Exploring the farming and waste disposal nexus in the UK: Towards a typology of 'Environmental Criminals'

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Abstract: The farming Industry and rural locations are increasingly being targeted by predatory environmental criminals but as will be demonstrated there is also an insider element to environmental crimes. Such criminal activities pose an environmental challenge and require creative solutions. Indeed, the notion of the farmer as an environmental criminal is a contentious addition to the typology of rural criminals. Traditionally, environmental crime was an overlooked and under researched category of criminology, primarily because 'farmers' as a genre were treated with an elevated level of societal respect in line with their 'idyllic' portrayal. They do not fit accepted social constructs and stereotypes of the urban based criminal fraternity. Consequentially, we heard little of the stereotype of the 'bad' farmer. Recent years have seen a rise in public interest and concern relating to ethical aspects of farming leading to a raising of public awareness. Farmers are no longer immune from criticism, nor prosecution. Using documentary research methods this study reports on several high-profile cases at the nexus and reveals an updated typology of rural environmental crimes and criminals.

Keywords: criminal entrepreneurship, farm crime; environmental crime; fly-tipping; illegal dumping.

Introduction

Green criminology or 'Eco-Crime' are useful paradigms for understanding how crimes of the economy affect the environment and business practices (White, 2010; White & Heckenberg, 2014). According to White (2013) environmental harm and crime is linked to the activities of large companies, corporations and organised criminal syndicates and is linked to financial gain. Whilst crimes against the environment are an established research paradigm in 'Green Criminology' (Ruggerio & South, 2013) it is less so in 'Rural Criminology'. Nevertheless, awareness of environmental crime in a farming industry context is growing (for example, see Walters, 2012; Barclay & Bartel, 2015; and Smith, 2015). However, an awareness of a nexus between organised criminals and insiders, such as rogue farmers (Smith, 2004) in relation to crimes against the environment is less prevalent. Thus, whilst it is broadly accepted that many environmental crimes such as 'fly-tipping' (i.e., illegal waste dumping) are perpetuated on the environment by predatory outsiders, there is some anecdotal evidence that such crimes can be committed by industry insiders. Consequentially, consideration of the 'Farmer' as an 'environmental criminal' is rare albeit there is a sparse literature in both an Australian and a U.S. context which documents and describes farm and farmer-based environmental crimes (see Barclay et al., 2007; Barclay & Bartel, 2015).

There is always a cultural element in the commission of environmental crimes. Until recently, environmental crime was an overlooked and under researched category of criminological theory and research (Smith, 2015). Indeed, farmers as a genre were granted an elevated level of societal respect in line with the 'rural idyll' (Mingay, 1995; Smith & Byrne, 2018) because of their position in the community (Somerville et al., 2015). Consequentially, farmers did not fit the accepted social constructs and stereotypes we have come to associate with urban-based marauding criminal fraternity. Seldom is the stereotype of the 'bad' farmer considered albeit that farmers are often stigmatised as 'environmental vandals' (Lowe & Ward, 1997; Barclay & Bartel, 2015) in the context of environmental crimes such as pollution from farming practices. Moreover, environmental crimes such as 'fly-tipping' (Webb et al., 2006) are regarded as a criminal activity perpetrated on farmers. Fly-tipping is defined as the 'illegal deposit of any waste onto land that does not have a licence to accept it'. For example, tipping a mattress, electrical items or a bin bag full of rubbish in the street causes a local nuisance and makes an area look ugly and run down.

However, in recent years there has been a rise in public interest and concern relating to ethical aspects of farming and rural life such as for example the ban on hunts and concerns over badger culls. Books such as 'Farmageddon' (Lymbery, 2014) have raised public awareness of the potential cruelty of factory farming and there is increased scrutiny from political and environmental activists. The internet has made available magazines / bulletins such as 'Vermin Patrol' which name and shame individuals (including Farmers) found guilty of animal cruelty and/or environmental crimes. Moreover, the work conducted by bodies such as SEPA / Food

Standards Agency has led to an increase in environmental surveillance. As a result, 'Farmers' are no longer immune from criticism, nor from prosecution and are part of an emerging typology of environmental criminals.

