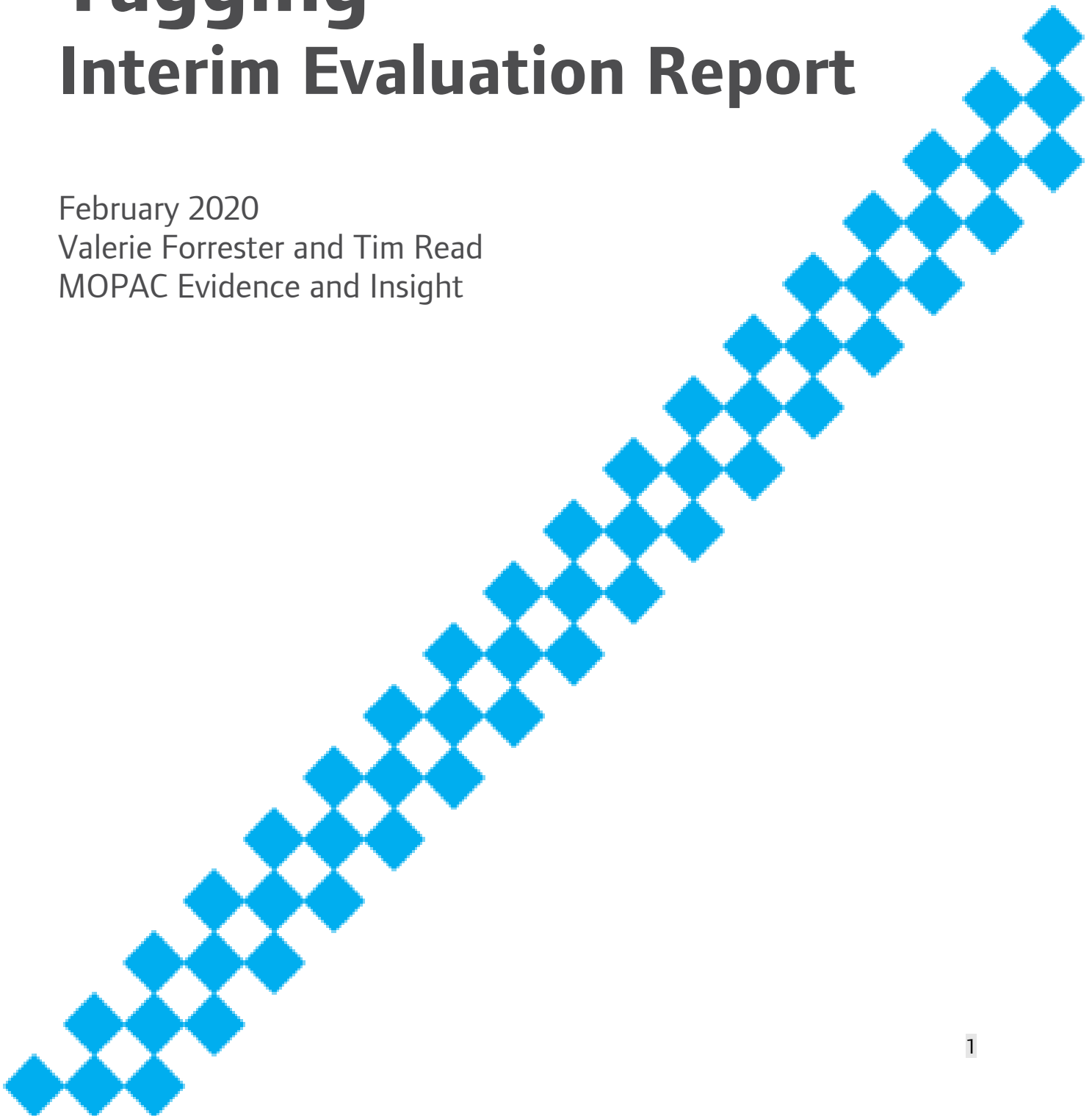# GPS Knife Crime Tagging
Interim Evaluation Report

February 2020
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MOPAC Evidence and Insight

Contents

Executive Summary

In 2017, the London Mayor's Office for Policing And Crime (MOPAC) published the London Knife Crime Strategy. Set against the backdrop of increases observed within Knife crime (both Nationally and London), the strategy took a public health approach to tackling knife crime and included a commitment to pilot the use of GPS tagging with knife crime offenders. The overall aim of the pilot is to test GPS as a tool for reducing the likelihood of offenders committing further offences, especially weapon-related offences. Specifically, this includes the use of GPS location data:

- to improve the management of the risk posed to known adults, children and the public,
- to improve the enforcement of licence conditions and increase deterrence,
- to challenge the offenders' thinking and lifestyle and improve rehabilitation; and
- to enable the MPS to map individual cohort crimes effectively to support crime detection.

To be eligible for the MOPAC pilot, an offender must be:

- Aged 18+;
- Automatically released on a determinate prison licence. In addition, in January 2020 there was agreement in principle for the eligibility criteria to be extended to include cases being considered for re-release after recall by the Parole Board, if GPS conditions were deemed necessary and proportionate;
- Serving a sentence for either a knife possession offence or another offence which involved the use of a knife or bladed object;
- Released from an eligible prison;
- Released before the pilot end date (currently 30th April 2020);
- Being released to one of the pilot boroughs (as detailed below); and
- Being released to some type of viable accommodation (to enable tag charging).

The pilot began in February 2019, in four London boroughs and, following a Mayoral decision, has subsequently been rolled out to cover 24 London boroughs. The pilot is due to finish in April 2020 for new releases, with existing cases being monitored until October 2020.

From the beginning of the pilot (February 2019) to the date of analysis (early January 2020) a total of **102** GPS tags had been imposed, the majority at the point of prison release (**90%**, n=92), with **10** being imposed as part of a licence variation in the community. Most cases were held by the National Probation Service (NPS) (**71%**, n=74) and the remainder (n=28) held by the London Community Rehabilitation Company (CRC).

All but one of the tag wearers were male (n=**101**) and the mean age of the tag wearers was **26.5** years (SD=9.8). Almost all tag wears were aged under 40 years (**89%**, n=91), with **64%** (n=65) aged 18-24 years, **25%** (n=26) aged 25-39 years, **9%** (n=9) aged 40-54 years, and only **2** aged 55+ years. Where the ethnicity of the tag wearer was known (n=92), **54%** (n=50) were Black or Black British, **24%** (n=22) were White, **12%** (n=11) were Mixed, **7%** (n=6) were Asian or Asian British and **3%** (n=3) were Other.

In half of cases (**50%**, n=51) the main offence of the tag wearer was possession of weapons, most commonly having an article with a blade or point in a public place (n=**34**) and possession of offensive weapons without lawful authority or reasonable excuse (n=**14**). In **16%** of cases (n=16), the main offence of the tag wearer was robbery. In a quarter of cases (**25%**, n=25), the main offence of the tag wearer was violence against the person, most commonly involving actual bodily harm, wounding or grievous bodily harm (n=**17**).

At the point this report was written, there had been **46** completed cases; **27** cases ended due to recall and **19** cases ended without recall, giving an overall rate of completion without recall of **39%**. However, of the 27 cases ended due to recall, **16** cases were recalled for reasons unrelated to the GPS tag (e.g., poor behaviour, missed probation appointments, a new incident), **6** cases were recalled due to failure to comply with licence conditions directly related to the GPS tag (e.g., refusal to have the tag fitted, failure to charge the tag), and **5** cases were recalled due to breach of an exclusion zone being monitored through the GPS tag. Taking these reasons for recall into account, the effective compliance rate, that is the proportion of cases completed without recall for failure to comply with the GPS tag as a licence condition, is **87%** (n=40). Fifty-one offenders were subject to exclusion zone monitoring, with five offenders being recalled specifically for breaching this condition, giving an exclusion zone compliance rate of **90%**.

The research undertaken indicates that probation offender managers (OMs) have a very positive view of the GPS tag. There was widespread support for the GPS tag as a means of monitoring the movements of tag-wearers, providing information that could be used in supervision, and the improved ability to manage risk (both to victims and tag-wearers) precisely because of this increased certainty about tag-wearer's movements. OMs also felt that there was scope to extend the use of GPS tags to other offences.

