Introduction of a UK-wide Digital Waste Tracking System

Business and Regulatory Impact Assessment (BRIA)

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Scottish Government
Riaghaltas na h-Alba
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Contents

1. Title of proposal: Introduction of a UK-wide digital waste tracking system

1. This is the partial Business and Regulatory Impact Assessment (BRIA) assessing the impact on Scotland of proposals to implement a UK-wide mandatory waste tracking system.

2. The BRIA was written subject to the most up-to-date information at the time and accompanies a joint four-countries consultation document. Much of the information included in this document is closely aligned with the Impact Assessment prepared by DEFRA, which was undertaken on a UK-wide basis, hereafter referred to as the UK IA.

3. The final BRIA, which will be published at the same time as secondary legislation, will be informed by information gathered through consultation with businesses and the public.

2. Purpose and intended effect

2.1 Background

4. Scotland is committed to building a circular economy, meaning we reduce demand for raw materials by keeping resources in use for as long as possible, extract maximum value from them, minimise waste and encouraging reuse, repair and recycling, to ensure products last as long as possible. To do this we must ensure we have the information about what waste is being produced and where it ends up. Around 11.5 million tonnes of waste is produced in Scotland each year[1], but there is currently no single or comprehensive system to track it.

5. The Scottish Government also wants to support and make the system fairer for those operating legally. At present waste tracking is carried out using largely paper-based record-keeping, making it very difficult to track waste effectively. Waste can be fraudulently reclassified and transferred, or simply be illegally dumped, at which point the paper trail disappears. This makes it difficult to identify and deal with waste crime ranging from fly tipping and deliberate misclassification to illegal waste exports and the operation of illegal waste sites.

6. In order to meet Circular Economy commitments, the Scottish Government and the Scottish Environment Protection Agency (SEPA) have been working with the other UK administrations and regulators to develop and introduce a waste tracking system for hazardous waste[2]. Separately, Persistent Organic Pollutants (POPs) legislation has been introduced to mandate the tracking of POPs waste[3]. In addition, In our Circular Economy

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[1] SEPA 2018 Waste from All Sources dataset

[2] Waste that displays specified properties that might make it more harmful to human health or the environment if not managed appropriately.

[3] POPs waste is toxic, bioaccumulative, long-ranging and does not break down in the environment and can be found in a wide range of products from sofas to IT equipment.

Strategy[4], the Scottish Government committed to move towards mandatory use of the electronic "EDOC" system for waste in Scotland. This policy proposes to supersede the circular economy commitments and the proposals made in the POPs legislation, to introduce a mandatory waste tracking system for all waste.

7. Development of a mandatory waste tracking system in the UK will also help to meet regulatory requirements under the persistent Organic Pollutants Regulations[5]. as well as delivering on recommendations from the National Infrastructure Assessment[6], and the Life Smart Waste project led by SEPA[7].

2.2 Regulatory background

8. Currently in Scotland, and the rest of the UK, there is no comprehensive service for 'tracking' waste transactions. Multiple IT services collect specific elements of waste data, but large amounts of data are either not collected, or not collated centrally. The overall picture is of a fragmented set of services that do not 'talk' to each other.

9. Legal requirements are focussed on having a written description of the waste that should be transferred along the supply chain when the waste is passed from one holder to another. Handwritten or digital waste descriptions of the wastes composition and details of the waste transaction must be accurate and contain all the information the holder is reasonably in a position to provide to ensure the lawful and safe handling, transport, treatment, recovery or disposal of the waste by subsequent holders.

10. Those receiving waste must ensure that the waste matches the written description and that any permit[8], if applicable, allows the acceptance of such waste. Those operating under a waste exemption must ensure that any waste received does not contravene the exemption[9] criteria e.g. waste limits or types.

11. The specific legal requirements for the information that must be recorded when waste is moved or transferred differ depending on the type of waste being handled and how the waste is transferred/moved.

- **Non-hazardous waste** - waste that does not display properties that would classify it as hazardous waste
- **Hazardous waste –** waste that displays specified properties that might make it more harmful to human health or the environment if not managed appropriately

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[4] Making Things Last: a circular economy strategy for Scotland - gov.scot (www.gov.scot)

[5] Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants, as it forms part of domestic law on and after Transition Period completion day, and as amended by The Persistent Organic Pollutant (Amendment) (EU Exit) Regulations 2020

[6] A common data reporting framework for businesses handling commercial and industrial waste by the end of 2019, ideally through voluntary reporting but if necessary by legislation, National Infrastructure Assessment 1 - NIC

[7] LIFE SMART Waste | Scottish Environment Protection Agency (SEPA).

[8] An environmental permit gives "permission" to an operator to carry out a set of particular activities.

[9] Waste exemptions allow waste operations considered low risk to be carried out according to general rules, without the need to apply for an environmental permit.

- **"Green List" waste movements** - includes types of waste that are considered to pose a low risk to the environment when shipped to EU/OECD and some non-OECD countries for recycling or recovery.

12. It is estimated that each year there are at least 2.1m (see Table 1) and 26m notes recording waste movements/transfers being issued each year in the UK[10]. The 26m estimation counts season tickets as one note, but these could represent many hundreds of movements each year. Recent estimates suggest that there are around 500 million waste transactions each year in the UK[11].

