



Smarter Regulation of Waste in Europe (LIFE13 ENV-UK-000549) LIFE SMART Waste Project

Action B14:

Identifying and selecting interventions Mini guide 3

Helping you to make the right decisions in complex environmental situations

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April 2017

This report was prepared with the contribution of the LIFE financial instrument of the European Union

AN EU LIFE+ PROJECT FOR 2014–2019

Version 3.2



Introduction

The Practical Guide on Designing Interventions to Deal with Waste Crime sets out a method to plan, test and evaluate the use of interventions. It is supported by Mini Guides that provide additional information for:

1. Analysing the situation and defining the problems
2. Identifying interventions and delivery partners (This Guide)
3. Modelling solutions using the iDepend tool - Getting Started Guide

This Guide comprises:

- A. Categories of intervention
- B. Guidance on selecting (choosing) interventions
- C. Examples of existing and new (planned/in development) interventions
- D. Case Study (Waste Tyres) demonstration of approach

A. Categories of interventions

A1. What are interventions?

An intervention can be defined as something that is done to change the behaviour of an individual, organisation, sector, nation, or any other defined group. Interventions are often actions or activities used to modify or determine events or their outcome, for example to make things better by hindering or disturbing a course of action that would otherwise occur.

A2. Bespoke vs pre-existing Interventions

Practitioners may attempt design their own solutions, or choose from pre-existing types (menus) of intervention.

A new bespoke solution will take longer to develop and test. Whereas a user might quickly and easily characterise their situation from an inventory of “attributes”, and then build bundles of interventions from menus.

One has to think through the specific issues being addressed, the types of interventions to use, whether they are available and whether they are likely to be successful, or not. The Practical Guide provides method for doing this

In selecting interventions, you may wish to refer to a set of interventions that you already use within your organisation, but if you feel that is limiting your choice then you can refer to other lists of interventions which are available.

This Guide lists interventions and sources for further information. It also provides a draft “menu” of most relevant interventions for waste crime and provides indications of what circumstances each is most suited to.

A3. Characterising interventions (typologies)

The following classification of interventions is based on a typology developed by Cranfield University (Taylor, 2013) for Defra.

Box 1. A typology of interventions

- **Direct regulation (permits/licences, inspection/monitoring, enforcement/penalties).** These have relatively certain outcomes but are resource intensive and need to be targeted (rationed).
- **Economic instruments (eg taxes, trading schemes, financial incentives).** These have less certainty of outcome but greater flexibility for businesses to choose least cost options.
- **Information based approaches (eg intelligence led approaches, campaigns).** Dependent on availability of data/information and ability/resources to analyse and utilise.
- **Partnership/joint working (eg collaborative projects/initiatives).** Can encourage rapid action, flexible to changing circumstances
- **Self-regulation (eg standards such as ISO 14001):** action motivated by financial, customer/supply-chain or reputational influences. May not be relevant for tackling waste criminals directly, but may help legitimate operators to address vulnerable points within their control.
- **Support and capacity building (eg campaigns, advice and guidance).** As for self-regulation, will be aimed at legitimate operators in order prevent/mitigate illegal activity occurring within their sphere of influence. Campaigns may be aimed at ‘interested parties”, such as citizens, consumers, investors, NGOs who may be able to influence the behaviour of criminals. They may also provide information to enforcement agencies

Another typology for interventions was developed by the Scottish Government (The Serious Organised Crime Task Force , 2009) and called the “4Ds”:

- Detection,
- Deterrence,
- Diversion and
- Disruption

The “What Works Centre” for crime reduction at UCL¹ lists 35 interventions and provides further information for each one in terms of:

- Impact on crime
- How it works

¹ UCL (2015) Crime Reduction Toolkit. <http://whatworks.college.police.uk/toolkit/About-the-Crime-Reduction-Toolkit/Pages/About.aspx>

- Where it works
- How to do it
- What it costs

Interventions can also be classified according to use:

- Preventative Interventions: those which act to prevent an illegal activity from occurring
- Re-active interventions: those which act to prevent harm after the act has occurred
- Remedial Interventions: those which act after harm has occurred but may prevent further illegal activity.