There was qualified support too from OMs for direct access to the IT system provided by the tag contractor (Buddi), although it was clear that OMs' understanding of the GPS data and its potential uses varied. Given this, OMs would likely benefit from further training and support to promote the value of the data.

The findings from tag-wearers were more ambivalent. Although there appeared to be support for the tag from tag-wearers at the point that the tag was fitted around topics such as their offending behaviour and the impact of the tag on their lifestyle, it was not possible in this report to examine the level of support at the point of removal. However, we also found tag wearers and OMs express the need to receive more information about the tag. This is something that should be addressed as the pilot progresses – especially in terms of further communication to tag-wearers. However, there does appear to be a recognition on the part of some tag-wearers of the benefits that the tag gives in providing a means of avoiding risky situations/individuals, if they have the inclination to do so.

The evaluation has also identified some issues around the administration of the tag, particularly in the early days of its operation. There were initial difficulties in arranging tags to be fitted in prison on the day of release. Issues, too, relating to the charging of the tag, and the ability of OMs to establish whether the tag was faulty/not charging in the face of claims from the tag-wearer. It would also appear that there is scope to improve communication with offenders about

the pilot to ensure that they are aware that they are going to be tagged. Concerns too, were expressed about the utility of some of the output routinely provided to OMs (which has been amended in the light of these concerns). Nonetheless, the OMs appeared to be very content overall with the service received from Buddi.

Overall, OMs felt that availability of GPS data had an impact on the nature of supervision between them and the tag-wearer, and on tag-wearers' behaviour whilst on the tag. A different type of discussion with the tag-wearer was feasible, because of the type of data additionally available (i.e., it was difficult for the tag-wearer to challenge the location data). OMs also suggested that wearing the tag may have a short-term deterrent effect during the monitoring period, although they were less convinced that the tag would bring about longer-term offending change. In the views of OMs, any change for the tag-wearer was largely dependent upon the tag-wearer's motivation and their willingness to change – to take advantage of the 'window' that the tag provides. Interviews with tag-wearers appeared to support the importance of motivation.

Findings from the police crime mapping process are inconclusive at this point. Despite the large number of crimes uploaded and matches assessed, there have been relatively few "significant matches" to date and the GPS information shared with local BCUs has not led to any additional convictions so far. The MPS is refining the process for identifying and triaging automatic matches to ensure that they focus on the cases where there appears to be the best potential for a meaningful match with a greater chance of this being used for investigation and arrests. There will also be a great focus on more serious offences (excluding minor property crimes and focusing on contact crimes).

The final evaluation report, to be completed within six months of the pilot's conclusion, will continue to collect data on the number of tags fitted and levels of compliance by wearers, as well as feedback from tag wearers and OMs. Additional performance and qualitative data on crime mapping will be collected, including throughput of crimes uploaded for mapping to outcomes of matches and feedback from police staff. If the sample size (i.e., the number of tags fitted) permits, it will also examine the impact of the tag on tag-wearers' offending behaviour against an appropriate control group.

1. Introduction

In 2017, the London Mayor's Office for Policing And Crime (MOPAC) published the London Knife Crime Strategy. This was against a background of increases in levels of knife crime nationally (from 2014) and within London (increases begin during 2016). To illustrate, knife crime rose steeply within 2017 - England & Wales (+22%), London (+30.5%) (ONS 2018, Met Stats). Even with a stabilisation during 2019 (when there was a 6% increase), the issue remains key for London. Londoners' perceptions of knife crime as a problem in their local area has also increased over recent years (i.e., from 23% in Q2 17-18, to 38% in Q3 19/20 – as measured by the MOPAC Public Attitude Survey). The Strategy took a public health approach to tackling knife crime and included a commitment to pilot the use of GPS tagging with knife crime offenders. The pilot was endorsed and supported by joint work with the Ministry of Justice (MoJ) and designed to work alongside the MoJ's national GPS programme, ensuring there was no overlap or duplication between the MoJ and MOPAC GPS provision. Details of the differences between the MOPAC and MoJ programmes are identified below.

Table 1. Differences between the MOPAC and MOJ GPS pilots

MOPAC knife crime GPS pilot	MoJ national GPS programme
Only available for knife crime offenders on determinate licence	Available for any offence type and for sentence types including community and indeterminate prison sentences
Only available for offenders returning to pilot London boroughs	Available nationally
Pilot end date currently 30th April 2020 for new releases	No end date for this programme.

The pilot began in February 2019 in four London boroughs and has subsequently been rolled out to cover 24 London boroughs as detailed in table 2 below. The pilot is due to finish in April 2020 for new releases.

Table 2. Rollout of the GPS knife crime pilot

Launch date	Boroughs	Total pilot boroughs
February 2019	Croydon, Lambeth, Lewisham, Southwark	4
June 2019	Greenwich, Hackney, Newham, Tower Hamlets, Waltham Forest, Westminster	10
August 2019	Barking & Dagenham, Camden, Enfield, Haringey, Islington, Redbridge	16
September 2019	Barnet, Brent, Ealing, Hammersmith & Fulham, Kensington & Chelsea, Wandsworth	22
November 2019	Bromley, Hounslow	24

The GPS tag is part of the tag-wearer's licence conditions and is usually fitted at release from prison. The length of the tag is specified by the OM, up to a maximum of 6 months.

Eligibility criteria

To be eligible for the MOPAC pilot an offender must be:

- Aged 18+;
- Automatically released on a determinate prison licence. In addition, in January 2020 there was agreement in principle for the eligibility criteria to be extended to include cases being considered for re-release after recall by the Parole Board, if GPS conditions were deemed necessary and proportionate;
- Serving a sentence for either a knife possession offence or another offence which involved the use of a knife or bladed object;
- Released from an eligible prison[1];
- Released before the pilot end date;
- Being released to one of the pilot boroughs; and
- Being released to some type of viable accommodation (to enable tag charging).

Aims of the pilot

The overall aim of the pilot is to test GPS as a tool for reducing the likelihood of offenders committing further weapon-related offences. Specifically, this includes the use of GPS location data:

- to improve the management of the risk posed to known adults, children and the public,
- to improve the enforcement of licence conditions and increase deterrence,
- to challenge the offenders' thinking and lifestyle and improve rehabilitation; and
- to enable the MPS to map individual cohort crimes effectively to support crime detection.

Key partners in this pilot include the National Probation Service (NPS) (London division), London Community Rehabilitation Company (CRC), the Metropolitan Police (MPS), Her Majesty's Prison and Probation Service (HMPPS) and Buddi Ltd (the GPS monitoring provider).

Background to the pilot

GPS monitoring was piloted by MOPAC with persistent and knife crime offenders on community sentences in eight North and East London boroughs between 2017 and 2019. Building upon the learning, MOPAC, with support from MoJ, extended the use of GPS tags to individuals convicted of knife crime offences released from prison on licence, providing location data to probation staff to assist them in monitoring specific licence conditions, addressing the subject's offending behaviour and managing risk of serious harm. In the pilot, OMs are encouraged to use GPS data openly with service users in supervision meetings, to examine and challenge lifestyle and risk factors linked to offending, especially knife crime. It is anticipated that GPS will be used to monitor compliance with exclusion zones and attendance at rehabilitation programmes and

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[1] Eligible releasing prisons are - Belmarsh, Brixton, Bronzefield, Coldingley, Downview, Feltham, High Down, Highpoint, Isis, Onley, Pentonville, Send, Thameside, Wandsworth, and Wormwood Scrubs

treatment. Data can also be provided about bespoke and flexible key locations for the individual via real time notifications and summary reports, such as heat maps and top addresses visited, provided by the monitoring provider to the OM.

