

# Are fines for littering effective in reducing and preventing littering behaviour in NSW?

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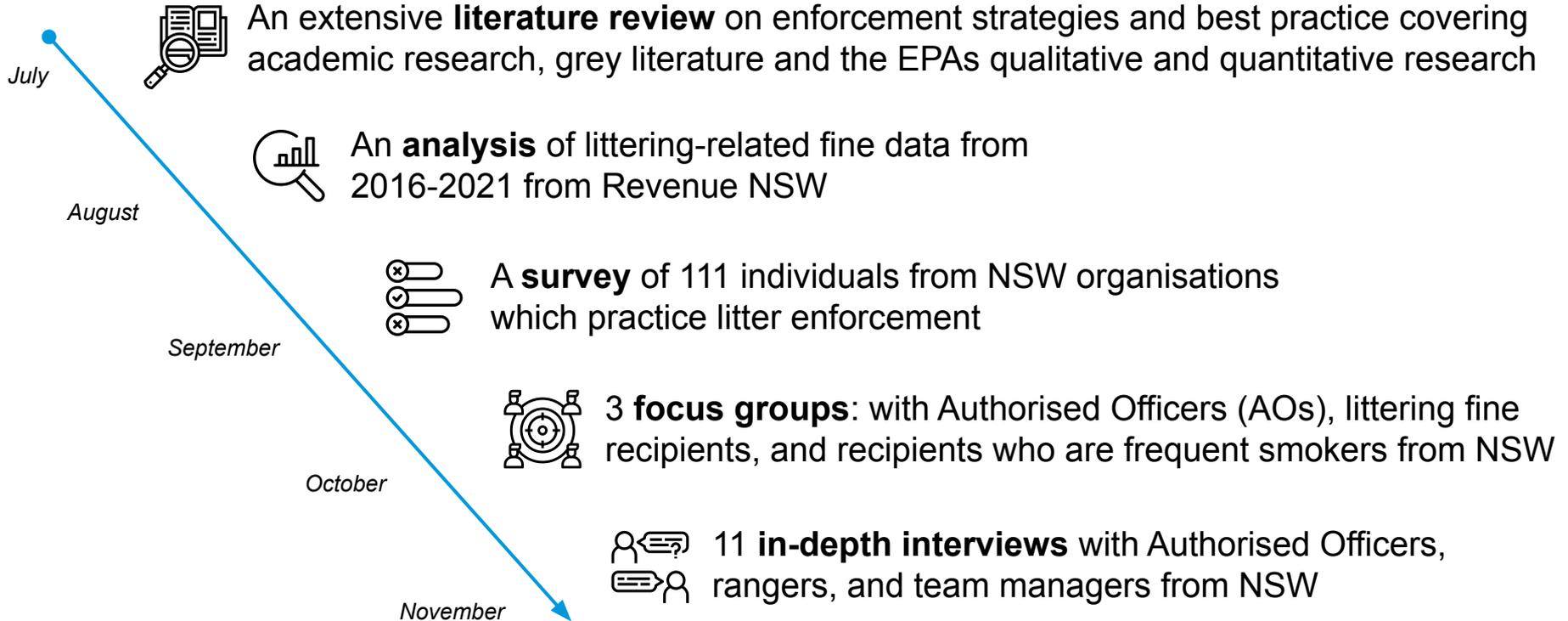
THE  
BEHAVIOURAL  
INSIGHTS  
TEAM



Planning,  
Industry &  
Environment



# Activities completed in 2020





# Executive Summary - Key Findings

	Existing evidence for best practice litter enforcement strategies is lacking
	Public perception of the risk of receiving a littering fine is very low (31%) and not effectively impacted by fines <sup>1</sup>
	Littering fines are often paid after a delay
	It is difficult for some Authorised Officers to issue face to face fines
	Issuing authorities have significant differences in how they operate
	There are mixed opinions of whether or how fines and non-financial penalties should be changed

1. DBAT Deep dive evaluation on post campaign tracking data 2013-2019



# Executive Summary - Recommendations

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**Make fines quick and easy to pay.** Fines are more effective if paid immediately after an offence - smaller value, on-the-spot fines would help this



Centralised directives can help provide **skill-sharing, training, and resources** for local enforcement, and this will help increase visibility of fines



**Align, simplify, and justify differences in fine values.** This will aid as an education tool, make fines feel justified, create an opportunity for a campaign, and facilitate future evaluations



Ramp up the **visibility of fines**. More officers issuing warnings, and low value fines can increase the perception of risk



Target existing differences in operations in order to **conduct evaluations of what works and what doesn't**. Measuring perceived risk of being caught for littering is easier than measuring littering itself

# Project background

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# Introduction

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In July 2020 the Litter Prevention Unit (LPU) from the NSW Environment Protection Authority sought to understand the effectiveness of on-ground / face-to-face litter enforcement in NSW. The LPU delivers a comprehensive litter regulation and enforcement program as part of the NSW Litter Prevention Strategy 2019-2022. The outcome of the research was to identify how the NSW litter enforcement strategy can be improved to reduce litter and littering behaviour in NSW and to drive the development of the next phase of the NSW litter prevention strategy.

The research objectives were to investigate the effectiveness of litter enforcement at changing litter disposal behaviours, to understand the relative strength of litter enforcement compared to other interventions at changing disposal behaviours and to understand stakeholder barriers and incentives to practising more effective enforcement.

The report is structured in the following way:

- We first highlight some important context from the wider literature, and identify barriers to directly addressing the research objectives
- We then report on the enforcement process, with information from authorised officers and previous fine recipients
- We then follow with findings from objective data on litter fines and payments
- The report ends with a set of recommendations to take forward

Littering fines can be issued by 20 state agencies and all LGAs under various legislation. This report focuses on littering fines only. These include both face-to-face (LGAs, stage agencies) and indirect (Report to EPA) methods of issuing fines to both individuals and corporations. Where data is reported, this reflects the complete data available, except where noted.

The intended audience of this report is the wider litter enforcement community including all organisations practising litter enforcement, regulators and other government agencies involved in administering litter fines.



# Glossary

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The following terminology has been used in this report.

<b>AO</b>	Authorised Officer. Any person that is authorised to issue a penalty notice under specific legislation
<b>CALD</b>	Culturally and Linguistically Diverse
<b>CAN</b>	Court attendance notice
<b>Fines</b>	All mention of fines refers exclusively to penalty infringement notices issued for litter-related offences
<b>NLI</b>	The National Litter Index is a quantitative assessment of litter. It has been undertaken since November 2005 and is done in all states and Territories in Australia
<b>Small / medium / large fines</b>	We group the face value of fines into small (less than \$250), medium (\$250-600), and large fines (larger than \$600)
<b>WDO</b>	Work Development Order. Non-financial management of a fine, for example community service
<b>Paid</b>	We use the word paid in this report to refer to fines being paid in full. The data did not distinguish between those who entered payment plans or those that did not pay any of their fine.



# The litter enforcement process

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*Are fines effective in  
reducing and preventing  
littering behaviour in NSW?*



# What does the wider literature say about litter fine effectiveness?



# Context from a review of the literature



The first activity was an in depth literature review,<sup>1</sup> that investigated existing evidence that fines were effective at reducing littering, and the best practices and activities for litter enforcement more broadly.

The review covered both littering behaviour and analogous anti-social behaviours (parking fines, speeding, fly-tipping, graffiti).

Our sources included:

- Academic and peer reviewed published research
- Grey literature
- The EPA's own qualitative and quantitative research



# Barriers identified in literature review



Fines do not appear to be more effective than other litter prevention strategies (e.g. awareness campaigns such as *Don't be a Tosser* (the EPA) or *Bin Your Butt* (Keep Australia Beautiful))

Direct behavioural change is difficult to measure due to the challenge of measuring littering behaviours

Fines may not change the long-term behaviour of offenders

**Risk of fine**

**Litter behaviour**

**Fine issued**

**Behaviour change**

Fines are more effective when the perceived likelihood of receiving a penalty is high. But public perception of the likelihood of being fined for an offence is low (31%)<sup>1</sup>

1. DBAT Deep dive evaluation on post campaign tracking data
2. EPA. (2018). Identifying effective strategies to reduce cigarette butt litter.
3. Lewis, A., Turton, P. and Sweetman, T. (2009) Litterbugs. How to deal with the problem of littering. London: Policy Exchange
4. Williams, E., Curnow, R., & Streker, P. (1997). *Understanding littering behaviour in Australia*. Beverage Industry Environment Council.
5. Williams, E., Curnow, R., & Streker, P. (1997). *Understanding littering behaviour in Australia*. Beverage Industry Environment Council.
6. Shukor, F. A., Mohammed, A. H., Awang, M., & Sani, S. I. A. (2012). Litter reduction: A review for the important behavioral antecedent approaches. In *Proceeding of 3rd Internat. Conf. Buss. Economic Research Proceeding* (pp. 2133-2149).

