

# **EPA Approaches to Behaviour Change Project: Stage 2**

**Improving compliance outcomes: Understanding the  
behaviours and practices of business environmental  
performance**

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# Executive Summary

## Introduction & methodology

This report presents the findings from the second stage of pilot research commissioned by EPA Victoria (EPA) to explore how to achieve better environmental compliance outcomes with Victorian businesses. The research was conducted by Monash University's BehaviourWorks Australia (BWA) and RMIT University's Beyond Behaviour Change (BBC) research program.

In Stage 1 of this research BWA and BBC investigated the behaviours of, and practices performed by, EPA's Environment Protection Officers (EPOs) in enforcing environment protection laws. This second stage sheds light on another part of the compliance picture by exploring the factors influencing business behaviours (BWA) and the practices businesses perform (BBC) in order to comply with environment protection laws.

Stage 2 focused on two sectors: electroplaters and fuel retail businesses. The two research teams drew on different theoretical approaches, behaviour change (BWA) and social practices (BBC), to conduct interviews with businesses from both of these sectors. A total of 19 interviews were conducted with a mix of small independent businesses, larger companies, and franchises (12 electroplaters and 7 fuel retail businesses or their consultants).

Data were analysed using the two research team's theoretical approaches. BWA drew on behaviour change theory to explore the motives, capabilities, and responses that influence business compliance behaviours and outcomes. BBC drew on social practice theory to identify the environmental compliance and everyday practices businesses perform, and the competences, skills and materials implicated in those practices.

The exploratory nature of this research necessitated a small sample size, and the research design aimed to deliver maximum insight into the target business groups. While this study is not intended to be representative of the target groups, the consistency between the teams' findings lends weight to the validity of the insights gained. Findings are also consistent with the EPO perspective provided during Stage 1 of the project.

## Summary of findings: BWA

Positive influences on business motivation to comply involved protecting the business reputation and feeling a sense of civic duty, suggesting that the interviewees were predominantly from EPA's 'willing' business behaviour quadrants. The negative influences on businesses' motivation to comply involved the questionable impact of financial penalties and how they could manage conflicting risks and priorities. However, the main negative influence was found to be based on business' perception that EPA and EPOs at times lacked understanding of their business and were unwilling to collaborate with them in identifying the best course of action to achieve compliance.

In terms of capability, while both UPSS and electroplating managers indicated that the costs of compliance were the biggest influence on limiting their capability to comply, electroplaters concentrated more on the immediate costs of compliance while UPSS concerns revolved more around the scale and lack of 'clarity' for future investment and planning. Given such challenges, staged implementation approaches for achieving environmental compliance were a welcomed prospect from both sectors that would assist their capability.

Businesses reported positive responses to some EPA activities, such as fair and collaborative interactions with specific EPOs and, letters sent to businesses prior to inspections. They acknowledged that EPA had a legitimate role to perform, albeit with shrinking resources. However, businesses reported frustrations around inconsistencies in advice provided by the EPA and in its fees and regulatory requirements, as well as a lack of clarity across the state. Frustrations were also reported around slow responses from EPA and poor/irrelevant/hard to find guidance documents and online materials. A perceived lack of technical expertise and understanding

among EPOs and EPA staff were also reported as frustrations (which could potentially be addressed through training opportunities with industry associations).

## Summary of findings: BBC

The BBC team's findings indicate there is misalignment between the everyday practices businesses perform, and the compliance practices EPA expects them to perform. This finding is much more pronounced among smaller independent businesses, while larger companies are more likely to have (or have access to) dedicated environmental management staff and resources. Further, most interviewees saw EPA's practices as being inconsistently performed and found the organisation's style of enforcement to be out of touch with the realities of operating a business; too inflexible; and not collaborative enough. EPA communication materials were largely considered too generalised to be useful or too technical to be understood; and complaints of unresponsiveness in communications with EPA were common. The recent compliance blitz has brought some of these disconnections into sharp focus for the electroplating industry, while in the fuel retail industry historical perceptions of EPA may be continuing to shape business practices.

The BBC team also found that intermediaries play a crucial role in shaping business practices. These can include environmental consultants, centralised staff, industry associations, water authorities, banks, developers, and suppliers. In some cases these intermediaries actively perform environmental compliance practices on behalf of clients or franchisees, and in other cases they give advice or shape practices in various ways.

## Recommendations: BWA

Based on the research findings of BWA, there were a number of synergies between EPOs (from the Stage 1 report) and businesses about key motives and capabilities that impact on compliance. But the findings also suggested a blurring of the boundaries across EPA's business behaviour quadrants, which re-emphasised a key conclusion from the Stage 1 report that the quadrants are best viewed as a heuristic resource that provides an audit of possible compliance indicators to assist (but not pre-empt) the choice of intervention strategies based on the given circumstances. Capability issues also received far more attention from businesses compared to the opinions expressed by EPOs in the Stage 1 report, leading to a recommendation that more detailed capability considerations be included in EPA's business behaviour quadrants, as well as in its Outcomes survey where they are under-represented. Other question suggestions for the survey included broadening the scope of social influence questions.

In terms of the gap between what EPA delivers and what is desired by businesses, it is recommended that EPA review its website and online material to improve its accessibility and relevance, provide more timely responses to business enquiries and needs, and support mutually agreed and staged compliance implementation approaches. Furthermore, there is a need to address the inconsistency in advice provided by EPOs and other EPA staff, improve efforts to capture the business perspective within EPA's environmental problem solving processes, and use its partnerships with industry associations as a training opportunity to improve the skills and expertise of EPA staff.

## Recommendations: BBC

Based on its research findings, BBC suggests two possible pathways EPA could take for future engagement with industry: the first represents a modified continuation of the EPA's current approach, under which businesses are required to perform environmental management and compliance practices that align with EPA's own practices; by contrast, the second option requires a fundamental reshaping of EPA's approach to align its practices with those already performed by businesses. It may be possible to apply pathways on a case-by-case basis: we envisage that Pathway Two, for example, may be most applicable for smaller independent businesses while Pathway One may continue to be used with companies that have dedicated environmental management staff and resources.

In developing its recommendations BBC has also considered the work EPA has already done to establish best-practice approaches to enforcement and engagement. Of particular relevance is the 'EPA problem solving steps' approach (see Appendix 6). While this approach complements Pathway One with only minor modifications to its current format, it would require significant re-shaping to be used as part of a Pathway Two approach. In particular, a Pathway Two approach would place more emphasis on how businesses define and understand the problem being targeted as part of the 'EPA problem solving steps'.

## Conclusion

Using different conceptual and methodological approaches, both BWA and BBC's findings suggest that EPA may be able to improve compliance outcomes by analysing businesses' behaviours and practices of environmental compliance. Problem definition has become an important plank of EPA's strategies for intervention, and this research finds that businesses are likely to define and understand problems differently from EPA. Similarly, the ways in which businesses understand and approach environmental compliance differ significantly between business types and industries, and this has implications for the outcomes of EPA interventions.

While the boundaries of EPA's role in assisting businesses to comply remain contentious, its operating model does involve some degree of support to comply. The insights gained during this research suggest that supporting compliance can involve a range of methods of engagement to foster compliance. More specifically, improving compliance involves understanding the business perspective and tailoring 'support to comply', using the tools of engagement at EPA's disposal. Through this understanding EPA cannot only better conceptualise the problems businesses face, but also work towards shared solutions.

# 1 Introduction

The Environment Protection Authority Victoria (EPA) is committed to protecting Victoria's environment, toward meeting the needs of current and future generations. As part of its role as the state's environmental regulator of pollution, EPA monitors industry for compliance with the Environment Protection Act 1970 (EPA Victoria 2011a). Understanding the behaviours and practices of businesses that influence or shape their willingness and ability to meet their environmental obligations is therefore fundamental to EPA, and is reflected in its strategic Research and Development priority area 'Business Behaviour Change' (EPA Victoria 2011b).

In 2012, the EPA developed an education and behaviour change strategy that segmented business compliance behaviour across four quadrants—formed from the intersection of *willingness to comply* and *ability to comply*. The assumption was that knowing which quadrant a business falls into would assist EPA and its environment protection officers (EPOs) to tailor and implement compliance strategies more effectively (EPA Victoria 2012). But the use of such a framework for categorising businesses raised a number of questions. How do we determine which quadrant to place any given business in? Which organisational, contextual, and industry-sector variables most effectively predict willingness and ability to comply? Do the quadrants assist or restrict EPOs in the delivery of their duties? And what professional practices do EPOs engage in, and how might these be further supported or modified to increase compliance across the quadrants?

To explore these questions, EPA recognised the potential value of documenting the experiences of its EPOs in their day-to-day endeavours to influence business compliance. EPA partnered with BehaviourWorks Australia (BWA) at Monash University and the Beyond Behaviour Change (BBC) research group at RMIT University to undertake research in 2013 that aimed to formalise and integrate these insights within the EPA's business behaviour quadrants, and recommend how certain enforcement and inspection practices of the EPOs can be tailored and supported to match expectations of business compliance.

While the project was successful in articulating different business motives, capabilities, and responses to regulatory initiatives, as well as detailing the expectations and competences of EPOs that shape their inspection practices, one recommendation that emerged was to repeat the research from a business perspective (Curtis et al. 2013; Anna Strempel et al. 2013). The main reason for this recommendation was that EPOs were often being asked to articulate proxy measures of business motives, practices and behaviour, and that there would be value in comparing these insights and observations to those elicited from businesses who have had some level of interaction with the EPA. In 2014 EPA partnered with BWA and BBC to build on these initial findings by shifting the focus towards businesses and understanding the drivers, barriers, practices and partnerships that influence or shape their environmental performance. Importantly, this research aimed not only support EPOs, but also add insight into the roles of strategic partnerships with industry associations, community organisations and using media and other influences to drive compliance outcomes around intervention activities.

The aim of the study was therefore to explore the factors influencing business behaviours and practices that shape their compliance performance, where they might sit within EPA's business behaviour quadrants, and how EPA should best intervene to improve compliance outcomes. To meet this aim, the project was guided by the following research objectives:

1. Understand the variables that influence Victorian businesses' willingness and ability to comply with EPA law (BWA lead).
2. Document and analyse the practices that Victorian businesses participate in (or are unable to participate in) that shape compliance outcomes (with a specific focus on membership of industry associations) (BBC lead).
3. Identify business expectations of EPA, including the role of EPOs and regulatory interventions in assisting them to achieve compliance outcomes (BWA/ BBC).

As in the previous study (referred to as 'Stage 1' throughout this report), the research draws on two distinct yet complementary research perspectives. Theories of behaviour and theories of social



practice offer distinctive understandings of social problems and possible solutions. To date, most research has pursued these theoretical perspectives separately or in opposition to the other. But by placing these perspectives side-by-side, the project uniquely values the distinctiveness of both bodies of theory for being able to provide different methodological, conceptual and practical understandings on problems of social and environmental change. It thus provided a multi-disciplinary approach for investigating the complexity surrounding business compliance outcomes.

Results from both teams (BWA and BBC) are presented in this report. The report begins with a brief literature review from both the behaviour change and social practice perspectives that provided the foundations for the study. It then outlines the recruitment procedures and methods employed by the two teams. Findings are then presented, followed by a recommendations section that brings together the insights from the different research perspectives.

## 2 Methodology

### 2.1 Conceptual framework and literature review: BWA

Figure 1 shows EPA's business behaviour quadrants. This is slightly modified from the original version, with the colour scheme for the segment 'willing but not able to comply' changed from orange to blue to distinguish it from the 'unwilling but able to comply' segment (which was also orange).

Figure 1: EPA's business behaviour quadrants

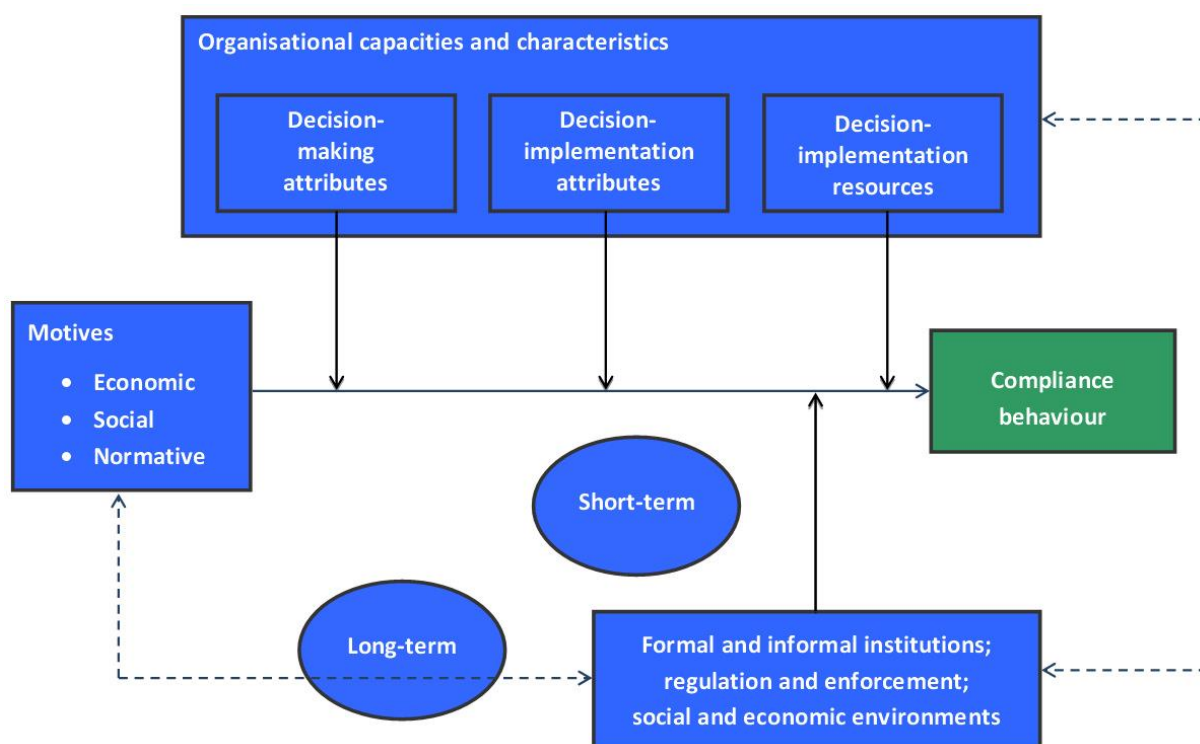


At its core, the framework recognises the limitations of adopting a standalone 'one size fits all' regulatory approach. Given that duty holders are confronted with different external pressures, and have their own particular mix of capabilities, skills, and motives, intervention strategies need to invoke a judicious mix of mechanisms (a hybrid of persuasion, capacity-building, and deterrence elements) that reflect or respond to these different contexts (Ayres & Braithwaite 1992; Gunningham 2011b; Gunningham 2011a). Put another way, the framework aims to provide some guidance on how EPA and its EPOs could intervene with duty holders based on consideration of their willingness and ability to comply: something that few regulators, according to Gunningham (2011a), have explicitly sought to address. As Gunningham (2011b, p.202) further emphasises, "good regulation means invoking different responsive enforcement strategies depending upon whether one is dealing with leaders, reluctant compliers, the recalcitrant or the incompetent".

While segmenting businesses across the dimensions of willingness and ability might seem simplistic, the foundations of this segmentation find support in the behavioural literature. For example, one of the world's leading models of human behaviour—Ajzen's (1991) theory of planned behaviour—outlines how people's behavioural intentions are influenced by their attitudes toward the behaviour, a sense of social pressure (perceived norm), and perceived behavioural control. In this context, the constructs of attitude and perceived norm are aligned with willingness, while perceived behavioural control is aligned with ability. Similarly, the 'COM-B' model proposed by Michie et al. (2011) outlines how human behaviour is a function of motivation, opportunity, and capability. While these models focus more at the level of the individual, compliance and organisational change researchers have also recognised the value of considering business behaviour as partly a function of underlying motives ('willingness') and capabilities ('ability') (May 2005; Winter & May 2001; Gunningham et al. 2005). Of particular relevance to the current study is the model put forward by Parker and Nielsen (2011), which describes three determinants of a business's compliance behaviour:

- its motives to comply across the categories of 'economic' (the extent to which a firm is committed to maximising its own economic or material utility), 'social' (the extent to which a firm is committed to earning the approval and respect of significant others with whom it interacts), and 'normative' (the extent to which a firm is intrinsically motivated to obey regulation simply through a sense of moral obligation);
- its organisational capacity and characteristics (e.g., leadership, size, staff knowledge and skills, profitability, technological capabilities); and
- its response to different regulatory enforcement strategies and styles (see Figure 2).