Data provided to OMs by the tagging provider

OMs are provided with real time email alerts in the event of their service user breaching an exclusion zone or entering an interest zone. When the tag reaches 30%, the wearer will receive a series of automated text messages and phone calls reminding them to charge the tag for at least an hour, if the tag has still not been placed on charge after two hours the offender manager will receive a notification of the breach.[2]. In addition to the alerts, OMs are sent a weekly summary report by email which provides details of the service user's charging pattern, and the 'top addresses' visited by the tag-wearer during the week (the format of the latter was amended in the light of comments received from OMs to provide more detail about the location, and the duration of the tag-wearer's visit to the address). If applicable, OMs also receive respective details of curfew violations (as this is a licence condition rather than a GPS licence condition, OMs do not receive real time alerts for these breaches).

Figure 1. Example of Buddi patented Heatmap
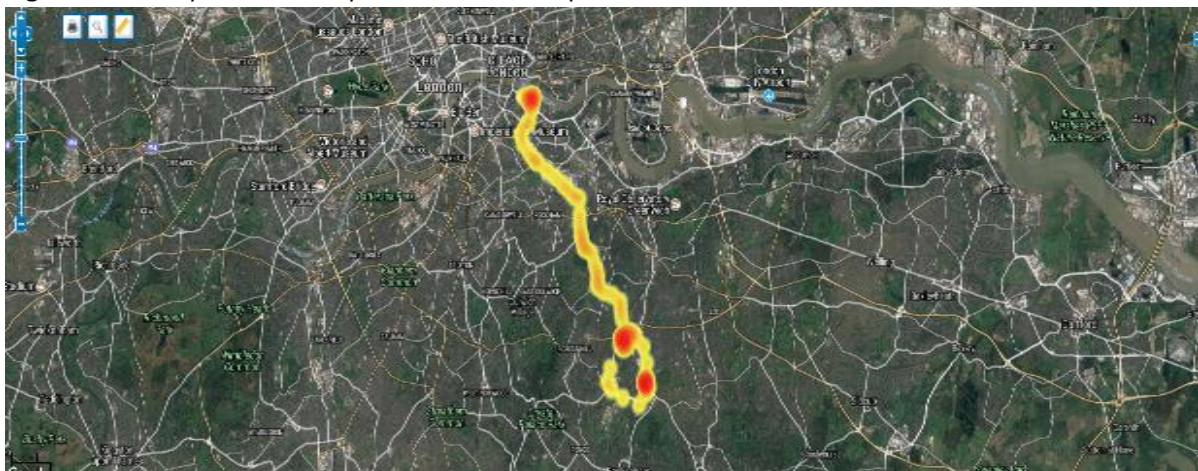
The OM is also able to request data on an *ad-hoc* basis from Buddi. This could be in the form of Buddi patented heat maps (indicating the most popular locations visited by a service user over a certain period in a specific area – see Figure 1), trail maps (showing details of the tag-wearer's movements, or details of the tag-wearer's visits to specific addresses/locations).

Since November 2019 some OMs have been given direct access to the Buddi system via the secure customer portal, allowing them to produce the various outputs above as required without having to request this from Buddi. This access was initially offered to all NPS OMs who had live cases at the time (15 OMs), about half of whom accepted.

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[2] There is also the facility for Buddi to phone the on-call emergency probation manager in the event of an emergency out-of-hours breach of an exclusion zone.

Exclusion/inclusion and interest zones

As part of the licence conditions for the GPS tag it is possible for the OM to specify an area or areas which the tag-wearer cannot enter or leave whilst on licence. PSI 12/2015[3] states that 'the purpose of an exclusion zone condition must be clear and necessary, and the size of the exclusion zone reasonable and proportionate' (Prison Reform Trust). These zones can be a variety of types. Exclusion zones are where the OM is provided with an alert immediately as the tag-wearer *enters* the specified area(s). A variation of this is the exclusion zone with a 'grace period' attached – where the OM/tag-wearer is not alerted until a specified period has elapsed (typically requested by the OM if, for example, the tag-wearer has to pass through the exclusion zone for work/when travelling). There are also inclusion zones, where there is an alert when the tag-wearer moves *outside* a specified area, inclusion zones with a grace period, and interest zones (zones which generate an alert for the OM but are not linked to an enforceable licence condition).

GPS monitoring and crime mapping

Crime mapping allows eligible offenders to have their movements automatically cross referenced against the location of reported crimes. Data is only released when a match is confirmed, and this is then forwarded on to local police for investigation. Crime mapping is only carried out for offenders assessed as "more likely than not" to reoffend within 2 years, that is individuals with an OGRS (Offender Group Reconviction Scale)[4] score of 50%+. Crime mapping has been taking place since June 2019, and since November 2019 has been undertaken by a dedicated analyst based in the MPS Central Intelligence team. The post is funded by MOPAC until October 2020.

The MPS and other agencies can also request specific GPS data through an External Agency Request (EAR) process. This can be used to assist in investigation and conviction. Where justified through a RIPA (Regulation Investigatory Powers Act) request it is also possible for police teams to gain direct access to the Buddi system to live monitor the location of an offender on tag.

GPS tagging evaluation

The Evidence and Insight team at MOPAC were asked to evaluate the GPS knife crime pilot, capturing learning around the implementation and design of the pilot, gaining insight into the experiences of practitioners and tag wearers, and measuring success. The overarching aims of the evaluation are to examine:

- *Performance* - monitor the key performance indicators of the innovation, including numbers receiving the tag, types of orders, compliance rates, violations, breaches, order completions, crime mapping hits, crime mapping outcomes.

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[3] Prison Service Instructions (PSIs) outline the rules, regulations and guidelines by which prisons are run.
[4] The Offender Group Reconviction Scale (OGRS) is a risk assessment tool used to estimate likelihood of re-offending using static factors such as age, gender and criminal history. It gives a score, which shows the likelihood of someone re-offending over a 1 year or 2-year period, expressed as a percentage or on a range from 0 to 1. A lower score means a lower likelihood of re-offending.

- *Process* - understand the experiences of practitioners and tag wearers involved in the pilot through surveys and interviews.

- *Impact* – the final evaluation will seek to explore the impact (if any) of the GPS tag upon offending behaviour (assuming the number of tags sufficiently large). The evaluation will also capture indicators of success and will use qualitative methods to gain learning about the success of the pilot.

This report shares findings and learning from the first year of the GPS tagging pilot. It consists of performance and process aspects, including feedback from OMs and tag wearers. The final evaluation report, to be completed within six months of the pilot's conclusion, will continue to collect data on the number of tags fitted and levels of compliance by wearers, as well as feedback from tag wearers, OMs. Additional performance and qualitative data on crime mapping will be collected, including throughput of crimes uploaded for mapping to outcomes of matches and feedback from police staff. If the sample size (i.e., the number of tags fitted) permits, it will also examine the impact of the tag on tag-wearers' offending behaviour against an appropriate control group.

2. Methodology

This section outlines the approach undertaken in the evaluation.

<u>Performance</u>

Performance data was gathered from a range of sources, mainly the tagging provider Buddi and MOPAC delivery staff. This data included information about the tag wearers and the types of orders they were on, and their compliance with the tag. In addition, data was provided by the MPS about the crime mapping element of the pilot (i.e., numbers of crimes up-loaded, numbers of matches, and subsequent actions taken by the police).

<u>Tag wearer survey</u>

Tag wearers are asked to complete a short survey at the point the tag is fitted and again when removed. The survey was designed by E&I and consists of 3 topics; the surveys aim to collect the wearers' anticipated and actual perception of the impact of wearing the tag on their behaviour, their relations with friends and family, and their lifestyle. Data were available from 50 individuals where a tag had been fitted, but only 5 cases where the tag had been removed, the difference in the numbers being due to many tags still being active. Because of the small number of removal cases, these data have not been analysed for this report but will be included in the final evaluation report as numbers increase. Surveys are administered by the tag fitter (staff members from Buddi).

<u>Interviews with offender managers and tag wearers</u>

Semi-structured interviews were undertaken with 12 OMs who had supervised those on the GPS knife crime tags. Those interviewed were asked about details of the specific case they had supervised, how they had used data from the tag in supervision, and for their views of the GPS tag in general. In addition, semi-structured interviews were completed with a small number of service users (three individuals) who had been tagged. The interview asked about their experiences wearing the tag, their understanding of why they had been tagged, and their views of the tag overall.

