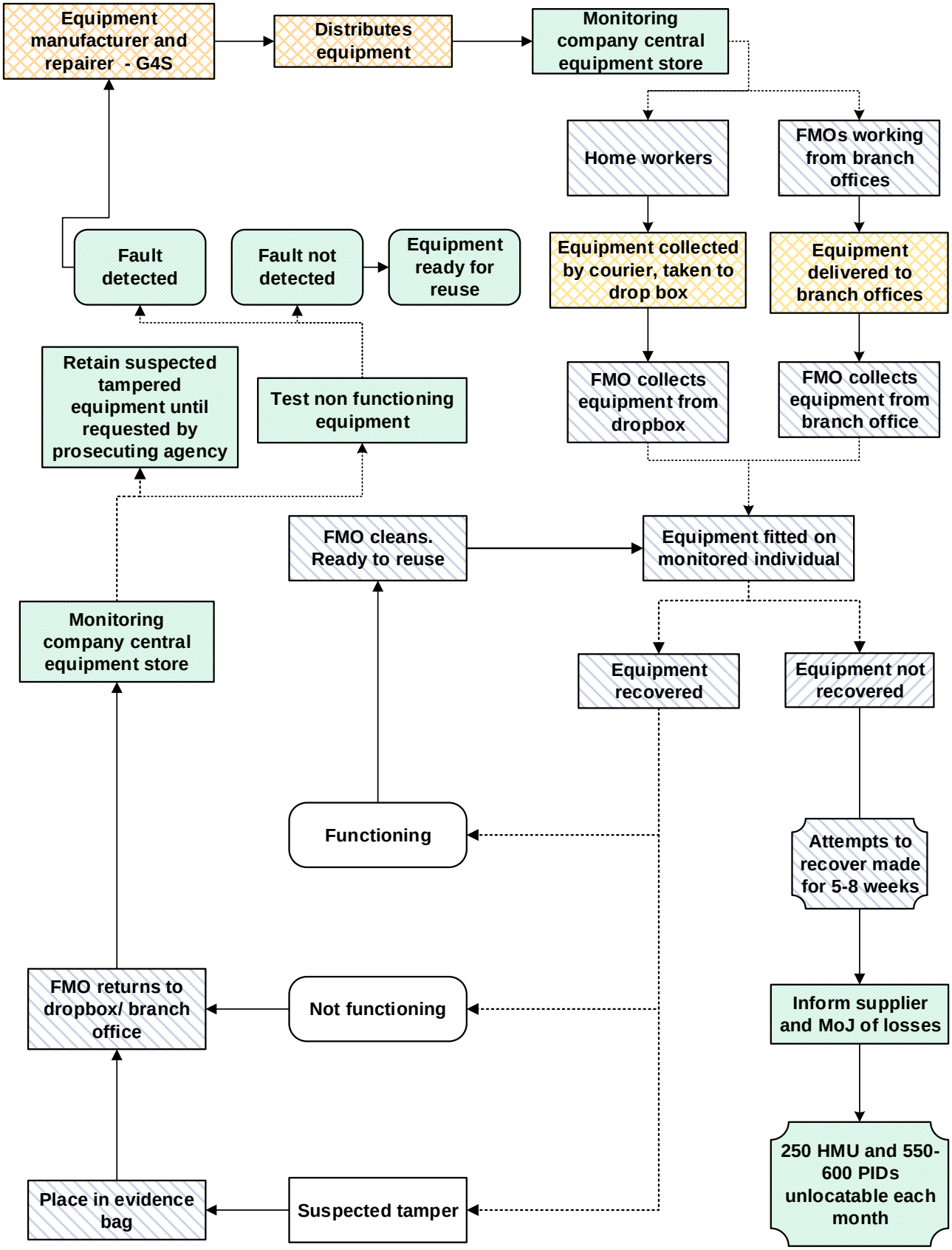
Appendix three: Home Detention Curfew




Monitoring period
Monitoring provided by EMS 24 hrs per day, 24 hour phone contact available for people under EM
Variation requested (hours/ address)
Suspected Violations
Prison sentence under 12 months: Requests made by offender manager
Prison sentence over 12 months: Requests made by monitored individual
Request made to HDC decision maker
No evidence of violation
Evidence of violation
Request unsuccessful
Request successful
Enforcement process begins
Licence revoked
EM continues
Breach decision
EMS informed of variation
Breach not proven
Breach proven
Address variation
Warning letter sent to monitored person
Licence revoked
Other licence conditions breached
Visit to new address to install equipment
Alleged offence committed
Equipment recovered
EM ends


Violation
EMS attempts to make contact by telephone within 15 minutes
Contact made with HMU/Equipment able to monitor
Contact not made/ Equipment unable to monitor
Equipment violation
Time violations
Behavioural violation Physical/verbal abuse to staff
Visit within 4 hours of violation or first hour of next curfew
No evidence of violation
Evidence of violation
Breach threshold not reached
Breach threshold reached
Warning letter sent to monitored individual
PPCS provided with violation report within 48 hours
Decision to breach Licence revoked
Decision not to breach
Warning letter sent to monitored individual
EM continues
Recall notice sent to EMS and sent to police who attempt to arrest
Monitored individual arrested
Monitored individual remains at large
EM continues
Monitored person returned to nearest appropriate prison
EMS collects monitoring equipment from prison and monitored person's home
EM ends

Appendix four: Equipment lifecycle



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