**Figure 2: Holistic and plural model of business compliance, adapted from Parker and Nielsen (2011)**



Parker and Nielsen (2011) also acknowledge studies that look more into how compliance is socially constructed, which resonates with the social practice theories that inform the BBC team's research.

Despite the theoretical merits of the willingness and ability dimensions of EPA's compliance framework, its practical value lies in how well it can be operationalised in a policy context. For example, the UK's Department for Environment, Food and Rural Affairs (Defra) has used these dimensions in segmenting the population according to their intentions to act in 'green ways'.

According to Defra (2008, p.7), a segmentation framework makes it “easier for government to tailor its approach for specific groups. We can identify the issues and opportunities, based on our understanding of each segment’s attitudes, barriers, motivations, and current behaviours”. Similarly, a number of national and international regulators, including in the environmental field, apply a regulatory ‘pyramid’ or framework that models the willingness and ability of businesses to fulfil their compliance obligations, and how different compliance tools can be used in response to their levels of willingness and ability (e.g. Australian Taxation Office 2000; Department of Infrastructure Transport, Regional Development and Local Infrastructure 2008; EPA South Australia 2009). And based on the findings outlined in BWA’s Stage 1 report (Curtis et al. 2013, pp.41–42), the authors concluded:

*The task of populating EPA’s business compliance quadrant framework, based on the knowledge and experiences of EPOs, has served as a valuable mapping exercise (or “audit”) of the various motives and capabilities of businesses, and as a survey of the strategies employed by EPOs for maximising compliance ... the quadrants provide a heuristic resource, offering indicators to assist (but not pre-empt) an EPO’s choice of intervention strategies—indicators that are sensitive to circumstances encountered on a visit.*

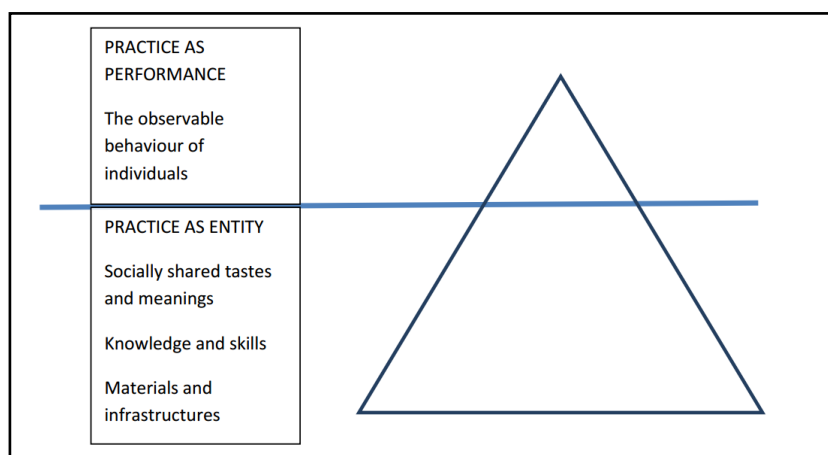
But the question remains whether the insights collected from the previous study, which relied on the knowledge, interactions, and experiences of EPOs, are accurate representations of the distinctive motives, capabilities, and behaviours that businesses are confronted with that impact on their compliance performance. Asking the same core questions of businesses that were asked of EPOs is therefore a key step in building a more holistic account of compliance (based on the perspectives of both businesses and EPOs) that EPA can take advantage of to be a more effective and efficient regulator.

## 2.2 Conceptual framework and literature review: BBC

The BBC research team specialises in understanding and intervening in social and environmental problems using theories of social practice. These theories view the world as constituted by the social practices people participate in, such as running, shopping, showering, or traveling by car (Shove et al. 2012). In this project we are primarily interested in the practices businesses perform in relation to waste management, and how these relate to and intersect with the waste compliance practices performed by EPA employees.

A practice can be thought of as both an entity (an identifiable activity) and a performance (Shove et al. 2012). The framework we adopt in this report follows Shove et al.’s (2012) conceptualisation of a practice entity as being comprised of three ‘elements’: **meanings** or socially shared understandings about how a practice should be performed, such as what is right, proper or socially acceptable to do; **competences**, knowledge or skills about how to practically undertake and perform a practice; and **materials**, such as objects, infrastructures, and technologies that are necessary to perform the practice (Shove et al. 2012). In the context of this research, a waste management practice is likely to involve meanings about what is appropriate, normal and necessary to do; competences about how to handle and manage wastes; and materials such as measuring and monitoring equipment, containers, tanks, the materiality of the site where waste is produced and managed, and the waste itself.

The performance of any practice is a dynamic process whereby people carry out the practice by bringing all of its elements together. A practice can also be modified through performance, as the ‘carriers’ or ‘performers’ of the practice integrate new elements or reject old ones (Shove et al. 2012). From this theoretical perspective, behaviour is viewed as the ‘tip of the iceberg’ of a social practice (see Figure 4) (Spurling et al. 2013).

**Figure 3: Observable behaviour as 'the tip of the iceberg'**

Source: Spurling et al. 2013, p.8

Practice theories are valuable for decentring the role of the individual in achieving change, and for focusing attention on the elements of practice (meanings, competences and materials) and how these are brought together 'on the ground' as people carry out their day-to-day activities. Adopting a practice theory lens in relation to this project required the BBC research team to investigate and analyse the shared elements of waste management and compliance, how these 'bundle' together, and how they intersect with the bundle of waste compliance practices which EPA is charged with delivering and performing. As such, the BBC research team did not focus on individual or psychological elements of businesses and their employees, such as their motivations, attitudes or personal values.

Social practice theories are increasingly being applied to investigate and address a range of environmental and policy problems, such as energy demand (Strengers 2013), water demand (Browne et al. 2013), food consumption (Evans et al. 2012), cycling and driving (Watson 2012), air travel (Strengers 2014) and household waste (Chappells & Shove 1999). However, most studies have focused on 'everyday' practices performed by householders as part of their mundane or ordinary consumption, with fewer studies applying this theory to institutional or governance problem areas such as waste compliance. As such, there is a lack of literature that investigates and analyses waste compliance issues through a social practice lens.

Given this gap, the BBC team's research was also informed by a literature review that explored other theories and related research applied in our Stage 1 report (A Strempe et al. 2013) including:

- 'Street-level bureaucracy', a concept introduced by Michael Lipsky in 1980 to describe the relative autonomy of the 'base' level of government – that is, the workers who implement public programs. Lipsky (1980) argues that these workers have an inordinate and discretionary influence on policy outcomes through their day-to-day practices, and Hupe & Hill (2007) expand on his theory to propose a series of 'grounding axioms' for the study of street-level bureaucracy;
- Buysse and Verbeke (2003), whose analysis of 'green' business distinguishes between businesses whose environmental performance is compliance driven and those that are more proactive; and
- A large scale observational study into the role of the field environmental inspector in the enactment of regulation in the UK (Fineman 1998).

The BBC team also reviewed a number of EPA publications to provide the background for this work, including strategic documents, internal reviews and practice guidelines.

## 2.3 Data collection

### 2.3.1 General approach

The EPA Approaches to Behaviour Change project adopted a qualitative methodology to provide thematic depth and insight into a small number of electroplating and fuel retail businesses. This research approach is useful in avoiding the assumptions common in large-scale surveys, where questions are often designed around multiple choice answers or where research participants are directed towards specific answers. Qualitative research also identifies connections, contradictions and complexities in participant views and actions. The sample is not statistically representative and does not seek to be so. The sample was designed to reach saturation of thematic insights in line with best practice qualitative research (where no new data arise despite repeated questioning with additional participants). Should a representative study be desired, a large-scale survey to test the findings could be developed from this research.

Throughout this report all participants have been de-identified with pseudonyms in accordance with RMIT University and Monash University's ethics guidelines. Direct quotations are represented in italics and are included verbatim to retain the conversational style of the interview. As such, they may contain grammatical or typographical errors. Ellipsis points (...) mark an omission from a quotation. Supplementary text for quotations is provided in square brackets where clarification is required. Where an interviewer's comment or question is included as part of a quotation, they are identified with the title 'Interviewer'. The quotes included in this report have been limited to an illustrative selection.

### 2.3.2 Recruitment

The two research teams aimed to conduct a total of 32 interviews, with each team conducting eight interviews with participants from two industries that were of particular interest to EPA. In deciding which industries to target, EPA developed some selection criteria that involved considerations such as:

- Locations in metropolitan Melbourne (the project's budget did not cover regional travel costs)
- Timing with current and future EPA activities/areas of interest (e.g., the industry sector will be a focus of interest for the EPA over the next 6 months)
- Mix of licenced and unlicensed (including SMEs)
- Industry association involvement
- Clear role from EPA in the sector and good access to participants
- Engaged project lead within EPA
- Existing social research coverage (Outcomes program)

Based on these considerations, businesses from the electroplating industry and businesses that operate or manage underground petroleum storage systems (UPSS) were chosen as the focus industries. Different recruitment approaches were used for the two industries, as summarised below.

#### 2.3.2.1 *Electroplating industry*

Contact details of potential participants from the electroplating industry were provided by EPA from two sources. The first involved a list of 16 electroplaters who had recently been inspected by EPA and who had indicated their willingness to participate in follow-up research about the factors that influence their compliance behaviours, or the practices they participate in. The research teams divided the list based on location, with BWA focusing on the south and southeast suburbs and BBC covering the north, northeast and northwest suburbs of Melbourne.

Each business listing included a contact person; the research teams contacted those persons by telephone and, where possible, by email to explain the research and request an interview. This method did not yield sufficient participants, and EPA subsequently provided a second list of electroplaters who had completed their outcomes research survey and agreed to be contacted for

further research. Using both contact lists BWA and BBC were able to secure six interviews each. This was less than the target of eight interviews per team, however there were no further options for recruitment as the research teams were only permitted to approach businesses that had previously agreed to be contacted.

### 2.3.2.2 UPSS industry

EPA initially provided a contact list of 18 UPSS businesses who had completed their Outcomes research survey and agreed to be contacted for further research. This list comprised mostly service stations and a smaller number of mechanics and other business types. The research team removed businesses located outside the metropolitan area, leaving 12 businesses.

Each business listing included a contact person; the research teams contacted those persons by telephone to explain the research and request an interview. This method yielded very few participants, as contact persons had often moved or were difficult to reach and the researchers generally spoke to junior or frontline staff who did not have decision making authority. EPA then provided a second list of 49 fuel retailers; excluding those outside the metropolitan area left 30 businesses, many of which belonged to the same chain or parent company. This second list did not include contact persons, and after several unsuccessful attempts it was agreed that continuing to contact frontline staff at service stations was not worthwhile. The team agreed to contact central office staff from the major oil companies instead, and EPA provided contact details for relevant staff. The BBC team also decided to interview two consultants from a company that provides consulting services to the UPSS industry. Additional attempts to recruit UPSS operators were made through the Australasian Institute of Surface Finishing email newsletter, with no results.

Through these recruitment processes BWA and BBC conducted three and four UPSS industry interviews respectively.

### 2.3.3 Sample

The sample comprised a mix of business sizes and types, including small independent electroplating businesses and fuel retailers; branches or franchises of large companies; central offices of large companies and networks; and consultants who provide services to the UPSS industry. In total, BWA interviewed 12 people representing six electroplating businesses and three UPSS businesses, and BBC interviewed 13 people representing six electroplating businesses and four UPSS businesses.

A breakdown of the sample is shown below in Table 1.

**Table 1: Interview sample**

	Industry	Participant no.	Business type	Comments
BBC	UPSS	1	Independent mechanic / fuel retailer	Unrecorded interview (handwritten notes only)
		2, 3	Central office of multinational company	Two interviewees
		4	Central office of independent retailer network	
		5, 6	Consultancy	Two interviewees
	Electroplating	7	Independent electroplating workshop	
		8	Independent electroplating workshop	
		9	Branch of multinational company	
		10	Independent electroplating workshop	
		11	Electroplating department within large company	

		12, 13	Electroplating department within multinational company	Two interviewees
BWA	UPSS	1	Central office of multinational fuel company	
		2	Central office of multinational fuel company	
		3	Local branch office of national fuel delivery company	
	Electroplating	4	Independent medium-sized electroplater	
		5	Independent electroplater	
		6,7,8,9	Independent medium-sized electroplater	Four interviewees
		10	Independent small electroplater	
		11	Independent supplier to electroplaters (and former electroplater)	
		12	Independent small electroplater	Telephone interview (handwritten notes)

### 2.3.4 Interview instrument and approach: BWA

Guided by the business behaviour compliance model of Parker and Nielsen (2011), the BWA interview instrument (see Appendix 1) aimed to elicit from businesses different motives and capabilities that influence their compliance behaviours and outcomes. By using the same model as the one used previously with the EPO study, it would allow for direct comparisons of opinions between EPOs and businesses in relation to perceived and actual influences on compliance.

The interview instrument also sought to shed some light on whether some of the questions the EPA currently asks businesses in its outcomes social research program captures a full spectrum of influences on business compliance behaviour. Conducted by an external research provider, it uses telephone and online surveys to collect feedback and track changes in experiences from the general public, customers, community and strategic stakeholders, government, and environmental partners on a wide range of performance topics. As part of the survey, EPA has developed questions aimed at measuring 'attitudes to compliance' based on the 'Table of 11' framework produced by the Dutch Ministry of Justice (2004), which articulates eleven dimensions that are believed to have a key influence on business compliance. However, studies by regulatory scholars such as Kagan & Gunningham et al. (2011), May (2005), and Winter and May (2001), suggest that some additional (and more specific) influences might also have a role, which in turn might assist EPA capture additional insights in future rounds of data collection for its outcomes research program. The interview instrument therefore presented participants with tables of other potential compliance influences to consider (separated between factors that might influence business 'willingness' and 'capability') that might not have been elicited in the initial open-ended questions. As the table in Appendix 2 shows, which compares the different compliance items between the Table of 11, EPA's outcomes research, and the BWA research instrument, the latter places greater emphasis on a broader range of factors related to 'approval' and capability considerations.

In addition to questions about the businesses themselves (e.g., number of staff, years of operation), the final set of questions in the interview instrument draws on previous studies that have looked at business responses to regulator activity (e.g., Thornton, Gunningham et al. 2005), asking businesses about the perceived role of the EPA, how successful is the EPA in performing this role, how useful have certain EPA initiatives been in supporting business compliance, how has the business responded to these initiatives, and if there are any gaps in what EPA delivers and what is desired by the business. A final question about how the condition of the site influenced business behaviour was also asked if time allowed (although that questions seemed more pertinent to the BBC research).

### 2.3.5 Interview instrument and approach: BBC

The BBC team conducted semi-structured, in-depth, face to face interviews based on Rubin & Rubin's (2005) concept of 'responsive interviewing', which recognises that qualitative interviewing needs to be dynamic and iterative. Accordingly, interview schedules were used as a prompt or guide, and the interviewer modified questions according to interviewee's responses. This approach was chosen because of its suitability for the exploratory nature of the research.

BBC interviews aimed to explore the practices of each business, from general or everyday practices to those concerning remediation, waste management, pollution prevention and interaction with EPA. Interviews also collected data about practices relating to industry associations and other intermediaries.

Separate interview instruments were used for each target industry, to reflect the differing nature of the work conducted in each; and within the UPSS target group different versions of the instrument were used for large multinational fuel retailers and small independent companies. The consultant interview was loosely based on the large fuel retailers instrument but was largely improvised in response to interviewee answers and areas of expertise. Interview schedules are included at Appendices 3-5.

Where permitted, interviews were recorded using a digital voice recorder. When participants did not give permission to be recorded, detailed notes were taken by hand. Prior to interviews, participants were given a copy of the Participant Information Statement and asked to sign a consent form.

## 2.4 Data analysis

All data collection and analysis were conducted in accordance with Monash and RMIT universities' human ethics committees. Both teams obtained human ethics approval to conduct this research. Each interview was recorded with the permission of the participant and then transcribed. Interview transcriptions and written notes were analysed based on the business behaviour and social practice frameworks outlined at Section 2.1 and 2.2. The qualitative analysis software program Nvivo was used to thematically group and analyse the data.

## 2.5 Limitations and exclusions

While the pilot nature of the study meant that it was never our intention to work with "representative" samples across the different sectors (and business behaviour quadrants), we nevertheless had the intention of conducting a total of 32 interviews to collect some detailed formative and diverse insights. Given that the research teams were only able to secure 19 interviews in total (mostly from electroplaters), the responses described in this report are less likely to capture the broad range of insights that exist across the two sectors. Indeed, as both research teams discovered, there was a strong sense that most of those who agreed to be interviewed tended to be "good compliers".

Given the budget of the project, interviews were restricted to locations in metropolitan Melbourne. This means that opinions and variations in practice specific to operating in regional Victoria might be under-represented in the report. Having said that, a number of respondents do provide insights that are more pertinent to regionally-based operations.