Table 1 – Number of waste transfers and movement notes issued annually in Scotland (estimated[12])

Waste type	**Notes**
Non-hazardous waste	2m waste transfer notes[13]
Hazardous waste	78,500 consignment notes[14]
Green list waste	29,000 Annex VII notes
Total	**2.1m notes**

Non-hazardous waste

13. Legislation[15] states that when non-hazardous waste is transferred from one holder to another, an agreed written description of the waste should also be transferred. This is known as a **'waste transfer note'** and should include the waste description and code, information about how the waste is contained, details of the parties involved in the transfer, as well as other information specified in the ' Duty of Care Code of Practice'[16].

14. Waste transfer notes can be completed in several different ways; in paper form, online via the voluntary Electronic Duty of Care (edoc) service[17], or by using an operator's own electronic services. These notes do not need to be submitted centrally, unless requested.

[10] The number of waste movements does not feed into the cost benefit analysis.
[11] Estimates have not been published.
[12] Estimates have not been published.
[13] This is likely to be an underestimate of total waste transfers as the total waste transfer notes figure does not include transfers of waste that are carried out using a season ticket.
[14] 3-year average over 2016, 2017 and 2018
[15] All businesses that produce or handle waste are required under Section 34 of The Environmental Protection Act 1990 to complete a written description of waste when they transfer it to someone else Environmental Protection Act 1990 (legislation.gov.uk)

[16] https://www.gov.scot/publications/duty-care-code-practice/
[17] https://www.edoconline.co.uk/

15. Where the same type of waste is transferred regularly between the same parties a **'season ticket'** may be used. A season ticket is a single waste transfer note that covers a series of non-hazardous waste transfers. Businesses are expected to keep a log of individual transfers covered by a season ticket for audit purposes.

16. A waste transfer note is currently not required for non-hazardous waste if the waste holder does not change on the transfer of waste e.g. the waste is moved to other premises belonging to the same business. Under the Duty of Care Codes of Practice[18], however, businesses are expected to keep a record of internal transfers for audit purposes.

Hazardous waste

17. Waste legislation[19] requires hazardous waste producers, carriers, brokers, dealers, permitted/authorised treatment sites and some exempt waste sites to keep certain records relating to the production, transport and management of hazardous waste. Currently, moving hazardous waste involves a similar transfer of information to moving non-hazardous waste albeit more information is required for hazardous waste movements[20].

18. Details of the waste moved must be recorded on **'consignment notes'** and these must be completed for all movements of hazardous waste including movements from one premise to another within the same business. The only two exceptions where a consignment note is not needed are where domestic hazardous waste (other than asbestos waste) is removed from a domestic household or waste is imported or exported under international waste shipment controls[21].

19. Businesses that handle hazardous waste are required to use consignment notes and obtain a hazardous waste code from SEPA to put on their consignment note.

20. Circular Economy commitments[22] will require records of hazardous waste movements to be made available to the relevant regulator through an electronic registry. Therefore, a new IT service will be required to enable businesses to submit records of hazardous waste movements into a central system. Businesses will need to digitally record and submit the quantity and nature of materials and products resulting from re-use, recycling, or other recovery of hazardous waste.

21. These requirements, to submit records relating to the production, transport and management of hazardous waste, will also apply to waste containing Persistent Organic

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[18] https://www.gov.uk/government/publications/waste-duty-of-care-code-of-practice and https://www.gov.scot/publications/duty-care-code-practice/pages/1/

[19] The Special Waste Regulations 1996

[20] Examples of additional information required are: details of where waste will be taken, details of the process which has given rise to the waste, chemical component details and UN classification numbers.

[21] This is controlled by separate legislation involving equivalent notes - The Transfrontier Shipment of Waste Regulations 2007 (applies to whole UK).

[22] Green growth and circular economy - Environment - European Commission (europa.eu).

Pollutants (POPs) (which may be either hazardous or non-hazardous) following new Persistent Organic Pollutants Regulations[23].

"Green List" waste movements (non-hazardous waste that is imported/exported abroad)

22. An 'Annex VII' document must be completed and travel with "Green List" waste at all times. This must contain information regarding who has arranged the shipment of the waste, who is transporting it, as well as information about the waste's description (including required identification codes) and details of where it is being taken. In Scotland and Northern Ireland, the Annex VII forms for waste exports must be submitted to the relevant regulatory agency in advance of the movement taking place; however, in England and Wales, there are currently no requirements for exporters to pre-notify the regulator or to submit any information on these exports.

2.3 Objective and rationale

23. The current regulations, and supporting IT, do not enable waste to be easily and consistently tracked from the point of production to end fate.

24. Multiple IT systems collect specific elements of waste tracking data[24] – but large amounts of data are either not collected or not collated centrally. Some data are paper-based and other data are captured digitally. Some data are managed by private contractors, whilst other data are managed by Government or the regulatory agencies. There are separate services for household waste, commercial waste, hazardous waste and international waste shipments. As government requirements have changed over time, various add-ons and separate databases have been developed in isolation. Therefore, the overall picture is of a fragmented set of systems that do not 'talk' to each other.