This article reports on a data base of crimes, crime and criminal types and builds a working typology of environmental criminals. It develops from previous research into rogue and criminal farmers in the UK (Smith, 2004; Smith & McElwee, 2013). As a result, it is possible to identify a number of obvious crimes, crime types and criminal types which fall into the environmental crime category including the disposal of waste, pollution and pest control methods.

Fly-tipping and the illegal dumping of waste: A review of the literature.

Fly-tipping and the illegal dumping of waste are environmental crimes which are increasing year-by-year (Webb et al., 2006). The former is usually committed by the householder, or a third-party contracted to remove the waste material / items whilst the latter is committed by unscrupulous businesses and organized criminal groups. However, the two categories can be connected because waste criminals may dump larger consignments in a variety of sites to make it appear as if it is 'fly-tipping'. In the latter case, the third-party offender will have been paid a low price (usually cash in hand) to dispose of the refuse which may or may not be party to the payment of a land fill tax. The disposal of such waste is heavily regulated and to reduce costs organized criminals, or unscrupulous businessmen, may contract to dispose of the waste in quarries or illegal landfill sites. According to official statistics, every 90 minutes of the working day an illegal dumping is detected. The academic literature on 'fly-tipping' is somewhat sparse and spans the literatures of criminology and ecology: thus to understand the current context and scale of the problem it was necessary to peruse the grey literature and in particularly documentary evidence (see Scott, 2014) supplied by journalists and industry insiders which contains up-to-date information and figures.

Fly-tipping, rogue waste operations, illegal tips and tax evasion via the deliberate misclassification of waste result in financial loss while posing environmental and health threats and cost the UK more than half a billion pounds a year. Of particular concern is illegally dumped building rubble and deliberate misclassification of waste to evade tax (Vaughan, 2014). These are said to be widespread and endemic, according to an ESAET Report. The ESAET report estimated that the cost of waste crime was somewhere between £324m to £808m, with a best estimate of £568m, caused by loss of revenue for legal waste sites and related tax evasion strategies. The scam works by deliberately classifying hazardous waste as standard to avoid paying the higher tax plus the associated costs of cleaning up 'fly-tipping'. The suspicion is that the illegal activity is funding organised crime. The scale of the problem has to be set against the loss of 1,700 jobs at the Environment Agency and a reduction in work on illegal waste activities and a reduction in core spending from £17.4 million in 2011-12 to £16.9 million in 2012-2013.

Local authorities in England and Wales dealt with more than 711,000 incidents of 'fly-tipping' alone in 2012-13.

Another scam is to export hazardous waste to developing countries for reprocessing by labelling it as standard. In this scenario as well as financial losses, there are environmental and health impacts because the workers in such countries are exposed to pollution which would not be sanctioned in the UK. Moreover, because the criminals do not recycle the waste there is a lost opportunity to move material up the waste hierarchy. There are more than 1,000 illegal waste sites in the UK which cause pollution both environmental and noise wise. Illegal waste dumping and disposal is a source of easy money.³ It is inconvenient and unfair on legitimate waste businesses that pay for waste-disposal licences, permits and tipping fees. The criminal networks are complex and range from small, individual operations to larger, often multiple sites, companies and sometimes countries. Environmental crime is a big, growing business. According to Environmental Agency Statistics, as of March 2012 there were 1,175 illegal waste sites in England and Wales. It can take up to five years for complainers to see such sites closed. Most sites deal in construction and demolition waste which is the biggest single category whilst others in household and commercial waste including end-of-life vehicles. It is cheaper to reclaim the metal and dump the oil, the battery, the brake and air conditioning fluid.

The legislation in the United Kingdom is complex and includes the Deposit of Poisonous Wastes in 1972, the Control of Pollution Act in 1974 and the Environmental Protection Act of 1990. These legislative actions were designed to deal with legitimate business infringements and not illegal businesses. It is at least 50 percent cheaper to get rid of stuff illegally with legitimate companies charging £180-£200 per skip (i.e., an open-topped container that can be loaded onto a truck). The illegal operators only ask £100-120 cash in hand. It is tempting to businesses. The illegal operators pocket the money and avoid paying the costs of all the various permits, licences and taxes; burning the waste. They sell on the valuable scrap metal. A common modus operandi is to rent the corner of a farmyard or a field, or industrial unit, buy a few skips and begin dumping. Environmental Agency tactics include visiting with uniformed police to disrupt the business. Sites are classified as low, medium and high risk depending on location, the toxic nature and quantity of the waste being dumped there, or the number and kind of complaints received about it. It is also lucrative and low risk because often the material is untraceable and thus the chance of detection by the police or environmental health officers is low.