3. Results

This section of the report presents the early findings from the evaluation, covering aspects such as basic performance, tag wearer demographics, compliance with the tag, as well as the findings from the qualitative research carried out with OMs and tag-wearers about their perceptions of the tag's operation.

Performance

As of early March, **152** GPS tags have been imposed. For the purpose of this interim report, the analysis below covers GPS tags imposed up to the week commencing 6th January 2020.

GPS tags imposed

Since the beginning of the pilot in February 2019 to the date of analysis, a total of **102** GPS tags had been imposed, the majority at the point of prison release (**90%**, n=92), with **10** being imposed as part of a licence variation. Most cases were held by the NPS (**71%**, n=74) and the remainder (n=28) held by CRC. Tag wearers were most commonly released from Thameside Prison (n=21), followed by Feltham (n=16), Pentonville (n=14), Isis (n=12) and Brixton (n=11). The number of tag wearers released from Feltham and Isis, which focus on young adult offenders, reflects the fact that almost two-thirds the tag wearers were aged under 25 years. In terms of the enforceable licence conditions monitored by the GPS tag, 80 tag wearers were subject to trail monitoring, 51 were subject to at least one exclusion zone, 35 were subject to a requirement to attend a specified location, and 14 were subject to a condition to report at an approved premise.

Characteristics of tag wearers

All but one of the tag wearers were male (n=**101**) and the mean age of the tag wearers was **26.5** years (SD=9.8). Almost all tag wears were aged under 40 years (**89%**, n=91), with **64%** (n=65) aged 18-24 years, **25%** (n=26) aged 25-39 years, **9%** (n=9) aged 40-54 years, and only **2** aged 55+ years. Where the ethnicity of the tag wearer is known (n=92), **54%** (n=50) were Black or Black British, **24%** (n=22) were White, **12%** (n=11) were Mixed, **7%** (n=6) were Asian or Asian British and **3%** (n=3) were Other[5].

In half of cases (**50%**, n=51) the main offence of the tag wearer was possession of weapons, most commonly having an article with a blade or point in a public place (n=**34**) and possession of offensive weapons without lawful authority or reasonable excuse (n=**14**). In **16%** of cases (n=16), the main offence of the tag wearer was robbery. In a quarter of cases (**25%**, n=25), the main offence of the tag wearer was violence against the person, most commonly an offence involving actual bodily harm, wounding or grievous bodily harm (n=**17**). The mean OGRS score (2 year) of tag wearers was **62%,** which places the group on average at medium risk of offending[6], but there was a wide range of scores across the cohort (minimum of 9, maximum of 97). Older

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[5] In terms of disproportionality, although BAME individuals represent 41% of the London population overall, they represent 54% of the population under 25. Figures from MPS CRIS data for the FY 2017/18 indicate that those of black African-Caribbean ethnicity comprise 46% of all knife crime offenders, and 50% of knife crime possession offenders (MOPAC 2018b)

[6] OGRS scores are banded into 'low' (49% or below), 'medium' (50-74), 'high' (75-89) or 'very high' (90-99).

tag wearers tended to have a lower OGRS score, with the mean score of those aged 40+ years being **48%**. The OGRS score is also important because the crime mapping facility is only available for tag wearers with a score over 50.

Compliance with the GPS tag

Up to the week commencing 6 January 2020, of the 102 total tags - 56 cases were live. Looking at the **46** cases who had completed their period of GPS monitoring, **27** ended due to recall and **19** ended without recall, giving an overall rate of completion without recall of **39%**. Of the 27 cases ended due to recall, **16** cases were recalled for reasons unrelated to the GPS tag (e.g., poor behaviour, missed probation appointments, a new incident), **6** cases were recalled due to failure to comply with licence conditions directly related to the GPS tag (e.g., refusal to have the tag fitted, failure to charge the tag), and **5** cases were recalled due to breach of an exclusion zone being monitored through the GPS tag. Taking these reasons for recall into account, the effective compliance rate, that is the proportion of cases completed without recall for failure to comply with the GPS tag as a licence condition, is **87%** (n=40)[7]. This is a relatively high level of compliance[8], and in all likelihood can be seen as a positive - although in itself is not a measure of 'impact'. Fifty-one offenders were subject to exclusion zone monitoring, with five offenders being recalled specifically for breaching this condition, giving an exclusion zone compliance rate of **90%.**

Diagram 1. Completed cases and compliance with GPS tag as a licence condition
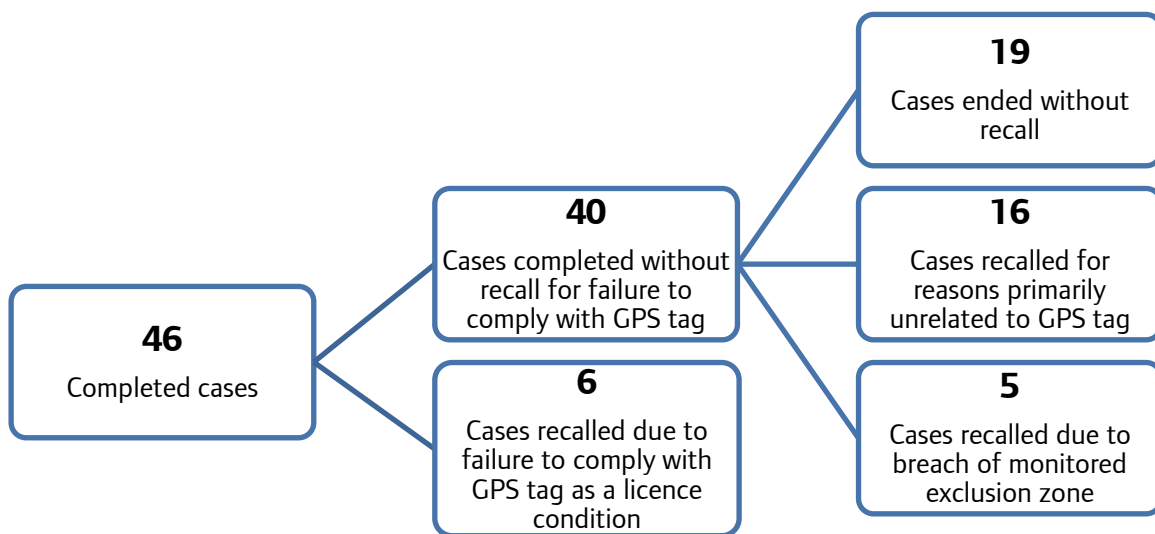
MPS crime mapping

To date, nearly **160,000** crime reports have been uploaded for crime mapping, with the reports mapped against the movements of those subject to a GPS tag, with any matches being automatically identified (where the tag-wearer had come within a 200m radius of the crime

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[7] As a compliance rate, this is higher than that found by MOPAC in the use of GPS tagging with an IOM cohort (56%) but slightly lower than that for AAMR (94%). It should be noted however, that the characteristics, and offending behaviour of the individuals who receive these various interventions differ.

[8] This compares against a compliance rate of 66% for licence and post-sentence supervision cases supervised nationally by the CRC (July-September 2019). Figures are not available for the NPS.

location during the timeframe of the offence). Over **1,005** automatic matches have been made and examined so far, to make an initial assessment of how likely the tag wearer was to have been actually involved in the reported offence. During this assessment the dedicated MPS analyst took in to account factors such as the suspect description or tag-wearer's speed of movement, for example, to see whether they had been at the scene of the crime long enough to commit the offence. Following this 'triage', plausible 'significant matches' were forwarded on to basic command units (BCUs) for further investigation. As of an MPS update in December 2019, **96** 'significant matches' (**10%** of the total matches) had been forwarded to BCUs. The most common offence types for significant matches were burglary (**48%**, n=46) and vehicle crime (**25%**, n=24). **84%** (n=81) of matched offences were theft offences (including taking from/of motor vehicles). To date these this process has not led to any charges or conviction. Factors that might explain the low level of outcomes from the crime mapping procedure are identified in the discussion section of this report.

There have been 15 External Agency Requests (EARs) for GPS data made by the MPS to Buddi, and there has been one case of the MPS having direct access to the Buddi system to live monitor the location of an offender subject to a GPS tag granted through a Regulation of Investigatory Powers Act (RIPA) request.