25. Many of the existing digital services available for businesses to record non-hazardous waste transactions are voluntary – as a result, the use of these services is very low. In 2016, only 150 organisations a month voluntarily used EDOC (a non-mandatory service for commercial waste transfers). This compares to the 5.5m businesses that are estimated to be carrying out non-hazardous waste transactions across the UK[25].

26. The lack of a central digital service for recording waste movements/transfers presents several problems:

- Policymakers do not have sufficient data to monitor the effectiveness of interventions and identify opportunities to move towards a Circular Economy[26].
- Up to date information is not available to allow the efficient and effective regulation of waste.

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[23] Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants, as it forms part of domestic law on and after Transition Period completion day, and as amended by The Persistent Organic Pollutant (Amendment) (EU Exit) Regulations 2020

[24] For example, wastedataflow, National Packaging Waste Database, and Electronic Duty of Care

[25] Internal evidence – not published.

[26] A circular economy is an economic system aimed at eliminating waste and the continual use of resources.

- There is opportunity to commit waste crime – waste can easily be 'lost' or deliberately misclassified - regulators cannot easily gather or interrogate the information needed in order to investigate waste crime – and producers cannot easily check how their waste has been treated.
- Regulators and policymakers do not have access to data on the treatment or end fate of waste (e.g. if materials are recycled into something or if material is disposed of in landfill or is incinerated).
- Industry lacks information on products from waste that could be used to reduce raw material costs for example.
- It is more difficult and time consuming for producers of waste to comply with their duty of care.
- Lack of reliable information for infrastructure planning and investment.

27. Outputs from a 2021 questionnaire to the Waste Tracking User Panel[27] found that 13% of waste operators currently use **paper records only** for recording movements of waste. The pen and paper approach to completing these records is inadequate as producers often do not know what has happened to their waste and are not confident their waste has been handled correctly. In addition, regulators do not have easy access to the information they need to monitor waste activities. Using paper records also allows operators undertaking illegal activities to operate with impunity, safe in the knowledge that regulators lack comprehensive data on the waste they have handled.

Table 2 - How businesses currently keep records for waste transfers, movements, and shipments in Scotland

	Non-hazardous waste	**Hazardous waste**	**Green List waste**
Both paper and electronic records	69%	74%	63%
Paper records only	15%	13%	17%
Electronic records only	16%	13%	20%

[27] The Waste Tracking User Panel has around 1200 members representing waste producers, carriers, brokers, dealers, waste site operators, local authorities and regulators from across the UK, 450 of which operate in Scotland. Members of this Panel are helping to develop the service by getting involved in user research and testing the system as it is developed.

28. In order to effectively regulate and manage waste, make the most of the resources within waste and discourage its production in the first place, an effective waste tracking service needs to provide information on:

- What the waste is.
- Who produces waste.
- Who is responsible for the waste at any point in the journey (including treatment).
- How the waste is treated.
- Where it ends up, and in what form.
- The description of the recyclate.
- Any products or materials that have been made from waste.

29. There are gaps in our knowledge of all the above – particularly with regards to commercial and industrial wastes and how waste is treated at a small number of exempt sites[28].

30. Being able to track waste, and resources, will transform the way that waste is regulated and provide the information that agencies need to prioritise regulatory activities, tackle waste crime and support a shift to a circular economy.

31. The key objectives of the implementation of a digital waste tracking system are therefore to:

- Integrate and simplify recording of all waste movements and transfers.
- Improve the quality and accuracy of data on waste movements and transfers.
- Reduce the opportunities to commit waste crime (and in turn reduce the negative environmental impacts, risk to human health, and disamenity effects associated with waste crime).
- Ensure that the data captured is easily accessible and usable.
- Realise efficiencies and resource savings and remove risks associated with existing legacy services**.**

2.3.1 Social and environmental negative impacts

32. Under the current waste regulations, significant negative impacts result from criminal activity in the waste industry, such as risk to human health, and disamenity effects.

33. Negative impacts arise from disposing of waste in a non-compliant manner (e.g. not recycling, disposing of hazardous waste unsafely and fly-tipping). Operators do this to avoid the costs associated with the correct disposal of waste (for example, paying landfill

[28] Waste exemptions allow waste operations considered low risk to be carried out according to general rules, without the need to apply for a waste management licence/permit. In Scotland, many exempt sites are still subject to the rules regarding consignment and waste transfer notes.

tax). However, in doing so, there are costs to society and the environment – including, carbon emissions, the release of harmful chemicals, the release of foul odours, pollution of surface or groundwater, noise and dust from vehicle movements or on-site operations, or safety risks from fires.

34. A waste tracking system will reduce the amount of 'waste crime' that is committed in the UK by reducing the incentive for waste operators to act illegally on the basis that they're more likely to be caught committing crimes. Specifically, mandating that digital records of waste transactions are uploaded into a central system will enable regulators to identify when 'waste goes missing' and/or when 'the description of waste changes'. In addition, once waste is added to the system (and is being 'tracked'), any subsequent omissions in the data trail will raise an alert to the regulator. This intelligence will support regulators to carry out more targeted monitoring of compliance and provide useful evidence to effectively enforce against criminal activity.

35. Being able to track timely data on waste movements to regulated sites would mean that interventions to prevent waste crime could be proactive, rather than reactive - for example when a site receives a waste that it is not permitted to accept or it is nearing its maximum capacity, regulators could respond accordingly. Data on site activities is currently submitted to the agencies in quarterly returns – potentially up to three months after a given waste movement, so little value can be extracted from the available information.