B. Method for selecting (choosing) interventions

The starting point for building your solution is an objective analysis of the situation and problems to be solved, including vulnerabilities (opportunities for illegal and/or harmful activities), targets, objectives and barriers. This should be the principal output of Stage 1, Planning the Use of Interventions, as set out in the Practical Guide. From this analysis, you should have a clear picture of:

- the changes you want to achieve (objectives)
- any barriers that would stop, or reduce the chances of, achieving objectives
- targets and possible interventions to help achieve your objectives and remove barriers

Good Practice Tips

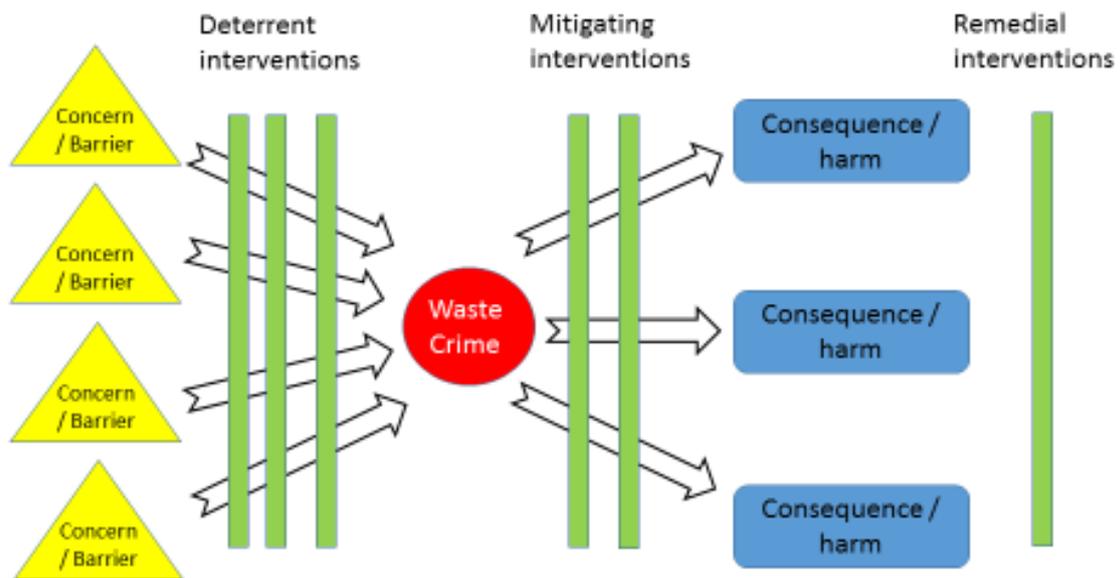
1. Consider the mix and types of intervention needed to improve your chances of achieving your objectives.
 - Use the analysis from Stage 1 to consider how to deploy your interventions on each target and which of your objectives each intervention might (help to) achieve.
 - Take a wide view of the interventions that you could use - think out of the box and not just on the 'traditional' operational (direct) aspects of a crime situation. For example, a behaviour change may require a societal type intervention delivered by others. A bundle of interventions could include policy and regulatory change at the EU level.
2. Selecting interventions, You may wish to refer to a set of interventions that you already use within your organisation, but if you feel that is limiting your choice then you can refer to other lists of interventions which are available.

Having developed a number of interventions you might wish to separate these into

- Preventative Interventions: those which act to prevent an illegal activity from occurring
- Re-active interventions: those which act to prevent harm after the act has occurred
- Remedial Interventions: those which act after harm has occurred but may prevent further illegal activity

You might like to use the Bow tie approach to demonstrate to yourself and others if you have covered all the three aspects above. The bow-tie model can also help you consider sequencing of interventions: which should come first and which should follow.

Fig 1. Bow Tie Model



The bow-tie models were developed to show how (health and safety related) incidents develop and how you can intervene at many points to interrupt the completion of the sequence.

For example, you may need to introduce interventions at one or more of these points, to attempt to intrude and disrupt the sequence so that we can ensure the sequence is not successfully completed.

C. EXAMPLES OF INTERVENTIONS

C1. Examples of interventions being used to tackle waste crime

Some newer enforcement initiatives have been developed which may be particularly applicable to waste crime, including:

Legislative amendments by speeding up prosecutions for rogue waste site operators, and introduction of fixed penalty notices for small scale fly-tipping in the UK (Defra, 2015).

Enhanced enforcement powers to help the regulators tackle waste crime and entrenched poor performance in the waste management industry (Defra, 2015). The interventions include:

- Suspension of permits where an operator has failed to meet the conditions of an enforcement notice;
- Issuing notices that include steps an operator must take to prevent the breach of a permit getting worse;
- Widening the regulators' ability to require the removal of waste from land.
- Fixed Penalty Notices for fly-tipping;
- Specifying operator competence, including operator technical competence and the financial provision made by applicants for waste permits.