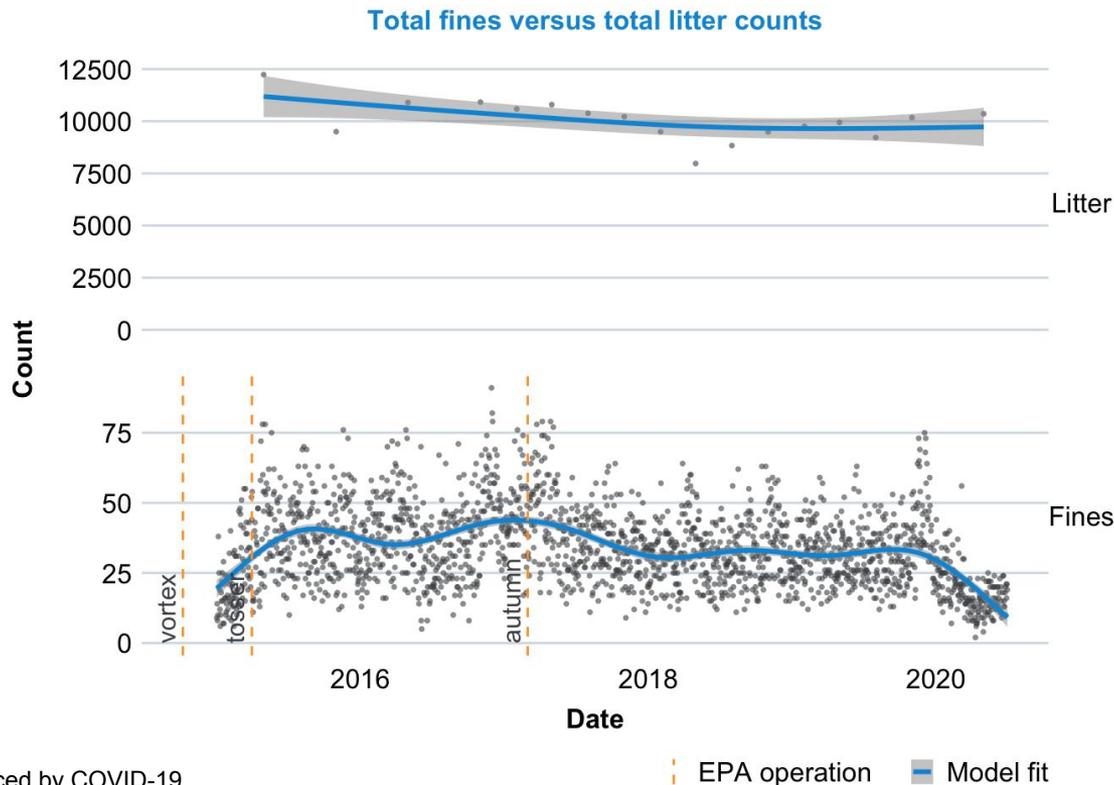
# Fines do not appear to affect litter counts (at a population level)



Litter counts (derived from the National Litter Index) and the number of issued fines are decreasing.

The average value of fines is increasing.

There isn't a relationship between fines and litter counts, but litter counts are sporadic.



\* The drop in litter counts in 2020 may have been influenced by COVID-19

# What is enforcement like for Authorised Officers?

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# Issuing face to face fines can be difficult

Face to face enforcement of littering offences can be difficult, as offenders may be confrontational, and refuse to provide ID to authorised officers

Litter behaviour

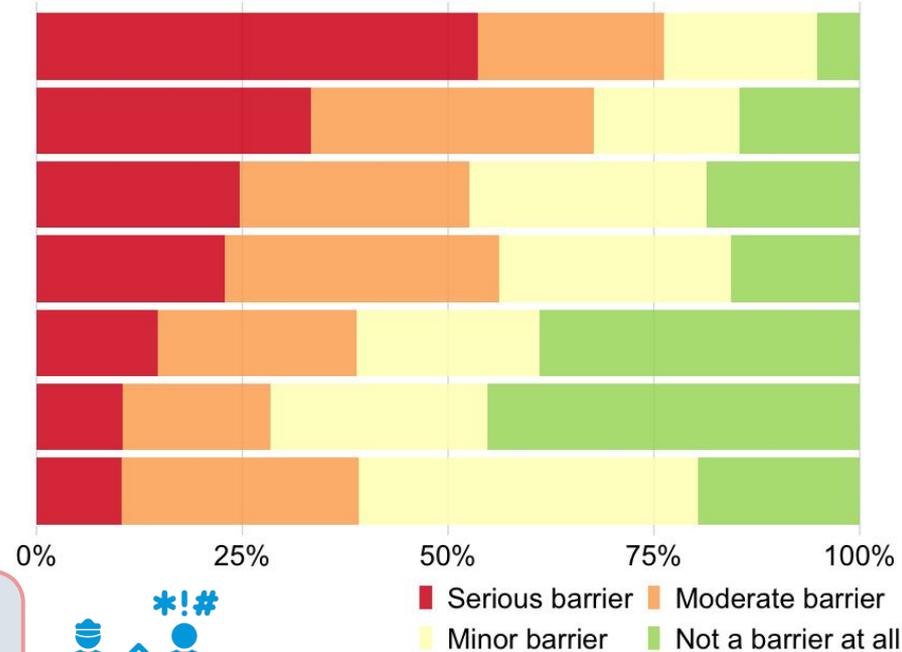
Fine issued

*“90% of the time you won't get an ID” - AO*

*“You can't survive in this role if you are scared of confronting people” - AO*

- Difficulty getting identification from an offender
- Risk of confrontation or negative response from offender
- The time and effort involved
- Lack of opportunity to issue face to face fines
- My organisation's policies or priorities don't support issuing fines face to face
- The legislation you are authorised under
- Lack of training and knowledge

### Barriers to face to face enforcement



Responses from our survey of 111 individuals from NSW organisations who practice litter enforcement



# Officers are less likely to issue a face to face fine

AOs are more likely to use softer approaches to enforcement, rather than issuing a fine

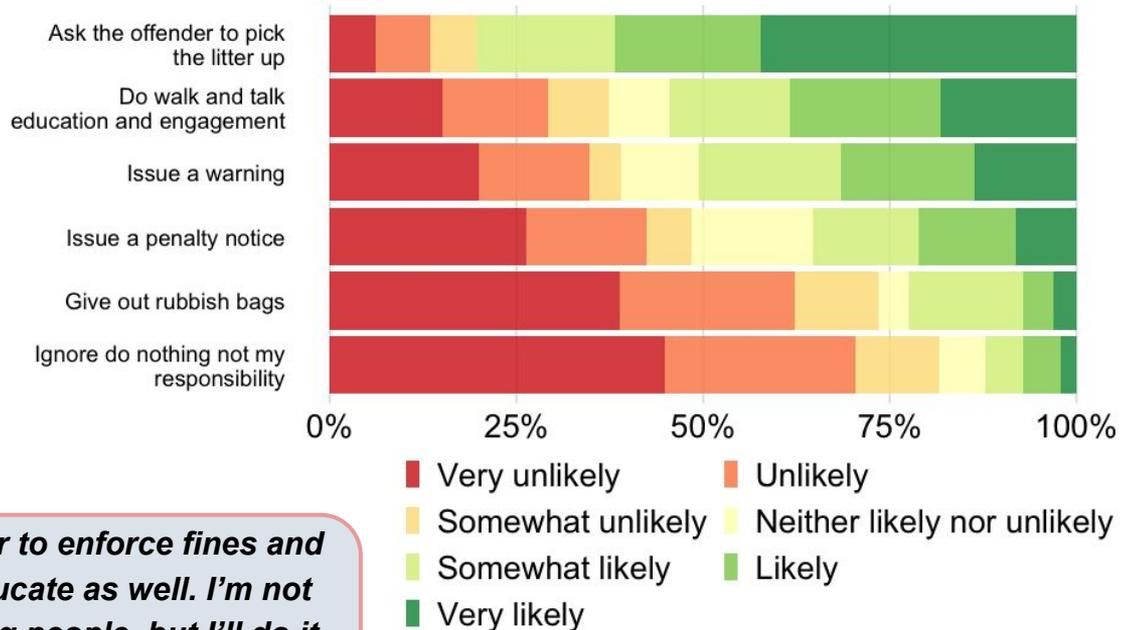
Litter behaviour

Fine issued

*“You have to be diplomatic and delicate” (with the public) - AO*

*“I have the power to enforce fines and the power to educate as well. I’m not in favour of fining people, but I’ll do it if I have to - sometimes it’s the only thing that gets through” - AO*

