

Written evidence submitted by Professor Dominique Moran

Executive Summary

- This submission focuses on the Committee's interest in the current condition of the prison estate, and delivery of the Government's pledge to create an additional 10,000 prison places.
- It presents new evidence of the effectiveness of particular characteristics of the prison estate – namely green spaces – for delivering improvements in prisoner and staff wellbeing, in relation to levels of self-harm, violence and staff sickness absence.
- Robust quantitative analysis indicates that
 - 'greener' prisons (i.e. those with higher percentages of the area contained within the outer wall or fence which is vegetated), exhibit lower levels of prisoner self-harm, violence between prisoners and violence against staff.
 - prisons located in green spaces (i.e. with a vegetated areas beyond their perimeter wall or fence) also exhibit lower levels of prisoner self-harm, violence between prisoners and violence against staff.
 - 'greener' prisons also have lower levels of staff sickness absence.
- These effects persist when we control for prison size, age, type and level of crowding.
- These data suggest that in improving the current condition of the prison estate, HMPPS and MoJ should seek to increase vegetated areas within prisons, and in planning any new prisons, should seek to locate these in semi-rural or suburban areas (with good public transport links).

Submitter and organisation

Professor Dominique Moran is a senior academic researcher at the University of Birmingham. She has been researching prison environments for the last 14 years, supported by over £2m of research funding from the UK's Economic and Social Research Council [ESRC]. She has conducted data generation in prisons in the UK, Scandinavia and the Russian Federation. She has provided advice around the design and use of prison buildings to NOMS/HMPPS, the Ministry of Justice Estates Directorate, and its corresponding organisations in the Netherlands, Colombia and New Zealand, as well as to numerous prison establishments in the UK.

Introduction

1. Concern for wellbeing in custody is growing in England and Wales, partly driven by record levels of self-harm and violence. These come at immense personal cost to the prisoners and staff involved, and they also carry significant financial implications for the prison system – and by extension for the taxpayer – in terms of associated costs of healthcare services, staff attrition, and litigation.
2. In these circumstances, and in the current context of expansion and modernisation of the prison estate (as the NAO report points out), it is important to understand whether and how the prison environment influences wellbeing. Prison life causes chronic stress and mental fatigue, which are thought to limit the capacity to act in a reasonable manner and probably leads to increased levels of tension and violence.
3. Nature contact via the presence of green space is known to have a positive impact on wellbeing in 'normal' home and work environments; reducing stress and tension, and improving health outcomes.

4. A small number of studies have identified such benefits in the prison environment, but until now there hasn't been a statistically robust investigation. New research (led by Professor Dominique Moran, with colleagues Dr Phil I Jones and Ms Amy E Porter at the University of Birmingham, and Dr Jacob Jordaan at the University of Utrecht in the Netherlands), brings new evidence to this issue.
5. The research reported here calculated, for all closed prisons in England and Wales, the percentage of the area within their outer perimeters that is vegetated (i.e. comprising areas of lawn, shrubbery and trees). It also calculated the green space percentage within a 500m 'buffer' zone of the prisons' outer perimeters – i.e. describing their immediate surroundings. These data were then analysed alongside data published by HMPPS for self-harm, assaults between prisoners, assaults against prison staff, and days lost to staff sickness absence (2014-2018).

Green space within prisons reduces self-harm and violence

6. Analysis showed that prisons with higher percentages of green space within their perimeter have lower levels of self-harm and violence, irrespective of the other prison characteristics analysed – prison age, size, type (Category, gender, YOI and sex offender specialism) and level of crowding.
7. Analysis showed that across all prison types, green space percentage was the most important determining factor for levels of self-harm, and assaults against staff. Women's prisons have by far the highest levels of self-harm in the prison estate, but green space was found to be a more significant factor in *reducing* self-harm than the female gender of establishments was in *increasing* it.
8. Our analysis indicates that on average across closed establishments, a 10% increase in green space would result in a 3.5% reduction in self-harm, a 6.6% reduction in assaults between prisoners, and a 3.2% reduction in assaults on prison staff.

Green space in the area immediately surrounding prisons reduces self-harm and violence

9. Analysis also showed that green space in the 'buffer' zone outside the prison perimeter fosters prisoner wellbeing, in that there are lower levels of self-harm and violence in prisons with higher percentages of vegetated land area in the buffer zone. These relationships are also statistically robust, and they persist when we control for prison size, type, age, and level of crowding. The findings are noteworthy in that they demonstrate the importance of considering prisoner wellbeing when selecting prison sites, and therefore have the potential to significantly influence future prison location.
10. Given the potential implications of these findings concerning the relationship between greenspace, self-harm and violence for decisions about future prison siting, it is worth considering why this effect might be found – especially since previous research has identified

distance as a barrier to prison visitation in more rural and (presumably) 'greener' areas distant from urban centres.

11. Our methodology did not enable us to consider distance from urban centres as an independent variable, but by including the presence of major roads as a proxy for connectivity we were able to show that *both* greenspace and connectivity are significant factors in relation to wellbeing. Therefore in locating new prisons, efforts should be made to find potential sites which have green surroundings, but whose location does not present a barrier to access for visitors.

Green space in prisons reduces staff sickness absence.

12. Analysis showed that there are lower levels of staff sickness absence in prisons with more green space inside their perimeter. This relationship persists when we control for prison size, type, age, level of crowding, and also for levels of self-harm and violence among prisoners, and levels of assaults against staff.
13. This demonstrates that the presence of green space within prisons works to reduce staff sickness absence, *even where there are high levels of prisoner self-harm and violence* (which are known to cause considerable emotional distress to staff) *and even where there are high levels of assaults on staff* (which may cause them actual bodily harm).

Summary and recommendations

14. Together, these findings provide the first robust evidence that green space (both inside and close to prisons) makes a measurable difference to wellbeing, by reducing levels of prisoner self-harm and levels of assault between prisoners and against staff, and staff sickness absence.
15. Based on these findings, we recommend:
 - i that green space is maximised within all closed establishments – this means that existing green spaces (areas of lawn, trees etc) should be retained, and wherever possible, increased in coverage: i.e. that some existing hard surfaces should be replaced with vegetation – particularly in areas which are viewed from prisoners' accommodation.
 - ii that the areas immediately surrounding prisons (for example the verges of approach roads and car parks) should be 'greened' through the planting of trees and shrubbery.
 - iii that new prison establishments should be located in areas with a high percentage of green space in the surrounding area, whilst maintaining good public transportation for prison visitation.

NB: This submission summarises research findings which have been submitted for publication via three academic journal articles. These papers are currently under review, but confidential pre-print copies can be provided on request.