The Environmental Agency now adopts a new intelligence-led approach working closely with police and other government agencies including the tax office, trading standards, vehicle licensing, border control and work and pensions to keep abreast of the criminals' activities. Bringing cases to court is expensive, and time-consuming. Prosecuting one case can cost £22,000 for the investigation without legal fees: hundreds of hours of surveillance and covert rural surveillance using long-lens photography of the site. High Court injunctions and stop orders are difficult to obtain and even when granted many illegal operators simply continue to function.

Complex investigations and prosecutions can run to three or four years and illegal operators use delaying tactics. Even after a conviction, illegal operators often simply start all over again with a new company name. Some simply cease to desist even when released from prison. A special task force has dealt with 760 illegal waste disposal sites by shutting them down or bringing them into legal operation. The agency has brought 335 successful prosecutions, including 16 in which large-scale waste criminals were handed prison sentences, and the number and size of the financial penalties imposed have multiplied: £1.7m in fines last year, over twice as much as in 2010, while the biggest single fine trebled to £170,000. Over £2 million in assets have been confiscated. Such crime causes serious pollution and put communities and legitimate businesses at risk. The focus is on illegal waste exports, mis-description of waste and illegal waste sites and to find new ways to disrupt illegal activities. The task force is developing new expertise and methods. At the end of March 2014 there were 556 active illegal waste sites, the lowest figure in four years. This figure is increasing annually.

The latest police intelligence suggests that organised crime groups are muscling in on the UK's waste sector using cash, corrupt officials and violence. Intelligence assessments suggest that 14 of the most dangerous gangs in Scotland are involved in the industry (Peachey, 2015). Approximately £100m of criminal assets have identified gangs' other activities. The number of gangs involved has more than doubled since 2012. A 2013 Europol report found that the crime was under-investigated across Europe with the exception of the Italian mafia involvement in the waste industry. The industry which in many areas operates on a cash-only basis – has been used as a front to launder the proceeds of other crimes. According to a SEPA spokesperson corrupt farmers allow their land to be used for tipping and industrial units have been filled and left abandoned. Some of the most harmful electrical waste has been shipped abroad to Africa and Asia. The practice costs taxpayers £570m every year. The existence of environmental black markets (Brack & Hayman, 2002) is of note as is 'Aggroterrism' (Bryne, 2012). The persistent dumping of waste on farmland and in the countryside could indeed be viewed as environmental terrorism.

From an examination of the above reports it is evident that the stereotype of the 'Green or Eco Criminal' engaged in 'fly-tipping' and the illegal dumping of waste is that of rapacious and greedy corporations, businessmen and entrepreneurs who ruthlessly target the countryside, making farmers and landowners the victims. Yet this is only part of the paradigm because the commission of environmental crimes may be entered into deliberately, or wilfully, by fFarmers' e.g. releasing slurry, waste, or effluent into a waterway or recklessly spreading it on already saturated land or even by accidental overflow (as evidenced by Smith, 2015). Indeed, there may be pressure upon them to do this when a slurry tank is full and there is no other immediate solution. It may result from what insurance companies often refer to as an 'act of god' such as flash flooding, or even by mere accident. Irrespective of motive, or intention, the consequences can be disastrous for wildlife, and fauna. These different motivations and modus operandi are

reflected in a working typology which would be helpful to the authorities in the investigation of such crime. The study by Smith (2015) created a typology of four basic types. These include:

- 1. The Corporate Offender: This category pertains to 'farmers' and 'owners' of Farm Businesses / Agricultural Companies who manage their farms' pollution and environmental portfolios. Creating a corporate umbrella shields the farmer from personal liability as convictions accrue against the corporate body. There is no evidence from the initial reading that this category of offender is any more prolific, or careless, in relation to environmental crimes than private offenders. Lymbery (2014) reports on the existence of Corporations in the developing world who deliberately flout environmental laws and routinely commit serious environmental crimes. These corporations hire security staff to keep the public and journalists at bay. Again, we see cultural norms in play.
- **2.** The Private Offender: This category pertains to 'farmers' who own or rent their farms and operate as private individuals. They may be personally liable for any acts of deliberate, or reckless, acts in relation to environmental crime.
- **3. The Trusted Employee:** This category relates to 'managers', 'factors', 'farm labourers', 'ghillies' (i.e., caretaker of fish ponds), 'game keepers', 'contractors', or 'wardens' accused of committing environmental crime. Importantly, they act on behalf of the 'farmer', or 'land-owner', during the course of their employment, and not of their own volition. There is often a vicarious responsibility on the land-owner. Employees may act out of ignorance of the law, or on the basis of custom and repute. In some instances, they may not be aware of potential violations.
- **4. The Urban Marauder:** This category consists of an outsider type person usually an organized criminal or business owner who targets rural areas and farm land for the purposes dumping industrial and household waste (classic fly-tipping) because it is easier and cheaper to dispose of it illegally than pay land-fill charges. In extreme cases the dumped materials may also be toxic or chemical waste.

This diversity of crime type and modus operandi makes it difficult to accommodate environmental crimes under one rubric. Only those in category four are stereotypical criminals and it is often difficult for investigators to 'get their heads around' treating the other categories as criminal. These so called 'Men in Suits and/or Wellington Boots' simply do not conform to our socially constructed expectations of criminality. Having considered the main types of persons who commit environmental crimes, it is necessary to consider types of crimes encountered in a Scottish/UK context. It is also apparent that the categories may sometimes be inter-related and that the basic typology inadequate in relation to the true scale of the problem.

Methodology

The methodology used is of necessity qualitative in nature and includes a framework consisting of (1) Netnographic and scenario building techniques (Kozinets, 2015); (2) Documentary Research techniques (Scott, 2014) which were used to locate and identify relevant material in official reports, newspaper articles and also via internet posts; and (3) Narrative Inquiry techniques from which micro case studies (Yin, 2010) were authored from the collected data. This helps contextualise the crime and the criminal. From the data collected it was apparent that most of the documentary evidence collected related to the crime of 'fly-tipping' and not the illegal dumping of toxic waste. For this reason, a decision was made to concentrate on this category of environmental crime but also because academic inquiry into 'fly-tipping' to date is sparse. To move from data to narrative based micro case studies the author created a database of articles and from these wrote up notes on key themes on post it notes. These were then organized into categories on a whiteboard to further extrapolate themes, sub-themes and patterns. From these a typology of environmental criminals emerges which allows for a discussion on wider socio-economic implications for the farming industry and rural communities. This methodology was also both convenient and necessary because the author had no direct access to respondents involved in eco-crime, nor a research budget to interview industry practitioners nor offenders. Moreover, the number of reported cases of 'fly-tipping' in the press and media was sufficient to sustain the viability of the study.

Presenting the case studies

To illustrate the scale of the problem and bring the environmental crime of 'fly-tipping' to the fore we present two sets of micro case studies of reported and detected scenarios — one for "complicit farmers and business people" and one for "organized groups". From the data, 12 micro case studies were selected, with five in the first category and seven in the next category. They cover a time period from 2010 to 2017 and are indicative of the reporting on 'fly-tipping'.

Complicit farmers and business people

Micro case study 1: An illegal waste operator and company were fined for illegally dumping waste at a farm near Windsor. The farmer who was found to be complicit pled guilty at Maidenhead Magistrates' Court to three offences of causing or permitting the unlawful deposit of waste between August 2006 and December 2010. He was fined £5,000, ordered to pay costs of £4,793.84 and a Victim Surcharge of £120. The Environmental Services company also pled guilty to three offences of unlawfully depositing waste on the land. The company was fined £20,000, ordered to pay costs of £4,793.84 and a Victim Surcharge of £120. Between 2006 and 2011 Environment Agency officers visited land rented by the farmer and found that an estimated total of 57,600 tonnes of waste soils had dumped by the contractors and spread. During site visits Environment Agency officers told the accused that permission from the Environment Agency

was needed to continue bringing waste onto the site. This would impose controls on the activity to minimise its environmental impact. However, permission was never obtained. The complicit farmer allegedly made hundreds of thousands of pounds.⁵