Likelihood of enforcement strategies used



n = 100  
Responses from our survey of 111 individuals from NSW organisations who practice litter enforcement



# Administration gets in the way



***“Management don’t want Rangers to issue fines because of the resource to issue the fines, patrol, and go to court if people contest the fines.” - AO***

***“One fine is a lot of work... it is very long winded and involves a lot of administration.” - AO***

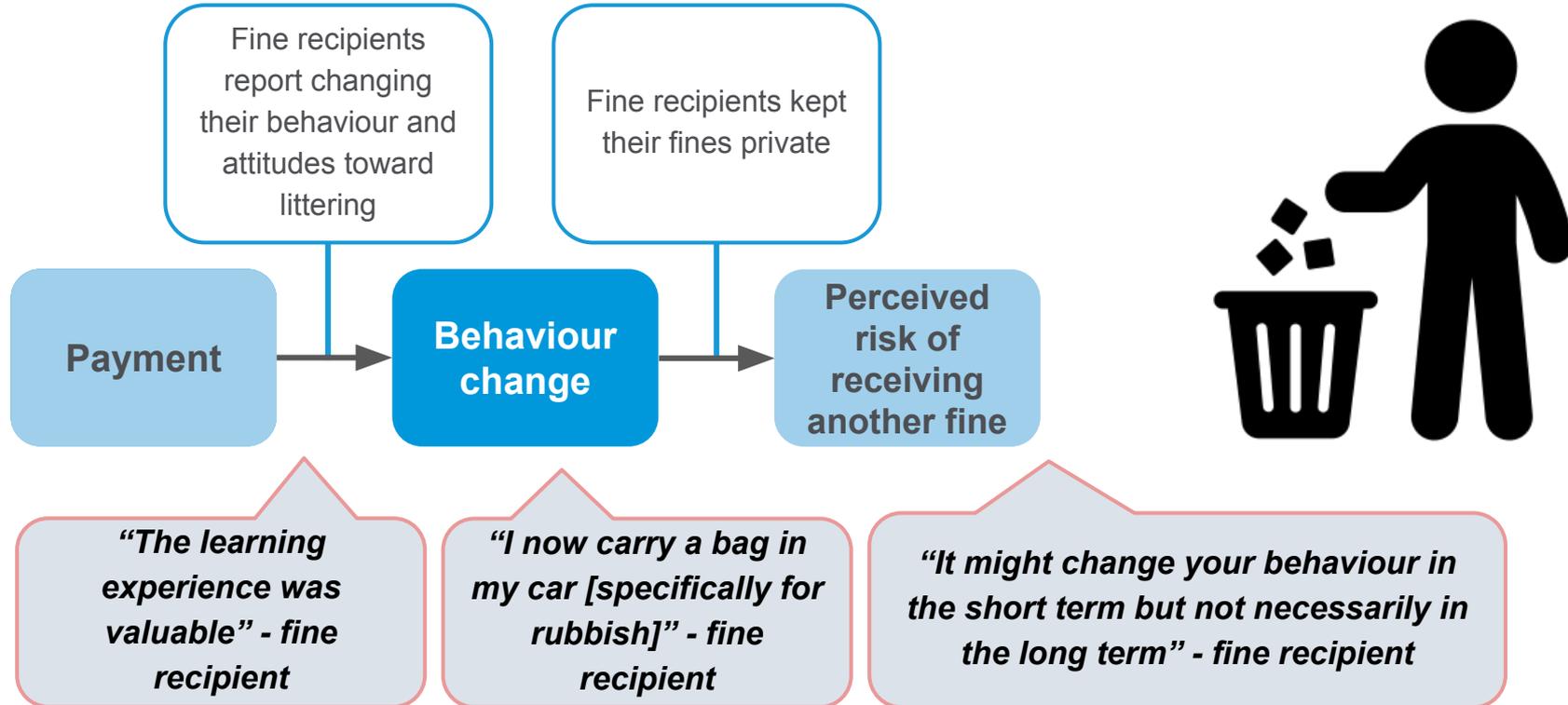
***“[Litter enforcement] takes the place of existing work we already have to do.” - AO***

# What do fine recipients think about fines?

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# Do people change their behaviour after receiving a litter fine?





# Perception of risk of a fine is low

Public perception of the likelihood of being fined for an offence is low (31%)<sup>1</sup>

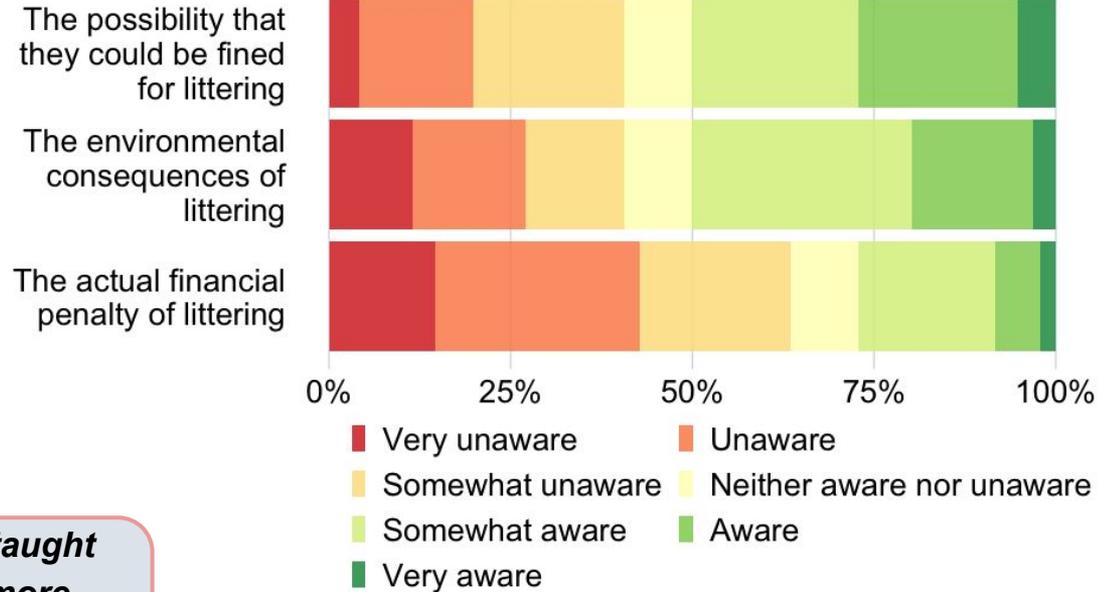
Risk of fine

Litter behaviour

*“I would put the chances of being fined very low” - fine recipient*

*“Being fined taught me to litter more carefully” - fine recipient*

Public awareness



n = 96

1. DBAT Deep dive evaluation on post campaign tracking data 2013-2019



# There are mixed attitudes towards the value of fines

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The general consensus among both the public and AOs was that fines are necessary as a deterrent, but both groups had mixed attitudes toward the monetary size of fines for litter offences.

Both AOs and the public think fines should be more specific (on an item basis), and repeat offenders should be fined more.

There was some public confusion over **why** certain items had specific costs, and many thought that community service was a more appropriate penalty (i.e. it fits the offence).

<b>Fine value</b>	<b>Percentage of total fines*</b>
<b>\$80</b>	<b>13%</b>
<b>\$200/250</b>	<b>80%</b>
<b>\$450/500/660</b>	<b>6%</b>

\*fines issued less than 100 times over 5.5 years are excluded



# Offender profiles



**First timers** include those that are naive to the possibility of a fine (e.g. tourists) and those who consider the likelihood of being fined very low. This group are most likely to change their behaviour as a result of a fine.



