



*Scottish Prison Service*

**Mobile Phone Signal  
Intervention  
OFFICIAL - SENSITIVE**

# **SCOTTISH PRISON SERVICE**

## **Mobile Phone Signal Intervention End Project Report**

REDACTED FOR RELEASE

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**Document Responsibility**

Name	Function	Organisation
XXXXXXXXXXXXXXXXXXXX	Author	Operations Directorate

**Change History**

Version	Date	Comments
0.1	15 April 2014	First draft
0.2	3 March 2015	Updated to reflect project outcomes
0.3	24 July 2015	Further update to reflect outcomes
0.4	30 July 2015	Project team feedback updates
0.5	1 September 2015	REDACTED FOR FOI RELEASE

*Each version of this document is always reissued in its entirety.*

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## 1 INTRODUCTION

### 1.1 Purpose

The report is the Project Manager`s report to the Project Board (which may pass it on to corporate or programme board) on how well the project has performed against its Project Initiation Document, including the original planned cost, schedule and tolerances, the revised Business Case and final version of the Project Plan.

## 2 ACHIEVEMENTS

### 2.1 Achievements of the Projects Objectives

Delivery of Mobile Phone Signal Intervention Capability at two pilot establishments. This will involve:

- Identification of 'pilot sites' – **ACHIEVED** – The chosen pilot sites of HMP Shotts & HMP Glenochil achieved the expected outcomes in terms of volume of SOCG offenders affected and historical handset recovery rates.
- Assessment of operation at pilot sites to establish the effectiveness of the installation at thwarting the attempts of those involved in serious organised crime to continue to conduct criminal activity from within prison through the use of illegally held mobile phones – **ACHIEVED** - The chosen pilot sites of HMP Shotts & HMP Glenochil achieved the expected outcomes of both technological best fit and tackling offenders directly involved in serious organised crime.
- Scoping the market –both UK and Europe – to identify the range of systems in the marketplace that can effectively block 2G & 3G mobile phone transmissions – **ACHIEVED** – The tender process identified a number of potential solutions and suppliers.
- Identify whether fixed or portable systems (or combination/hybrid thereof) best meets the operating environment of the SPS. – **ACHIEVED** – The tender evaluation process identified a high level of competent solutions all of which were fixed solutions.
- To install the preferred option(s) at the preferred sites within the current financial year. – **ACHIEVED** – The systems went 'Live' as planned within the current financial year 2013/2014.

Create or amend business processes to support the use of intervention equipment.- **ACHIEVED** – Standard Operating Procedures (SOPs) detail the safe operation of the installed solutions.

### 3 PERFORMANCE

#### 3.1 Performance against the Planned Target Time and Cost

- Ref: Extract of PID Objectives - *SPS has undertaken to pilot this technology in two prisons within the financial year 2013/2014 – ACHIEVED*
- Approved Budget **£1,300,000** ex VAT – Actual spend **£1,210,176** - **ACHIEVED**

### 4 APPROVED PROJECT CHANGES

- Proceed with project on 2G & 3G technologies only (No 4G) – This had a significant impact to ensure the project still provided an effective solution. Options papers were produced to inform the decision making process. The option to deploy a site wide [REDACTED] solution and a tactical deployment of [REDACTED] technology was approved following some detailed consideration. The overall benefit was a greater assurance of effectiveness within the restrictions of 2G & 3G technologies.
- Change location of pilot site 1 from HMP Edinburgh to HMP Glenochil – Although a significant change it was completed seamlessly with no requirement to amend the contract conditions for the preferred supplier. The overall benefit was a greater assurance of coverage of the system and less risk of leakage which was identified as a high risk at HMP Edinburgh.

#### 4.1 Effects on the Original Project Plan

The main effect of not getting 4G coverage was to restrict the deployment of available solutions in rural settings only

#### 4.2 Effects on Business case

The lack of 4G coverage and the signal strengths at HMP Edinburgh precluded the establishment from being involved in the pilot scheme.