During the course of the interviews, it was clear that some key differences emerged in the concerns and pressures faced by the two sectors. Further, the authors note that the sample included more electroplaters than UPSS businesses, and recognise that while this study was not intended to be representative of either industry, the insights regarding electroplating businesses are somewhat more comprehensive than for UPSS. To this end, caution is required in extrapolating and applying the results to the UPSS industry at large, and to other sectors that might have their own specific concerns and pressures.



Finally, both this study and the Stage 1 study have been developed and framed as pilot projects, so any conclusions drawn from this research should be considered as formative. Only when larger samples are involved, representing different sectors and concerns, will a more conclusive picture emerge of the different compliance narratives that impact on business behaviours and constitute practices.

### 3 Findings

This section begins with an overview of the electroplating and UPSS industries. The findings of each research team are then presented separately to retain the integrity of the two conceptual approaches, beginning with BWA's findings followed by BBC. Each team's section concludes with a summary of findings.

#### 3.1 Industry overview

##### 3.1.1 Overview of electroplating industry

Based on interview findings the electroplating industry in metropolitan Melbourne comprises a range of business types, from small family-owned or independent operators to multi-function sites operating as branches or franchises of large parent companies. Smaller operators generally appear to focus on plating products for external customers, which may include small one-off jobs (e.g. trophies, collectibles); ongoing contracts to plate componentry for industries such as the automobile, furniture, and electricity industries; and ad hoc work for furniture companies, shopfitters and others. These businesses tend not to manufacture any items themselves. By contrast, businesses that operate under large parent companies tend to conduct electroplating (or, in some cases, 'electro-less plating') as part of a broader range of activities, which often include on-site manufacturing. These companies typically focus on plating their parent company's products only, rather than taking on work from external customers.

The sample for this study comprised mostly independent electroplating businesses where electroplating was the main service offered, as well as a smaller number of businesses that were part of larger chains or companies and which conducted electroplating (or, in some cases, 'electro-less' plating) as part of a broader range of services.

The electroplating industry has been significantly impacted by the trend towards offshore manufacturing and processing across a range of 'feeder' or client industries. In response to these shifts, smaller independent electroplating businesses reported significantly reduced revenues and a corresponding downsizing of their operations (including staff numbers) in recent years. Within this context, smaller independents felt highly uncertain about their viability into the future. Larger businesses operating under parent companies, meanwhile, appeared somewhat sheltered from these changes and did not report the same levels of anxiety or uncertainty about the future.

##### 3.1.2 Overview of UPSS industry

Based on interviews and available industry data, the range of businesses that operate underground petroleum storage systems (UPSS) includes retail service stations and motor garages/mechanics, bulk fuel depots, airports, oil refineries, and various small businesses (EPA NSW 2014). The sample for this study comprised mostly retail service stations or their parent companies, plus one fuel delivery company. Some service stations also provided mechanic services onsite. The businesses comprising the UPSS sample are commonly referred to in this report as fuel retailers.

The retail service station sector is made up of independent and non-independent sites: non-independents are owned and operated by the major oil companies (Shell, BP, Caltex) or by supermarkets in alliance with major oil companies (i.e. Coles and Shell; Woolworths and Caltex) (ARA 2010), while independent service stations typically fall into one of the following groups:

- *branded independent sites*, which are owned and operated by individuals or a small company, but use the branding of a major oil company (e.g. for signs, fuel pumps and store cards);
- *independent sites*, which are not branded by a major oil company or chain; and,
- *independent chain sites*, owned by large independent companies that are not affiliated with major oil companies (such as 7-Eleven and United) (ARA 2010).

Some independent service stations also operate as members of an independent retailer network – in Victoria these include Endeavour Petroleum and Vantage Fuels, for example.

The structure of the service station industry has been shifting away from independent ownership and operation, with large multinational companies increasing their market share: in 2010 around 75% of service stations in Australia were directly owned by or affiliated with major oil companies or supermarket chains, and those stations were thought to account for up to 90% of total retail fuel sales (ARA 2010). The growth in supermarket-owned service stations is putting particular pressure on the independent sector, which has struggled to compete with the prices and incentives supermarket chains can offer (ARA 2010). As the fuel retail industry has shifted away from independent owner-operator sites, environmental compliance and other business management practices are increasingly performed or mediated by external and/or centralised actors, such as environmental consultants and head office staff.

### 3.2 BWA findings

The results of the interviews with managers from six electroplating businesses and three UPSS representatives are structured according to the four general areas of inquiry that formed the basis of the interview instrument:

1. Important achievements or challenges in implementing environmental business behaviours and/or complying with environmental standards
2. Factors that influence willingness to comply
3. Factors that influence capability to comply
4. Business responses to EPA initiatives.

When answering the questions, respondents were given example compliance behaviours that they might want to consider. For electroplaters, this involved behaviours like establishing trade waste agreements with local water authorities; storing chemicals and liquid wastes in bunded areas; and cleaning up liquid or solid spills immediately. For UPSS operators, this involved behaviours like installing/using systems for accurate and frequent loss monitoring; regular maintenance checks of bowzers, pipelines, and bores; and tank integrity checking etc. Each of the following sections includes quotations that illustrate emergent themes that were raised in the interviews across these different areas on inquiry. Given the small sample size, and the more 'willing' nature of participants (in terms of being motivated to comply) that became apparent during the interviews, caution is required in relation to generalising the results beyond the immediate sample. Finally, emphasis is placed on representative examples from business managers' responses, along with concise insights based on relevant theoretical models.

#### 3.2.1 Important achievements and challenges

Following an approach by Gunningham et al. (2005), we first asked participants (as an 'ice-breaker' question) to describe an important achievement or challenge around implementing environmental business behaviours and/or meeting compliance obligations. In general, most respondents focussed on achievements. One UPSS manager described a success story of being able to demonstrate to inspectors and other concerned community members that they were indeed meeting their environmental obligations through innovative actions. To the manager, this was an example of 'excellence' that could be communicated to customers. It highlighted the integral nature of environmental compliance to the company's image and brand:

*So we actually showed them [inspectors] that with the use of our blow-back collars there was no need to worry about [the environmental impacts of] refuelling. We were compliant. So that was one of the wins, it took us considerable time to convince all these environmental people that we*

*could do it safely and efficiently. It's a selling story to our customers. It's a standard of excellence thing. **UPSS***

Similar pride in the development of new innovations or intellectual property during the course of meeting regulatory standards were highlighted by other respondents as a key achievement:

*A colleague actually, she implemented a property guideline document. Historically our property guys would buy sites with no due diligence, they'd sign leases with no environmental anything and then the firm would have to deal with environmental clean-up. So it was a document that was developed to cover up on those, and then if there are any issues, they need to be referenced in a lease. **UPSS***

Furthermore, three of the eight firms interviewed described a situation where the business decided to invest in costly upgrades or expensive consulting to preserve the business reputation above and beyond compliance standards:

*The challenge [after discovering groundwater contamination] wasn't anything to do with technical or compliance, it was mainly around sensitive stakeholders - neighbouring properties, a bakery, a child care centre ... The challenge was about timeliness and how fast we were able to get out there, do the testing, provide assurance there were no immediate risks, and it did involve drilling in people's properties. We got an external communications team on board - we needed to draw in expertise to manage the community engagement. I consider it to be a favourable outcome. We got cooperation with the various stakeholders, we completed the testing and did confirm that there were no unacceptable risks, which is the goal. [The achievement] was the immediate identification that it was a high risk in terms of commercial risk, reputational risk, and financial risks that we addressed quickly. **UPSS***

When challenges were raised, the costs of compliance and maintenance were typically mentioned, even though such investments were often still seen as 'good business':

*Probably just the outlaying costs for bunding was the biggest challenge recently. I probably spent about \$40,000 on bunding. I think it was necessary, but I mean only a constraint because we're a small business and \$40,000 is a lot of money. So any compliance with anything is taxing, but you have to do it and I don't have a problem with it ... I mean these things have to happen. If you want to be in the industry you have to have compliance. **Electroplater***

Another challenge that was mentioned was the perceived lack of coordination among different regulators. While businesses don't question the legitimacy of these different authorities, they just wish there were greater sensitivities to the requirements demanded by each and how a more coordinated approach between regulators might assist businesses:

*There seems these days to be a fair bit of cross-over between EPA, WorkSafe, local council and even to the point of MFB, Fire Brigade. So they're all aware of what the compliance laws are and there's always some form of advice from them if they think there might be something that's not maybe where it should be. So it's really... you've really got four bodies looking out for the one purpose. **Electroplater***

Perhaps the biggest challenge mentioned involved scenarios where different expectations and understandings of the terms of compliance existed between the business and the EPA, especially when the business felt it had already made great in-roads in fulfilling their compliance obligations based on previous arrangements. As one electroplater described:

*It is absolutely true that we will bend over backwards to observe the regulations ... [But] when I got these guidelines from EPA I immediately responded, 'These guidelines show me the bunding requirements for containers of process solutions. I need it for waste disposal' ... So what I had to do was actually draw up what I was planning on doing and then get the people to sign off on it. Less than 12 months later they're back and looking at the bunding work, [saying to me] 'that filter cake bin doesn't sit in the bund, that really should be in a rollover bund.' And I said, 'Well I've got an email dated about 12 months ago telling me what I had proposed was acceptable'.*

**Electroplater**

Overall, when answering this question, the mixture of achievements and challenges echoed a number of those that were elicited in BWA's Stage 1 report. For example, EPOs described how 'willing' businesses were often proud of their compliance achievements and were eager to share these stories with EPOs during a site visit. As EPOs acknowledged, such stories can go unnoticed within EPA inspection documentation or procedures, and therefore believed it was important to

respond with positive feedback and praise to support their innovation and nurture their motivation. Furthermore, the need for greater coordination among regulatory authorities to ensure individual businesses are not overwhelmed at any one time was also a recommendation from BWA's Stage 1 report. In contrast, the more detailed accounts of compliance cost challenges and a potential lack of consistency among EPOs were emerging insights that were not revealed in any great detail in the Stage 1 report, highlighting the value of getting the business perspective when it comes to meeting compliance obligations.

### 3.2.2 Factors that influence willingness to comply

The second set of questions asked of electroplating and UPSS managers centred around motives that facilitate or impede willingness to comply with environmental standards and/or implementing environmental business behaviours. Five prominent themes emerged from the data.

#### 3.2.2.1 *Business reputation*

Overwhelmingly, concern about protecting business reputation was the most frequently mentioned factor when managers considered their willingness to comply. Both UPSS and electroplating managers expressed pride in their businesses and generally agreed that the importance of a positive public impression coincided with a willingness to comply with environmental standards or implementing environmental business behaviours.

*We would over comply. Anything that we do we actually go one step higher. So whatever are the harshest or hardest levels, we actually surpass that. [We do this for] our clients. We can go to our clients and say, 'This is it, you're working in the construction industry, this is our code' ... and that's with regards to not only the environment, but with regards to the appearance, the truck, the maintenance ... Protecting our business reputation, that's huge to us. We are about image.*

**UPSS**

*If we were doing something wrong you would be paranoid and a lot of companies, a lot of other companies, the cowboys are. But our image and our reputation and our managing director will not allow it. It's straightforward.* **UPSS**

*I think feedback from customers [is a positive influence on our willingness to comply]. Our feedback from all customers is what a tidy, clean plating shop we have. And you feel great justification and a deal of happiness when you get that feedback from making the effort and spending the money and doing all that sort of thing. It makes you better.* **Electroplater**

Managers from the larger UPSS companies also remarked on the importance of reputation with regard to shareholders and investors:

*So our willingness to comply is born out of the fact that we're an ASX listed company, we have to report to shareholders, we've got governance protocols, we've got internal policies about what we're trying to do ... So that all feeds into our compliance.* **UPSS**

While it might be easy to assume that reputation plays a more important role for larger and more visible businesses, the importance of maintaining a strong positive business reputation was also evident among electroplating businesses for reasons such as the history of the business, its connections to community, as well as the simple fact that they have 'survived' within the current business climate:

*I mean it's a family business and it's always been something that you do things the right way ... The main reason we do it [comply] is because of the sense of duty and protection of the business reputation.* **Electroplater**

Based on the above responses, reputation and its connection with compliance is thought of in a multi-dimensional way that includes types of reputation (business or personal) and the functional outcomes of a good reputation (repeat customers, committed investors, new contracts). These reputational factors were also mentioned by EPOs in the BWA Stage 1 report, specifically with regards to businesses falling within quadrant 1 (willing and able) and quadrant 2 (willing but not able). Their view was those larger, high profile businesses, as well as those with strong connections to the community (particularly in the regions), make them particularly sensitive to reputational concerns.

### 3.2.2.2 A sense of civic duty

With obvious links to business reputation, respondents explicitly commented on the value of 'doing the right thing' for communities located in the vicinity of their operations, either in terms of addressing pollution concerns (and potential impacts to the environment) or making a contribution to the local community:

*We had a massive barney with the lady that was living across the road, complaining about noxious gasses and then loud noises at night and it just went on and on. We spent a fortune on putting in silencer ducts. This lady was absolutely vexatious, and the EPA came out to do tests at night with the microphones, they did every test you could imagine. They couldn't find anything wrong. In the end the EPA were completely on our side, but we still wanted to do the right thing, not just for her but for everyone in the street. **Electroplater***

*I think money's always well spent on making things better for the environment and for people, particularly if it's people that are residential people then why wouldn't you do the best. Providing it's a business that can afford it too. **Electroplater***

*We're paranoid about compliance. It's just the [potential] environmental impact. We've got to take responsibility of storing up to 95,000 litres of diesel. **UPSS***

*You live in a community and you wouldn't go to the petrol station that looks dirty and battered because you'd think, 'Oh that's horrible' ... and then you question the fuel you put in your car if it's cheaper, that's what I would do. So if you get to a service station that's well maintained and looks good ... and you might buy some other stuff so that directly feeds into establishing a community, from quality fuels, to convenience, to being part of the community. So it all comes back to reputation and servicing a community. **UPSS***

Recognising the importance of the community and other key stakeholders to the success of their businesses, some UPSS interviewees explained that their role revolved explicitly around stakeholder engagement:

*In terms of liaising with affected community members, yes that is my influence. Stakeholder management is essentially the key to my role. So there's a compliance side of things but then there's obviously the communication to various stakeholders, the community in particular. **UPSS***

Such responses highlight that interviewees are keenly aware of having a social license to operate, and that their operations might have positive and negative implications for nearby communities. Indeed, these considerations seem to be the most salient when respondents were asked to freely list some of their greatest achievements at the start of the interview. Again, obligations to the community were mentioned by EPOs in Stage 1 with regards to businesses falling within quadrant 1 (willing and able) and quadrant 2 (willing but not able). Such obligations, however, are probably less persuasive for businesses in the other two quadrants, where there is a general unwillingness to comply, regardless of potential community impacts. One respondent provided the following sobering reminder of this fact:

*I like challenges, I like overcoming them and all that sort of thing. But I guess in reality the bottom line is we're not in business to be socially friendly with the people that come in the door, that's a side effect I guess. We're here to make a living and make money. **Electroplater***

### 3.2.2.3 Financial penalties

While business reputation and community considerations were mentioned as positive influences on a business's willingness to comply, respondents also made explicit mention regarding the role of fines. For some, avoiding a fine was a key motive to comply:

*Of course, yeah, well I mean if that's part of the law, they're the regulations, I mean you either abide by them or you receive a fine or you decide to give the business away. So it's just ... you've got to comply. **Electroplater***

But many respondents in this instance suggested that the threat of an EPA inspection or fine was *not* an important factor when it came to compliance, mainly because it was clear that those who participated in this study consisted mostly of 'good compliers'. As EPOs highlighted in BWA's Stage 1 report, some businesses are more influenced by reputational factors than fines, specifically those with higher profiles. This was reinforced in the current study:

*No [when asked if the main reason for compliance was to avoid paying a fine], the main reason we do it is because of the sense of duty and protection of the business reputation. **Electroplater***

*We're not scared of what they'll threaten us with or whatever (fines), fear is not a part of it ... we comply because we believe it is necessary for the benefit of the community. **Electroplater***

*No, it's not really driven by fines as such. The immediate one is, okay, is there an immediate health risk, or is there an environmental risk, which is compliance. Is there a commercial risk and is there a reputational risk? So there's compliance and non-compliance-related (issues). It's driven by all, not solely by either one of them. **UPSS***

However, participants also offered the perspective that they have seen examples where the risk of fines and inspections often do not have any lasting influence on businesses' compliance behaviours. The minimal impact of fines described by some electroplaters may also reflect the financial hardship and shrinking business prospects faced by most electroplating enterprises. The looming threats to commercial survival perhaps overshadow the less pressing risk of a non-compliance penalty.