**Smokers** are a unique group that have littering habits reinforced by social norms. They are less likely to respond to fines, but may respond to efforts of destigmatisation. Smokers are also more likely to litter other items at a higher rate than the general population.<sup>1</sup>



**Repeat offenders** are not currently tracked, but do not respond to current fines. Their attitude may be difficult to change, but increased fine amounts may be effective.



**Aggravated litterers** are those who deliberately litter, and have no respect for the societal consequences of their actions. They are likely to attract large fines which are less likely to be paid.

1. (DBAT Deep Dive).

# What does the data say about litter fine payments?



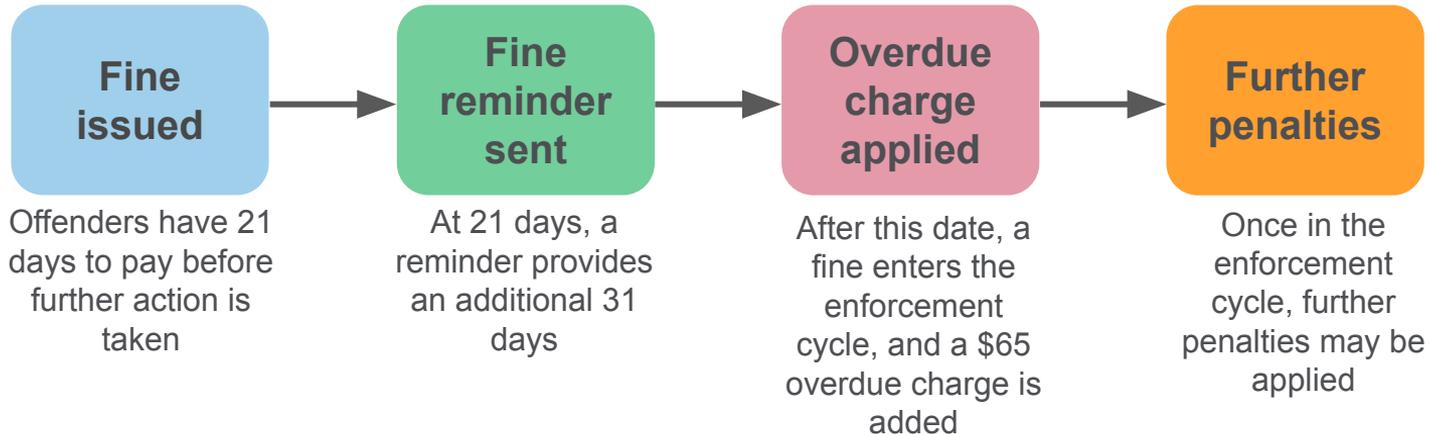
# What does the fine payment process look like?

## How can people pay?

Payment plans (fortnightly or weekly)  
Partial payments  
WDO / non-financial management

## What penalties are there?

\$40 additional charge  
Driver/business license restrictions  
Cancellation of vehicle registration

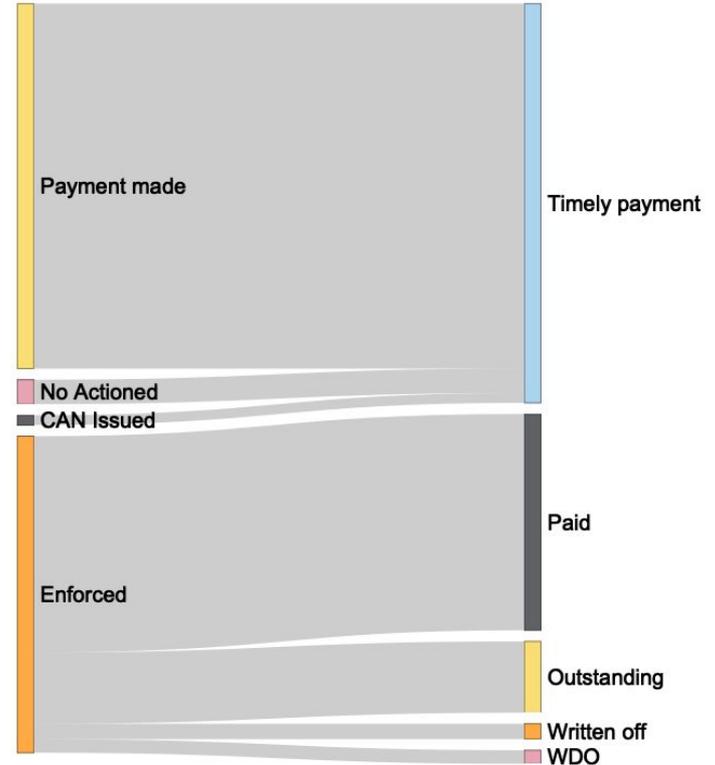




# Fines are often paid when overdue, or only after additional enforcement

The following is a breakdown of fine payments:<sup>1</sup>

- **30% of fines are paid when they are overdue** (after 52 days)
- 49% of fines are paid in full<sup>2</sup> before their due date (within 52 days)
- Most of these timely payments are made 41 days after the offence
- Overall, for fines paid in full, **payment is made on average 160 days after the offence**



1. OAN-4796 - EPA littering specific offence codes

2. The data does not distinguish between individuals who enter payment plans, and those who never pay.

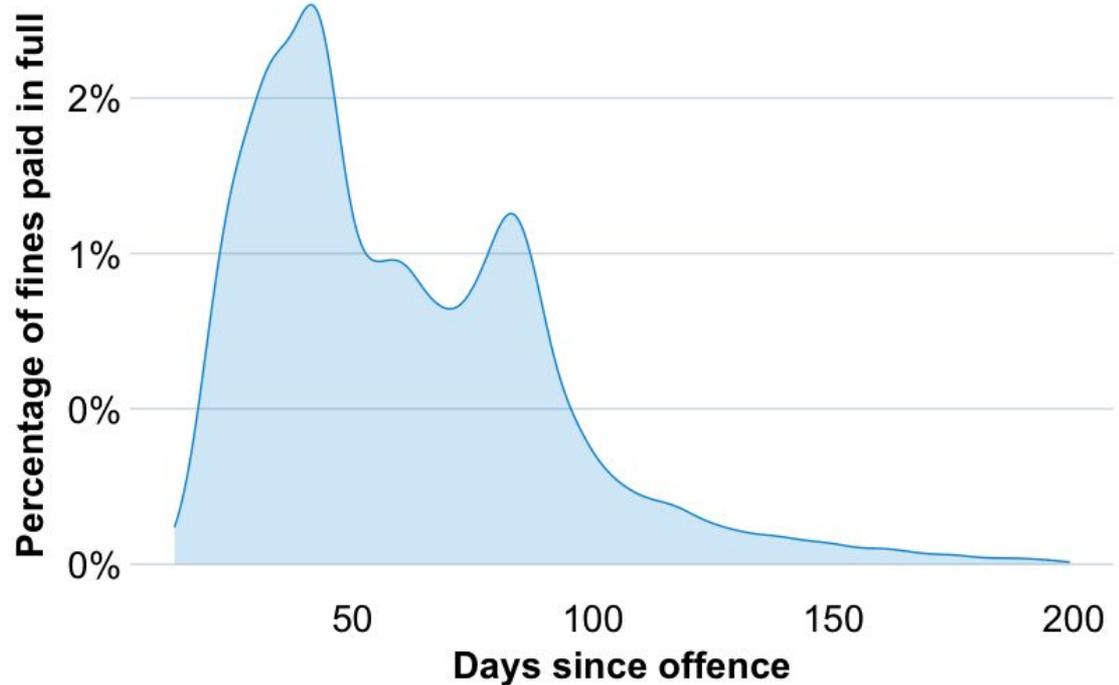


# Fines are paid after substantial delays

The most convenient way for an offender to pay a fine is to do so online via Revenue NSW<sup>1</sup>.

However, fines are often not paid quickly - **only 11 fines were paid within a fortnight of the offence.**

The plot shows the distribution of fines paid in full, before enforcement, over time (truncated at 200 days).