Fixed and variable monetary penalties and enforcement undertakings

Economics instruments aimed at improving waste management industry performance include landfill taxes and fees, incineration taxes and fees, pay-as-you-throw (PAYT) schemes, and producer responsibility schemes for specific waste streams (notably packaging, WEEE, ELV and batteries).

Powers to recharge for pollution works associated with the deposit of waste on land (Defra consultation, 2015).

Actions to improve landowner awareness of potential liabilities related to waste operations ((Defra consultation, 2015).

Interventions related to waste crime which can be delivered at different points in the waste supply chain:

- operator or site specific measures eg monitoring, improvement/stop notices, sanctions
- interventions at pinch points in the waste supply chain (e.g. where waste is moved across borders);
- working with a particular waste sector or business representative bodies;
- working with end user representative bodies; and
- lobbying for legislative and policy change at a national or European level.

C2. Examples of 'new' interventions being developed or planned

Defra consultation (Defra, 2015)

- Take physical steps to prevent further breaches by an operator of their permit;
- Take steps to remove a risk of serious pollution, whether or not a facility is under a permit;
- Options to address abandoned or orphaned waste management sites;

Waste Tyres, research by "EPOW" (Environment Agency, 2012) showed that financial gain was the strongest driver for waste tyre crime and illegal collection, storage and export. By targeting interventions at the point where the money changes hands, one of the key drivers can be Interventions mentioned in this study included:

- Introduce systems of producer responsibility and fee-free waste collections, removing the exchange of money at point of collection and dis-incentivising illegal activity"; For example levying a charge early in the tyre's life cycle, which removes the incentive to illegally collect as there is no money changing hands at point of waste collection. (A case study in Italy provided details of successful use of this approach)
- Targeting the source of the illegal waste, the producers, rather than their normal approach of targeting the suspect fly-tipper (and gave an example of successful application in SEPA).
- Use of "SmartWater" to help deter fly-tipping of waste. SmartWater incorporates state of the art forensic technology and each batch is forensically unique. It provides an invisible and permanent trace to the waste, meaning that if it is sprayed on individual batches of waste they can be traced back if disposed of illegally.

C3. Structured menu developed by the Environment Agency (England) and reproduced in Figure 1.