*The argument doesn't hold water about the fear of getting checked because there's electroplaters that have been around for the last 30, 40 years and they still don't have their practices right. And they're just waiting for a visit and if a visit comes they say whatever they're going to say and they get a corrective motion and they do the absolute minimum they need to do. **Electroplater***

As Gunningham (2011b) explains, there is a real risk that businesses who typically 'do the right thing' might feel at a competitive disadvantage if they invest money in compliance when others are seen to be getting away with non-compliance or the current climate does not reward such investments. This can also have ramifications for the 'legitimacy of the regulator' if businesses are seen as 'getting away with it' despite the prospect of fines and inspections being an ever-present threat.

#### 3.2.2.4 **Mutual goals and understanding**

Many businesses expressed a need for mutual respect as an important determinant of willingness to comply, as well as the recognition of mutual goals around compliant business behaviours and the financial sustainability of the industry. While some of these factors will be reiterated later in the context of capability, business managers in this instance were explaining how a lack of understanding might have flow-on effects to ongoing collaborations with the EPA:

*I talked about that balanced perspective. You can have that dialogue where they might be going, 'Okay, this site really concerns me' and I could say, 'Okay, I'll take that up' and I can act pretty quickly. Or I might be able to push back and go, 'That's in my plan for next year, is that acceptable?' and have that kind of dialogue. **UPSS***

*I think they need to come in with a soft approach to start with and create a relationship with these electroplaters and get an understanding about what they actually do. **Electroplater***

While participants seemed to accept the legitimacy of EPA objectives, electroplaters specifically raised concerns about the delivery of compliance expectations, and the need for a more 'give and take approach' that is tailored to individual business considerations. This will be discussed further in the capability section and resonates with the BBC team's findings discussed in Section 3.3.2. Electroplaters also felt that their willingness to comply was sometimes undermined by EPOs having a lack of understanding of their business and a belief that 'nothing is impossible' when it comes to compliance:

*They don't quite understand electroplating. I reckon if they want people at the EPA they should have electroplaters, who know something about it. Because they're telling me to lift tanks up that weigh about three tonne. Can't lift them. **Electroplater***

*And half the guys that come out [from EPA] to these places wouldn't know what they're looking at. Would not know. **Electroplater***

*So we cleaned all under the floor and showed them it's all nice and smooth and good but to lift them up, I told him the first time it's going to be impossible. He told me nothing's impossible. **Electroplater***

But one electroplater did make the point that despite some unrealistic expectations coming from EPOs, he recognised that they, and the EPA, have a job to do that manifests in their expectations of businesses:

*If you go and lift them [tanks] then you're going to crack them and then you've got issues. So that's probably where a lot of people say, "Well they're [EPA] ill informed, that's not the way you go about it." But I can understand EPA's point of view, they want to be able to see that the integrity of the floor's okay and that there aren't things leaking out of there 24 hours a day, seven days a week. **Electroplater***

In addition to the level of knowledge, how EPOs and the EPA communicated to electroplaters was also raised as an issue:

*I mean if someone asked me the right questions I probably could [comply], but it just seems to be a massive gap between what the EPA wants and what the environment should have and what people are actually capable of doing. **Electroplater***

*The questions they asked were out of Sesame Street ... They just kept saying, 'So what are the obstacles?' Well it's pretty obvious what the obstacles are. They must think that every business makes that much money that all they want to do is spend it on something that offers no return. **Electroplater***

But when knowledge of the industry is apparent among EPA staff, and is accompanied by a willingness to engage in an open dialogue on compliance issues, there is less likely to be push-back from the business:

*One EPA regional office has a very, very good team that you can have an open dialogue with about sites, and you get a bit of consistency in terms of they have more of a balanced view across your portfolio. They're pragmatic. They know the policies and they know when to apply the policies but they're also happy to be provided the right arguments with backed up data to be able to change an outcome. So they may say, 'We believe this is an issue' and I might be able to say, 'Okay, I'm going to give you a report that offers you a different opinion of that' and they'll accept that report for example. 'That's nice, but we still feel you need to do A, B and C' and I'd go, 'Okay'. You can have that dialogue with them. **UPSS***

Basically, respondents felt their willingness to comply would be better served if EPA and EPOs were more willing to collaborate with businesses to identify the best course of action to achieve compliance, as well as having a better understanding of their business. A similar finding is reported by the BBC team in Section 3.3.2.5. These views were not lost on EPOs in the Stage 1 study, as they highlighted the importance of being able to use their own discretion in ways that will assist businesses to achieve compliance outcomes (often based on some consideration of the business's capability). EPOs also mentioned demands by businesses to provide more specialised advice, but admit their role is to be across of range of compliance issues rather than more specific ones. Business demands for EPOs to have a greater understanding of their operations will ultimately be influenced by what is expected of EPOs across the EPA, the industry and the community.

### 3.2.2.5 Risk management

Business managers in both the UPSS industry and in electroplating generally felt that balancing different priorities and risks across a number of regulatory bodies and commercial factors was a pressing issue. In some cases, the complexity of demands could reduce willingness to comply based on conflicting priorities or simultaneous deadlines:

*It depends on various business drivers and those drivers' risks according to health, environment, our assets, and reputation. We would actively review those drivers and if an environmental risk, if the consequence of that risk is that we will be in non-compliance with our obligations, then that becomes the driver. If it's for other reasons, commercial, other financial drivers, then there needs to be responses according to that as well. It's about making sure there are no unacceptable risks. They're interrelated. **UPSS***

*The immediate one is, okay, is there an immediate health risk, or is there an environmental risk, which is compliance. Is there a commercial risk and is there a reputational risk? So there's compliance and non-compliance-related (issues). It's driven by all, not solely by either one of them. **Electroplater***

And if certain requirements are expressed as guidelines rather than regulations, respondents acknowledged that they can quickly be seen as simply 'nice to have' and dropped down the order of priorities (a point that will be elaborated on further in the 'business responses to EPA initiatives' section).

Based on these responses, interviewees articulated a range of risks and priorities that they have to grapple with on a day-to-day basis. In some respects, there is a sense that risks and priorities can at times either be independent or in competition with each other. But as the model by Parker and Nielsen (2011) highlights, they all contribute to the compliance story. Perhaps making better links between various regulatory areas and commercial factors can assist in making compliance obligations more salient.

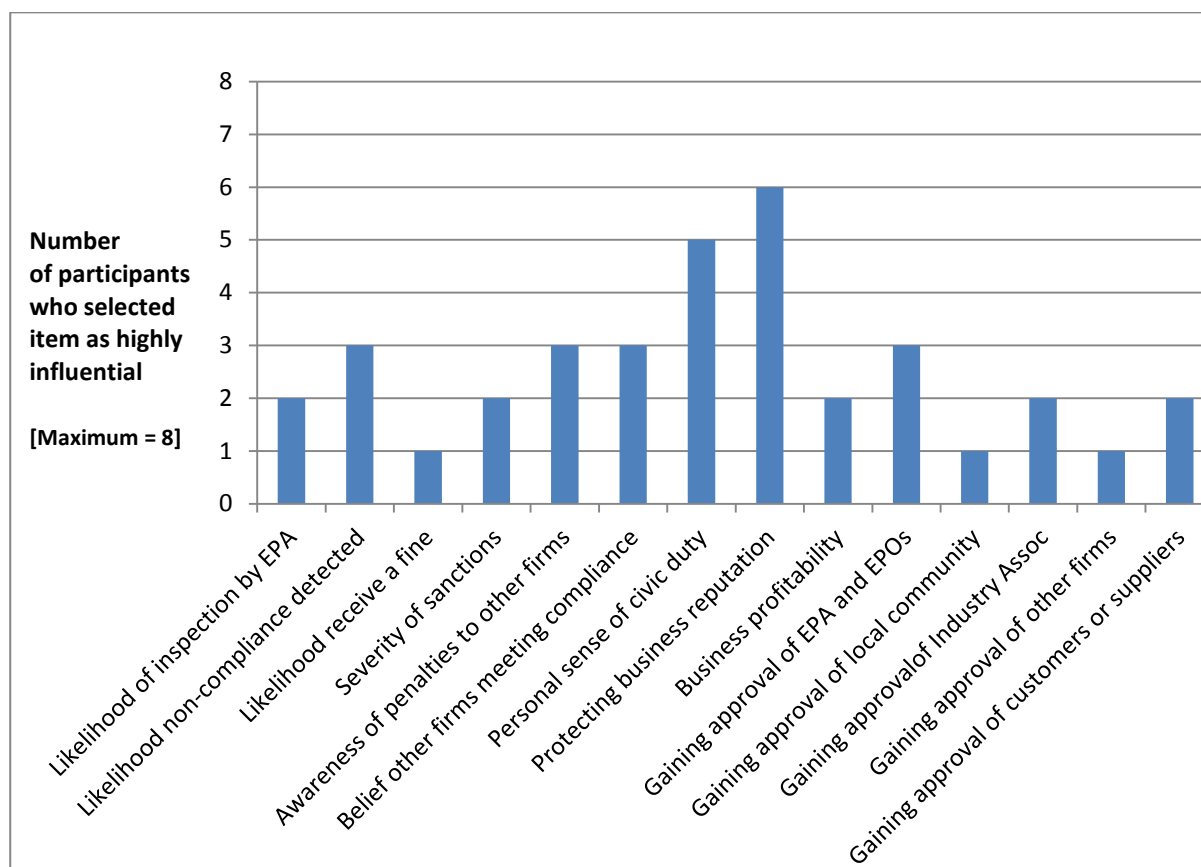
### 3.2.2.6 *Other willing-to-comply factors*

Following the open-ended questions regarding willingness to comply, both UPSS managers and electroplaters were prompted to consider other factors based on the 'Table of 11' that EPA uses to inform some components of its Outcomes research. From an expanded checklist of fourteen items, participants were asked to indicate which factors most influence their willingness to comply (some of which might not have previously been freely elicited). The results from the checklist are shown in Figure 4. While all the items received at least one nomination, the results reinforced what had previously been articulated, highlighting the sensitivities of 'good business' that are at a premium for managers in this study (note that while gaining the approval of the local community did not attract many selections, we would argue that many respondents linked this to business reputation). Other factors such as the 'likelihood of a fine' offered little impetus toward willingness to comply. Given the small sample, caution is required to not 'over-interpret' the results.

Such results suggest that the businesses who were interviewed fell into 'willing and able' and 'willing but not able' categories based on the compliance indicators developed in the Stage 1 BWA report with EPOs (Curtis et al. 2013). These results would no doubt be different among 'unwilling' businesses. A key point to mention in the context of EPA's outcomes research is that while 'business reputation' was the most frequently mentioned item, an explicit measure along these lines does not currently exist in EPA's outcomes research.



Figure 4: Factors that influence willingness to comply



### 3.2.3 Factors that influence capability to comply

When it came to describing the factors that influence capability to implement environmental business behaviours and/or compliance with environmental standards, most participants responded with negatively-framed answers covering the following key themes.

#### 3.2.3.1 *Dedicated compliance resources*

UPSS managers strongly believed that meeting their compliance obligations and preventing leaks from their sites were simply the 'costs of doing business'. To this end, they have invested in dedicated tools, processes, staff and systems to ensure their compliance capability and to detect potential leaks or other non-compliance events:

*[We have] a licensed software that statistically analyses the trends, we get the summary that, oh, it looks like there's a potential fuel release and then it triggers an investigation in terms of whether that fuel release is accurate or is it just a calibration error ... [If it is an actual fuel release] we get in and we test, we monitor, we assess and then we, yeah, we review it and we make a determination whether there is contamination into the subsurface, into the environment ... then that's where the environment team gets in, we get our consultants. **UPSS***

*Zero to ground means we do not spill a drop. We have reporting mechanisms and incident reports that the slightest... even the slightest drop gets reported. We analyse the reasons why and we fix them. For example, if we know that a certain brand of nozzle drips and because we've got so many trucks we get that information and we look at it, we got back to the manufacturer of the nozzle and say, "Hey, you've got a problem" or B "We are changing nozzle size." Yeah, because it's not the equipment that will get the bad reputation if there is an environmental problem, it's Mini Tankers. **UPSS***

With such investments, there was a sense that UPSS managers were less reliant on the EPA to support their compliance obligations:

*I think as a business we understand our responsibilities and therefore we resource accordingly. I think we've got the internal expertise to therefore not really rely too much on EPA guidance.*

#### **UPSS**

These findings are consistent with those from the Stage 1 BWA report, where EPOs described that 'size does matter' in terms of larger businesses having the resources to invest in their compliance capability. While some electroplaters described similar investments (albeit at a smaller scale), they were quick to point out that their potential to make such investments are being undermined by the downturn in manufacturing in Victoria and increasing operational costs, which will be described in further detail in the next section.

One final point to note is that while UPSS managers were able to articulate their significant investments in compliance capability, their degree of control over individual sites could still be compromised by the specific ownership and/or operational arrangements:

*There are occasions where we have a site where we don't own the tanks. So these are the ones where the lines are blurred where we operate the site through either a staff member or a franchisee ... but we do not own the tanks or the lines. So we then expect the owner to do his own maintenance work ... they're always the curly ones ... if we've got exposure. **UPSS***

*I guess that's probably the dealer owned sites where we don't have that direct influence. Yes, so it really is up to the individual dealers how... we can't control their business drivers but we can obviously work and best inform them ... Their business drivers are around sales and about making profitability of that individual service station's operations. Yeah, and as long as they're getting regular fuel supply from us they probably don't have any other interests in terms of the environment. **UPSS***

In such cases, UPSS managers described how they deployed 'relationship managers' or something similar to assist these sites meet specific compliance obligations. Yet there is still a sense of having a lack of direct control on the compliance performance of such sites.

#### **3.2.3.2 Costs of compliance**

While both UPSS and electroplating managers believed that the burden of cost was the biggest influence on limiting their capability to comply, electroplaters concentrated more on the immediate costs of compliance, whereas UPSS managers pinpointed future costs of acquiring non-compliant sites (based on EPA guidelines as opposed to regulations), and the expense of remedial improvements and loss of revenue from unleased properties. These issues are also discussed by the BBC team in Section 3.3.1.1.

For electroplaters, the pressures of a shrinking market, departure of a primary customer base in auto manufacturing, and prohibitive costs for global trade have stressed their bank balances and future prospects:

*Well I can tell you right now, shrinking market, a death of an industry. So no one is going to spend money on complying now, no one. So everyone's just going to skirt around the problem and if they get caught they'll say, "Yeah, we'll do this, we'll do that. We'll do the bare minimum that's necessary". **Electroplater***

*Business is diminishing which means there's more people competing for the remaining business which nearly always means ... there's less profit in what it is you're doing because it's more competitive. It's cut-throat and then on the other side of that balancing act is an ever increasing set of costs for compliance. And those two things really do butt heads. **Electroplater***

*Once our car makers are gone there will be a lot of people fighting over an increasingly small market of work and with it, ever decreasing profit margins from which to pay the waste disposal costs. Those who are still around in six years' time are then confronted with the problem of the disposal being completely impossible or totally cost prohibitive. **Electroplater***

*We're having to compete with parts, not just locally, but overseas where these sorts of things are common practice and people get away with them. At the end of the day it's giving these other businesses unfair advantages because there's certainly costs involved in doing things the right way. And if we're doing it the right way and someone else is doing it the wrong way. **Electroplater***

These financial strains limit the capability of small-to-medium-sized metal finishing enterprises to spend on compliance-related upgrades to their facilities and business behaviours:

*It just costs too much and to put a bunded floor in and say we're going to move all these tanks out in the process in the effluent treatment area and to do that we've got to shut the plant down for, I would say a week. And we can't go without production, we can't, we've got deadlines, we've got customers' stuff, everyone screaming for their stuff, can't afford it, can't afford it.*

**Electroplater**

On the other hand, UPSS managers were more concerned with future costs related to potential changes in guidelines or regulations in the fuel storage sector, and varying environmental standards across different States. Generally these managers are concerned about how to manage business acquisitions and growth in a dynamic regulatory environment.

*...so competition is fierce, [and with] others not complying, my CFO may not be as sympathetic to environmental costs in the future. UPSS*

*We still do work here [Victoria] but if anyone in finance decided to read the environmental requirements in Victoria they'll probably go, 'Hang on guys ... Why are we spending this money?' So we're trying to find a balance down here. We're a responsible organisation, we're not trying to say we're not going to do anything, but if I was in New South Wales I could go and say, 'I need \$1 million next year for these three sites.' They'd go, 'Fine' without question because the regulation is very clear there. UPSS*

In sum, while managers from both the UPSS and electroplating groups felt the pressure of expenditures when it came to capability to comply, responses by the two industry sectors diverged around the temporal features of cost.