1. Offenders require their penalty notice number, offence date and offence code to do this.

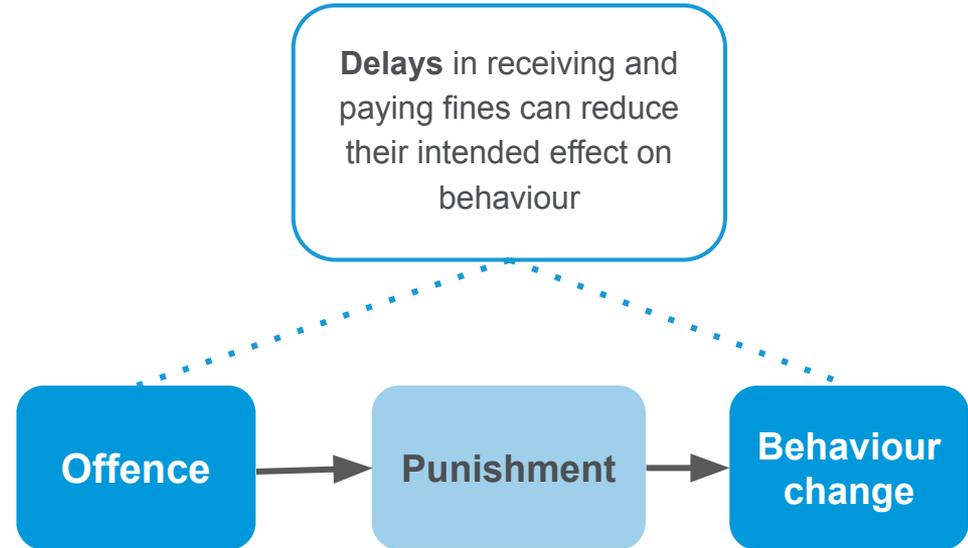


# The psychology of late payments

The reason timely payments are important is that research has shown that punishment is more likely to discourage a behaviour if it is applied **directly after the offence**\*.

The “punishment” for littering offences involves both **receiving** and **paying** a fine.

If there are delays in receiving or paying fines, offenders are less likely to learn from the experience of being fined and **less likely to change their behaviour**.



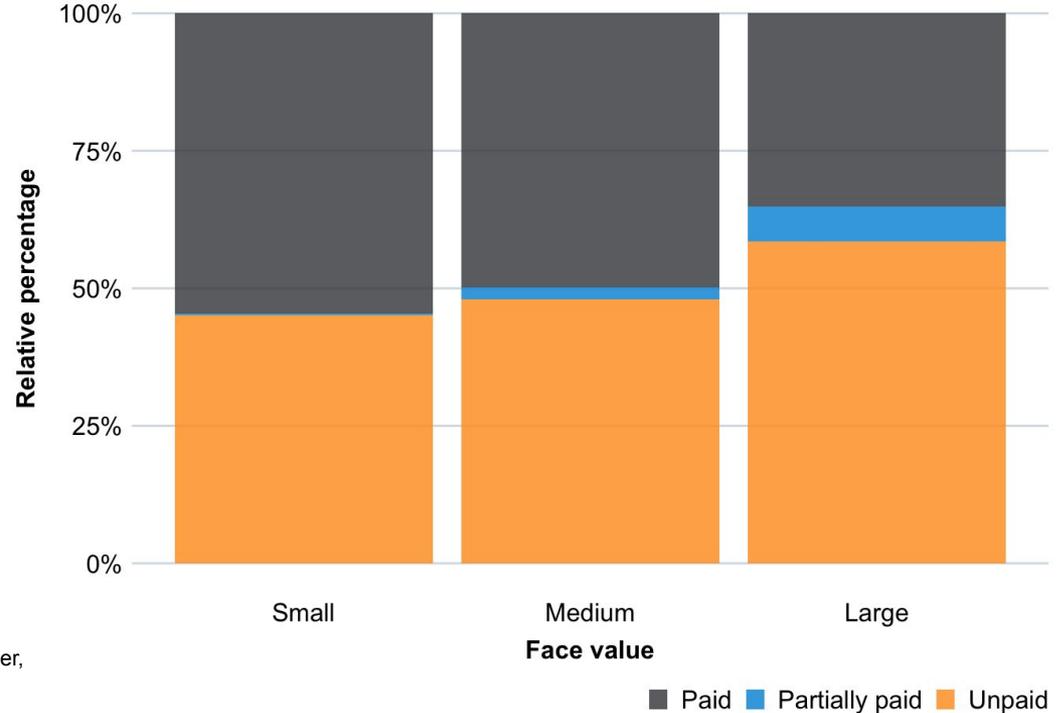
\*Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). Applied behavior analysis. Mazur, J. E. (2002). Learning and behavior (5th ed.). Prentice Hall/Pearson Education.



# Large fines are less likely to be paid early

Within the initial due date (52 days), **larger fines are paid less often.\***

As **fines that are paid after a delay are less likely to act as a deterrent**, larger fines are less likely to lead to behaviour change than smaller or medium sized fines.



\*These data reflect fines for both individual and corporate offences, however, this pattern is identical for each offence category independently.

# There may be a “sweet spot” for fine value

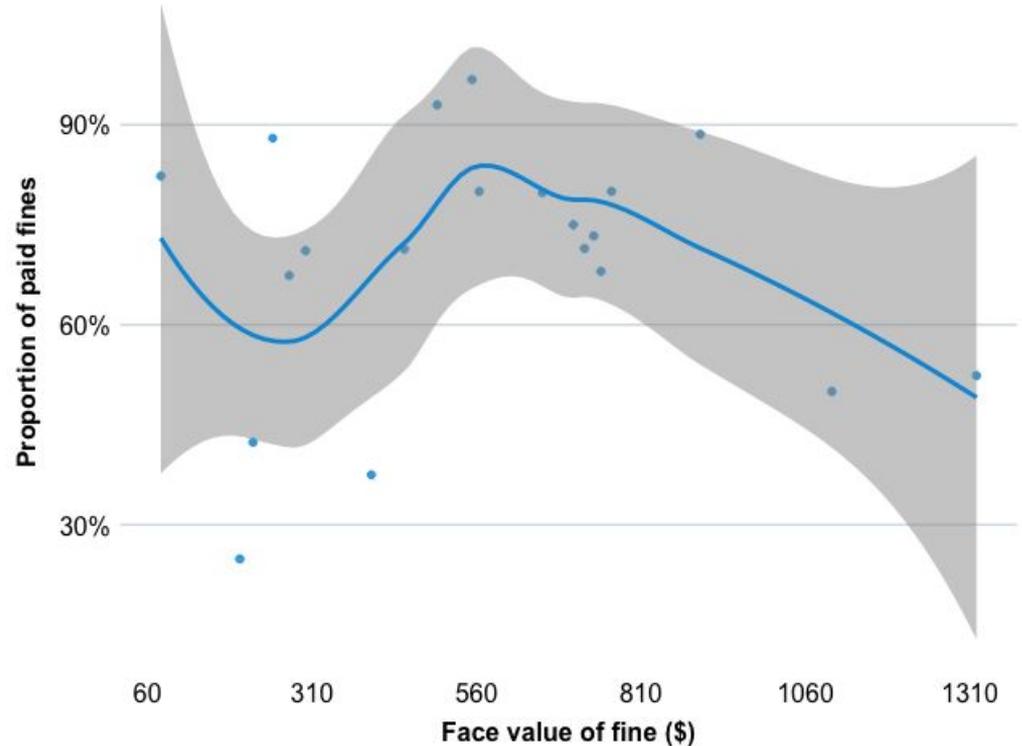


While there are diminishing returns for larger value fines, fines around \$560 point appear to be paid at higher rates.<sup>1</sup>

While this might indicate a “sweet spot”, this does not take into account that fine values should be aligned with the societal/environmental cost of the offence.

Overall, these trends suggests that increasing fine amounts beyond a certain point will not be an effective strategy.