36. The Independent Serious and Organised Waste Crime Review in England[29] highlighted that the lack of digital record-keeping in the waste industry is frequently exploited by organised criminals, as it provides ample opportunity to hide evidence of the systematic mishandling of waste. This report recommended that to better address the problems we face, mandatory electronic (digital) tracking of waste should be introduced at the earliest opportunity.

3. Consultation

37. A Waste Tracking User Panel (1200 stakeholders with 450 operating across Scotland) has been consulted throughout the process of considering and developing a prototype system for digital waste tracking. Feedback from this user panel has informed this partial EQIA, and input from the user panel will continue to be used to develop the system, alongside feedback from a wider, public consultation in autumn 2021.

3.1 Within Government

38. The development of a UK-wide waste tracking system requires a joint approach, while respecting devolved powers. The governments (Scottish, UK, Welsh and Northern Irish Governments) and environmental regulators (SEPA, the Environment Agency, Natural Resources Wales and the Northern Irish Environment Agency) have been working closely to develop a waste tracking that works well for all stakeholders.

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[29] Independent Review into Serious and Organised Crime in the waste sector, November 2018.

39. The views and requirements of local authority stakeholders have also been elicited through the local authority representatives who are part of the Waste Tracking User Panel (which includes 17 Scottish local authorities and 63 others from across the UK). Further local authority stakeholders will be engaged more widely through the formal, written consultation process.

3.2 Public consultation

40. A formal UK-wide consultation is being conducted to present and seek thoughts on :

- Accessing the data on the waste tracking system
- Fees and charges
- Exemptions and alternative requirements for digitally excluded persons
- Offences and sanctions

41. The feedback will be used to review and refine the proposals which will then be reflected in secondary legislation and shape the digital design of the waste tracking service. We, therefore, do not intend to run further public consultations on the secondary legislation.

3.3 Business

42. The Waste Tracking User Panel (1200 stakeholders with 450 operating across Scotland) has been consulted throughout the process of considering and developing a prototype system for digital waste tracking. This panel includes a range of business stakeholders from across the waste sector as well as wider sectors. Engagement with the user panel has taken place through questionnaires, surveys, interviews, user research workshops and discussions, and written feedback as well as usability testing of prototypes.

43. However, further consultation with businesses will take place during and after the public consultation process. The form of engagement will depend on COVID-19 restrictions at the time, but it is expected that it will include virtual interviews and discussions, questionnaires, email correspondence; and possibly workshops.

4. Options

4.1 Outlining the options

44. In the initial stages of the waste tracking project, non-regulatory options for tracking waste were considered – for example, running communication campaigns and running free training to promote the use of digitally recording waste movements/transfers in IT systems.

45. Non-regulatory options have not been presented in the options appraisal as we do not believe that they are capable of meeting the policy objectives (see section 2.3) and would not offer the same net benefits. For example, communication campaigns have been disregarded as a suitable option given the widespread non-compliance, and the cost to some businesses of transitioning to digital recording of data, communication campaigns

alone are unlikely to have the desired impact of bringing all businesses into digitally recording their waste movements/transfers.

46. Effective non-regulatory options would rely on all businesses voluntarily recording their data in a digital format (and using unique ID codes to identify each movement of waste from producer to receiving site). As described above, there are already several voluntary IT systems that can be used to record waste data, however, insufficient uptake of these systems has prevailed. Even if a significant number of businesses voluntarily complied with digital recording (and unique ID codes) but a relatively small number of operators did not voluntarily comply, then the whole system would be undermined and the potential benefits to businesses, governments and regulators would quickly diminish. This is because non-compliance from a small number of operators would create 'breaks' in data which would hinder the utility of the dataset. In addition, non-compliance is more likely to be carried out by illegal operators that are motivated by the perceived private benefits of illegal activity and without these operators reporting data, voluntary initiatives will not be able to deliver one of the key objectives of tracking waste – reducing waste crime.

47. A baseline and two regulatory proposals have instead been presented in this Impact Assessment (Outlined in Table 3), briefly, these comprise:

- **Option 1 (baseline)**: The baseline represents a 'do minimum' option – due to forthcoming legislative commitments, waste operators will be mandated to digitally record and submit data on movements of hazardous waste and Persistent and Organic Pollutants (POPs) waste.
- **Option 2**: Baseline, plus mandate that non-hazardous waste transfers are digitally recorded through an application of the waste operators' choice. Operators won't be mandated to submit non-hazardous waste data centrally.
- **Option 3** (Preferred Option): Mandate that waste holders/businesses moving/transferring waste of any type will need to digitally record these movements/transfers, and submit the data into a central waste tracking service for all waste. This option is the preferred option as the analysis indicates that it offers the best value for money to the taxpayer due to the centralised data system being more efficient and effective than a non-centralised data system. We also expect that Option 3 will result in the greatest reduction in waste crime.