Micro case study 2: A Welsh farmer allegedly made hundreds of thousands of pounds by storing tonnes of rubbish that gave off a rotting smell. He allowed a waste company to tip more than 4,600 lorry loads of rubbish onto his land. Local residents complained about the rotting smell akin to that experienced on municipal tips. Environmental officers later found some of the waste had become as polluted as raw sewage or "leachate" escaped onto surrounding land and a reservoir site. The complicit farmer made £283,000 by allowing the waste company to tip the rubbish onto the farm between 2006 and 2010. The farmer was sentenced to a 10-month custodial sentence, suspended for two years, and fined 300 hours of unpaid work. Action was taken to recoup funds under the Proceeds of Crime Act. The farmer allowed more than 87,000 tonnes of controlled waste to be dumped in a disused reservoir at the farm. It was described as a classic case of illegal landfill. The operation involved Environment Agency officers working with Gwent Police. More than 20 companies were investigated by the Environmental Crime Team after being identified as having tipped waste at the site. The farmer hid the dump by covering it with inert material on top.⁶

Micro case study 3: An Irish farmer was sentenced to a 12-month conditional discharge and fined £225 after burning materials on his land. He pled guilty to two charges of contravening the Clean Air Act, brought by the council's Environmental Health department. Between November 2014 and January, 2015 he burned waste on his land including tractor tyres, plastics and board materials. A joint council and Fire Service investigation gathered the evidence. Allison had repeatedly dumped waste and lit fires at his farm to dispose of waste.⁷

Micro case study 4: A businessman allowed 400 tonnes of household waste to be dumped on land at a trading estate in the Black Country without having a permit. He was sentenced to 8 months of imprisonment.⁸

Micro case study 5: A high profile case in July 2014 reported by SEPA related to a large quantity of illegal building waste being dumped at a disused farm near Edinburgh Airport disguised as silage bales. It saved the criminals £60,000 in landfill charges. It is obvious that the perpetrators must have had some association with farming and the farmer on whose land the bales were stored but there was insufficient evidence to prosecute.

Organized crime groups

Micro case study 6: A Slough businessman described as an organized crime boss and notorious local villain was convicted on 23 April 2010 after a week-long trial for running an illegal waste operation on his land. The operation was an illegal waste transfer station and scrap

metal yard which had a serious environmental impact on local residents living nearby. As well as the crushing of cars at all hours, complaints included acrid smoke, burning of diesel, dogs barking and left unattended, and powerful floodlights shining into homes late at night. Local residents complained of intimidation, threats of physical violence, and dog excrement thrown over their fences. Johal was also given a two-year community order. In August 2011, the businessman was ordered to repay more than £800,000 under the Proceeds of Crime Act (2002) and given a two-year community sentence with a five years sentence if he defaults. It was the largest Proceeds of Crime Act ruling the Environment Agency had secured to date. He failed to pay and in May 2013 he failed to appear in court and a warrant was issued for his arrest. He was arrested at Heathrow Airport trying to leave the country.

Micro case study 7: A Derbyshire woman was convicted of illegally disposing of clinical waste and dead pets. She collected animal bodies from local vets, burning them en masse, and in some cases presenting families with ashes they believed were from their dogs. The remains were buried, badly, on land she was renting. This is a case of opportunistic criminal enterprise.

Micro case study 8: An Aldermaston businessman described as an unrepentant organised crime boss was jailed for three years after failing to pay back the proceeds of his illegal waste and money laundering business in Aldermaston. He had failed to pay a £917,000 confiscation order imposed for waste crimes he was convicted of in 2011. He was imprisoned in 2009 for four-and-a-half years for possession of an illegal firearm, recovered following an Environment Agency search. In May 2011, he was sentenced to four-and-a-half years in prison for money-laundering and 22 months for waste offences, to be served concurrently. He failed to cooperate with the Environment Agency. His illegal waste business netted millions of pounds in profit by taking skips or lorry loads of construction and demolition waste to be dumped in an illegal landfill.¹⁰

Micro case study 9: A notorious businessman described by press as the so-called "million-tyre man" was jailed for 15 months for dumping more than a million used tyres at sites across five counties. Tyres are hard to recycle because they contain steel. Stockpiles which are set on fire can burn for years, and putting the fire out entails massive water pollution.