### 5 STATISTICS

5.1 **Final Statistics on Change Issues Received during the Project** – The project timescales and costs were not impacted by the changes

5.2 **Quality Statistics for all Work Carried Out** – The project timescales and costs were not impacted by the changes. See post project overview for pilot phase statistics.

**6 IMPACTS**

6.1 **Total Impact of Approved Changes** - The project timescales and costs were not impacted by the changes

**7 POST PROJECT REVIEW**

**7.1 Post Project OVERVIEW - Review Date and Plan**

**Post Project Review date and Plan**

Review Date	31 <sup>st</sup> January 2015
Review Plan	31 <sup>st</sup> January 2015

**A number of emerging issues have impacted on the effectiveness of the pilots.**

***Current & Developing Technologies***

The current installed systems are limited to providing signal denial in the 2G and 3G technologies. At the start of the pilot phase these were the only technologies present in the local areas. Although 4G is now operating in the areas local to both pilot sites there is no 4G signal available yet inside the residential halls. Both systems have the facility to be upgraded to include the latest 4G LTE technology.

OFCOM have also liberalised all the existing mobile phone frequencies across the 2G, 3G and 4G technologies which means the network operators can transmit any of the 3 existing technologies on all of the frequency spectrums they own and operate. In addition OFCOM has announced the auction later this year of a further range of frequency spectrums adjacent to the existing mobile phone frequencies to provide further coverage and capacity for both 4G and 5G technologies.

Mobile Phone technologies are fast moving and are in a continuous state of flux due to the evolving nature and the ever increasing demands for connectivity and communication. We now see changes occurring on a much faster and complex scale than might have been previously anticipated. The speed to market for new product development has changed from years to months with technology now software upgradeable. The existing system has been re-tuned a number of times to keep pace with these rapid changes and should continue to be monitored during the remainder of the 5 year programme.

### ***Changes in prisoner behaviours***

When the systems were initially installed the prisoner population attempted to make calls and send text messages at all periods of the day and night. [REDACTED]

As time progressed the pattern of use changed to periods when staff are busy with tasks other than monitoring prisoners in cells i.e. Shift handover, staffing exercise yards, lock up periods and breaks. The peak period of use is currently lunchtime, evening staff breaks and the first 3 hours of the nightshift.

### ***Changes in handsets being introduced into prisons***

Prior to the systems being installed, intelligence provided that small, cheap handsets were the preferred choice of the prisoner population. 'Key Fob' and 'Wrist Watch' devices were seen as the key threat as they were easily introduced due to their size, limited metal content which evaded metal detection and easy to secrete in body cavities. They can also be broken down into component parts for hiding. [REDACTED]

With the trend towards expensive 'high end' smart phones comes a perceived increased risk of discovery and therefore the cost to introduce such devices is proportionate to this risk. [REDACTED]

[REDACTED] As many prisoners don't have access to one [REDACTED], the business of renting out these handsets to a number of prisoners appears to be increasing. This leads to debt and bullying amongst prisoner groups.

Another factor in this change in phone trends forced by the [REDACTED] system is that the expensive 'high end' devices are less durable in surviving the impact of being thrown over a fence and therefore the method of introduction may shift towards people who access the prison [REDACTED]



***Prisoner Countermeasures***

Prisoners have developed innovative counter measures to current arrangements.

[REDACTED]

[REDACTED] This slight advantage is enough in certain circumstances, for the handset to bypass the SPS signal and connect to the public network. The countermeasure has been tested at the other pilot site HMP Glenochil and found to be effective there too. A recent re-tune and re-test of the systems at Shotts & Glenochil has proven to defeat this countermeasure however the systems are now operating at their peak performance whilst maintaining the integrity of the signals within the prison perimeter [REDACTED]

[REDACTED]

***Mobile phone detection and recovery statistics***

282 mobile phone handsets were recovered during 2014 across the prison estate. This is less than the 2013 figure of 352 handsets. This reflects a steady decline from the peak figure of 1417 in 2010 and is more reflective of find rates prior to the introduction of hand held mobile detectors. Some of this decline is due to the increased introduction of smart phones which operate on the 3g technology. These 3g smart phones transmit on very low power levels and so are more difficult to accurately detect and locate. Where previously the vast majority of handsets recovered in 2010 were 2g technology only, these devices are more easily detected and located. To combat this apparent weakness in our current detection rates we have replaced our stock of ageing hand held mobile phone detectors across the entire estate with state of the art hand held detectors that are more sensitive to detecting not only 3g but also now 4g signals. [REDACTED]