Qualitative research

The following themes are taken from qualitative research undertaken with tag-wearers and OMs at different stages of the tagging period; a survey completed with tag-wearers at the point that the tag was fitted[9], followed by interviews undertaken with OMs and tag-wearers shortly after the tag. Interviews with tag-wearers were only undertaken with those who were not recalled and were in the community, interviews with OMs were undertaken regardless of whether the individual they supervised was recalled or not.

General views of the tag

OMs overwhelmingly expressed positive views about the GPS tag.[10] It was suggested that tag 'provided structure and discipline' for the tag-wearers; provided more information and enabled more monitoring than a home detention curfew (HDC) tag; allowed better management of the case; opened up conversations with the tag-wearer (around their movements and safety); provided the 'perfect alternative to recall'; and gave the OM a greater ability to protect the victim. Interestingly, two of the OMs indicated that they were now supportive of the GPS tag despite having initial concerns. Indeed, one of these individuals suggested that one of the dangers with the use of the tag was that OMs would be become over-reliant on it.

Views from the tag-wearers were more considered, although the responses from the tag-fitting survey were positive. When asked whether they thought having the GPS tag would, in general, make their life better, worse or have no impact, the majority answered it would make their life

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[9] There was also the facility in the tag fitting survey for the service user to provide general comments about the GPS tag. Responses were received from 35 of the 50 respondents.

[10] There was one OM who said that her case, had dissuaded her from using a GPS tag in future, but this was a service user who had been recalled after 3 weeks for never engaging and had never charged his tag.

better (n=**35**) and only six thought the GPS tag would have a negative impact. In terms of the anticipated impact of the tag on their offending behaviour, again, most respondents felt it would have a beneficial impact (n=**39**); no respondents thought the GPS tag would make their offending behaviour worse. Asked about the impact of having the GPS tag on specific aspects of their life, however, respondents were more ambivalent, mostly answering that it would have no impact for all aspects except for their ability to socialise (see chart 1 below).

Chart 1. Tag wearers' perception of anticipated impact of wearing GPS tag on ...
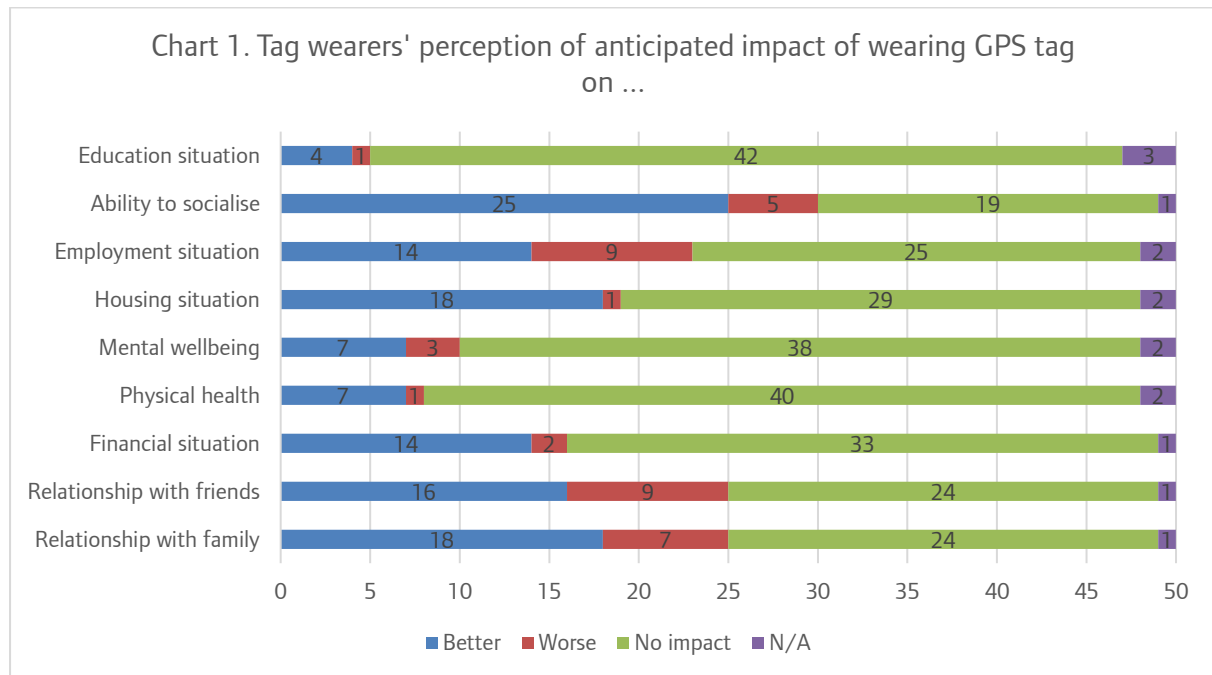
In terms of the perceived benefits of the tag, the most popular response to emerge from the free text on the tagging survey was that the GPS tag would provide the tag-wearer with the opportunity/justification to keep away from trouble and/or keep away from certain people, something that also emerged from the interviews.

> "'It had a good effect on me in terms of the whole element of people I knew before and would meet and would end up getting into trouble with, and it was like 'You're on a tag, I'm not meeting you! Fuck that! I'm not coming to see you, bro, you're OPO [on police observation]' and then I was like 'Cool, don't come and see me then bro, I'm not doing anything that I shouldn't….' That just shows me that all of them people that were saying that they didn't want to meet me, means that they are probably still doing the same shit, you know what I mean?"
> GPS tag wearer

Other benefits mentioned in the free text were that the tag was better than a curfew tag, better than being in prison, would assist in retaining (or obtaining) secure accommodation, and would establish that the tag-wearer was not in a certain area, and hence unable to commit crimes. The last point was something that was stressed also by OMs in interview, for example: "we would say

to them … if there was an incident that took place, I don't know, in Brixton, and somebody said they saw you, well actually we could provide evidence to say, well, no you weren't there because GPS says that you were here ... I think they liked that side of it, that bit they took on board definitely.".

Other factors, while identified as benefits by some survey respondents, were considered costs by others. Thus, while some respondents felt that the tag would increase their employment opportunities/allow them to retain employment, others felt that the tag would have costs as far as their employment was concerned (preventing them wearing work boots and prospective employers refusing work because of the GPS tag). Similarly, while some respondents mentioned that they felt that wearing the tag would have a positive impact on their family or family relations (for example, improving contact with their daughter, allowing them to care for their mother), a similar number suggested that wearing the tag would be a source of embarrassment (either to themselves when out in public or to their family).

The interviewed tag wearers held markedly different views as to the overall benefit of the tag. One was highly supportive (for the reasons outline above), the others were strongly opposed to the tag (uncomfortable, invasion of privacy and a breach of human rights). One of the opposed tag-wearers was also concerned with how the data would be used by probation and the police once he had completed his term on licence. The interviewed tag-wearers' views about the perceived fairness of the tag also differed markedly. One felt that the GPS tag should be reserved for terrorists, murderers and rapists, 'not people like me'. In addition, he observed that other people he knew had committed more serious offences than him but had not received a GPS tag. He did not think that tags would prevent knife crime, rather they would just allow the police to arrest people subsequently, young black males in particular. Conversely, the individual who had stressed the benefits of the tag in keeping him away from previous associates, described his feelings in the following terms:

> "At first, I was like, woah, it's weird that someone can see where you go 24/7, but then when I looked at the situation … I understood it is only right that I am let out of prison on a tag. I was let out of prison and I absconded for a year, so of course I need to be on something so that they can see what I am doing and that I am not out here doing things that I shouldn't be doing." GPS tag wearer

Interestingly, OMs' perceptions of the views the tag-wearers they supervised held about the tag also varied. While five interviewees felt that their (six) service users were 'fine with' or 'not bothered' by the tag, seven tag-wearers were felt to be unhappy being on the tag. However, for four of these seven, the OMs felt that initial hostility had been replaced by later acceptance.