Figure 1. Example Intervention Menu – part 1. Source Environment Agency 2015

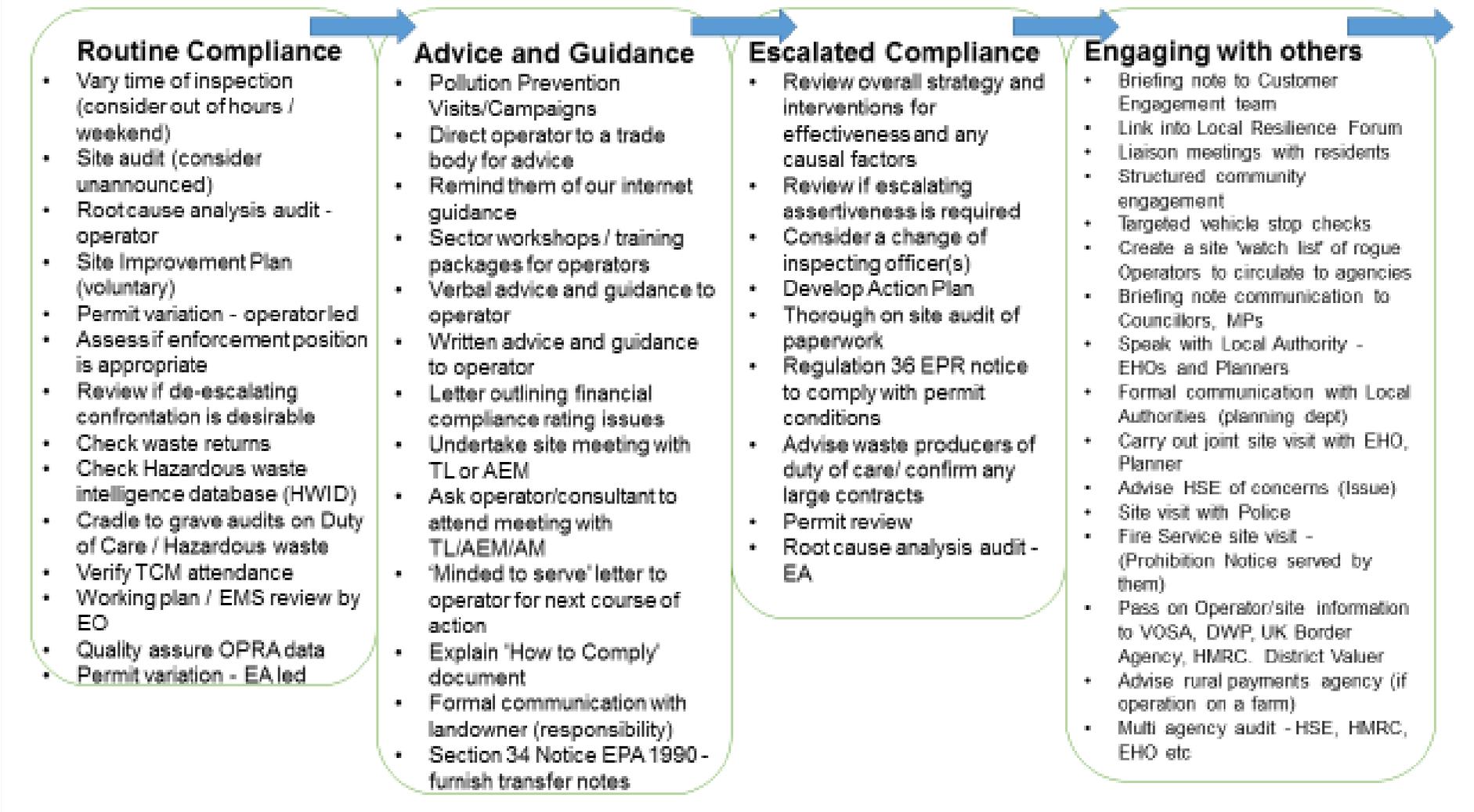
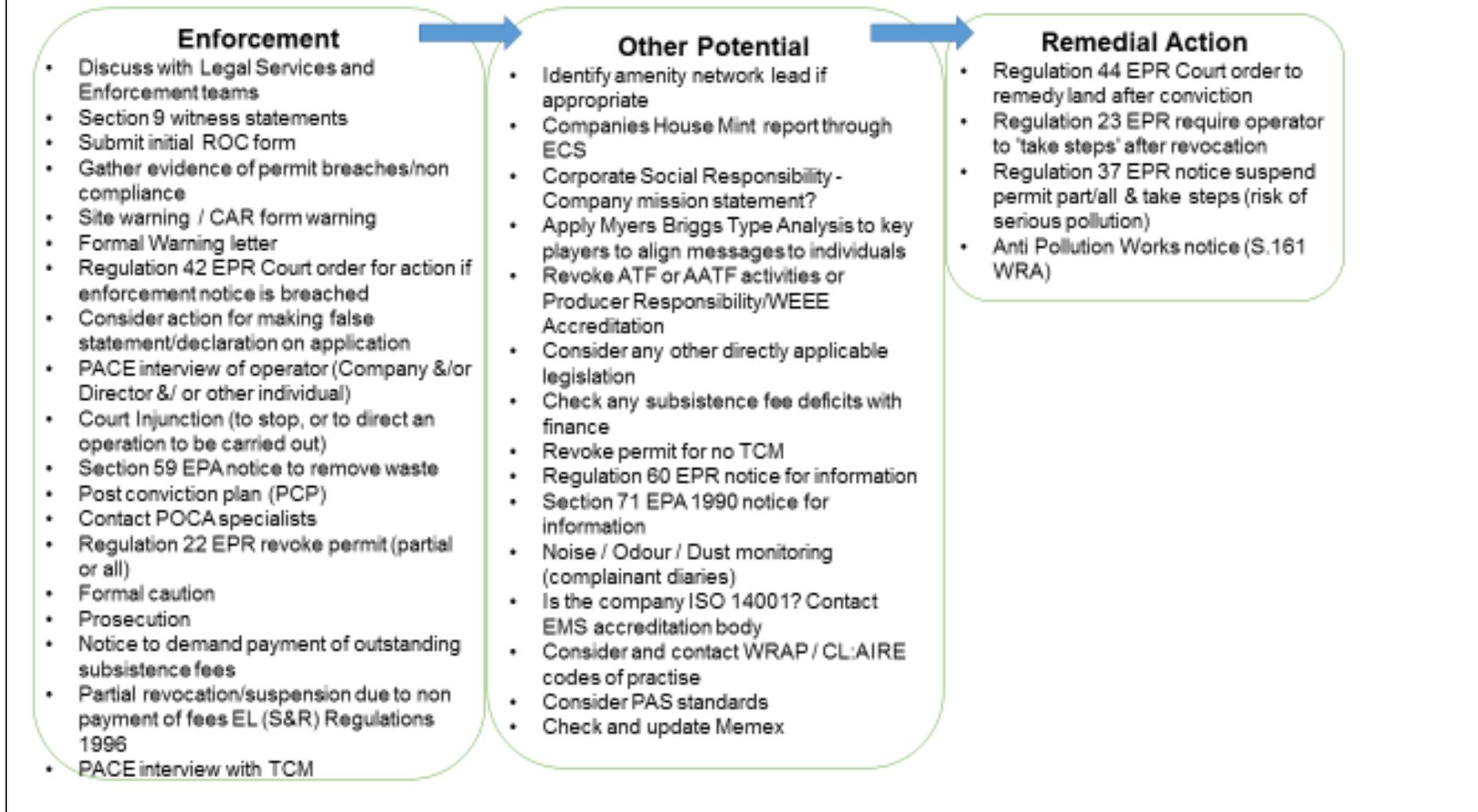