1. Note that fines do not have a broad range of values (93% of all PINs are either \$80 / \$200 / \$250), so some caution should be taken with the interpretation of this data



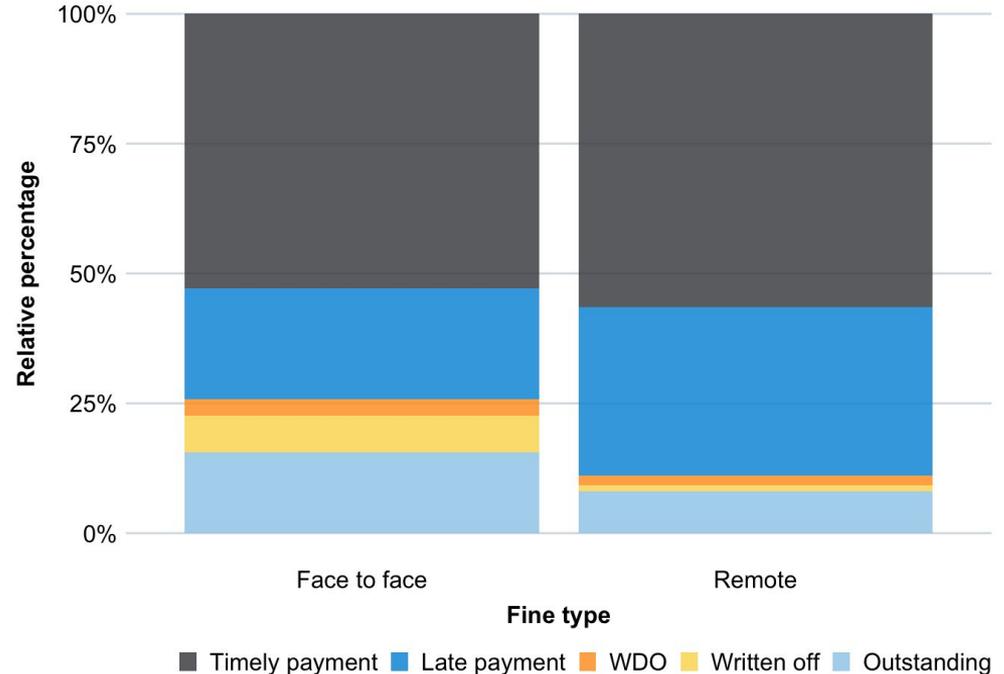


# Are “remote” fines too remote?

Both face to face and remotely issued fines<sup>1</sup> are important, and work in complementary areas.

However, remote fines give people an opportunity to question their offence or consider an appeal which can delay payment.

It also creates an opportunity for the offence to be forgotten. We can see that proportionally, **payments from remotely issued fines are more likely to be overdue.**



1. Remote litter fines are those that are not issued face-to-face. These arrive to the offender via the mail. The offender is unaware they have broken the law until the moment they receive the litter fine.

2. “Timely” payments are those made within 52 days, before the fine is enforced.



# Organisational profiles

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**High issuing LGAs** account for 15% of all fines issued. These 3 LGAs have payment rates between 56% and 69%, and are paid relatively quickly



**Report to EPA** accounts for 65% of all fines issued. Report to EPA is less resource intensive than face to face enforcement



**Low issuing LGAs** account for around 10% of all fines issued. There are 110 of these organisations, who on average issue 12 fines per year



**Unique organisations** include those involved with transport, parks, and fire. These organisations have unique contexts, barriers, and strengths, but account for less than 1% of all fines

# How can we tie these findings together?

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# Current barriers to fine effectiveness

While we cannot directly answer whether fines are effective at changing litter behaviour, there are suggestions that they are not as effective as they could be

Face to face enforcement of littering offences can be difficult due to confrontation. Softer enforcement is often used

Littering fines are **often paid after a delay** and/or require enforcement before payment is made

Behavioural change is difficult to measure, but fines don't appear to be related to litter counts

Risk of fine

Litter behaviour

Fine issued / received

Payment

Behaviour change

Public perception of the likelihood of being fined for an offence is low (31%)

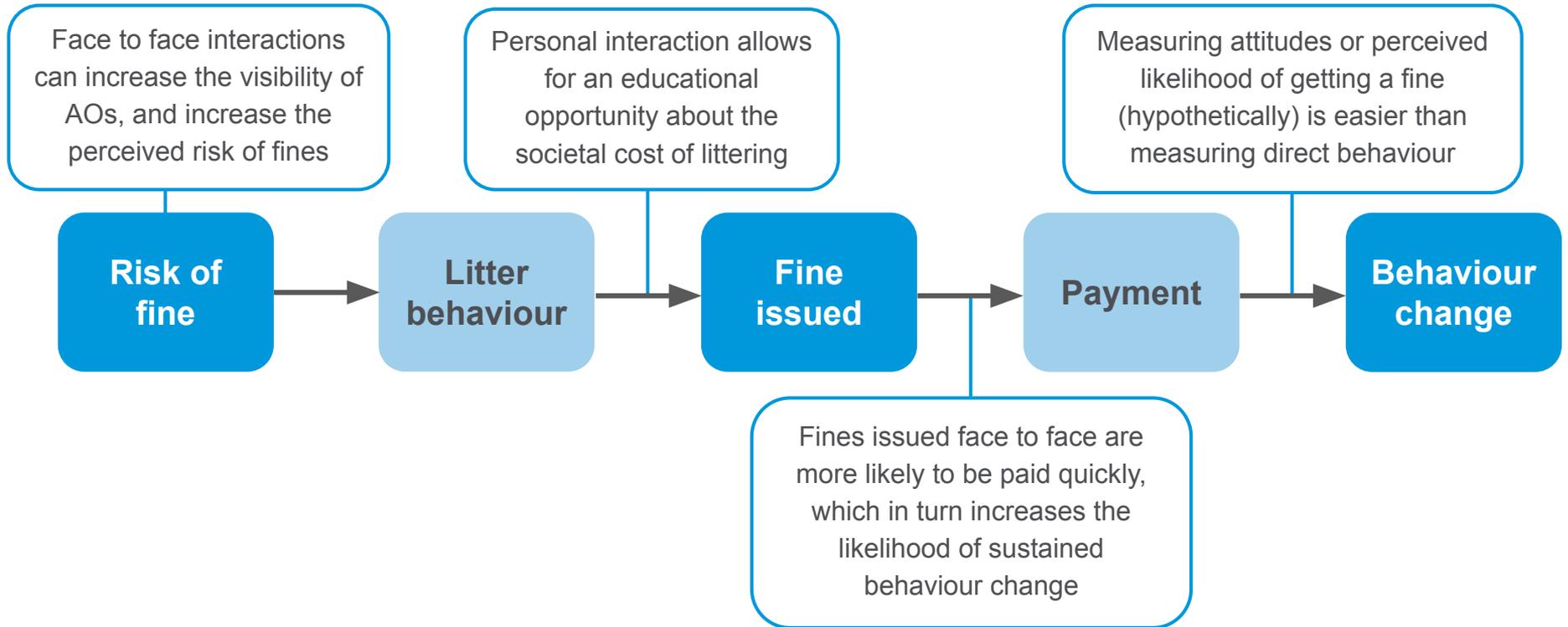
Fine recipients may reoffend

Administrative burden and organisational priorities mean littering is often not enforced

**Higher value fines**, and fines for aggravated offences are **less likely to be paid** within the critical payment period to impact behavior



# Opportunities for increasing effectiveness of fines



# Recommendations

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# Make it quick and easy for offenders to pay

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Punishment is more likely to discourage a behaviour if it is applied directly after the offence.

Because fines are received / paid after a delay, litterers are less likely to learn and change their behaviour.

This means that litterers are less likely to learn from the experience of being fined and change their subsequent behaviour.

## Facilitate on the spot fines

Face to face fines currently make up 20% of fines issued. Increasing the proportion of fines issued face to face, will increase the number of fines paid quickly.

## Remove frictions in issuing fines

Removing frictions in the process of issuing and administering fines will make AOs more likely to issue fines, and offenders more likely to receive their fine sooner.

## Encourage early payments

Fines should be sent as early as possible after the littering offence, and where appropriate payment plans should be encouraged (e.g. for large fines).



# Share strategies and reframe enforcement

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Many AOs haven't had sufficient training about best practice litter enforcement, and there are barriers with support from management about local approaches.

## Reframe enforcement as a preventive activity

Issuing authorities should understand that the key performance metrics of enforcement are not number of fines issued or paid. On-the-ground presence can be very effective in raising visibility and increasing perception, and preventing littering behaviour.

## Facilitating peer-to-peer interaction

The EPA could further encourage peer-to-peer interaction between AOs, either virtually - via a dedicated chat room for AO's to post effective enforcement strategies/ experiences, or in-person - by promoting existing enforcement networks and hosting communities of practice.





# Few fine values for many offences

Current fine amounts overwhelmingly cluster into specific amounts \$80 (typically on-the-spot fines), and \$250 (typically litter from vehicles).

Yet there are 45 unique littering offences, which are often not easy to understand.

