

Sustainable development. 12 years on . . .

Derek Hannan is the Deputy Head of Sustainable Development Delivery for the Ministry of Justice (MoJ). Derek was previously the NOMS Sustainable Development Manager with specific responsibility for environmental management systems and waste and recycling at public sector prisons and was placed third in the Annual Environmental Awards Top 100 for 2009. The awards recognise those individuals that have been positively influential across their organisation and have made the biggest impact on the waste and recycling industry in that year.



Custodial Review last interviewed Derek in 2000 when he was the project manager of the national waste management and recycling scheme for HM Prison Service that was being piloted at HMP Downview. The project was part of the procurement excellence programme and Derek was responsible for the 'end of life cycle' of products, specifically the reuse, recycling and final disposal processes. He then migrated into the National Offender Management Service



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(NOMS) Sustainable Development team, who were responsible for reducing the environmental impact of the prison estate and ensuring all Prison Service environmental aspects, such as waste, energy, water, transport, construction and biodiversity, were managed and sustainable.

CR What did the NOMS team do and what are the major differences between your activities in 2000 and now?

DH The foundation for all the work achieved on the HM prisons estate was the environmental policy we set in place in 2003. At that time our team consisted of specialists to cover each of the key environmental aspects of the business; waste, energy, water, transport, construction, biodiversity; ably supported by a few administrative staff. The team continued delivering the sustainability agenda and developed interventions as and when new requirements evolved. We looked at everything the Prison Service did and its effect on the environment. We identified the key environmental aspects and their impacts and then designed systems so that the prison service could manage them and minimise the effects on the environment. It's not always possible to minimise the impact, however it is possible to ensure that it's no worse than it has to be, it is closely controlled and that any detriment is no more than is absolutely necessary. In Sept 2011 the NOMS team transferred into the MoJ, amalgamating

with colleagues from the HM Court Service and this team is now responsible for the delivery of sustainable development across the whole MoJ Estate Directorate, which includes prisons, courts, tribunals and, soon, the probation estate.

CR Minimising impact seems a very open statement. How do you go about minimising the environmental impact of building a new prison house block?

DH Firstly we have a construction checklist that's to be considered when the house block is being designed and also there is the BREEAM standard which sets the standard for best practice in sustainable building design, construction and operation. These are applied to ensure we build in, where the budget allows, things like energy and water efficiency, rainwater harvesting and ground-source heat recovery. In the purchase of the equipment, we look to buy the items that offer the lowest total cost of ownership, in terms of power and material usage as well as its environmental disposal and costs at its end of life. For instance we look to install building management systems and movement sensors so that heat and light can be controlled. As we have to manage our landholding responsibly, a biodiversity audit is completed before the construction work begins. The aim is to get it right from the out-set and future proof the building as much as possible. This enables environmental benefits and savings to commence as early as is possible and prevent costly retrofitting. We strive for a combination that will bring best value in the build, the running and the eventual decommissioning.

CR Does your remit run to influencing the privately run prisons and the courts?

DH Now that we are incorporated into the MoJ that is so. Our role is to ensure the estate is as sustainable as is reasonably practical and provide best value. The tendering process for goods and services, including that to operate a prison, contains a requirement for sustainability and our colleagues in the MoJ procurement team include sustainability as part of the tender evaluation criteria and process.

CR When we first met 12 years ago you were piloting a recycling project, now most prisons I have

visited have embraced recycling with a fervour that I used to find surprising. Is it now compulsory for establishments to have a comprehensive recycling programme?

DH No it is not compulsory in terms of an explicit prison service order or instruction, however it makes sense to operate one to meet with the sustainability policy, Government targets and if you want to manage the site effectively. The question now is 'why haven't you a waste management unit?' In 2000 we had waste management units in eight public prisons, now we have them at around 120. By waste management units I mean a workshop where all the prison waste is sent to be sorted and processed for reuse, recycling or recovery through composting or energy from waste. This is to minimise what goes to landfill and now it also produces a revenue from the sale of the materials to recycling companies. Only recently have we become involved with the privately managed prisons and I'm pleased to say many of them are following the same model, if for no other reason than it makes good business sense.

CR I was at a prison in the Midlands a while back where they had an in-vessel composting machine that is used to turn food waste into compost. It requires energy and people to run it. Is such an installation really an economic advantage to the prison?

DH The business case for an in-vessel composting machine located in a prison is a little different than it would be elsewhere. The options are to dispose of it through a macerator and into the main sewerage network, which is not environmentally friendly and is also costly; it can be sent to landfill which is about as bad as it can get in terms of the environment, or it can be considered as a material rather than a waste and turned into something we can use. So instead of buying in compost prisons can manufacture their own and a waste stream becomes a usable commodity. We therefore minimise the environmental impact and save money by not disposing of the waste to landfill and also save money by not having to buy in compost. On top of that are the additional environmental benefits of not moving waste and compost around by lorry.

Sustainable Development continued

The 'in vessel composter' you mention is bought on a 'spend to save' basis and the usual payback period against the investment is less than 3 years. After that its money saved. That represents a good deal to the public from a financial as well as an environmental viewpoint. There are other benefits as well, such as providing work, training and qualifications for offenders.

CR Are these projects looked at from predominately an economic basis?