Micro case study 10: This case relates to the highest penalty imposed by the Scottish courts for the dumping of car tyres and plastic at a former colliery in Armadale, West Lothian, in 2012. The waste was buried. Locals gave evidence of queues of lorries waiting outside the gate in the early mornings. The colliery closed in the 1960s. An investigation uncovered Scotland's biggest illicit dump. The firm was fined £200,000 and the company directors were barred from holding licences for running a transport business. The Scottish Environmental Agency SEPA, which investigated the Armadale case using a multi-agency approach are working with Police Scotland to map the threat from waste dumpers and criminal groups: The investigation and mapping exercise indicates substantial amounts of waste on farmland, in industrial units and

greenfield sites. The OCG was not linked to a police database of Scottish organised crime groups and evidences a mingling of legitimate operators dumping illegally. It further evidences the infiltration of the waste industry by serious and organised crime gangs including top-tier criminals embedded in it.¹¹

Micro case study 11: In 2017 four waste bosses operating six illegal waste sites in Lancashire were sentenced to jail terms of up to 18 months. Agency staff and emergency workers had to wear protective suits and breathing apparatus to tackle chemical drums filled with acids, pharmaceutical vials, oil sludge, waste inks and crushed tablets, as well as 1,000- litre containers marked "carcinogenic contents". One large container marked, "explosive on contact with water" had been stored under a leaking roof.

Micro case study 12: A Dorset businessman who ran a "white van man" business (i.e., small, independently owned business, usually a trade, such as plumbing, locksmithing, home renovating) was sentenced to a 2-year conditional discharge for his offences for repeatedly dumping waste on rural land he had access to. The court took account of his mitigating circumstances, including his previous good character and his early guilty plea as well as his financial difficulties. He was ordered to pay £400 costs and a £21 victim surcharge. 12

It is apparent that the financial penalties for 'fly-tipping' are low and that initially the authorities begin with warnings and escalate to fixed penalties which if not paid may lead to court action. It is only then that offenders are likely to be jailed or fined more heavily. This creates an opportunity for repeat offenders to slip through the gaps because the crimes are dealt with locally thus an unscrupulous waste disposal operator or criminal may slip through the gaps if they operate nationally or regionally. The above cases also demonstrate that there is a degree of complicity between the farmers and landowners and the organized crime groups. Indeed, it is big business. From the readings an expanded typology of waste criminals emerged. In turn, these can be divided into predatory outsiders (Table 1) and predatory insiders (Table 2).

The developing typology spans a continuum from the householder through rogue tradesman to businessmen and organized criminals who possess very different motivations and modus operandi, making the interdiction of the crime even more problematic because each type of criminal would require the implementation of different investigative and preventative strategies. There is no doubt that 'fly-tipping' is also an urban problem and not merely a rural issue, but the rural does appear to be disproportionately targeted because of the ease of operating there unseen and the lessoned chances of interdiction. Although 'fly-tipping' may be labelled as a 'green crime' it could be argued that by labelling such crimes as examples of green criminology' we are merely trivialising the problem in a similar manner as labelling it a 'white collar crime' because the process of labelling reduces its seriousness. All the examples located by documentary research related to criminal behaviour for financial gain and there is evidence of organized criminality and insider complicity.