### 3.2.3.3 Staged implementation approaches

A related concern that influenced capability to comply for both the electroplating and UPSS participants was the desire for a collaborative approach to reach compliance including step-by-step strategising for change, and a level of EPO expert knowledge about how compliance in a particular business could be achieved. These issues were also identified by the BBC team, discussed in Section 3.3.2.5 below. For the electroplaters—being in a compromised financial situation because of dwindling prospects for the metal-parts manufacturing industries and the rising costs for staff and compliance upgrades—support from the EPOs for gradual business behaviour changes is much more actionable than sudden expensive shop-floor revamps. For the collaboration to be effective, electroplating managers need the EPOs to understand operational requirements in the metal-finishing industry, and embrace a collaborative rather than a policing approach to compliance:

*We would like to see a stage process for implementing required change, a working-towards attitude. Not saying, 'Okay you've got one month to sort out this \$600,000 problem you've got.' [Rather saying] 'Let's establish a time pattern, and set goal dates to achieve certain stages of this overall objective.' And I think they're more than willing. Yeah, so sequential, you know, 'so we're going to give you 3-6 months to have this much done. Now is that going to be achievable for you?' Like a bit of a dialogue back and forth ... more optimised situation per business, for where they're at in the world, and an appreciation for what their capabilities are. You know, horses for courses. Electroplater*

*I guess a working towards attitude. Like, not saying, "Okay, you've got one month to sort out this \$100,000 problem you've got". Let's establish a time pattern and set goal dates to achieve certain stages of this overall objective. Electroplater*

The UPSS managers also expressed how a step-by-step approach to compliance would greatly facilitate their capability to comply. In particular, a more in-depth understanding from the EPA about how a large corporation, made up of multiple, smaller operating sites, has immediate needs for flexibility and responsiveness to a changing business environment, could have capability repercussions:

*Capabilities are such that at the moment we are managing our liabilities under our own steam and our own direction. So we were doing the same (in NSW) and all of a sudden the EPA said, 'You've got to notify every site that's got xxx....' All of a sudden how do you manage all of those sites in one big hit? So you can't have a measured approach about what you're doing, because*

*we don't have an open cheque book to just chuck money at it. So capability, it's financial, but it's bigger than financial. It's being able to do it staged, I suppose, and it's also being able to do it on a risk-based approach, it's got to be risk-based. UPSS*

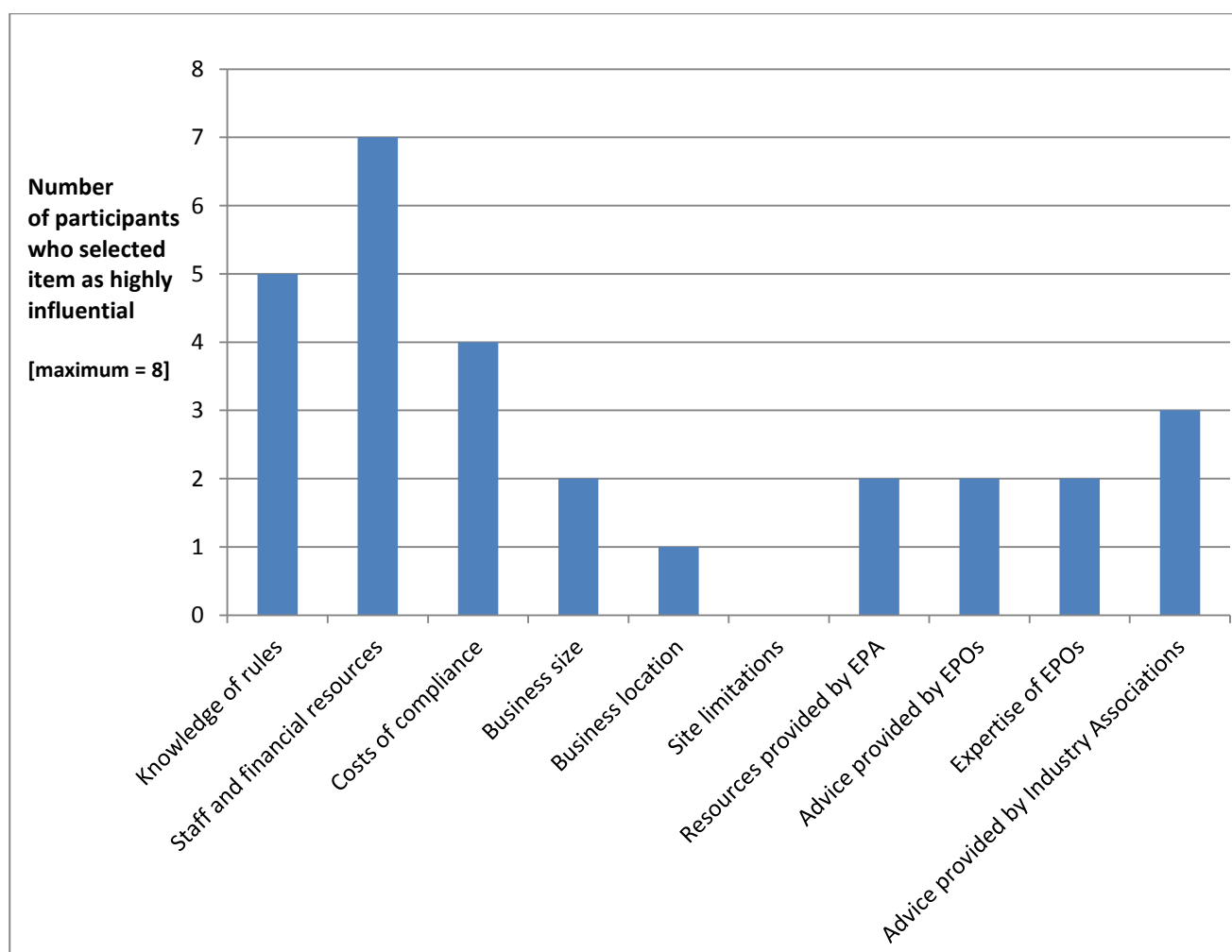
In the 2013 BWA report, a number of EPOs expressed the value of taking a staged or step-by-step approach, especially with 'willing but not able' businesses. The EPOs described how they would tailor their required actions with the capability of the business in mind to ensure certain compliance outcomes could be met (rather than being so onerous as to not have any realistic chance of implementation). That is, EPOs saw the benefit of using their discretion based on immediate circumstances confronting them during an inspection. It now seems that businesses also place great value on this approach.

### 3.2.3.4 **Other capability-to-comply factors**

Both electroplaters and UPSS managers were prompted to select the most influential pre-determined factors from a structured checklist of ten items. These factors represented potential influences connected to business capability to comply with environmental standards and/or implement environmental business practices. Only one of these factors – 'knowledge of the rules' – comes from the original Table of 11. All the other capability-related factors are 'additions' and are based on an expanded set of capability considerations (May 2005; Winter & May 2001).

The results from the checklist are shown in Figure 5. All but one of the factors ('site limitations') received at least one nomination, with the results, unsurprisingly, reinforcing the emphasis that business managers (both electroplaters and UPSS managers) placed on costs, financial resources and staff numbers. In this case, these factors are perceived as negative influences on willingness to comply. Given that both the Table of 11 and EPA's outcomes research places limited emphasis on capability considerations, this might be something to consider in the future, in order to provide a more detailed account of compliance drivers and barriers.

**Figure 5: Frequencies for factors that influence capability to comply**



### 3.2.4 Business responses to EPA initiatives

In order to understand more fully business managers' perceptions of their interactions with the EPA, we asked both electroplaters and UPSS managers how they see the role of the EPA. The findings discussed here resonate with those of the BBC team, discussed in Section 3.3.2 below. The responses were mixed, ranging from EPA establishing a level playing field for businesses, setting and enforcing environmental standards, acting as a compliance adviser, or performing more of a policing role:

*The EPA is to provide the laws regarding the environment protection and the environment. They're there to monitor and ensure that companies such as ours comply and they're there to prosecute those that don't comply. **UPSS***

*(Their role) would be to set guidelines and to make sure that they are stuck to, but in an egalitarian way, put it that way. Not to come down with Draconian force. **Electroplater***

*Yeah, their main role is just to basically police the way people are operating their businesses and how waste is disposed of and how it's contained, whether it be in processing or in storage situations. **Electroplater***

But there was a feeling that EPA, like the businesses themselves, are at times compromised with the requirements to do 'more with less', and cannot possibly cope with all non-compliance events or maintain constructive relationships with industry:

*I just think maybe they're understaffed and maybe they're burdened with a lot of work for a small group of people. And maybe they get a bit of tunnel vision and think, 'Well if we get preoccupied with everything else that we see on our way out to target this specific group of people that we're supposed to be targeting, maybe we won't actually get through it'. **Electroplater***

*EPA is underfunded, absent, and [has] no one to engage with. And that is not just a generic 'this is where they are now' versus 'this is where they were five years ago', this is if you look at the other EPAs across Australia they are so far behind the others and they used to be the number one EPA. **UPSS***

*I think they're very successful in setting the guidelines, I don't think they're very successful in maintaining them or getting the shift in the industry that they really, really want. **UPSS***

We were also interested in getting feedback from interviewees on initiatives that EPA has introduced to support or foster compliance. This might involve media releases, guidelines, online resources, letters to businesses, inspections and inspection reports, stakeholder engagement, relationships with industry associations etc. Given the different histories of the UPSS and electroplating sectors with EPA, there were some tangible differences in the responses provided. For one UPSS manager, there was a sense that EPA was currently conducting a 'fact-finding' mission about a sector that they have had limited engagement with so far:

*So the recent initiative that EPA is doing is an institute initiative to establish how we manage our UPSS. Because I guess what they're trying to do is they're trying to get their officers out, their EPOs out and to figure out what's going on their sites when they don't know anything about these sites. So they're on a fact-finding mission from the experts, if you like. **UPSS***

But there was already a feeling among UPSS managers that this engagement process was slow at times and they were waiting for key decisions to be made:

*So I guess we have these quarterly engagements with the EPA so we've already informed the EPA of our... I guess our priorities and those decisions that are being affected and taking longer than we feel it should. So we're advising them that some decisions are taking a little bit too long and we need to come to a pragmatic agreement ... Yeah, we can't just keep stretching it out. **UPSS***

Furthermore, the discrepancies among regulations in some states, and guidelines only in other states, causes confusion and high risk for the growth strategies of their businesses. And because of the non-binding nature of guidelines, some UPSS managers felt that they did not always warrant or justify much attention in the context of other competing priorities:

*EPA have talked about doing this mandatory notification for a number of years, but no one's written it. It's got to be written, it's got to be put to public consultation and then it's got to be gazetted and it's got to be ratified. [But that] is three years away. So nothing's going to happen in*

three years. In the meantime, the UPSS firm is unable to conduct business on this property [because of unrecognised contamination that was not caught under the guidelines only protocol].

#### **UPSS**

So we know we've got potential issues but it's very hard to go to my business and say, 'I want to do this work in Victoria' and they're going, 'Okay, what part of the regulation are you breaching?' Yeah, that's a good one considering in New South Wales it's clear, South Australia it's clear, WA it's very clear what the expectations of the regulator are. **UPSS**

I just sat there and said, 'No disrespect but it's a guideline' and they all went, 'I know it's a guideline'. And they sat there and there's a technical guy in the room [from EPA] who actually said, 'I was on the phone with a guy the other day, a developer, a one man band, and he said to me, 'I'm reading this guideline and it says I have put monitoring wells around these tank bits, around these tanks?' And he said, 'You should'. And he said, 'Well it's a guideline,' he said, 'you should'. He said, 'Oh it's a nicety, so I don't have to do that' and hung up the phone. So that's the EPA's challenge. **UPSS**

And the main thing there to add is in Victoria the UPSS888 which is how you're supposed to manage your underground petroleum storage system is a guideline, it's not a law. It's not law, it's not legal. So if I owned a service station on my own I wouldn't do anything. **UPSS**

In terms of business responses from electroplaters, feedback revolved mainly around EPA's recent inspection regime with the sector and accompanying communications. While it has been articulated previously in this report the frustrations that electroplaters have experienced in terms of the lack of expertise and consistency among EPOs, as well as an unwillingness on occasion to consider staged implementation approaches that take into account the capability of the business, there was still acknowledgement that EPOs perform their role fairly and collaboratively:

I mean my experience this time around has been good and I think that they were very fair with what they came out and looked at and the way it was discussed and then the follow up afterwards I was very happy with it. **Electroplater**

I can't remember their names but they were very easy to talk to and very approachable. And I think the days are gone where someone comes out with their whip and, sort of, says, 'This is what's happening and this is...' they want to get you to the right place if you're not there ... [It is] a much more different attitude to today than 20 years ago. **Electroplater**

The guy I dealt with from the EPA, if ever I've got any more dealings with them, I'll be going back to him ... Yeah, he was a really nice guy ... Because I reckon I stretched his patience further than anyone's patience has ever been stretched ... [and speaking the same language] really made a difference. Despite having to pay 10 grand. **Electroplater**

Electroplaters were also positive when it came to the letters that the EPA sent out prior to inspections, which in some instances had prompted them to take actions:

'(EPA) certainly got circulars out to all the electroplating businesses in Melbourne and let them know what they'd be targeting, what the expectations were (via collaboration with AISF). There were some guidelines given as to how the bunding should be put together and how it should be maintained. So, yeah so that was all positive.' **Electroplater**

Well because I'd seen that they'd made an announcement [via a letter] they were going to visit all the businesses and there were certain things highlighted there so I thought I'd get on the website and prepare for it. **Electroplater**

We always read the stuff that's provided and things like that. So I guess from receiving that letter it makes you aware and know what your responsibilities are. So we do act on them so if something comes up we act on it. **Electroplater**

Such comments were aligned with EPO anecdotal feedback from the field, saying that the letter had served to prompt on-site actions prior to the visit and/or resulting in less combative interactions during the visit itself.

But some electroplaters felt previous 'support to comply' discussions were being replaced by more policing-type approaches:

Yeah, EPA have clearly stated in their last meeting that we had with them that they've had a strategic change in position from compliance and working with their, I won't say customers, but

*the word is working with their industries, to policing. And they've stated that quite clearly.*

**Electroplater**

*At the moment there's a fear of them coming around like storm troopers.* **Electroplater**

Furthermore, some of the online guidelines provided by the EPA did not always align with business needs, assuming they could be found on EPA's website in the first place ('Well I went to the EPA website, I thought it was pretty difficult to understand'). Faced with this dilemma, some managers have taken it upon themselves to develop more relevant guidelines (although such initiative at times resulted in later complications):

*If they [EPA] just read their bunding guidelines [from the webpage], which are a joke ... they are a joke and I reckon my daughter, who's not very artistic, did better drawings when she was in kindergarten.* **Electroplater**

*It is absolutely true that we will bend over backwards to observe the regulations ... [But] when I got these guidelines from EPA I immediately responded, 'These guidelines show me the bunding requirements for containers of process solutions. I need it for waste disposal' ... So what I had to do was actually draw up what I was planning on doing and then get the people to sign off on it. Less than 12 months later they're back and looking at the bunding work, [saying to me] 'that filter cake bin doesn't sit in the bund, that really should be in a rollover bund.' And I said, 'Well I've got an email dated about 12 months ago telling me what I had proposed was acceptable'.*

**Electroplater**

Unsurprisingly, electroplaters felt there was room for improvement in terms of achieving greater alignment between EPA activities and the needs of their businesses. One manager discussed the prospect of an amnesty program with no fines for electroplaters during a pre-inspection phase, while another was adamant that the government needed to provide greater funding assistance to support compliance as part of a reciprocal relationship with business:

*I think it would be good to say, 'Now this is what we're looking at and this is what we, sort of, need to comply with,' and give people an opportunity to look at it and do something about it on their own time. Before an inspection, yeah, and give this informal advice. There should be a pre-inspection or an amnesty program.* **Electroplater**

*It needs more government assistance. If they want everyone to conform with the tight standards then it's got to be made affordable, because unless it's affordable people are not going to spend the money ... So if you've got a plating shop, one of the biggest factors is the bund but it's very expensive to do so. [If the EPA were to say] 'We'll bund it for you if you make sure that all your practices are good'. That would clean up 90% of it.* **Electroplater**

Several electroplaters were also unclear and upset about the fact that Victoria has four times the gate fees of other states for disposal of particular chemical waste, and that export of waste to other states is prohibitive:

*I know it's a state by state thing but I can't understand why we live in Australia and we can't ship waste across the (state) border. If there's only one point that we can ship it to in Victoria then they've got a monopoly on that and they can charge what they like. Make it competitive. We've got to be globally competitive ... And these prohibitive costs are making it more and more difficult for us to continue to trade.* **Electroplater**