Table 3 – Summary of waste tracking options

	Waste in-scope of regulatory change	Central system for Hazardous waste and POPs waste digital records	Central system for Non-Hazardous waste digital records
Option 1 (baseline)	Hazardous waste and POPs waste only	Yes – hazardous waste and POPs waste transactions to be digitally recorded in a central system.	No – no change to non-hazardous waste recording.
Option 2	All waste	Yes – hazardous waste and POPs waste transactions to be digitally recorded in a central system.	No – non-hazardous waste transactions will need to be recorded digitally, but they will not need to be uploaded to a central system.
Option 3 (preferred option)	All waste	Yes – hazardous waste and POPs waste transactions to be digitally recorded in a central system.	Yes – non-hazardous waste transactions will be digitally recorded within a central tracking service.

4.2 Summary of costs associated with each option

48. The implementation of a mandatory electronic waste tracking system is therefore being developed on a UK wide basis. The cost estimates presented in the UK Impact Assessment (https://consult.defra.gov.uk/environmental-quality/waste-tracking) represent the costs across all 4-nations of the UK. This represents the best available estimates of the cost impact of the options to implement waste tracking across the UK. Where available, aggregating data to a UK level is likely to provide a more reasonable estimate of total costs, since:

- The waste movements across the UK are highly complex and often not limited to a single nation;
- many businesses operate in multiple nations of the UK;
- much of the data is not available on a sufficient scale for individual nations to draw meaningful conclusions.

49. However, where possible, the UK-levels costs have been split to give costs for individual nations, for example, based on populations or the number of waste sites. These costs are available in Annex A5 of the UK Impact Assessment (https://consult.defra.gov.uk/environmental-quality/waste-tracking), and are quoted below where relevant.

50. We aim to gather further information, and possibly more Scottish specific information, throughout the consultation process, which will be used to update the BRIA before final publication.

4.2.1 **Option 1:** Do minimum (baseline)

51. The baseline is a 'do minimum' option. This option will not facilitate the commitments made by the four nations to mandate the digital recording of waste movements[30] – and the problems that a waste tracking service is looking to address will therefore remain present.

52. In the absence of a central waste tracking service for all waste, the Scottish Government, and each of the other nations will be required to meet **legal requirements for digitally tracking waste containing Persistent Organic Pollutants (POPs)**[31] and to **track hazardous waste** in order to meet Circular Economy commitments.[32] The four nations will therefore need to develop a new IT service to enable all records of hazardous waste movements and waste containing POPs to be made available to regulators via a coordinated electronic registry. The costs and benefits associated with this digital waste tracking service (for hazardous waste and waste containing POPs) have therefore been captured in the baseline scenario.

53. In addition, in the baseline scenario WasteDataFlow (WDF)[33] would need to be rebuilt as the current service is reaching end of life[34] and local authorities will need an effective way to provide the information they report to governments. According to an internal review from 2016[35], the current WDF system is not fit for purpose – the four governments and regulatory bodies struggle to access the information within the system and the system is deemed to offer a poor customer experience – the WDF system therefore needs to be rebuilt, rather than renewed.

54. The WDF system will need to be rebuilt only if a waste tracking system for all waste is not built – therefore, the costs associated with building a replacement for WDF are included in the baseline.

55. It is necessary to capture the costs associated with building and running the new IT service to track hazardous waste and waste that contains POPs and the new WDF IT service in the baseline, as **a new** waste tracking service **for all waste** would facilitate for the majority of the functions that these services would be built for, and therefore these IT services would not need to be built/run if **a waste tracking service for all waste** is implemented.

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[30] For Scotland, this includes Scottish Government Commitments set out in Making things Last: A circular economy strategy for Scotland and SEPA commitments set out in One Planet Prosperity: SEPA's regulatory strategy

[31] Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants, as it forms part of domestic law on and after Transition Period completion day, and as amended by The Persistent Organic Pollutant (Amendment) (EU Exit) Regulations 2020

[32] Defra Regulatory Triage Assessment for the Circular Economy Package 2020 (page 13)

[33] A web-based system for municipal waste data reporting by UK local authorities to government - WasteDataFlow Waste Management

[34] The current WDF contract is due to expire. It has been deemed insufficient to renew the contract as there are several fundamental issues that can only be addressed by rebuilding the service.

[35] Not published

Table 4 – Required changes to IT services in the baseline

Hazardous and POPs waste tracking, (new IT)	Build a mandatory digital waste tracking service that will track hazardous waste (and materials and products produced from hazardous waste) and track waste that contains POPs (that may be hazardous or non-hazardous waste). This is required due to the new POPs regulations[36] that specify that POPs waste will need to be digitally trackable and due to Circular Economy commitments.[37]
WasteDataFlow (WDF), (procurement, development and rebuild)	Rebuild WDF[38] which is reaching end of life.

56. These new IT systems are expected to be built over a 3-year period (2022-2024) in such a way that meets current, and future, regulatory requirements. The digital tracking of hazardous waste is expected to result in some significant benefits compared to the current IT services that are in use to capture hazardous waste data (typically Excel and xml documents sent via email) – the benefits include increased landfill tax receipts and time savings to businesses from no longer needing to submit consignment returns. These are described in further detail in section 7.3.

57. However, a new Hazardous and POPS waste tracking service, and a rebuilt WDF system, will not effectively track and monitor **all waste from production to disposal** as there will be significant gaps in the types of waste covered by these services, most notably a large proportion of non-hazardous commercial and industrial waste and waste exported under green list controls[39]. As a result, these new IT services will not deliver the benefits that we expect a centralised waste tracking service for all waste to deliver.