[REDACTED]



***Banning mobile phones and sim cards from the networks***

Work is progressing at a pace to amend the regulations made under SECTION 80 OF UK SERIOUS CRIME ACT 2015 currently going through UK parliament which will include the provision for banning handsets. Early indications suggest an implementation date of spring 2016.

***NOMS/MOJ current strategy***

**7.2 Measures of Success agreed in PID**

- An assessed reduction in the number of mobile phones in the 2 prisons (supported by intelligence and on-going deployment of the detection equipment) **NOT ACHIEVED** – The emergence of a successful countermeasure and the arrival of 4G technology to the areas around HMP Shotts resulted in a higher number of more sophisticated phones being introduced into the prison and those present at the start of the project not being disposed of due to their prison based value.
- A reduction in the number of Facebook pages clearly being maintained from within the 2 prisons **ACHIEVED FOR HMP SHOTT'S** [REDACTED] Unable to assess the impact for HMP Glenochil due to limited operation of the system during the pilot period.
- A reduction in the number of callers external to the prison reporting that a prisoner had contacted them from a mobile phone. **NOT EVIDENCED** This measure did not have supporting evidence of data before the pilot however there were NO recorded callers during the pilot phase.
- No reports of service denial from prison “neighbours” at the pilot sites (illustrating that the technology was being successfully confined to the prisons and not spilling out to public areas) **ACHIEVED** Neighbours contacted for feedback on at least 2 occasions during the pilot phase.

- During the installation phase in particular, the ability to maintain “business as usual” and to avoid an increase in the number of incidents or episodes of unrest attributable to the decision to install Signal Denial equipment. **ACHIEVED**

### **7.3 Strategy outcomes to inform future Projects**

7.3.1 A number of factors continue to influence our thinking and it is clear that any SPS strategy should be flexible enough to track and respond to rapid changes in both the technologies and the responses of our prisoner population. It must also reflect the level of threat posed by access to the internet and social media for the purposes of serious organised criminal activity.

[REDACTED]

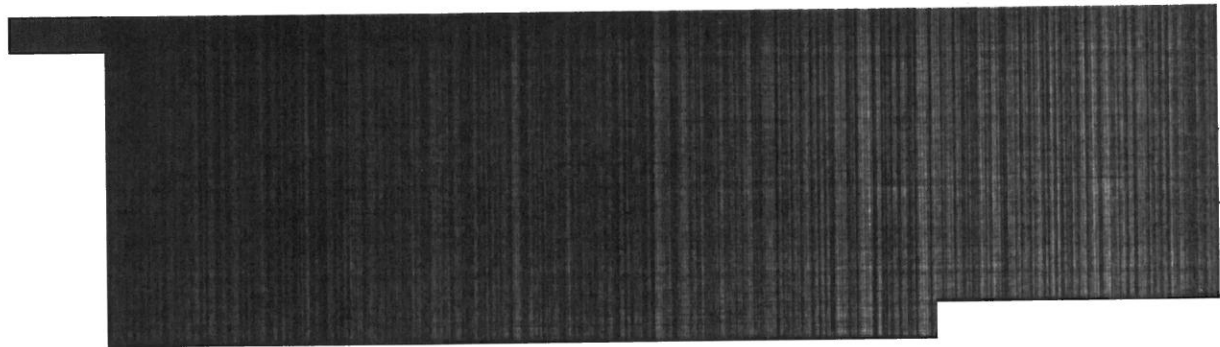
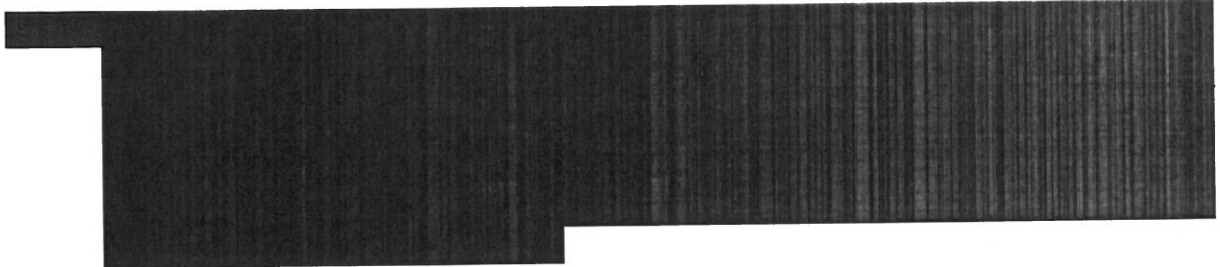
7.3.3 To keep pace with changes in the technologies of 3g, 4g and eventually 5g will be complex and expensive if we continue to invest in fixed solutions. The liberalisation of mobile communication frequencies and the opening up of new spectrums are all driven by the need to provide mobile network operator customers with better coverage, connectivity and capacity. This of course conflicts with our objectives within the prison setting. Further rollout to other establishments is therefore not recommended without the thorough consideration of benefits and the significant investment.