Operation of the pilot

Most OMs appeared clear about the eligibility criteria for the pilot, and why the tag-wearer had been recommended for inclusion, referring to the tag-wearer's current and/or previous knife-related offence – '[he] screened perfectly for it'. Several OMs referred to the additional oversight

that the GPS tag provided, particularly around exclusion zones, while one OM stated that the tag had been recommended because it avoided the tag-wearer having to be placed in an approved premise (AP). As one OM said: "His offending was gang-related, there was weapons offences, possession of knives, firearms previously. It was my thinking of let me have a bit of a measure on his movements and then if I could see a lot of erratic movements around the place, then that might suggest that he may be up to something – acquisitive offending, whether that be dealing or at worst going to seek out altercations with rivals. I couldn't see a lot of other protective elements that I had to work with this guy. I felt that this was the only possible way that I would have tabs on what he was getting up to, I found it almost a bit of a godsend in that way because I wouldn't have had anything else".

Some OMs queried why the use of GPS tagging had been limited to knife-crime offenders, and most felt there was the scope to extend the use of the GPS tag to other offence types. Amongst the offences identified were domestic abuse and sexual offences (the most popular responses - although a couple stressed this was primarily for the management of risk to the victim); child sexual abuse; serial burglary; serious organised crime; serious group/gang-related offending; firearms offences; and harassment/stalking.

One OM suggested that the rollout of the pilot across London boroughs had improved the operation of the tag. In the early stages, when limited to a few boroughs, a lot of otherwise eligible cases (for example, high-risk younger offenders with peripheral or entrenched involvement with serious group offending) were being missed because their return to home areas would not be supported if that was where their 'gang' affiliation was, and it was not possible to place them in boroughs outside the pilot areas. As the pilot was rolled out to a greater number of boroughs, most approved premises (APs) were covered, allowing these offenders to be placed in safer areas with a GPS tag to monitor whether they were going back to risky areas.

In terms of the level of information the tag-wearer knew about the tag itself, the evidence we found was generally mixed. To illustrate, all respondents to the tag-fitting survey (50) indicated they understood how the GPS requirement worked and what they had to do to comply with the tag order. The clear majority agreed that they understood both how the tag fitted in with the other licence requirements (n=**48**) and why they had received the GPS tag (n=**43**). Most respondents reported feeling very confident (n=**29**) or fairly confident (n=**17**) that they would successfully complete the tag order. This also was found within our interviews, to illustrate, one tag-wearer highlighted the value of the document he had been given to read - 'Before I came out of prison I had a little booklet to read about it and I assumed that my Probation Officer was going to ask me about where I had been … there was one time that I was going to visit my nan but it was in my exclusion zone, so I had to contact my Probation Officer to try and sort something out'.

However, in contrast, the research also heard from many tag-users whom were unclear around many aspects of the tag. To demonstrate, in the tag fitting survey, nine of the respondents stated they had not known about the tag and were unaware that it was going to be fitted. A similar theme emerged when talking to OMs, with a number highlighting their tag-wearers did not know about the tag prior to fitting, or not told enough about the tag.

These mixed findings would seem to indicate that the good practice there is (i.e., the booklet for tag users), is not yet fully embedded in prison pre-release working practices, resulting in an inconsistent knowledge base. This is something that should be addressed as the pilot progresses – especially in terms of further communication to tag-wearers.

Administration of the GPS tag

Tag fitting

OMs provided details of where the GPS tag had been fitted in 13 cases. Notwithstanding the stated aim of the pilot that tag-wearers should be tagged in prison prior to release, this had only happened in five of the 13 cases[11]. For the remainder, the tag had been fitted in the probation office, occasionally to the OM's surprise (" It was the same day [as his release] and they came and tagged him in my office, but I wasn't expecting that. As far as I knew he was getting tagged on release"). In one case the tag had been fitted in a probation office out of area because the OM's office (inside the tag-wearer's exclusion zone) was deemed too risky for the tag-wearer concerned. During the interviews, a couple of OMs suggested that Buddi were not fitting the tags in prisons or appeared unaware that the tag could be fitted in prison. A number of explanations were given for the failure to tag in prison: that Buddi staff had been declined entry, that the tag-wearer had been released early and missed the appointment to be tagged. One OM identified the possible ramifications of this: 'I just think it would work better if it was done in the prison, because they're in a different space at that point and they're just quite keen to come out … It took me almost a month to get the tag on him because he missed … the first appointment for the tag'. Perhaps unsurprisingly, there were few, if any, issues associated with tag removal (one tag-wearer had cut off his tag when it had not been removed at the appointed time).

Using the Buddi system

Buddi is the service provider that fits and removes the GPS tags, and is responsible for providing monitoring information and details of charging and zone breaches to OMs. Probation staff perceptions of the usefulness of the reports routinely provided by Buddi varied. While some OMs described the weekly report that outlined the tag-wearers' top locations as useful/sufficient, a slightly larger number described it as 'poor'/ 'not useful'. Other OMs praised the ability to obtain bespoke information from Buddi about offender movements and popular locations, and the usefulness of data about curfew and inclusion zone compliance. It was clear that OMs' understanding of the data that was available from Buddi, it's meaning, and what could be requested, varied (one OM stated that they did not know how to use the data they received, another that they had only ever received charging information). It is important to stress that OMs had different levels of access to the system and its output. In addition, the format of the reports provided by Buddi changed over time (notably the top locations report), largely in the light of comments received from OMs through this evaluation, to provide more detail about the length of time tag-wearers spent at the 'most popular' addresses.

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[11] The most recently available figures (late February 2020) suggest that the pattern emerging from the OM interviews differs slightly to the pattern overall. Of the 138 tags fitted to date, 82 have been fitted in prison, and 53 at probation (3 cases have not been tagged – either refused or recalled at the gate). This change probably reflects the improvement in Buddi gaining access to prisons to fit tags.

When asked if they would like to have direct access to the Buddi system OMs' opinions similarly differed. While most felt that having this access would be an improvement, suggesting that access to the system would be useful during supervision, and to clarify tag-wearers' movements quickly in the event of an exclusion zone alert, a couple of OMs, however, did not feel this was necessary. One felt that there was enough information from the existing reports and notifications already. The other said 'just send me the emails, I can't do anymore'. The responses tended to reflect the OM's ease with and understanding of the outputs, and points to the need for improved training and support around the system for OMs.

However, the OMs interviewed were extremely complimentary about their contact with Buddi overall, with all the comments received being positive. Interviewees frequently mentioned the 'helpful and responsive' nature of the staff (whether via email or telephone) and the tag fitters were described as 'very professional'. One stated: 'They were very helpful, the minute he breached an exclusion zone I would get an automatic email, if they were contacting him to locate him, I would get an email, if they were sending alerts to his phone they would let me know, then at the time that I wanted further information, they would find it'.

Practical issues of wearing the tag

Comfort of the tag

In relation to the practical issues of wearing the tag, most tag survey respondents stated that it was comfortable to wear (although it should be stressed that this was at the point that the tag was being fitted). The view from the tag-wearers interviewed after removal were different. Two of the three felt it was uncomfortable (too big and bulky, particularly when the charger was attached), with one interviewee identifying difficulties charging it at night: 'at night you have to charge it and the wire is very short so if I am asleep and charging it, if I move when it feels like it's going to come off, so that makes it hard to sleep'[12]. Some OMs also stated their tag-wearers had remarked on the uncomfortableness and size of the tag. These findings bear some comparison to other electronic monitoring evaluations which record wearer perceptions of the size and fit of tags (Pepper & Dawson, 2016).

Charging the tag

The ability to keep the tag charged is critical as it allows the location of the tag-wearer to be monitored, and tag-wearers can be recalled in the event of failing to keep the tag charged. This being the case, tag wearers (surveyed and interviewed) and OMs were asked to identify any problems they had experienced with keeping the tag charged. Ten respondents (out of 35) to the tag fitting survey anticipated that it would be easy to use the charger/charge the tag, although again it should be stressed that this view was being expressed at the point that the tag was being fitted and where they would have just been provided with instructions by the Buddi fitter. Equally, even at the point of fitting (where the problems were presumably anticipated

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[12] Throughout the pilot tag wearers were issued with wireless chargers, which clipped on to the ankle tag, without needing to be simultaneously plugged in. As the quote above shows, some tag-wearers used the equipment in ways that had not been foreseen or recommended. Further guidance for offenders and probation staff has been developed through the pilot so far to try and steer subjects towards a more regular routine of compliance with tag charging.

rather than experienced) there were four survey respondents (out of 35) who felt that keeping the tag charged would present difficulties for them because of their circumstances.