4.2.2 **Option 2:** Implement a waste tracking system for hazardous waste and POPs waste. Mandate that all non-hazardous waste transactions are recorded digitally but do not provide/specify a central service to use for non-hazardous waste

58. Under this option, all those involved in the production or handling of non-hazardous waste would be required to record individual movements and transfers of waste using some form of digital service. This is an extension of the baseline scenario, (where there would already be a specific mandatory service for **tracking hazardous waste and any waste (hazardous or non-hazardous) that contains POPs)**. The choice of what type of digital service to use would be open to businesses to decide. Services could range from an Excel spreadsheet to a bespoke digital solution. This option will therefore have the most significant impact on businesses that do not currently hold digital records of their

[36] Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants, as it forms part of domestic law on and after Transition Period completion day, and as amended by The Persistent Organic Pollutant (Amendment) (EU Exit) Regulations 2020
[37] Defra Regulatory Triage Assessment for the Circular Economy Package 2020 (page 13)
[38] WDF is currently used by LAs to collect data on the types and quantities of all municipal waste collected.
[39] https://www.gov.uk/guidance/importing-and-exporting-waste#article-18

waste transfers (expected to be ~13% of operators according to responses from the Waste Tracking User Panel[40]).

59. This additional data would only need to be reported to regulators upon request. However, by mandating that records are held digitally, they would be able to be submitted to regulators more easily and with increased accuracy. Waste Transfer notes will continue to be used in Option 2 for non-hazardous waste transfers – the requirement for businesses to digitally hold information on their waste transfers will be in addition to the current practice of sharing waste transfer notes.

60. A new process would be required to ensure waste transactions between parties could be easily identified from their digital records. A process akin to current hazardous waste requirements whereby a unique code using a prescribed format must be applied to every waste transaction could be used. Those businesses transporting the waste would likely be in the best position to ensure that a unique code, developed in accordance with some centrally provided government guidance, is shared with both the producer of the waste and the receiving party in a waste transaction.

61. These codes would need to be included on relevant records required to be kept digitally by businesses and/or submitted to regulators (if requested)

62. In addition to the recording of waste movements and transfers digitally, waste receiving sites would also be expected to digitally record details of what happens to the waste they have received i.e. how much has been treated, disposed of or recovered, or whether any products or materials have been produced from the waste.

63. As in the baseline scenario, new IT services will need to be built (as described in table 4) to replace the WDF IT service and to meet the new requirement to track hazardous waste and waste containing POPs.

64. This option would result in an NPV of £20m (-£16m to £57m) over 15 years, with a direct net impact on businesses of -£1.7m (£0.7m costs and £2.4m benefits, equivalent annual) at a UK level. Table 5 provides a summary of the non-discounted costs and benefits to businesses, compared to the baseline (option 1). Please refer to the UK IA for more details on the elements and effects of this option (https://consult.defra.gov.uk/environmental-quality/waste-tracking).

[40] This data was recorded in a survey carried out in January 2021.

Table 5: Summary of non-discounted costs and benefits split by nation (Option 2), £m[41]

	Scotland	**Wales**	**England**	**NI**
Option 2 costs (net of the baseline impact)				
Regulators – Transition costs	0.01	0.01	0.01	0.01
Businesses - Transition costs	0.7	0.4	7.1	0.2
Option 2 benefits (net of the baseline impact)				
Businesses – Ongoing savings from storing waste records digitally	3.07	1.77	31.06	1.03
Total costs	0.71	0.41	7.13	0.24
Total benefits	3.07	1.77	31.06	1.03
Net impact	+2.36	+1.36	+23.93	+0.79

4.2.3 **Option 3 (preferred option):** Provide a central digital waste tracking service and mandate its use[42]

65. Under Option 3 a mandatory electronic waste tracking service for all waste will be created. It will provide a means for businesses to record all waste movements/transfers in one central service and will enable the UK to effectively track waste through the economy, as well as products and materials produced from waste.

66. The waste tracking service will be an IT service that will replace the current requirement for written waste transfer notes (for non-hazardous waste), consignee returns (for hazardous waste), waste site returns and Annex VII forms for "Green List" waste imports and exports. The service will be developed with the requirement to record and submit information on hazardous waste and the requirement to trace waste containing POPs in mind to ensure that the requirements set out in the POPs Regulations and circular economy commitments are met. With a central waste tracking service for all waste in place, WDF would not need to be rebuilt as the waste tracking service will include the majority of the functions that are currently carried out by WDF.

67. We intend, depending on the outcomes of further consultation, that businesses will have the option to digitally record their data through their own services, and then upload

[41] Split from UK-level data using population data

[42] Mandating that digital records of **all waste** movements and transfers are **held and submitted** by obligated businesses is an alternative scenario to the baseline – a new Waste Tracking service for **all waste**, rather than just **hazardous waste and POPs waste**.

their data to a central online service. Alternatively, the central waste tracking service will likely offer a data capture function that will provide the necessary infrastructure for businesses to comply with waste tracking, without investing in their own software or spending time building spreadsheets and then uploading them. If a business is digitally excluded (they do not have access to a device or internet), then the regulator will likely accept the required information over the phone and in the post.