Table 1: A typology of waste criminals: predatory outsiders	
Organized Crime Groups	According to Crowe and Lynch (2020), organised criminal gangs are increasingly being blamed for the continued rise of large fly-tipping incidents across England. Their modus operandi is to set up fake companies which hire out buildings to dump clients' waste. This has cost local authorities almost £60m in clean-up costs since 2012. Often the gangs wrap the waste in plastic and stack the bales up in areas of apparently unused land to mirror the appearance of being farm produced bales. This category is characterised by the presence of traditional organised crime figure and criminal and families. These may or may not have a connection to scrap metal dealers. The illegal waste business will only form part of the portfolio of legal business and illegal criminal ventures. Thus, it will be an illegal entrepreneurial venture in which the crime boss will have invested money. There will likely be a manager or other person fronting the operation. The OCG boss will have rented a farm or an industrial unit and the person in day-to-day charge absorbs the routine pressures of operating the business. Investigators may treat the front man as the perpetrator and may never uncover the full scale of the operation. Such crime bosses may finance several different ventures in different locations.
Travellers	Although this is a politically contentious inclusion members of the travelling community do odd building, construction, landscaping and gardening jobs on a seasonal basis. Many dump the waste in rural or isolated urban locations in laybys, lanes and waste ground. Alternatively, they may dump the waste in municipal recycling sites by posing as members of the public thus avoiding the commercial rates. It is a usually a criminal venture in that there is no intention to declare the earnings to HMRC. Customers appreciate that a cash in hand transaction may not be legal but do not care.
Independent Criminals	This group act in a similar manner to travellers but are independent and have access to a van and tools to do low level gardening or construction work. They masquerade as tradesmen but have no intention of becoming legitimate. Customers appreciate that a cash in hand transaction may not be legal but often do not care.

Table 2: A typology of waste criminals: predatory insiders	
Illegal Waste Operators	These are illegal ventures which have the outwards appearance of being a legitimate waste business. They will have all the artefacts and symbolism associated with a business in that there will be a company name, a registered premises and the appearance / semblance of legitimacy. There will be a manager and rudimentary office staff. However, the organisation of the business will act in a similar manner to a long-firm-fraud in that the intention is to trade as long as possible without being closed down. The business will not apply for permits and will flout laws, rules and regulations as part of their modus operandi. The company may be operated by an independent businessman or by several business partners. Criminals undercut legitimate firms in cash deals and dump the rubbish.
Unscrupulous Waste Operators	This category consists of legal waste operators who are unscrupulous and conduct legal waste operations alongside illegal operations depending on necessity and profit factors. They have the industry legitimacy, equipment and contacts. This type of operation is difficult to detect and deal with and if caught depending on the severity of the environmental hazard they can plead that it was a sharp practice, mistake, oversight, bad decision or aberration. Managers can be sanctioned and replaced by the owners to provide a veneer of responsibility. It is an example of illegal entrepreneurial pluriactivity.
Rogue Farmers / Entrepreneurs	This category knowingly exploits their physical and social capital in the form of land or property to make easy money. There are active and passive operators. In the case of the former, the former or entrepreneur will act as a front for the business and plead ignorance as long as possible. In the latter case the farmer or land-owner can argue that as an absentee landowner they were unaware of illegal activity and dealt with business through legal representatives.
Building Firms	This category of operators usually always cuts corners to save money and will engage in fly-tipping on most occasions unless they have factored in the waste disposal fees into the invoicing process.
Cowboy Tradesman (DIY)	In waste crime the public are usually cast as the victims, but a proportion of fly-tipping is committed by the public who engage in renovation projects and may be tempted out of laziness or convenience to fly-tip.

Discussion

As a result of the analysis of the industry reports mentioned above common issues emerged. Firstly 'fly-tipping' and the dumping of illegal waste is often very difficult to investigate because there are often no clues left at the scene as to the identity of the offender. Secondly, the crime often slips between the organisational cracks of the agencies involved. Such cases can be reported to the police, the local Council and to the 'National Fly Tipping Hotline'.

If a member of the public reports 'fly-tipping' to the police in the UK they automatically refer them to the aforesaid hotline and take no further action. It is doubtful whether the police will record the incident and whether the caller so redirected will bother to call the hotline. This is important because it leads to a dilution of the problem and a skewed set of statistics. Fourthly, the above inconsistencies lead to an investigative atrophy whereby prompt action is not always taken. Ultimately it is the local Council environmental Health Officers who are responsible for the investigation and other Council Departments for uplifting and disposing of the litter / waste into landfill. There is often a considerable time delay from members of the public reporting such crimes/incidents and the offending material being disposed of. This inevitably creates further problems because once illegal waste is left in situ it encourages others to use the site for 'flytipping'. A delay of even 2 to 3 days from dumping to the start of the investigation can lead to the erosion of viable clues. It is not likely that a busy council employee will take the time to search the debris for receipts or other identifying minutia or take batch numbers from paint tins etc. It is also unlikely that all the council staff dealing with the problem will be trained in its investigation. Opportunities for surveillance or other proactive measures are thus lost if an investigative ethos is not present. All of these issues exacerbate the problem.