DH No, and it's quite important to note that there are three areas we consider. There is the economic, the environmental and also the social aspects. There is a substantial benefit to be had from instilling good environmental awareness and practice for the



Inmates sorting rubbish.

offenders too. If recycling and energy efficiency habits and practices have been adopted whilst the person is in prison then they are more likely to recycle and use less energy when they are released. They will already know about sorting their rubbish and that is not good to create food waste in the first place and it's nonsensical to dispose of it into the garbage instead of separating it for composting. Being involved in environmental issues helps to instill good house keeping habits and also the social norms that are expected of all of us – not dropping litter, using recycling facilities, being energy wise – so they become more socially aware and more easily integrate back into the community.

CR Is there a training value to this and do you have any difficulty getting prisoners to do such a seemingly unpleasant job?

DH We have introduced accredited industrial training where we can so that prisoners can leave with a qualification in waste management that can assist them in obtaining a job. We are not just talking about sorting rubbish, it's a whole package that is centred on waste, it may be concentrated on recycling however there are also many other areas it can benefit that do not seem obvious at first. Surprisingly it has not taken much encouragement to get the prisoners working in these schemes. If you recall when we were discussing the Downview prison project 12 years ago I said that one of the most challenging parts of my job was convincing Governors that prisoners would do this sort of work; at the time they were sceptical. Now it's recognised that the work is popular. Prisoners consider the prison as their environment and so while they are there they will want to look after it - for example, to take the time to recycle, to maintain the biodiversity - just as people do so in their homes. This doesn't apply to all the prisoners but a sizeable proportion take ownership of the issue and act accordingly.



Waste cardboard and paper awaiting recycling.

CR What have been the savings so far?

DH To the environment, they have been significant. During 2011-12, around 54 per cent of the total waste generated at prisons was diverted away from landfill disposal to reuse, recycling and value recovery operations such as composting and energy-from-waste. The financial savings have been equally impressive. Revenues from selling on waste materials totalled £500,000 and total efficiency savings were around £5 million – this is the annual saving that we realise through the reduction in waste disposal costs and the value of reusable items salvaged from the waste stream, such as clothing.

CR What are your targets for the future?

DH We want to improve performance by 2015 to reach a target of 70% of the waste generated being directed to reuse, recycling and recovery. The aspirational target is to get down to zero waste being sent to landfill. This will be achieved, in the main, in line

with the development of the commercial sector waste management infrastructure. We will then be able to include, within waste disposal contracts, a requirement that waste materials should not be disposed to landfill. It's not as simple as it seems and we have to be mindful that alternatives may offer poor value both in cost and environmental aspects. A prohibitively expensive solution would delay us in achieving our zero waste to landfill aspiration. However technology and processes develop and as alternatives become available so we need to be able to adapt in the light of these changes.

CR What are these developments and alternatives you mention?

DH The most well-known one is making energy from waste; a little controversial in this country but widely used across Europe and a familiar technology to many in the waste industry. It involves incineration, where the waste is burnt to produce energy. The other well known one is anaerobic digestion. Some of the newer 'environmental' technologies would not have been a cost effective consideration a few years ago but as the market has developed and the technology has become more efficient we consider what is available to identify where the MoJ can take advantage. For instance, a few years ago rainwater reuse was not considered to be a viable option in prisons, now rain water recovery systems have become part of the standard build options.

CR What areas are the toughest for you to do something about?

DH Transport is a big problem. The prison estate is substantial; there is a constant need to move offenders about from prison to court and from prison to prison and we cannot use public transport for it either! Prisons are usually in out of the way places so getting to them can involve travelling considerable

distances; this being unavoidable due to the nature of the organisation we are working in. We do minimise the environmental impact of travel for example through the contract for prisoner escort services that stipulates that the vehicles used meet with the latest standards for carbon emissions and engine efficiency.

CR It would have been difficult 12 years ago to foresee what an industry waste management and recycling would become and how much the Prison Service would adopt it. Where do you see all this going?

DH Ideally we want to see a waste management unit in every prison. There are creditable reasons why the few that have yet to set one up haven't done so; resources not being available being a common theme. It may also be that the prison has a small population and a small waste footprint. This would mean that the business case for investing in the necessary equipment from its own budget just could not be made. However

the escalation in disposal costs and also the landfill tax levy has meant that the point at which the investment is worthwhile has now changed dramatically. There is now a good business case for every establishment to have its own waste management unit and not to just pass on the waste en masse to a contractor. An in-house unit is the most viable option for prisons; it engages staff and prisoners in the environment issue, it provides purposeful work and training for prisoners, it realises significant environmental and cost benefits, it demonstrates a level of social and environmental responsibility. It is, in essence, the sustainable solution. You could contract it all out but at what cost? In effect, this would take prisons back to the 1990's where all waste went into a skip and was removed from site – out of sight, out of mind, and at high cost.

CR What about central funding for some of the more ambitious projects, or ones in establishments where the case for investing in recycling equipment is less obvious?

DH We are hoping to introduce a 'seed financing' scheme in the near future where prisons will be able to bid for funding to introduce schemes that meet all the environmental and social objectives but where the budget argument is less clear. This should help kick start schemes and hopefully encourage the more ambitious ones to be planned and implemented. This issue will get more and more important as the cost of raw materials increases and the cost of waste processing and disposal escalates. I believe we have reached the point where the economics alone will prompt a unit in each prison, the social and environmental aspects make the case even more compelling.

CR Thanks for talking to the Review again.