To address such challenges, some electroplaters recounted previous attempts at forming a partnership between the EPA and the Australasian Institute of Surface Finishing (AISF), which was linked to providing financial assistance to the industry. But such assistance did not eventuate, raising questions about the value of any such partnership, especially when electroplaters felt they had acted in 'good faith':

*That was the whole idea of the compact with the EPA was there was going to be money available for businesses to go down certain paths ... In terms of what I've heard, our industry association basically gave EPA a list of things that they should be looking at. It was all tied in with the funding being available and then the funding was, sort of, withdrawn. So it was, sort of, like, well why have we all gone out on a limb and provided all this and sat down and gone through it all and it's not really reciprocated, sort of thing.* **Electroplater**

But one area that both UPSS and electroplater managers agreed on, which could be fostered through links to industry associations, was that EPA and its staff should be better informed about

their respective industries, which would inject added know-how and technical expertise (perceived to be currently lacking) to the EPA's negotiations and compliance directives:

*The EPA should be working hand in hand with the AISF. The AISF can share information with the EPA so if the EPA wants to look at the database and say, 'Okay, we've got an electroplater out in Dandenong and we're pretty sure he's not compliant. He only does zinc plating and he's got a two stage passivate process, gold and silver ... Okay, let's have a look at the schematics of the basic processes he needs to treat the water. So let's go out there.'* **Electroplater**

*They [EPA] don't necessarily know exactly what they're looking at, they don't have the expertise to understand what they're looking at. And they either see it or they don't see it and if there's bad practices going on and you can't recognise it then as far as the paperwork's concerned you're spot on, you're compliant.* **UPSS**

*We have a lot of old sites and so the challenge for EPA is when they train their officers to come out and do audits on service stations is they need to be considerate of a service station that is built now and the regulations for things like stormwater drainage, versus a service station that was built four years ago and has had no upgrades, which cannot be penalised for something that was built to spec four years ago versus today. First thing they're going to do is they're going to go, 'Where does all your stormwater drain to? What happens if there is a spill?' I can see it coming. And they're going to say, 'You've got to do this, this and this'. And [I would say], 'I'm sorry guys if you're going to do that then how are you going to expect us to pay \$1 million on every service station you do on inspection on to upgrade our drainage' or whatever it costs, which is not going to happen.* **UPSS**

Based on these comments, it is evident that while some EPA activities have garnered some positive responses from the industry sectors, challenges remain in terms of EPA being seen to better support a range of compliance and business endeavours. Whether these areas are realistically part of EPA's mandate is another question. These findings are picked up below in the BBC's discussion of intersections between business and EPA practices (Section 3.3.2).

### 3.2.5 Summary of BWA findings

In general, similarities among the issues faced by electroplaters and by UPSS managers abound in the data. Both of the industries value the role of the EPA as a referee to provide for an even playing field for their industry. Both hold business reputation as a key positive influence on willingness to comply, and both are struggling with the pressures of a competitive global market and difficult operational costs. Furthermore, both have struggled with what they perceive as ill-informed compliance approaches and directives from EPA when it comes to the specifics of their daily businesses behaviours.

It is in the details that the differences across the two industries emerge. Differences such as the aspects of regulations that matter most, be it waste disposal restrictions for electroplaters, or undefined site contamination for UPSS firms. Other comparisons rest in differences between immediate costs that impede capability to comply for electroplaters, versus future and unknown costs for UPSS managers. These ambiguous future costs are related to informal compliance guidelines that exist in some states, and regulations in other states where the large corporations also operate. The lack of clarity around site conditions and contamination levels make assessing properties for acquisition a high risk exercise. Future reparations to meet regulatory compliance can be expensive and unforeseen.

While applying some of these insights to staff training, partnerships, communication material and survey research might offer a selection of benefits, the point must again be made about the limits of the sample. That is, based on the compliance indicators that were developed in BWA's Stage 1 research report, it was clearly apparent that most of the respondents were willing compliers. The group of businesses interviewed in this study do not cover the full spectrum of businesses that EPA deal with on a day-to-day basis. Having said that, the compliance behaviour of the 'good apples' should not be taken for granted, as they need to believe that there are benefits in investing in compliance, and that those who don't are confronted with a range of obstacles and deterrents. With this in mind, the insights in this report have direct relevance to securing the ongoing compliance of existing 'willing' operators.



### 3.3 BBC findings

This section begins by describing some of the practices businesses perform in their day to day work, focusing on the competences, meanings and materials that shape those practices. Section 3.3.2 then describes how those practices intersect with EPA's compliance and enforcement practices. Finally, section 3.3.3 describes the role of various 'intermediaries' in shaping and performing business practices; and section 3.3.4 provides a summary of the findings.

#### 3.3.1 Business practices

Business owners/operators and their staff perform a wide range of practices in their day-to-day work, which vary depending on the size, type and nature of the business. For electroplaters these can include: plating products using either manual or automatic lines and various different chemicals; liaising with customers and managing orders, which may be performed by office staff or by the owner/manager; and conducting quality control. For fuel retailers they can include serving customers; restocking product lines; monitoring fuel levels; and servicing vehicles. There are also various practices that both electroplating and fuel retail businesses perform, such as managing staff; meeting health and safety requirements; paying bills and managing finances; maintaining equipment; and making decisions about equipment purchases and upgrades, which involves conducting financial and other assessments.

Depending on the size and nature of the business, there may also be committees, meetings and other internal processes to participate in. To perform these practices, business owners/operators and their staff employ a wide range of technical, bureaucratic, and practical skills and competences. They interact with and utilise numerous materials including site equipment, communications materials such as guidelines, testing and monitoring equipment, and the physical qualities of the site itself. They also draw on shared meanings or understandings about the role of these practices and how they should be performed.

Electroplaters and fuel retailers also perform a range of practices to reduce and manage their environmental impacts. These are summarised below under three sub-headings: pollution prevention practices; remediation practices; and waste management practices. Each of these groupings involves various competences, materials and shared meanings, which collectively shape business practices.

##### 3.3.1.1 *Pollution prevention practices*

Electroplaters perform various practices to prevent chemicals used onsite from contaminating soil and water. For smaller independent operators these practices are generally very 'hands-on' and have been learnt on the job over time; they include storing chemicals in contained (bunded) areas, testing pH levels and chemical composition of wastewater, and keeping spill kits on site. Larger operators tend to use more sophisticated automatic systems to monitor water leaving the site, which trigger alarms if unacceptable chemical levels are detected. In contrast to smaller independent operators, larger companies generally have dedicated environmental management staff and perform a mix of 'hands-on' and bureaucratic pollution prevention practices.

Pollution prevention practices are shaped by the practices of authorities, such as EPA and water authorities, and can also be shaped by internal policies. For example, one company replaced its underground tanks with above-ground models to bring them in line with global company policy:

*we have the [company] guidelines, our corporate guidelines – according to that guideline we can't have any underground tanks for waste treatment processes, so that was the main driving force [to] bring our treatment plant above ground... [last time] we went through the audit process they found it was a non-conformance, so we had to then pretty much start working on that project. P13*

For UPSS operators leak prevention can be loosely divided into two groups: equipment, and monitoring. The first group includes the type, age and location of equipment; how and how often that equipment is maintained; and what types of equipment are installed when replacement occurs. 'Monitoring' includes monitoring losses and gauging tank levels; testing groundwater and soil; and testing tank integrity. Equipment and monitoring practices vary significantly between businesses:

while some are progressively installing automatic tank gauging systems and contracting third parties to monitor Statistical Inventory Reconciliation Analysis (SIRA) data, for example, P4 claims many others still rely on very basic monitoring to detect leaks:

*we call it the rod or the stick: you've got your fuel; you shove a stick in the hole; find a wet mark; don't bounce it, drop it in nicely – you learn this when you're young – pull it up; average of three dips [although] most people don't, they do one or two. The wet mark: mark it ... Now what it doesn't allow for is water down the bottom, or [there could be a] wave as a car drove past... P4*

Several interviewees suggested that small independent sites may avoid undertaking detailed monitoring, partly through fear of the costs that may result from finding a problem.

*companies would like to know, generally speaking, if they have problems because then they can manage them; but I would suggest there are probably some small mums-and-dads or people who own one or two service station sites who just don't want to know ... [A service station network manager] had in the past a bit of frustration with the smaller mum-and-dad sort of operators because they were terrified of what they might find if they do a test: 'we don't wanna know' ... P6*

However, others felt small operators would monitor their fuel closely: P1, who owns and operates a service station and mechanic workshop, said he would always want to know if he had a leak because he would not want to lose fuel that he had paid for. Other interviewees agreed that small independents would probably monitor their systems closely, but felt they may be less likely to act if a problem were discovered (beyond closing off the associated pump and tank):

*[Small independents] would know their dips better than what we would know ours; they manage their fuel deliveries very well. It's when a leak has been detected – what do they do then? P2*

*What you've got is that [small operators] sit on problems, so that if you've got a tank that leaked [they will say] 'okay, let's seal it off, pump it out; put a tank next door'. P4*

Large companies generally appeared to be more proactive about leak prevention, and as with larger electroplating companies their practices were more aligned with the desk-based, risk management approach that shapes EPA's practices. For example, some were implementing programs to gradually replace old tanks with new fibreglass models at their sites, and this was framed as a risk management strategy:

*We have an internal risk ranking [that] determines whether a site is a high risk, a moderate risk, or a low risk ... we're looking to re-tank 120 sites. That's based on us not having a fuel system older than 20 years by 2030 ... If we found a tank that had a hole in it we'd undertake the appropriate investigations, but we would take that tank out of service. Our risk management would then increase the rating of the site to such a level that all of a sudden it becomes a high risk site that then triggers a re-tank; now, it may be six to 12 months before we actually re-tank the site, but it may not even [have been] listed as being a site to re-tank in the next five years [otherwise]. So that's how we manage our risk. P2*

The availability of resources to purchase pollution prevention 'materials' or hire dedicated environmental management staff and/or engage consultants to perform different pollution prevention practices appears to be critically important for both small and large companies. This resonates with BWA's finding that cost is a significant factor influencing 'capability to comply' (see Section 3.2.3.2).

*Independents don't like spending money, and they'll do the minimum amount that they possibly can; whereas if you look at the majors who've got money, they'll actively get out there and do as much as they can. P6*

*All the oil majors have their own programs with their own people internally appointed ... to manage portfolios or sites, or somebody will be managing ongoing operational sites [or] divestment portfolios; and they would have their own contracts and standards and [procedures] ... so these people have a fair bit of experience in the way they manage their portfolio risks. And the way the smaller guys operate is they'll tend to just operate their sites until a problem arises and then go, 'ooh, we need to do something about this...' P5*

Intermediaries such as independent retailer network managers and central office staff play a key role in shaping or mediating the monitoring practices used onsite. For example P4, who manages an independent retailer network, explained what he requires of member sites:

*supervisors gotta walk the site every day, and if they smell fuel they gotta do something. And we've got monitoring wells, and they know that if they see fuel or smell something they gotta go to the next stage, which is confirm their tank dips. Then we've gotta go to inspection chambers and pull them up ... P4*

P2, meanwhile, works in the central office of a large service station chain and says franchisees play a very minimal role in monitoring; this centralisation of environmental management practices was reportedly a common approach among the major oil companies and service station chains.

**Interviewer:** Do [franchisees] do anything at all in terms of letting you guys know if they think there's a leak or a problem?

**P2:** Not really, no.

**Interviewer:** They wouldn't know?

**P2:** Oh, if they see fuel flowing across the forecourt then they might pick up the phone [and] call our support centre. But apart from dipping the tanks they have nothing to do with it.

For larger operators who have internal expertise in environmental management and protection, pollution prevention may shape initial decisions about purchasing or leasing a site:

*I only buy sites that have contamination on the top soil or an isolated contamination of a spill, or something that can be plotted; and we'll drill around it to know that. I'd never buy a low-level contaminated site with a high water table ... So the first thing we look at is water table [and] then [we look at] the age of the tanks ... P4*

P4 had learnt how and why to conduct these types of assessments over time, as the role and awareness of environmental regulations within the fuel retail industry increased.

As found by BWA (see Section 3.2.2.1), several interviewees regarded preventing pollution as important to their business or company's reputation, and for some this was linked with the cleanliness of the site:

*[Our name] could be brought up through the media and that's something that we hold dear to our heart – [we have] a very good name in the industry ... and we hold that very tightly to ourselves; not just [our branch] but the [parent company's] name as well, which is worldwide ... P9*

*Oh look I make a point of it, to keep the place clean. I don't know if you've ever been into other plating shops but some of them you basically gotta put on a pair of gumboots to get in there... it's good PR, the couriers come around and say, 'look! You guys have the cleanest plating shop'; and they might go to do a delivery and they'll say, 'oh you should see [x business], the place is spotless'. And we've actually picked up a bit of work just through word of mouth that way... P10*

Others, meanwhile, felt the way the site looked should not necessarily be taken as an indication of a business's compliance or environmental performance, as discussed at section 3.3.2.1.

Another meaning associated with pollution prevention practices was the understanding that poor practice may result in clean-up costs and fines:

*Well if you [aren't proactive] you end up with these situations; if we didn't think that we were doing the right thing – we just let it go, and just did the bare minimum and things started to degrade, and we started to pollute the surrounding environment – we would be charged with a huge bill to clean that up. Not only would it be the clean-up but it'd also be the fines... P9*

Some interviewees felt a degree of connection to their site, which they could link with the need for environmental protection. For instance, P10's interest in windsurfing encouraged him to think about the relationship between the condition of the bay and the practices he performs as an electroplater:

**P10:** *It makes you actually think about what you're doing, and how everything you're doing is affecting the oceans and stuff. I windsurf out there [and] the water there's putrid compared to the other end of the bay. So the last thing I wanna do is put any more crap out there.*

To summarise, our findings suggest pollution prevention practices are informed by the nature and materiality of the site; existing resources and competences; and shared meanings about environmental protection and pollution prevention.

### 3.3.1.2 Remediation practices

Site remediation is a feature of both the electroplating and fuel retail industries. Remediation practices include technical work such as testing soil and water bodies to determine the extent of contamination; removing underground equipment, which may or may not be replaced and may also entail removing residual chemicals, fuel or wastewater; using specific machinery to remove contaminants, such as hydrocarbon; and disposing of contaminated soil. They also include bureaucratic practices, such as applying risk management strategies, interpreting regulations, managing divestment portfolios and liaising with authorities; and financial practices, such as applying for financing, developing budgets and liaising with banks or other bodies. Again, the mix of practices performed varies between businesses, often according to business type and size.

Remediation typically involves one or more intermediaries (see Section 3.3.3), including central office staff; consultants; contractors; and banks and lenders. While some of the major oil companies undertake technical remediation work in house, most appear to contract it out.

*It's just [P3] and I who are experts in [our company], so our work is tendered to consultants who actually perform the work: they provide [a] proposal to do the work; carry out the work; and provide us with the report. Some of the larger oil companies do some of their own remediation work, some of the technical work in house; whereas others don't really do that technical work but they'll have someone who can understand it and second guess it and so on... P2*

*[X company] do their own fieldwork ... which is highly unusual for a major oil. P6*

Overall, P3 felt the larger companies had broadly similar approaches to remediation:

*I think we all do things similar ... No [major oil company] would walk away from a problem ... But some of them are a little bit more proactive when it comes to remediating sites. P3*

Interviewees agreed that remediation is costly, partly because contamination often occurs below ground level and is therefore difficult to test and clean up, and involves underground equipment which is expensive to remove and replace. Other costs include soil disposal and transport costs, which interviewees say have increased significantly recently following the closure of several disposal facilities. P4 said there was great uncertainty within the industry around the costs of remediation, and that this added to site owner/operators' reluctance to deal with problems.

*When someone's trying to clean up something there's no [sense of], 'Oh you're trying to clean up something – let's get this done' ... the EPA [has resulted in] people not cleaning it up because they're absolutely scared shitless of what the bill will be, so they're not getting in the right things ... they're just hanging on to the land, and waiting. They're waiting for a positive environment in [which] they can engage with someone to understand the clean-up costs. They're waiting to sort of take the steps without being penalised, and they're waiting to engage without knowing that someone's gonna slam them and serve notices ... P4*

The BBC team's findings suggest there are key points in time when remediation becomes particularly 'front of mind' for site owners, such as when they wish to sell their land. In these cases, the materiality of the site becomes important for how remediation is performed and 'handled'. For example, a site owner may have suspected or known about contamination but chosen not to address it until an offer was made on their land, or they decided to sell:

*The thing that actually sparks the work to be done is the land value ... Someone comes along and says, 'I'll give you two million for that land'; [the site owner] can go, 'well, shoot, I can at least – I reckon there'd be six hundred or seven hundred thousand – I'll clean it up now'. P4*

Larger operators, meanwhile, may employ office-based competences to perform remediation practices, such as maintaining divestment plans that specify when remediation will be conducted.