68. Waste tracking will go beyond the mere tracking of waste from source via the carrier to the site at which it is recovered or disposed of – it is envisaged that waste tracking will also 'track' the transformation of waste within a treatment site, into non-waste 'products' and to track at least the first movement of that 'product' back in the product economy.

69. It is expected that registration on the waste tracking service will commence in early 2023, and subject to consultation, by September 2023 all waste producers and waste operators in scope of the reform will be required to comply with the waste tracking service. Businesses will be financially responsible for covering the costs of running the service.

70. This option would result in an NPV of £362m (£182m to £452m) over 15 years, with a direct net impact on businesses of -£10.8m (£5.6m costs and £16.4m benefits, equivalent annual) at a UK level. Table 6 provides a summary of the non-discounted costs and benefits to businesses of option 3 (preferred), compared to the baseline (option 1). Please refer to the UK IA for more details on the elements and effects of this option.

Table 6: Summary of non-discounted costs and benefits split by nation (Option 3), £m[43]

	Scotland	**Wales**	**England**	**NI**
Option 3 costs (net of the baseline impact)				
Regulators – Transition costs	0.01	0.01	3.12	0.01
Businesses - Transition costs	**5.7**	3.3	57.5	1.9
Government – Cost of decommissioning EDOC			0.01	
Businesses – Increased taxation[44]	**27.3**	15.8	276.4	9.2
Option 3 benefits (net of the baseline impact)				
Government - IT development cost savings	0.2	0.1	2.2	0.1

[43] Split UK-level data using population data

[44] In the absence of data on the split of waste crime costs to the public sector between taxation, clearing of illegally dumped waste and compliance monitoring/enforcement, we have assumed that the full cost to the public sector is loss of taxation. Therefore, the assumed reduction in waste crime reflects an increase in taxation receipts for the public sector (the increase in taxation receipts will be an additional cost to businesses). However, in reality the cost to businesses is likely to be less as some of this benefit will be reduced clean-up costs, or reduced compliance monitoring/enforcement costs.

	Scotland	Wales	England	NI
Government - Savings from reduced waste crime	27.3	15.8	276.4	9.2
Government – Savings from no longer running EDOC	0.2	0.1	2.1	0.1
Government – Savings from no longer running WDF	0.4	0.2	4.0	0.1
Local government – Time savings to businesses from no longer needing to submit WDF returns	15.6	9.0	158.0	5.3
Businesses - Time savings to businesses from no longer needing to submit certain waste returns (Permit site returns and waste exemption returns)	**14.3**	8.2	144.4	4.8
Businesses - Benefits from reduced waste crime	**8.3**	4.8	84.2	2.8
Businesses – Ongoing savings from storing waste records digitally, and in a central service	**6.8**	3.9	68.8	2.3
Environment - Benefits from reduced waste crime	1.1	0.6	11.0	0.4
Total costs	32.9	19.0	336.3	11.1
Total benefits	73.6	42.6	746.0	24.8
Net impact	+ 40.7	+ 23.6	+ 409.7	+ 13.7

5. Scottish firms impact test

71. The Waste Tracking User Panel has been used to engage with stakeholders to understand their requirements for a digital system, the potential impacts of a digital system and to test prototype digital services.

72. The user panel consists of around 1200 stakeholders, of which, 465 users operate in Scotland. The Scottish Stakeholders on the User Panel represent:

- 91 businesses with 1-10 employees (micro-businesses),
- 151 businesses with 11-250 (small and medium enterprises (SMEs), and
- 201 with 250+ employees (macro-businesses)
- SEPA
- local authorities (17 of the 32 Scottish local authorities are represented)

73. The number of businesses affected by the policy will depend on the scope of the electronic waste tracking system (e.g. how exemptions are applied will change the scope), which will be informed by the consultation. These businesses will include waste producers

(e.g. commercial and industrial businesses) and the waste industry (e.g. waste carriers, brokers and dealers and waste treatment sites).

74. The expected monetary impacts on these businesses is set out above. It is important to note that the costs of transitioning to an electronic waste tracking system are calculated only for waste sites. The expected transition costs for waste carriers, brokers and dealers, exempt waste sites and waste producers have not been monetised at this stage – please see section 8 of the UK impact assessment (https://consult.defra.gov.uk/environmental-quality/waste-tracking) for a qualitative description of these costs. We will seek additional views on the likely impact on producers of waste from transitioning to using digital records and a centralised service through stakeholder engagement.

5.1 Competition assessment

75. The main impact on competition will be encouraging a more level playing field within the waste industry and supporting legitimate businesses. We expect that the waste tracking system will move a significant proportion of illegally handled waste to being handled legally. This shift will offer opportunities to legitimate businesses in terms of increased access to waste from which businesses can profit, and in turn improved opportunities to invest in their business (either through increased labour force or capital investments) as a result of having greater scope for profit. A more level playing field should also improve efficiency within the sector.

76. Only operators who can and do comply with digital waste tracking will stay in the market. As such, increased investment and running costs may be an economic barrier to entry to a small number of businesses. However, this intervention has been carefully designed to prevent illegal and non-compliant waste operators from entering/staying in the waste sector, whilst still enabling compliant businesses to operate by ensuring costs of compliance are set at a reasonable level.