[REDACTED] In addition, the technology developments are wholly geared towards liberalization and expansion; not denial of service which is a significant inhibitor to further investment

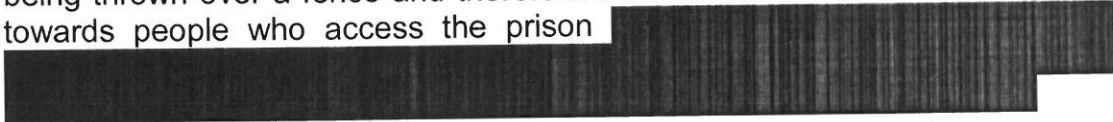
7.3.4 The SPS may benefit from having an effective ‘sterile’ communication free prison where we can house those seen as a direct threat to public order and safety either through serious organised crime or terrorist activity. HMP Shotts could potentially suit this model and therefore we may wish to continue to support the current investment there to achieve this. HMP Shotts is also capable of upgrading to 4g coverage and we may wish to consider options to achieve this.

7.3.5 The “blocking” solution installed in HMP Glenochil is also capable of upgrading to include 4g and 5g [REDACTED]  
[REDACTED] The system is only currently deployed on one wing of 64 cells. The limited effectiveness found during the pilot phase due to design limitations of the system and resilience issues during the pilot phase combined with the lack of intelligence provided by the system suggests that we will require a further period of assessment before consideration may be given to extending coverage to the whole hall. This would provide the SPS with a secondary

'sterile' communication free location. Further rollout to other establishments is not recommended at this time.



7.3.8 SPS will carry out a review of our current front of house security arrangements in light of the intelligence picture provided at HMP Shotts. A major factor in this change in phone trends forced by the [redacted] system is that the expensive 'high end' devices being introduced are less durable in surviving the impact of being thrown over a fence and therefore the method of introduction may shift towards people who access the prison [redacted]



#### **7.4 Strategy Summary agreed with the SPS Executive Group and Board Members**

- Continue with the current pilots at HMP Shotts and Glenochil. On-going maintenance and support for both sites and consideration of 4G and 5G upgrades during the planned 5 year timescale subject to evaluation and affordability.
- Subject to evidencing resilience of the installed system at HMP Glenochil assess the benefits of expansion of the deployment to provide signal denial coverage to the whole hall (4 flats with 250 cells) and subject to evaluation and affordability.



- Progress the processes required to support the proposed legislation to ban handsets from the Mobile Phone Networks.

- Take steps to improve detection and recovery strategies for hand held mobile phone detection and detection dogs.

## **7.5 Conclusion**

The Project team would ask the Programme Board to note this end of project report and consider the creation of a separate PID to manage the next phase of permanently Banning Mobile Phones from the Mobile Phone Networks and to develop strategies for improved detection and recovery rates of mobile communication devices.