*we would generally know [about contamination] because of our ongoing monitoring, and when the lease is coming up we'd have a good run at [remediating] it a few years before to get it to [an acceptable] level. P3*

*Generally the oil majors will have some kind of screening mechanisms to look at their risk sites; they may be fairly high-level ones that say 'we don't know there's any problem on this site until somebody notices an issue'; but they'll have some kind of risk matrix ... and then once they decide to divest sites they'll put in train processes to do appropriate levels of assessment ... P5*

P5 suggested the remediation practices of large companies may also be influenced by the costs of clean up relative to the value of the site:

*P5: some of the umming and ahing about whether they prioritise sites [is because] it's gonna cost half a million dollars to clean a site up; if it's a five million dollar value site in Brighton that's an easy decision. If it's a two hundred thousand dollar site in Kyneton then it's worth minus three hundred! ... the liability's there, but the imperative to go and realise it is perhaps a little different.*

There was a shared meaning among some interviewees that it was not worthwhile to remediate a site if it would continue to be used as an electroplating workshop or service station, which reflected a sense that contamination was to be expected at these sites:

*P2: Well it's an operational petrol station: it has contamination.*

*P3: You'd have to pull all the tanks out, clean it all up; which, from a commercial point of view, doesn't make sense to shut the service station down for six, twelve months to do that.*

*P2: ... You would put tanks back in the ground and continue to operate as a service station; so, why bother until [you're] going to get out of the site...*

There was also a shared meaning that in most cases it was not possible to fully remediate a site:

*with things like groundwater contamination you never start with a certain amount of contamination and finish with zero contamination. You start with quite a lot of contamination, some of which is causing a risk or a perceived risk; and you end either at a point where you restore beneficial uses – which is often not achieved – or at a point where you've exhausted all practicable efforts [and] the residual risks can be considered to be managed... P5*

Shared meanings and competences about remediation varied throughout each industry, with smaller companies often struggling to navigate and understand the regulations while larger companies were typically well aware of their compliance requirements – or at least, were able to hire consultants who could manage the process for them. However, P4 explained that the concept of remediation was relatively new to the fuel retail industry, and required a significant shift in the way business operators thought about their sites and performed their practices. P4 felt that many site operators still did not properly understand the concept of contamination or remediation, making it harder for them to accept the costs involved with such work.

Our findings suggest that the performance of remediation practices are significantly shaped by shared meanings about costs and risk, bureaucratic competences and access to resources, and the materiality of sites.

### 3.3.1.3 Waste management practices

Waste management practices are a significant part of electroplaters' work. Waste is typically divided into two streams: prescribed waste, which is potentially hazardous and has conditions surrounding its transport and disposal; and trade waste, which includes 'wastewater discharged from commercial, industrial, laboratory or trade activity' (South East Water n.d.). The sophistication of waste management practices varies among electroplaters, with larger companies developing highly technical competences for removing chemicals from their waste streams and operating purpose-built wastewater treatment systems; while smaller operators are largely dependent on third parties to perform their waste disposal and treatment practices. Most electroplaters have regular contact with waste transport companies and water authorities through their waste management practices.

Fuel retailers also manage waste, from 'everyday' waste such as oil filters and tyres to remediation-specific waste such as contaminated soil (as mentioned in section 3.3.1.3). Again, practices vary between small and large businesses in both industries.

Most electroplaters had undertaken some efforts to reduce the contamination levels of their waste, and/or the amount of waste they sent offsite. Waste streams were sometimes seen as potential revenue streams, with the possibility to extract metals such as copper and either reuse it onsite, or sell it to third parties. Larger companies were often able to develop in-house waste management facilities drawing on highly skilled engineering and technical staff: P11's colleague, for example, was investigating how to extract and reclaim volatile organic compounds from solid waste and the

atmosphere, while another interviewee's engineering department was upgrading an onsite wastewater treatment system.

Some smaller independent electroplaters were investigating and trialling methods for reducing their waste disposal costs too, which tended to involve simpler methods or competences with less upfront cost than the options larger companies were canvassing.

*I wanted to try and recover metals out of my water so I can reduce my sludge... So now all I've gotta do is set up the procedure for taking those metals out and separating it, and the water; and we'll do that over the next few months ... There's less weight; there'd be less metal in there, so it'll reduce my cost ... So at the moment I'm Classification A; if I reduce my zinc level I'll drop down to level B, which is cheaper again; and if I can come down to C it'll be even better! ... P7*

Financial considerations constrained both the ability to purchase necessary materials and the time available for performing or learning waste management practices. Some interviewees spoke about the importance of short payback periods for waste management materials:

*If I'm going to invest ten thousand dollars [I] need a payback period of about three years ... I can't afford the time to penny-pinch to save a hundred dollars here, fifty dollars here ... I need income that's gonna generate around ten grand a month. P8*

Others talked about the need to convince senior management that implementing waste management solutions was worthwhile, and some felt this was easier if there were matched funding available as it implied the proposed measures were an important area of focus. However, while financial imperatives were obviously critical, some interviewees also derived personal satisfaction from designing and learning new technical competences and/or held a shared meaning that there was a responsibility to do so for the greater good of the environment and society.

*It's all my interest – personal interest, really. Because I'm from the same background, I've done PhD from [x] uni; so as a PhD student you always do research, try new things and so on; so that's why I was interested. When I first came to [this company] all these waste streams were just going offsite; people were not thinking about whether we could do something about this [so] I started doing tests myself ... As I say it's a personal satisfaction to get that concept and now apply it in a field, and [developing] this new plant and achieving that [waste reduction] target was a really, really great achievement for me. P13*

This example points again to the advantage larger businesses or companies have through their in-house technical competence and sophisticated equipment (materials). Dedicated environmental staff are not only able to design technical systems but also have the time and competences to develop budgets and funding proposals. However, this should not be taken to mean that smaller companies do not innovate: fuel retailer and mechanic P1, for example, built his own machine to separate oil from cans and filters. The waste streams are then sold to oil recyclers and scrap metal collectors, who P1 claimed were 'fighting over each other to get at his waste'. Again, however, financial incentives and savings were clearly not the only meaning implicit in P1's practices: he also paid to recycle tyres and filters, which he says he does because he knows his business is inherently harmful to the environment so he likes to be able to 'give back' in other ways.

Regarding trade waste, most electroplaters interviewed did not regard wastewater disposal as particularly onerous or difficult to undertake; in fact, most had established relationships with the relevant water authorities and spoke positively about their interactions with them. By contrast, the practices concerning prescribed waste transport and disposal were commonly regarded as heavily bureaucratic, confusing and onerous by small independents and larger companies alike.

*the certificate system [is] extremely cumbersome and not well-designed for the people who are actually supposed to be using it ... I mean to me it looks like a system that has been designed by somebody who knows really well what they're doing, but not perhaps considering who's ultimately using that system. P12*

**P10:** *It all has to be taken away by the approved sort of thing, which is where all the confusion lies. You gotta find out what's actually in there; you've gotta get it analysed, and then fill in all the forms, and then get an approved contractor to take it away and all that sort of stuff.*

**Interviewer:** *And do you do that yourself on site, or you have to send it off?*

**P10:** *No that has to all get sent out to an analytical laboratory...*

Some interviewees had sought external assistance in managing their prescribed waste practices: one had received guidance from an EPO during a site visit, and another had engaged a consultant to help design an internal system that would work for the staff who dealt with certificates.

*the EPA publish a document and we couldn't really work with it, and then [our waste transport company] has got another document for certificates and that one's a little bit more usable for us. So between the two of us we're kind of figuring out what to do, but ideally that should be coming from the EPA – they should be making it simple for us to do the right thing ... P12*

Our findings on waste management practices clearly highlight the differences between what smaller and larger companies can achieve; however, they also suggest that EPA's prescribed waste requirements in particular are considered difficult to comply with across all business types due largely to the technical and bureaucratic complexity of the certificate system. Similar findings are reported by BWA in Section 3.2.4.

### 3.3.2 Intersection between business and EPA practices

The research uncovered several widely shared meanings that interviewees associated with EPA's practices. These are discussed below, beginning with an overview of how businesses perceive EPA competences and capacity and what they think EPA expects of them. We then discuss shared meanings held about EPA's communication materials and enforcement practices; and finish by describing business's differing needs for support to comply based on competences and resources.

#### 3.3.2.1 EPA competences and capacity

Several interviewees felt that, while individual inspectors were generally knowledgeable enough to perform their jobs, EPA overall was under resourced. P5, for example, felt EPA lacked senior technical staff to provide businesses with the necessary technical competence to perform environmental management practices:

*because of the limitation of resources ... to make it attractive for very senior people to go into EPA is extremely difficult. So their most senior technical people are certainly not the most senior technical people in the industry, and it's not just me saying it ... that makes it very difficult for them to figure out how to manage technically difficult sites; it's difficult for anyone to do it, and particularly [when] you're limited in the resources you have. It's certainly not to blame anyone in there [but] they'd be a lot more able to get the right solutions or the right approaches in terms of regulation if they were able to have more of those senior type people. P5*

Similarly, P2 compared EPA Victoria to EPAs in other states and felt under-resourcing of the Victorian authority made it more difficult to deal with in some ways:

*Victorian EPA's very under-resourced. While typically they have some level of expertise in there I'd even go to private organisations [instead] at some stage ... So I see them more as being a regulator that will issue a notice rather than getting involved in the technical side of things ... the officer is appointed the job and that's the person you deal with, but I think in Victoria they tend to turn them over a bit more; and so you're not dealing with the same person on a day to day basis. They just seem more uninformed I would say ... P2*

This finding corresponds with Stage 1 of this research, which found that EPOs felt under-skilled in terms of their technical and industry-specific knowledge:

*While EPOs are skilled practitioners who employ a diverse range of competencies in the performance of their practices, there are various ways in which these competencies are being challenged or are in conflict. A key issue relates to capacity: strengths and weaknesses vary between EPOs depending on how long they have been in the role, their level of experience with different types of duty holders, their previous jobs, academic background, personal interests, what training they have received, and who they have been mentored by; however, there was a clear consensus that participants feel under-skilled in some areas of their work.*

*The most common areas of concern relate to technical knowledge, which encompasses knowledge of environmental systems and pollutants as well as industrial processes and systems.*

(Strempe et al. 2013, p.26)

### 3.3.2.2 **EPA expectations and shared meanings**

While interviewees generally accepted the need for environmental protection and compliance, smaller independent electroplaters were unhappy about the way EPA had conducted its recent blitz on their industry. Several thought EPA expected full compliance from businesses, which they considered unreasonable given EPA had not engaged with them in recent years.

*Over the years EPA have really just ignored the whole industry, and they're now suddenly cracking down. And people are finding, 'oh hang on, we're not complying'; because there's been really no education or nothing ... P10*

*I don't think it's the right way to go. I mean, they haven't been around for many, many years, and to some platers they haven't been at all; then all of a sudden, you're hit... all of a sudden [EPA] just pop out of the blue and expect everyone to be conforming... P7*

Some also felt EPA had unreasonable expectations about what businesses could achieve in terms of what they could afford to do; what they knew how to do; and what they could fit alongside their existing work practices. In that sense, several interviewees saw EPA as out of touch with or disconnected from the world of business.

*none of them [had] ever walked into an electroplating company before, so they have no concept of what we do; how we do it; the problems that we have; all that sort of stuff. They just came in with the rules, the law ... one of the [EPA] guys commented, 'you don't have to work in a dirty environment – you can work off a clean floor'. [But] just because you've got a dirty floor doesn't mean you're doing the wrong thing. Their perception of how an industry works is totally wrong – we don't all work in a restaurant and we don't all work in an office – we are handling metal that's covered in oil, that's covered in muck and dirt and rust; you know, that sort of stuff. P7*

There were similar concerns in the fuel retail industry. Several interviewees felt that smaller operators would go out of business if they tried to do what they felt EPA was foreshadowing:

*EPA could do a law right now which could shut down every regional service station in country Victoria, in really small towns, by simply demanding they all went fibreglass. Because the economics are that the cost of a fibreglass tank – and then installed to the [right] volume, and the margin the dealer makes – would never pay for it. P4*

*If we had to put in all new monitoring systems we couldn't afford to do it. All that does is help the Coles and Woolies and the big oil companies, because they can afford to do it and we can't; so we'd go out of business. Maybe that's what EPA wants. P1*

In summary, there was a clear perception that EPA staff held different shared meanings about how business and environmental management practices should be performed compared to those held by business owners and operators.

### 3.3.2.3 **EPA communication materials**

Interviewees were asked about their perceptions of various EPA communication materials. These findings should not be seen as an exhaustive review of EPA's wide range of communications, but rather give some indications about how businesses engage with those most relevant to them.

Some interviewees from larger businesses who already held competency in environmental compliance spoke relatively positively of EPA's website and publications:

*sometimes it could be hard to get the information you are looking for ... you have to go through all these big documents ... otherwise EPA website is pretty good – it's got a lot of information there, and guidelines. You just have to spend a bit more time. P13*

*there's some fantastic things about [EPA]; one is, the standards they adopted are very easy to apply in the industry – [they] are very sensible, very set: if you break them, to me you could never put your hand on your heart and say that you didn't know. The publications that they print – they might take a complex standard and talk about it in a really good [way]. I reckon their technical stuff now is very good, [and] their descriptions of events... P4*

Other interviewees found the information on EPA's website difficult to navigate and understand, which was frustrating for those who felt they were being pushed to find compliance advice online:

*It's totally confusing going through the website – you don't know where to look ... It almost treats [business operators] as people with 25 university degrees ... 'Oh it's all on the website' is*



*basically their answer ... I had a few questions on disposal of waste and stuff and [EPA] ended up sending me all these links to different parts of the website ... but that seems to be very technical and high level – makes it hard to understand. P10*

*You go to the [EPA website] and it's just mind-boggling to try to find the information you're after ... you give up in the end, because you don't understand it ... if they give us more information – face-to-face, not information on the website that you can't find... P8*

One interviewee commented specifically about the online reporting system for the National Pollutant Inventory, which he found difficult to navigate and work through:

**Interviewer:** Which parts of it are difficult?

**P11:** *Interpreting what you need to do and how you actually do it ... it's a very convoluted process: you've gotta download the spreadsheet, enter the data and then re-upload it, and it sorta automates the process but the instructions and everything on how to – I guess from the EPA's perspective they're writing instructions to deal with hundreds of different scenarios ... And so I guess they're trying to write instructions to suit everybody; but maybe only ten per cent of those instructions are applicable to us ...*

The above comment suggests that overly generalised materials are difficult for individual businesses to translate into competency within their own practices, which was also evident in regard to other EPA communications. For example, interviewees from the electroplater sample were shown a copy of EPA's 'Four steps for preventing pollution' information sheet (which was sent to electroplaters prior to the blitz) and asked what they thought of it; most said it was useful only as an indication of which areas EPA would focus on.

*it gave us an idea of what they're looking for, which basically [is] stuff we're already doing. P10*

*we all know that's no good [indicates picture]; we all know that's no good, and we all know that's pretty good. Yeah, look, it tells us what they want; they want to see a clean plant, you know. P7*

P12, who worked for a large multinational company, was seeing the 'Four steps' sheet for the first time and felt it was too simplistic to be of use in his company:

*I'd like to think we don't need the EPA to be telling us that sort of thing... We've got our internal guidelines [so] I like to think we're operating a long way above that ... I wouldn't even distribute [the sheet]: I'm not going out and telling the workshop that you need a bunded area or that you can't be storing prescribed waste next to the stormwater drain un-bunded... that's just basic. P12*

Further, some interviewees who already felt victimised by the electroplater blitz saw the 'Four steps' sheet as an example of EPA unfairly targeting the industry:

*This sort of stuff [shown in the pictures] – it's not just electroplating. I could go into a lot of other places where it's probably worse than that; it's not just electroplating... P7*

However, it should be noted that the electroplaters in our sample were self-selected, and may be more pro-active in compliance than 'average' across the industry (as discussed in section 2.5); furthermore, we do not know how businesses in other sectors would respond to the Four Steps sheet.

Other comments on EPA communications included that some information is very old and possibly outdated, and that business operators typically would not read technical guidelines.

There was a clear sense that much of the information EPA provided was most useful for already competent and technically skilled performers of environmental management practices. Smaller operators often did not have the competency, time or resources to interpret this technical information in a way that could be incorporated into their own practices. Other materials, meanwhile, were considered too generalised to be of use. Overall, EPA's communications were reported to be largely comprised of bureaucratic materials such as websites, electronic systems, forms and documentation systems, and many interviewees had difficulty navigating, applying, and making sense of them.