77. We will welcome views on the competition implications of waste tracking through the consultation.

5.2 Consumer assessment

78. No impact on consumers is expected as a result of this policy. However, if any impacts are identified through further consultation, this BRIA will be updated.

5.3 Test run of business forms

79. This policy intends to mandate the use of a digital service to report waste movements. The development of a prototype service has been informed through regular user testing and feedback through the Waste Tracking User Panel (1200 members, 450 operating across Scotland). This iterative process will continue as services are developed further.

5.4 Digital impact test

80. While this policy intends to mandate the use of a digital service to track waste movements, we recognise that some individuals, either working within businesses or as sole traders may be digitally excluded, for example, due to religious beliefs or lack of digital connectivity. We intend to provide telephone and mail services to enable digitally excluded persons to report waste movements to the service. We intend to consult on these arrangements and this BRIA will be updated if any relevant information is collected.

5.5 Legal Aid impact test

81. No impact on Legal Aid is expected

6. Enforcement, sanctions and monitoring

82. In Scotland, this policy intends for SEPA to be the enforcing body for the mandatory use of an electronic waste tracking system. We intend for SEPA to be able to enforce the appropriate use of a mandatory waste tracking system in Scotland, including through civil sanctions. We are consulting on these measures and this BRIA will be updated following consultation.

83. The impact of the waste tracking policy will be monitored on an ongoing basis and the regulatory measures will be evaluated in a UK-wide post implementation review (PIR) in 2028. The PIR will aim to analyse data captured through the waste tracking service, and data gathered through stakeholder engagement and calls for evidence to assess:

- **The impact of waste tracking on waste crime** - The specific data we will look to gather to support the PIR will be the estimated number, and scale, of illegal waste sites, illegal waste exports and waste operators in operation following the implementation of the reform. We will also review the amount of different wastes that are reported (trends in hazardous waste and non-hazardous waste) and data on waste landfilled under different tax rates to understand the benefits of a waste tracking service in reducing misclassification of waste.

- **The impact of waste tracking on legitimate businesses -** We are interested in the impact on legitimate businesses, specifically how much additional tonnage of waste they handle following the implementation of the reform, the number of new businesses joining the market, the extent of time savings incurred as a result of the

policy, and any additional cost burdens that operators may have incurred.

- **Diversion of materials away from landfill/incineration and the improvement in the supply of critical raw materials –** We will review the flows of material that end up in landfill/incineration and that are sent for recycling/reuse following the implementation of waste tracking, and compare this to historical data.

- **Efficiency savings for regulators –** We will engage with the regulators to understand the extent to which they have benefited from efficiency savings as a result of holding waste data digitally (and in a central system for Option 3).

84. The evaluation will be designed to address the following questions:

- Outcomes: What difference (if any) did the measures make?
- Mechanisms, Contexts and Attribution: Why did observed changes occur?
- How were the activities delivered, and what can we learn?
- Economic evaluation: Did the benefits justify the costs?

7. Implementation and delivery plan

85. This partial BRIA accompanies a joint UK consultation. Results from the consultation and engagement with Scottish businesses and other stakeholders will inform the development of the final BRIA.

8. Summary

86. Waste tracking would help meet the objectives of multiple key government strategies across the UK by providing the data and the means to use that data. This goes beyond waste sector focused strategies into areas including climate change, economic productivity and growth and tackling crime.

87. The implementation of a waste tracking system will support our work to tackle climate change and move towards a circular economy by:

- providing data to monitor progress towards key targets, including waste prevention by sector.
- Providing better data on the volume, composition and destination of ‘waste’ to help identify opportunities to reduce greenhouse gas emissions
- Providing the data that businesses need to maximise resource utilisation and to identify and develop more efficient processes and products.
- Providing better data on the movement of all waste allowing us to monitor progress against current and future targets and track material flows more efficiently.
- Providing timely, more detailed and complete data and information on the generation and management of waste materials to support robust decision making in areas such as policy, regulation, planning and investment.

9. Recommendation

88. We are consulting on the implementation of an electronic system for waste tracking and have explored three options, set out above (Section 4), which allow the Scottish Government, and other governments of the UK to fulfil legal requirements e.g. to track for waste containing Persistent Organic Pollutants and hazardous waste.

89. Our preferred option (Option 3, Section 4.3.2) sets out the mandatory use of an electronic waste tracking service for all waste. This will provide a means for businesses to record all waste movements/transfers in one central service and will enable the UK to effectively track waste through the economy, as well as products and materials produced from waste. The other options considered here are not preferred, because the current detrimental impacts incurred by the natural environment, local communities and legitimate businesses would not be sufficiently addressed. Without the ability to effectively and efficiently track waste and communicate timely relevant data – as proposed under Option 3 - we risk further environmental damage; operational inefficiency; and fewer investment opportunities for innovation.

90. This recommendation will be reviewed in light of further information gathered through further consultation with stakeholders, which will also be used to form the final BRIA.

9.1 Declaration and publication

91. I have read the Business and Regulatory Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options. I am satisfied that business impact will be assessed with the support of businesses in Scotland.

Minister's name: Lorna Slater MSP
Minister's title: Minister for Green Skills, Circular Economy and Biodiversity

Signed: 

Date: 22/11/2021

Scottish Government Contact point: Aidan Grisewood

Signed:

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