Fine value	Fines issued
\$80	13%
\$200/250	80%
\$450/500/660	6%

- Aggravated deposit litter (extinguished cigarette) - Individual - Protection of the Environment Operations Act 1997
- Aggravated deposit litter (lit cigarette) excluding from vehicle - Corporation - Protection of the Environment Operations Act 1997
- Aggravated deposit litter (lit cigarette) excluding from vehicle - Individual - Protection of the Environment Operations Act 1997
- Aggravated deposit litter (small item) excluding cigarette and from vehicle - Corporation - Protection of the Environment Operations Act 1997
- Aggravated deposit litter (small item) excluding cigarette and from vehicle - Individual - Protection of the Environment Operations Act 1997
- Aggravated deposit litter excluding cigarette and from vehicle - Corporation - Protection of the Environment Operations Act 1997
- Aggravated deposit litter excluding cigarette and from vehicle - Individual - Protection of the Environment Operations Act 1997
- Aggravated deposit litter from vehicle no exclusions - Corporation - Protection of the Environment Operations Act 1997
- Aggravated deposit litter from vehicle no exclusions - Individual - Protection of the Environment Operations Act 1997
- Allow to escape onto road any liquid or any loose or waste material - Roads Regulation 2018
- Break bottle/glass/syringe/ glass receptacle in bathing place and not remove it - Local Government Act 1993
- Break bottle/glass/syringe/glass receptacle on public land/road - Local Government Act 1993
- Bring waste into public area - Place Management NSW Regulation 2017
- Bring/leave refuse/waste/scrap/metal/rock/soil/sand/stone/other in a reserve - Crown Lands (General Reserves) By-law 2006
- Deposit litter (extinguished cigarette) - Protection of the Environment Operations Act 1997
- Deposit litter (extinguished cigarette) excluding from vehicle - Protection of the Environment Operations Act 1997
- Deposit litter (lit cigarette) excluding from vehicle - Protection of the Environment Operations Act 1997
- Deposit litter (small item) excluding cigarette and from vehicle - Protection of the Environment Operations Act 1997
- Deposit litter excluding cigarette and from vehicle - Corporation - Protection of the Environment Operations Act 1997
- Deposit litter excluding cigarette and from vehicle - Individual - Protection of the Environment Operations Act 1997
- Deposit litter from vehicle no exclusions - Corporation - Protection of the Environment Operations Act 1997
- Deposit litter from vehicle no exclusions - Individual - Protection of the Environment Operations Act 1997
- Deposit litter not in receptacle provided - Passenger Transport Regulation 2007
- Deposit litter not in receptacle provided - Passenger Transport (General) Regulation 2017
- Deposit or throw any article or substance into waters of Cockle Bay without authority - Sydney Harbour Foreshore Authority Regulation 2011
- Deposit thing may endanger person or property - Passenger Transport Regulation 2007
- Deposit/dischARGE/leave in a park any filth/dung/dead animal/noisome/noxious/offensive/thing - National Parks and Wildlife Regulation 2009
- Deposit/leave any waste in a park - National Parks and Wildlife Regulation 2009
- Deposit/leave litter in park not in receptacle provided - National Parks and Wildlife Regulation 2009
- Deposit/leave or abandon vehicle or part of in park - National Parks and Wildlife Regulation 2019
- Deposit/leave prescribed matter on public land without authority - Crown Lands Act 1989
- Deposit/leave/abandon vehicle/part of vehicle in park - National Parks and Wildlife Regulation 2009
- Discard lighted cigarette/match/incandescent material on any land - Rural Fires Act 1997
- Discard lighted cigarette/match/incandescent material on any land during total fire ban - Rural Fires Act 1997
- Display etc advertisement etc on Sydney Harbour Bridge or Anzac Bridge without etc a permit - Roads Regulation 2018
- Drop thing on or towards public passenger vehicle/train etc - Passenger Transport Regulation 2007
- Leave etc litter etc on Crown land not in place etc provided - Individual - Crown Land Management Act 2016
- Leave rubbish/litter other than in receptacle provided - Place Management NSW Regulation 2017
- Leave thing on road not removed as soon as practicable - Roads Regulation 2008
- Not immediately remove dog faeces from public place - Companion Animals Act 1998
- Release 20 or more lighter than air balloons at same time - Corporation - Protection of the Environment Operations Act 1997
- Release/cause/permit release of more than 100 balloons - Corporation - Protection of the Environment Operations Act 1997
- Throw or drop burning substance on or from etc public passenger vehicle/train etc - Passenger Transport (General) Regulation 2017
- Throw or drop burning substance on or from public passenger vehicle/train etc - Passenger Transport Regulation 2007
- Throw thing from public passenger vehicle/train etc - Passenger Transport Regulation 2007
- Throw thing from public passenger vehicle/train etc - Passenger Transport (General) Regulation 2017
- Throw thing onto road or into/onto vehicle on road - Roads Regulation 2008



# Align, simplify, and justify the cost of littering

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## Align offences and fines

The financial cost of a fine is intended to signal its societal cost. However, there are very few fine amounts, and very many offences, so this signal is easily lost. Simplifying offence categories, and transparently justifying fine amounts for each of these categories can act as an educational tool, and will boost visibility.

## Increase fines for repeat offenders

Repeat offenders may be insensitive to continual small fines. For these offenders, fine amounts could be increased for each offence. This appears to be a near unanimous opinion from those we talked to.



## Encourage alternative penalties

For individuals who may not be able to meet financial requirements of a fine, encourage alternative penalties, such as payment plans, and community service (which is currently targeted at vulnerable populations).



# Ramp up the visibility of fines

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Members of the public don't perceive there to be a credible risk of being caught and fined for littering.

## **Prioritise local enforcement**

This will boost visibility and increase the perception that one *can* be fined for littering.

## **Advertise offences and their costs**

Publicising simplified versions of specific offences and their fines can raise awareness of fines, their actual costs, as well as justifying the societal cost of littering.

## **Highlight the cost of litter**

To dispel myths that litter “creates jobs”, emphasise that council cleanup events, town beautification efforts and public maintenance works are not the default.

## **Use inclusive design**

Cultural and linguistic barriers frequently present challenges for both litter prevention and enforcement activities. AO training and signage can incorporate culturally and linguistically diverse backgrounds.



# Target outliers to understand what works/doesn't

90% of fines issued for “*depositing litter not in the provided receptacle*” are paid after a delay, and more than 60% are never paid in full.

Notably, this offence is covered by different legislation (Passenger Transport Regulation 2007/2017).



Use a specific offence or context as a **case study**:

1. Start by looking for differences in operations that could explain differences in outcomes
2. Test alternative operations and strategies in this context and evaluate their effectiveness

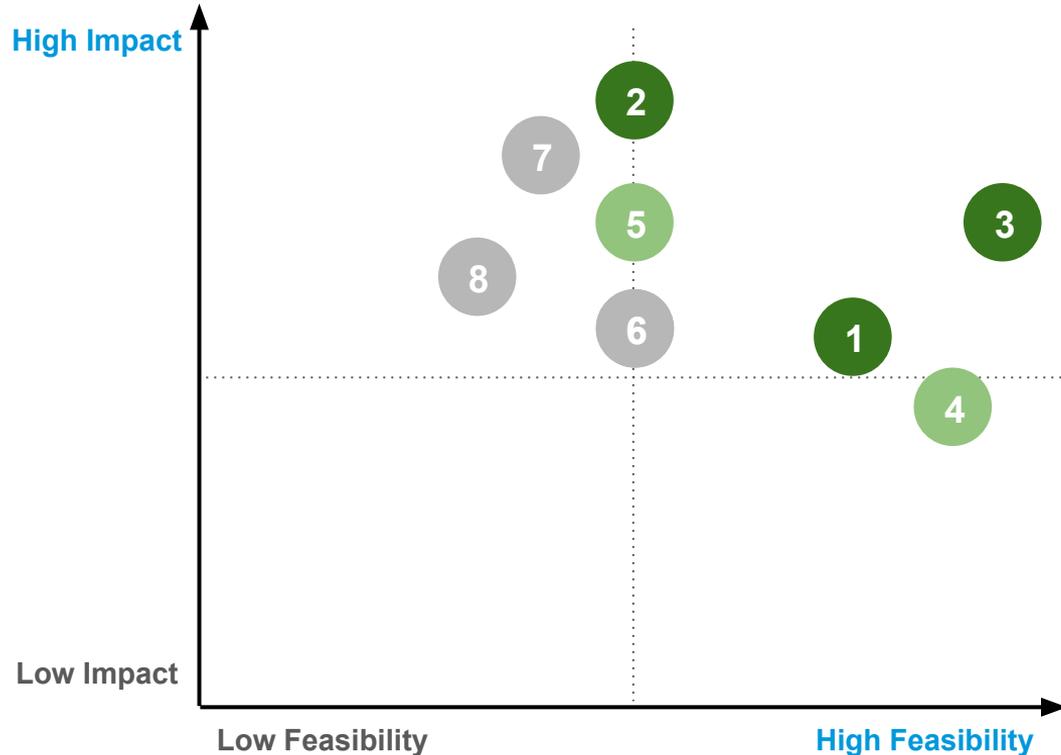
We suggest reframing evaluations to focus on **measuring the perception of risk of a fine** rather than direct littering behaviour.