OMs were similarly asked if their tag-wearers had experienced any difficulties charging the tag. Their experiences differed, although slightly more OMs said this had not been the case than those who did. OMs may have received occasional low battery alerts but not to the extent that warranted warning letters or threats of breach (although in one case Buddi had come out to the probation office to check the tag because there was a suspicion it had been tampered with). The OMs who reported that their tag-wearers had problems charging the tags attributed this to their chaotic lifestyle.

> "It was getting them to keep the unit charged, that was a struggle, because I constantly got emails saying that the units not being charged … I would go on home visits and find half the units on the table, it's plugged in to the wall but not switched on, so it was about teaching them over a course of like a month that this thing needed to be charged and how to charge it" OM

Only one OM identified that their tag-wearer had problems charging the tag due to not having settled accommodation. Interestingly, while one OM stated a benefit of the tag had been to assist the tag-wearer in getting a place in approved premises, another OM indicated that the tag had meant the tag-wearer avoided being placed in such accommodation, which he was keen to do so because of his concerns about the risk posed to him by other residents.

Another OM suggested that the tag-wearer was claiming that the unit was broken and was deliberately running down the tag to avoid being monitoring. The OM had Buddi replace the battery twice: "after the second time I said that anything else that happens to the battery would mean a warning letter because from the first time I gave him a second chance and by the second I knew that he was doing something to [the battery], I gave him a chance so that he couldn't say that I was giving him warnings for no reason, but that was the only issue that we had".

In addition, there were a number of OMs who reported problems with faulty tags – two because they or the tag-wearer would be receiving charging alerts when the tag was on charge, the other because of water damage. Several OMs observed that it was difficult to establish the veracity of the tag-wearer's claims that the tag was faulty, particularly the claim that it was not charging when it should be.

The answers given by the three service users to the same question about charging broadly reflected the answers provided by the OMs. Two said they had experienced problems, one that he had not. Experiences, unsurprisingly, were linked to the home circumstances and level of self-organisation of the individual, illustrated by the response from the tag-wearer who said he had experienced no difficulties.

> "[Charging] wasn't a problem for me, you had the home thing and the charger at home. I ensured that every day an hour before I got home from work, I would tell my sister to put it on charge, by the time I got home, I had a routine, that was the best way." GPS tag wearer

Use of GPS data in supervision

When asked how they had used location data in supervision the most popular response from OMs was to check on the movements of the tag-wearer, primarily for general monitoring (to see where the tag-wearer had been), or to ensure they had not been in exclusion zones (one OM mentioned the use of heat maps to check whether the tag-wearer had been in areas where crime had been committed). Other uses of tag data mentioned by OMs were to check on the tag-wearer's contacts with associates (in relation to suspected engagement in County Lines, or to monitor the tag-wearer's return to areas where what were termed 'risky' groups/peers resided).

Several OMs mentioned that they intended the tag to act as a deterrent (particularly around the establishment of exclusion zones - to keep the tag-wearer away from an ex-partner for example). One OM remarked that, when this deterrent had failed and the tag-wearer had gone into his exclusion zone, this had worried her precisely because he knew that the OM would be able to see his movements. OMs also used the tag to manage risk, either the risk posed by the tag-wearer (by 'set(ting) limits', 'provide dissuader from risky decision making') or the risk to the tag-wearer (one OM had extended the length of the tag by a couple of weeks on this basis). A few OMs suggested that they had used location data to challenge or discuss the tag-wearer's behaviour, one suggesting that the data had 'opened up' that conversation, although others stressed that it had not been appropriate to do this (because they could clearly see where the tag wearer had been) or not feasible (in cases where the tag-wearer had been non-compliant or recalled).

Exclusion zones had been set up by half the OMs interviewed, at a variety of levels (boroughs, an ex-partner's address, a hospital, a housing estate and the Notting Hill Carnival area). One OM indicated that while she had set up an exclusion zone, she had let the tag-wearer pick an area of his own to emphasise the benefits of an area for his own safety. OMs who had not established exclusion zones stressed that this was because they did not feel it was appropriate (because the tag was 'purely for monitoring', and because of the 'mobile nature' of the offence). OMs identified the need for a degree of negotiation or flexibility in the enforcement of exclusion zones. One tag-wearer, who had been moved outside London but had to travel into London, always came into a terminus station within his exclusion zone; 'having it on record to say there was a breach and that there is no other way it forced me to use my own initiative to contact the police and say that we need to have a sort of negotiation here because I am not prepared to prosecute someone for passing through a train station that is unavoidable'.

OMs were also asked if having the tag had made any difference to the nature of supervision. While a couple said not (based on the early recall of the tag-wearer, which meant that it had not been possible to use GPS data in supervision) most felt that it had, for a variety of reasons (the ability to check the tag-wearer's movements, there being more contact between the OM and tag-wearer, the tag providing data against which the tag-wearer's progress could be measured, and the tag opening up discussions about the tag-wearer's behaviour). Notably, even one OM who suggested that the tag had 'not necessarily' changed the nature of supervision then went on to add that they were 'receiving information about where [the tag-wearer] was going and certain addresses, which was useful in seeing if there was going to be a conflict'.

Views on the impact of the tag on the relationship between the OM and the tag-wearer varied. While a few OMs felt that it served to build trust – 'what the tag enabled me to do, and what he knew the tag enabled me to do, was monitor exactly his route that he took in … that was really, really helpful because also it builds trust, as well as be there to catch any return to a lifestyle' – other OMs felt that the imposition of the tag initially soured the relationship, which took some time to overcome.

The 3 tag-wearers interviewed were also asked about the impact of the tag on their supervision. One felt it was clearly beneficial and had led to improved relations with his OM: 'There was a lot of times when the tag wasn't picking up the charge and so there were warning things, so I was in regular contact with him to let him know that the thing wasn't charging, but the contact was on both sides and I would contact him so that I didn't breach'. One of the other tag-wearers mentioned that he and his OM would talk about his movements at the end of supervision: 'the GPS conversation would probably come at the end of the meeting, and during the start we would probably talk about other stuff…. she would ask what I was doing in [redacted] for so long, but I was with someone … parties and stuff she would ask me'.

The OMs provided details of breaches/recalls (or threats of the same) that had occurred during their supervision. The range of responses they provided reflects the pattern found in the performance section of this report. Two OMs said that they had had no issues in relation to the tag wearers, another that they had received charging emails and threatened a breach but the tag-wearer had completed, and a fourth that there had been some minor and one major breach of the tag-wearer's curfew conditions, which had been met by 'informal challenge' but that the tag-wearer had always attended and completed successfully. The remaining tag-wearers had all been recalled.

OMs were asked if they had extended the tag length or had considered doing so. One of the OMs had extended the tag for an additional month because of a 'little incident' between her tag-wearer and a 'couple of boys' but stated that the he had been fine with the extension and it had passed off successfully. Another tag-wearer had had his tag period extended for an additional month because it emerged that, due to faulty equipment, he had been unmonitored for that period. In that case, the OM was clearly concerned about the ethicality of the extension. Three other OMs indicated that: they would have asked for longer on the tag, with hindsight; they would have extended if they could (the tag-wearer had been recalled); and they would have done so if it had been necessary.

Influence of the GPS tag

Staff generally felt that the tag had had an impact on the tag-wearer's behaviour whilst on the tag, because it had acted as a deterrent, or due to then tag-wearer having an increased awareness of being monitored. As an example, one OM cited a case where the tag-wearer had not ventured outside his inclusion zone (the M25) whilst on the tag, but in the period shortly after removal had come to police attention in a number of counties outside the M25 and had been subsequently convicted for an offence in one of those areas.