Figure 1 continued. Example Intervention Menu – part 1. Source Environment Agency 2015



E. Case study to demonstrate selection of interventions to deal with Waste Tyres

How this might apply to the case study: Selecting interventions for “concerns and barriers” to achieve “objectives”?			
What is wrong? (CONCERN/ BARRIER)	What can we act on?	How can we act? (INTERVENTION)	Which OBJECTIVE might that achieve?
There are exemptions for storing ≤ 1000 tyres and there are lots of small stockpiles	The exemption	Ask Scottish Government to remove the exemption	
When demand for waste tyres falls the benefits of illegal activity outweigh costs. And there is not a consistent, nor big enough market for re-use and recycling.	Increase demand	Promote innovative re-use and recycling maybe working with metal recyclers association	v. Maximise recovery of metals from waste tyres vi. Maximise legitimate “re-use” of waste tyres.
The criminals need transport, land and property to carry out waste crime and other crimes: tax avoidance, vehicle planning etc.	Joint operations with police, LAs, HMRC etc. to identify their activities, movements, transactions etc.	Joint prosecution with Police HMRC etc. for serious and numerous offences, seize proceeds of crime, vehicles and equipment. Where SEPA do not have powers ask for new regs.	iv. Stop the illegal waste tyre waste activities of criminals
There is a financial incentive for tyre dealers to use cheapest waste disposers	Move payments up the chain. Increase their <i>perception</i> of the costs of non-compliance.	Ask Government to introduce producer responsibility schemes or tax Impress on them their duty of care responsibilities.	i. Stop mismanagement of waste tyres
Once tyres have left tyre dealers’ premises their source cannot be traced.	Technology to trace tyres.	Promote use of Smart water, UV markings etc. GPS etc.	i. Stop mismanagement of waste tyres
There are considerable rules and regulations around waste activity, in particular duty of care, but that is rarely enforced.	Increase fear of being caught,	Make example of someone, email all waste dealers.	i. Stop mismanagement of waste tyres viii. Deter others from getting involved in waste tyre crime

How this might apply to the case study: Selecting interventions for “concerns and barriers” to achieve “objectives”?			
What is wrong? (CONCERN/ BARRIER)	What can we act on?	How can we act? (INTERVENTION)	Which OBJECTIVE might that achieve?
Society want a clean environment and low crime rates, but have no tools or support to deal with waste tyre crime.	Provide society with <u>process</u> , <u>tools</u> & <u>support</u> for them to help stop illegal waste tyre activity	Install and promote reporting lines	iii. Stop environme

How this might apply to the case study: Possible targets for each intervention and what objectives will that achieve?		
Objective	Intervention	Target
Stop mismanagement of waste tyres	1. Ask Government to introduce producer responsibility schemes or tax	Government
	2. Ask Scottish Government to remove the exemption	Government
	3. Promote use of Smart water, UV markings etc. GPS etc.	Tyre Dealers
	4. Impress on them their duty of care responsibilities.	Tyre Dealers
Maximise recovery of metals from waste tyres AND Maximise legitimate “re-use” of waste tyres.	5. Promote innovative re-use and recycling maybe working with	Government Universities Metal recyclers association
Stop the illegal waste tyre activities of criminals AND Deter others from getting involved in waste tyre crime	6. Make example of someone by prosecuting	Customers, investors of waste management company Waste criminals and other would be waste criminals
	7. Install and promote reporting lines	Public