Conclusion

This paper further expands the typology of rural criminals posited in this journal by Smith (2013). One of the major issues to emerge from the research is that from an investigative perspective environmental crime in the UK/Scotland does not have a high profile, nor is it a high priority. There has been an erosion of rural policing skills and rural and environmental crimes are no longer routinely taught to an increasingly urbanized police service. This attitude needs to change. Nevertheless, despite the creeping withdrawal of policing services from the Countryside (see Smith and Somerville, 2013) due to cost cutting exercises in the age of austerity, the UK is still well served by Police Wildlife Liaison Offers in most areas. A special illegal waste task force has also been set up. There is scope for more multi agency working and joint approaches to target the crimes and criminals responsible. Until recently, the environmental crime of 'flytipping' was dealt with by the Environmental Agency and/or by local Council employed environmental health officers'; and occasionally by the police with differing priorities and investigative abilities. Each case is dealt with separately as stand-alone crimes when many crimes are repeat offences committed by the same individuals and organized crime groups. A more joined up 'intelligence led' approach is clearly called for whereby 'hot spots' are targeted and profiles drawn up of rogue entrepreneurs and businesses involved in the commission of such crimes. As a result of pressure applied by the NFU, in February, 2020, a new joint agency unit specialising in Waste Crime has been set up in England and Wales to bring together police forces, the National Crime Agency, the Environment Agency, HMRC and Natural Resources Wales to tackle the problem and to bring down the most serious and organised criminal groups (Crowe and Lynch, 2020). This is an exciting development, worthy of further scrutiny.

Endnotes

¹The report was commissioned by Environmental Services Association Education Trust (ESAET) and conducted by Eunomia.

²Vaughan, A. (2014) Waste crime costs UK more than half a billion pounds a year, report warns – 4.3.2014 - http://www.theguardian.com/environment/2014/mar/04/waste-crime-costs-uk-report

³Henley, J. (2012). Waste Crime: Britain's war on illegal dumping. http://www.theguardian.com/environment/2012/nov/11/waste-crime-britains-war-illegal-dumping

⁴An industry report – "Waste Crime: Tackling Britain's Dirty Secret" links UK cases of electrical waste exported abroad with involvement in OCG's responsible for theft, human trafficking, fraud, drugs, firearms and money laundering.

⁵Legal waste operator and company fined £25,000 for illegally dumping waste at a farm near Windsor - September 10, 2013 - http://tyrerecovery.org.uk/illegal-waste-operator-and-company-fined-25000-for-illegally-dumping-waste-at-a-farm-near-windsor/#sthash.Crb6nMa4.dpuf

⁶Tredegar farmer found guilty of waste storage is spared jail - 20 Oct 2013 - http://www.southwalesargus.co.uk/news/10750975.Tredegar_farmer_found_guilty_of_waste_storage is spared jail/

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⁷Colne man prosecuted following 'appalling' farm fires – 27.04.2015 http://www.pendletoday.co.uk/news/colne-man-prosecuted-following-appalling-farm-fires-1-7231516. Read more: http://www.pendletoday.co.uk/news/colne-man-prosecuted-following-appalling-farm-fires-1-7231516#ixzz42FGzMelk

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⁹See http://www.letsrecycle.com/news/latest-news/clamping-down-on-waste-crime/ Also - Johal Scrapyard owner gets "just desserts" for inflicting four years of misery on Colnbrook residents.

23-05-2013. http://www.colnbrook.info/johal-scrapyard-owner-gets-just-desserts-for-inflicting-down-on-waste-crime/.

<u>four-years-of-misery-on-colnbrook-residents/</u>. Also see http://www.theguardian.com/environment/2013/may/23/illegal-waste-boss-jailed-heathrow

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¹²Fly-tipper in court for operating illegal waste site at Coombe Valley near Weymouth. https://www.dorsetecho.co.uk/news/18227581.fly-tipper-court-operating-illegal-waste-site-coombe-valley-near-weymouth/

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