When asked if they thought that the tag was likely to have an impact on the tag-wearer's longer-term behaviour, OMs were more ambivalent. Some felt it was impossible to say, others that this

was not the case - 'definitely not the thinking thing' (pointing to the tag-wearer's subsequent conviction for the same offence). Other OMs pointed to improvements while on the tag, but which had ceased once it had been removed. Another OM felt there had been changes in the tag-wearer's behaviour but felt that this had been due to other factors (fatherhood) rather than the tag. Only one OM suggested that there was a continuation: 'they just continue like they've got it on'. It was also observed that the tag was of relatively short duration.

"Hard to say because he was on it for only five or six weeks. I don't think it impacted on long-term positive change but I think that what it did do is give him a five- to six-week period where he didn't have to even consider going back to a risky area, where he could actually take time to focus on doing what he wanted to do … it gave him a period of time to recognize that he's on licence, he went to prison for a reason, he can't do back to an area where his peers might pressure him, so he might as well do something positive, which was really good for him. Since he's come off the tag, his motivation has nosedived. He hasn't really done much at all. He's been rearrested. He's almost regressed. But I acknowledge it was a really short case, really short period of time." GPS tag wearer

4. Discussion

The GPS knife crime pilot forms an important part of the London Knife Crime strategy, developed in the face of increased levels of knife crime in London and heightened public concern about the problem. Between the beginning of the GPS knife-crime pilot in February 2019 and the 6th of January 2020 a total of 102 GPS tags were imposed. 46 cases have completed; 27 cases ended due to recall and 19 without recall, giving an overall rate of completion without recall of 39%. Of the 27 cases ended due to recall, however, 16 cases were recalled for reasons unrelated to the GPS tag, 6 cases were recalled due to failure to comply with licence conditions directly related to the GPS tag, and 5 cases were recalled due to breach of an exclusion zone being monitored through the GPS tag. Taking these reasons for recall into account, the effective compliance rate, that is the proportion of cases completed without recall for failure to comply with the GPS tag as a licence condition, is 87% (n=40). In terms of implementing innovation, this is a relatively high level of compliance and in all likelihood should be seen as a positive – although, in itself it is not a measure of 'impact'.

However, the issue of determining impact and identifying what success might look like in terms of case outcomes is problematic. For example, a recall, while it may decrease the completion rate overall, might be judged a success in demonstrating the improved (and swifter) enforcement of licence conditions. Indeed, this was one of the benefits of the tag that was identified by OMs – the ability to tell, faster and with greater certainty, when tag-wearers had breached exclusion zones for example. It is notable that in only 11 of the 46 completed cases to date recall was due to failure to comply with the tag as a licence condition and those recalled due to a breach of an exclusion zone monitored by the tag.

The qualitative research undertaken during this pilot indicates that OMs have a very positive view of the GPS tag. There was widespread support for the GPS tag as a means of monitoring the movements of tag-wearers, providing information that could be used in supervision, and the improved ability to manage risk (both to victims and tag-wearers) precisely because of this increased certainty about tag-wearers' movements. Overall, OMs felt that availability of GPS data had an impact on the nature of supervision between them and the tag-wearer, and on tag-wearers' behaviour whilst on the tag. A different type of discussion with the tag-wearer was feasible, because of the type of data additionally available (i.e. it was difficult for the tag-wearer to challenge the location data). Given the value seen in the data generated by the GPS tags, there was qualified support from OMs for direct access to the IT system provided by the tag contractor (Buddi), although it was clear that OMs' understanding of the GPS data and its potential uses varied. Given this, OMs would likely benefit from ongoing training and support to promote the value of the data and enhance knowledge and confidence around the ways and formats in which data can be requested/accessed.

OMs suggested that wearing the tag may have a short-term deterrent effect although were not yet convinced the tag would bring about longer-term change in offending behaviour. In the views of OMs, any change for the tag-wearer was largely dependent upon the tag-wearer's motivation and their willingness to change – to take advantage of the 'window' that the tag provides.

There was also support from OMs for the extension of the use of the GPS tag for other offence types. However, this potential extension needs to be considered in the light of concerns around net-widening and the ethical integrity of utilising GPS tags, with the increased scrutiny (and likely detection) they provide, for some offences but not others – a point already made by one of the service users interviewed.

The findings from tag-wearers were more ambivalent. Although there appeared to be support for the tag from tag-wearers at the point it was fitted, it was not possible in this report to examine how this varies over the period the tag is worn and the level of support at the point of removal. However, there does appear to be a recognition on the part of some tag-wearers of the benefits the tag provides in providing a means of avoiding risky situations/individuals, if they have the inclination to do so. This echoes the perception of OMs interviewed of the importance of motivation among tag-wearer. The tag-wearers also demonstrated a wide range of understanding to the tag, and more could be done to provide consistent information prior to and during the order.

The evaluation has also identified some issues around the administration of the tag, particularly in the early days of its operation. There were initial difficulties in arranging tags to be fitted in prison on the day of release. Issues, too, relating to the charging of the tag, and the ability of OMs to establish whether the tag was faulty/not charging in the face of claims from the tag-wearer. It would also appear that there is scope to improve communication with offenders about the pilot to ensure that they are aware they are going to be tagged. Concerns, too, were expressed about the utility of some of the output routinely provided to OMs (which has been amended in the light of these concerns). Nonetheless, the OMs appeared to be very content overall with the service received from Buddi.

Findings from the police crime mapping process are inconclusive at this point. Despite the large number of crimes uploaded and matches assessed, there have been relatively few "significant matches" to date and the GPS information shared with local BCUs has not led to any additional convictions so far. As discussed previously in E&I's 2018 Interim Report on the use of GPS tagging for an IOM cohort, there are several possible explanations for the seemingly low number of genuinely 'significant matches' generated by the crime mapping process. The GPS-tagged population deemed appropriate for crime mapping (i.e., those with an OGRS score higher than 50) comprises a small number of individuals, who are only likely to generate a correspondingly small number of truly significant matches after the analysis process has been completed.

Another complicating factor is the type of offences for which matches have been generated (theft and burglary for example). These offences, by their nature, provide the greatest latitude in terms of the reported time that they took place (and thus, the greatest risk of placing the offender at the scene without proving clear evidence that they were actually involved in the offence), so the greatest opportunity for what might be called 'false positives' in terms of matches (MOPAC 2018). In addition, many acquisitive offences are reported by the public over the phone or online, and as a result the crime reports for matched incidents often lack detail and may have been be closed for no further action. Another possible explanation for the low number of significant matches is that offenders subject to GPS monitoring are committing fewer offences whilst on the tag, meaning that the lack of matches reflects the deterrent effect

of the tag (consistent with OM feedback) rather than a failure of the crime mapping process to correctly match tag wearers with the crimes that they have committed. The pilot is focused on a cohort of knife crime offenders and violence/robbery rather than offenders with a history of burglary, and there have been very few matches to robbery offences (3%, n=3, of the 96 significant matches during the interim reporting period).

In the light of the issues identified above, MOPAC is currently working closely with the MPS to consider changes that can be made to enhance effectiveness of the crime mapping process. The MPS is refining the process for identifying and triaging 'hits' to ensure that they focus on the cases where there appears to be the best potential for a high-quality match and more serious offences (excluding property crimes and focusing on contact crimes, e.g. violence, robberies and knife-related crime). Notably, the use of crime mapping in this pilot is being framed in terms of 'crime reassurance' (confirming that tag-wearers have not/or are unlikely to have committed recorded offences) rather than the crime detection impetus behind the use of crime mapping in MOPAC's pilot using GPS tags for an IOM cohort. In addition, the process of managing the matches/offenders that emerge from the crime mapping process has been standardised across the MPS and now sits with the police IOM teams. How this management works will be examined in the final evaluation report.

Our final evaluation report, to be completed within six months of the pilot's conclusion, will continue to collect data on the number of tags fitted and levels of compliance by wearers, as well as feedback from tag wearers, OMs. Additional performance and qualitative data on crime mapping will be collected, including throughput of crimes uploaded for mapping to outcomes of matches and feedback from police staff. If the sample size (i.e., the number of tags fitted) permits, it will also examine the impact of the tag on tag-wearers' offending behaviour against an appropriate control group.

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