In the context of transport, train stations have many favourable characteristics for running field trials, including:

- Control of a semi-closed environment
- Stereotyped and high usage patterns
- Announcement loudspeakers
- Potential to leverage automated litter detection technologies to facilitate data collection (e.g. smart bins, turnstile data, closed-circuit television camera systems)



# Impact / feasibility matrix



- 1 Diagnose less effective enforcement
- 2 Make fines easier and faster to pay
- 3 Reframe enforcement as a preventative activity and share strategies across organisations
- 4 Boost visibility of local enforcement, advertise fines, use inclusive design in anti-littering messaging
- 5 Increase fines for repeat offenders
- 6 Encourage alternative penalties (payment plans and community service)
- 7 Align severity of offence with size of fine and advertise these costs
- 8 Run a robust evaluation of an enforcement intervention



# Conclusions

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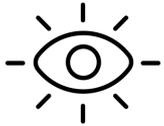
Make fines **quick and easy** to pay



Reframe littering as a **preventative** activity



**Align, simplify,** and **justify** fine amounts



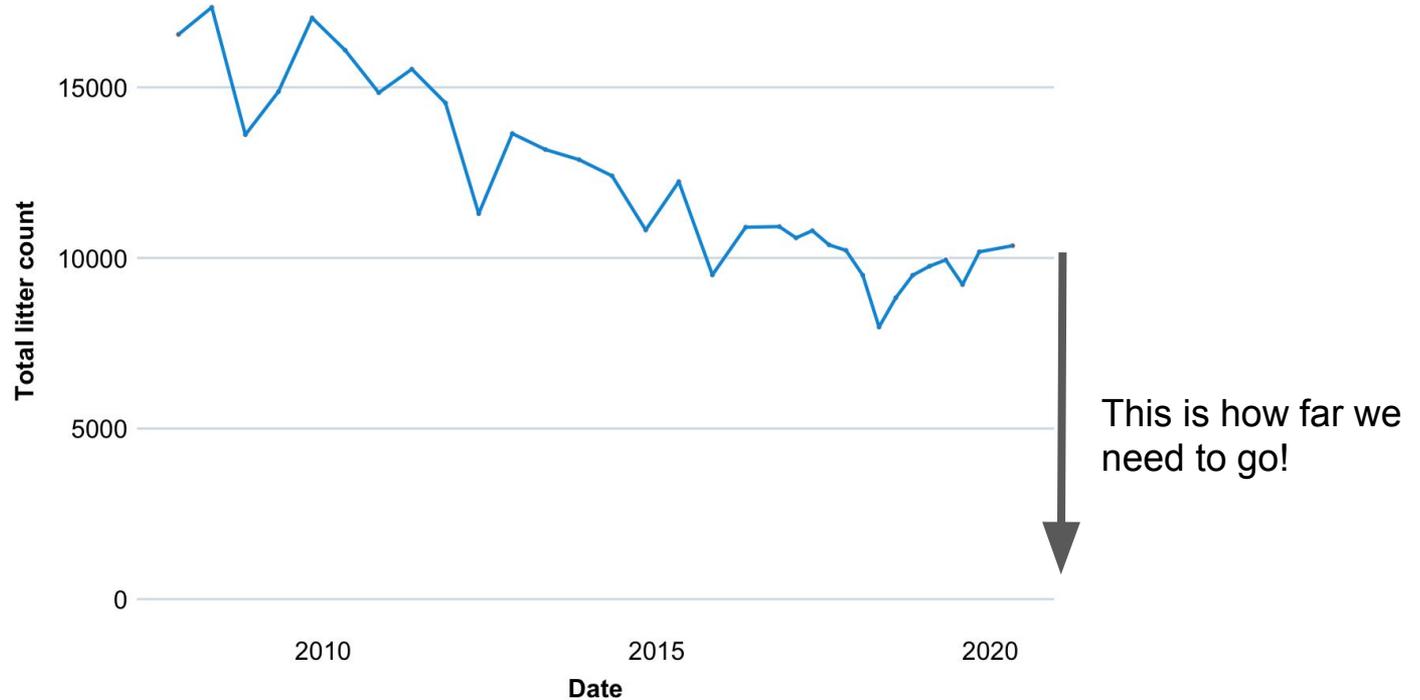
Ramp up the **visibility** of fines and enforcement



Target what **works** and what **doesn't work**



# Reason to be optimistic: litter is decreasing!



# Acknowledgements

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With thanks to the Environment Protection Authority (EPA) NSW in particular Alice Morgan and Rupert Saville.

We also want to acknowledge the broader Behavioural Insights Team project team including Elizabeth Convery, Ashleigh Morse and Terry Zhou.

Finally, we'd also like to acknowledge participants in this research who volunteered their time to participate in the research activities described in this presentation.



# Appendix: methodology and participants

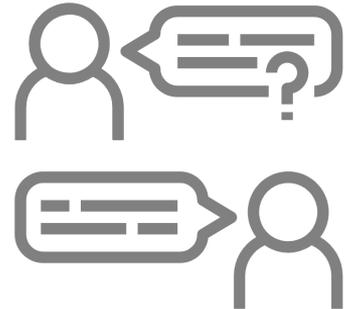
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# Survey

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- 111 respondents across NSW were primarily from the greater Sydney area (53%), primarily Rangers (55%) or other Authorised officers (31%), and a majority had been in their roles for over 3 years (56%)
- Only 46% of respondents said littering enforcement was part of their daily job, and 68% of respondents thought they did not have sufficient time to enforce littering
- 67% of respondents said they did not have any previous experience with litter enforcement training
- Many of these respondents were from NPWS (36%), which was underrepresented in the fine data (44 fines over 5.5 years)
- While we only sampled 8 people who were in management roles, they were less likely to report that littering was a serious problem, relative to Rangers and AOs





# Interviews

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- In November 2020 we interviewed 11 Authorised Officers from across NSW
- Interview participants included 6 from LGAs (Waverly, Strathfield, Cumberland, Randwick, Mid-Coast), 2 from state agencies (WaterNSW and Transport NSW) and 3 from National Parks and Wildlife Services
- The interviews were semi-structured and were approximately 30 minutes in duration. All interviews were conducted on the phone or via video conferencing
- We conducted a thematic analysis by organising key findings, insights and supporting quotes into themes which addressed the primary research questions
- We stopped conducting interviews once we reached data saturation where no new themes or information was emerging from the interviews



# Focus Groups

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- Between August and November 2020 we conducted the following three focus groups:
  1. One focus group consisting of 5 AOs from LGAs and state agencies
  2. One focus group consisting of 5 people who had received a fine for littering
  3. One focus group consisting of 5 people who had received a fine for littering and who also identified as a smoker
- Recruitment of the AOs was performed by the EPA. BIT recruited the litterers for the other two focus groups on Facebook with targeted advertisements
- Each focus group was 1.5 hours in duration and was conducted virtually due to COVID-19 restrictions
- Each focus group included semi-structured discussions to explore the personal experiences and opinions of AOs and litterers
- The focus groups were recorded and notes were taken to summarise the key findings



# The Behavioural Insights Team (BIT)

BIT was founded in the UK Cabinet Office in 2010 as one of the world's first government institutions dedicated to the application of behavioral science to public policy. Today, we are a social purpose company with >180 staff, with offices in Sydney, Wellington, Singapore, London, Manchester, Paris, New York, Toronto, and Washington DC.



## What we do:



### Behavioural Science

The study of how humans make choices and behave in real-world contexts



### Rigorous Evaluation

Investigating the causal connection between treatment and outcomes