### 3.3.2.4 EPA enforcement practices

Most interviewees expressed concerns about inconsistency in EPA enforcement practices. Some said they had been given contradictory advice or instructions by different inspectors, while others

believed they had received notices for issues that were overlooked or dismissed at other sites. Some linked this to the ambiguity of regulations, which needed to be interpreted by individual EPOs based on their variable knowledge and experience:

*So they reckon [this measure] is not doing the right job; but yet, the people beforehand said it was. So everyone's got their own views, different views – it's not consistent throughout the EPA. Each group of people, or inspectors, have got their own views or own requirements ... P7*

*There was inconsistency from one inspector to the other. One felt yes, it's the law, but [those measures] don't work – because he's most probably been around. This [other] bloke says, 'Well it's the law – you have to do it'. That hurts – really hurts – when there's an inconsistency... P8*

Further, it was important to some interviewees that they were viewed and treated fairly relative not only to other businesses, but also to other industries.

*Some plating plants that I know very well are ten times worse than me didn't get a non-compliance ... one of the businesses they went through we went down to buy; because it was in such a state we didn't buy it. [EPA] went into that business and found nothing wrong. Nothing! P8*

*There's a lot worse industries than me that [are] a lot more dirty than I am ... We've got industrial galvanisers a stone throw away from us and they're emitting more fumes, more vapour than I ever will; I'm only drawing air out of my factory, bringing the fresh air in and then drawing it back out so the smell's not in here. Why do I need to go and test my air quality? P7*

These concerns align with the BBC research team's Stage 1 research (Strempe et al. 2013), which found that EPOs agreed that duty holders expect consistency in the way regulations are applied and in their interactions with EPA generally. Stage 1 also found that EPOs thought businesses expect them to be responsive and follow up on issues they report; the current findings show that while businesses do hold this expectation, many feel it is not being met. This was a key source of frustration across our sample.

*The amount of emails I've sent to EPA [Victoria] without getting a response ... they're minor things such as we have a notice and we have to provide a report by a certain date; we're not going to make that milestone so I'll send an email off to them to say sorry, it's going to be four weeks later; and you don't hear back from them, so whether it's okay or not you don't know. P2*

*The biggest issue I had with the EPA was ... I'd get an email or a letter and then I'd spend perhaps a month ringing them and just not getting any return call ... I'm at the stage with the EPA unfortunately where if the receptionist says 'I'll get someone to ring you' I just say to them, 'no that's okay, I'll ring back'. Because I just don't believe it, unfortunately. Unless it's one of the inspectors – they always ring me back! P11*

**P7:** *I submitted all my paperwork, everything like that to [EPA]; no one ever come back and did the final inspection.*

**Interviewer:** *So you never found out whether it was all good or not?*

**P7:** *No. Until this round now, and they said 'oh we're coming here to close off' and they actually blamed me for not providing the paperwork to give the close off. And I said 'I can give you every email and when I sent it' to the two people concerned; and I have not heard a reply since.*

Several interviewees felt establishing an ongoing contact within EPA helped address this problem.

*I was getting very little help from inside until I latched on to one guy – he was like a telephonist but he knew about that process and once I got onto him everything was just fantastic, it was just so easy – I could ring him back at any time ... once I'd latched on to that particular guy, getting the annual performance statement done was just a breeze. P11*

Regarding ambiguity, the lack of a clear 'end point' in some regulatory processes was a common complaint from consultants and central office staff in the fuel retail industry.

*the end point is so grey at the moment with the way EPA are; it's very difficult ... So where you get to that end point, and how you demonstrate you've got to the end point, is a bit fuzzy on a lot of existing notices. It's kind of like, 'Well we've done our clean up – we think we've got to the end – how do we verify that?' ... P6*

*there's no end game – there's no end definition, and by nature of businesses there always has to be. P4*

Consultants P5 and P6 felt the lack of a clear end point not only makes the practices of environmental compliance more difficult and costly, but that it may also result in negative outcomes

for the environment. They were particularly concerned about situations where Groundwater Restricted Use Zones (GRUZ) cannot be implemented until certain criteria have been satisfied, creating a risk that bores would be sunk and contaminated groundwater drawn up and used:

*So we go through the process – we write out this thing, have some sort of ‘Clean Up to The Extent Practicable’ end point; we reach that, well we think we do; we send it off to the auditor and say, ‘we think we’re there’ and they say, ‘yeah you’re about there’; we write a report ... send it off to EPA to get their tick of approval and it just goes into the ether: no one makes a decision. And there’s all this contamination still off site, so no GRUZ is instituted because EPA won’t do it ... it means that unless you’re doing a 53X audit, the regulation right through to an end point for groundwater contamination is very unclear. P5*

P5 felt this could be addressed by defining a clearer end point for situations where there was no 53X audit, and enabling a GRUZ to be put in place “as soon as we know one should occur”.

The ambiguity of compliance instructions and processes left some interviewees feeling harassed and frustrated, and several singled out the risk-averse way in which Notices to Comply are written:

*P7: some of the things I’ve been asked to do I really feel like challenging them, because they’re irrelevant ... but anyway, I’ll do what they ask [and] then, once all my work’s done and it’s all tidy and clean and the rest of it; then if they don’t leave me alone I’ll get serious. I’ll go and see a solicitor or something and say, ‘harassment here’; there’s no real need for it.*

**Interviewer:** *Because you think they can’t actually prove there’s a problem in the first place?*

*P7: No! No. I mean even their notices to us, it’s all based on ‘may or may not’. Well I either am or I’m not. You can’t sit on the fence – I’m either doing it or I’m not doing it ... Right?*

Another interviewee gave an example from the recent electroplater blitz: during the inspection the EPO asked how he knew his underground tanks were not leaking; he replied that he didn’t know and was subsequently issued with a Notice to Comply. He then tried to engage several different engineering companies to test the integrity of the tanks, but all refused the job:

*So I now have to prove that they don’t leak. I can’t prove that they don’t leak – no one will help me. EPA won’t help me; the geoscience concrete guys won’t help me; I now only have one option: put a PVC chemical resistant liner in. Thirty six thousand dollars later I finished it.*

Installing the liners meant taking all his tanks offline, emptying them, lining them and then bringing them back online. He says he then sent photos to the EPO to show the work had been done:

*I sent some photos off to him basically showing him, because I’ve got to operate; so as soon as the tanks are in and lined I’ve got to fill them back up again.*

The EPO then said he needed more proof that the job had been done to an appropriate standard, which may require emptying the tanks again. P5 asked how that could be achieved without further significant expense; by the time of the interview he had not received a conclusive answer and did not know whether he would have to empty his tanks again or not. This example highlights several of the issues discussed already including ambiguity, unresponsiveness, and misalignment between the bureaucratic, process-driven nature of EPA’s practices and the day-to-day realities of business practices. The following section elaborates on these findings through a discussion of EPA’s communication and enforcement styles.

### 3.3.2.5 EPA communication and enforcement styles

While most interviewees felt EPOs were good communicators and were generally positive about their interactions with them on site, some EPOs were reported to be rude, aggressive and inflexible. More broadly, several electroplaters were unhappy about how EPA had framed its communications following the blitz, and one said there was a feeling in the industry that EPA saw electroplaters as ‘dirty people’. Interviewees commonly felt EPA’s ‘guilty until proven innocent’ approach to compliance painted them as ‘bad guys’ or criminals, when they wanted to be seen as collaborators. The language of compliance and enforcement was important here: interviewees disliked being told they were ‘non-compliant’ when in their opinion they wanted to comply but needed more support to do so. A very clear theme was that interviewees wanted EPA to take a more collaborative approach to compliance by supporting and participating in their business’s environmental management practices:

*When I get someone I can talk to, it's so much easier. It actually becomes a delight to comply because you get along with the person: '[Mate], you need to do this; you haven't done that right mate', rather than 'Under Section 444 I have every right to come into this premises, and can you sign that, and you're the nominated person' ... So I think [more flexibility] would help, considerably. And I don't think any plater would disagree with that; because then we can work together to move forward, as I said, rather than the 'man with big stick' [approach]. P8*

*[In the past] what I found with EPA, it was not a helpful organisation at all: it was 'this is the law and this is what happens'. So as a result you quickly learned, never go to the EPA. They would be the last people you would discuss your business with. P4*

*Don't forget: I'm focused in my business; I'm working in my business ... I'm trying to keep my customers happy; trying to do so many things. Someone sitting outside the business looks in and goes, 'Oh god mate, you could be doing things a lot better', right; and if they probably approached it in that sense more so than the big stick, and said, 'we're coming in, we want to help improve your business' and all that sort of stuff it'd probably be a different story – no one would be annoyed or pissed off... P7*

Several interviewees also raised concerns about the timing and staging of Notices to Comply: they felt the current system of issuing notices immediately on discovery of an issue was unreasonable, and suggested EPA could instead give advice (develop competency) in the first instance and set timeframes for improvements or changes. Non-compliance notices could then be issued later, if the agreed timeframes were not met.

*P7: I just think EPA need to be there as the policemen but also be there to help us. Be there to advise, and do the regular call-outs – not just all of a sudden expect to roll up on the doorstep and go, 'hey, we're here to do an inspection' ... [like] when WorkSafe come: they advise, 'oh look, I don't think it's safe to have this like this; what can we do to make it a bit safer'. And you come to a compromise in how to do it and they give you time to do it and they walk away, and they come back in three weeks or whatever. Why have to issue notices and say 'if you don't comply we can take you to court' and 'there's a two hundred and seventy thousand dollar fine', and all this sort of – I don't know, what are they trying to prove?*

**Interviewer:** So you think rather than straight off the bat giving you a notice they could start by saying, here's the things you need to improve and giving you time to...

*P7: Yeah! That's what they used to do. Why all of a sudden go round issuing notices?*

This may be largely about language: if businesses feel they have been labelled as non-compliant without first being given a 'chance' to comply (albeit that they are required to comply from the outset) they are likely to feel that EPA does not understand their pressures and is inflexible or non-collaborative in its approach.

As in the above example, several interviewees compared EPA's approach with that of other enforcement bodies such as water authorities and WorkSafe. There was a general feeling that EPA had become too heavy-handed and would have better relationships with industry (and, ultimately, better environmental outcomes) were it to bring its approach in line with other agencies:

*I feel like with WorkSafe when you ring their advisory line they treat you like a customer; and that's probably that blue sky I'd love to see with EPA – some similar concept. Whoever you speak to on the phone there, they've got one of two ways they can go about it: they can be hard to get along with and never call you back; or they can be the opposite. And the question I'd pose is, which one of those scenarios is going to encourage people [to comply]? Do you want to encourage people to do the right thing, and protect the environment and reduce your impact? Or do you want to discourage them from doing it? P11*

Essentially, while all interviewees recognised it was their responsibility to keep up to date with and follow the law, smaller operators particularly said they simply struggled to do this. They did not always have the necessary competency, nor the time or resources to develop it or hire someone to provide it for them or perform the necessary practices that were being asked of them.

*I'm sorry, we're busy trying to run a business; we're struggling – we're all struggling, and it's not a matter of putting your head in the sand – it's not; it's a matter of not having the time to sit down and read every single law and bylaw that comes out. P8*

In the UPSS industry, P4 suggested that smaller companies have been fearful of EPA since a major oil leak in Lorne in the 1990s, which led to heavy fines and subsequent business closures:

*then you've got the famous Lorne, where it was a million and a half dollars [in fines]; and you've got this roll-on period where the EPA became authoritarian in its style, and instead of engage with industry it scared the crap out of everyone ... those men went broke, businesses went broke and so did suppliers and so did people associated with it; every person that goes broke just scared the hell out of everyone; and so you realise that the whole industry was under threat. P4*

While P4 believed EPA had changed its approach somewhat since that time and said he personally felt more comfortable engaging with EPA now, he felt that many small operators still see the organisation as a threat and try to avoid any interaction with it. He felt this would be the case until EPA was seen to understand and be able to work within the practices businesses perform – particularly, recognising how costs associated with environmental compliance impact businesses, and being willing and/or able to speak the language of business cases and financing:

*The reason [EPA] can't get industry traction is, you just can't say 'we've changed' without changing: they've gotta come back to the dollars and the cents, the economics... at the last meeting I was at the industry was very disappointed when somebody raised about the dollars and cents and the EPA said 'well we know there's costs' but then, bang: 'We're out of this. It's not our discussion – that's your business' ... You cannot ignore the economics of an industry and then say you're an authority; it just doesn't go. P4*

P4 felt EPA could be a very effective regulator if it could mend its relationship with the industry:

*the thing I find tough about the EPA is they're such a good organisation in some ways ... just complete this bad bit of history – it's almost like they want to forget about it as well; everyone does. And what you've got is this nothing-period: nothing happening. P4*

In some cases, mistrust of EPA appeared to have bred suspicion: two smaller operators, one from the fuel retail industry and the other an electroplater, referred to perceptions that EPA had a 'hidden agenda' to close down small independent businesses, or electroplaters in general. A consistent theme from both industries was that interviewees understood the need for EPA to enforce environmental protection laws, but felt this would be more effective if it took a cooperative approach that recognised the way businesses operate and the difficulties their industries face:

*I don't think I can say it in any other way: they just need to work with us. Because at the end of the day we have to comply; the law is the law. It's just the way you go about getting us to comply with that law, can be done maybe in a slightly different way. Because as I say, it's our fault; but it's our ignorance that's the problem, so therefore if they give us more information – face-to-face, not information on the website that you can't find – and to be honest, force us; but ... to be flexible enough to work with us. Because the electroplating industry is struggling; all manufacturing is struggling. So again, while we need to comply, work with us and then there's a fair chance that we will comply. 'Cause we all want to comply. P8*

Ultimately, interviewees wanted to have collaborative relationships with EPA but many felt this was difficult to achieve in the context of EPA's 'big stick' style of communication and enforcement.

### 3.3.2.6 Support to comply

It was clear from our interviews that smaller independent businesses generally experienced greater difficulty understanding and meeting their compliance requirements than larger companies. This was mostly to do with access to resources, both financial and human. To begin with, larger companies could more easily access capital from both internal and external sources, including banks and lenders as well as grants programs (such as EPA's former HazWaste funding). Financial constraints for small businesses, meanwhile, have been exacerbated by the industry-wide shifts in practices discussed at section 3.1, and some interviewees said it was hard to prioritise environmental measures when they were uncertain about the future of their business.

*There's always a whole lot of risk with the manufacturing industry of, how much longer is it actually gonna last? How much do I wanna invest in the whole industry? The way the government's going with all the free trade agreements, it's just – it makes it very hard. P10*

*for us, we're hesitant about spending money but we're not here just for tomorrow: we're sort of looking beyond, trying to see our working life out. So we're prepared to dig into our pockets, but others out there would be going, 'ah, I don't really want to' ... for some people it will be difficult because they don't see a future and they'll go, 'why am I gonna spend any money'? The others may be like myself, who've gone 'well I still want a job for the next ten to fifteen years' ... P7*

Some interviewees suggested that many small independent electroplaters were not well equipped to meet the challenges of a downsizing industry, which was linked to their ability to diversify their services and product lines and their competences in financial planning and business strategy.

*the last few years I don't think anyone's spent any money on their business – we've just let it run down and obviously it's catching up now ... If you're not gonna diversify and you're just gonna sit there, I'd be worried. And the work's not gonna come to you: a lot of electroplaters think they can sit at work, wait till the phone rings – they're not proactive enough to go out and get that work. I don't know why – it's just their mentality. P7*

As a way to redress financial constraints, several interviewees suggested EPA could provide funding for businesses or subsidise the costs of compliance:

*instead of going round forcing everyone to do stuff, why don't you try to help them; and if you've got money available for R&D and research and all the rest of it, why don't you get a chunk of that money to distribute and help electroplaters get their plants to a state – on a loan basis and they'd repay, right – at least give them the opportunity for those who want to. P7*

*if we're really going to sort out underground tankage problems [there] almost needs to be a fund applied. People have to think outside the square: provide funds so that if there is this extra cost [for waste disposal], subsidise the tip; if the cost of removing soil and getting [it] treated was reduced, half the [cordoned off] land you see would be back in the industry being built on ... P4*

Our findings suggest any subsidies or grant programs targeting smaller businesses would need to recognise the limited capacity those businesses may have to fulfil bureaucratic requirements, such as developing detailed proposals and budgets.

As highlighted throughout our findings, the issue of human resource constraints is particularly salient for smaller independent businesses in which environmental management and compliance practices are typically performed by owner-operators, who may lack the time and/or competences to achieve the outcomes EPA requires. However, interviewees from larger companies also experienced difficulties with particular processes and requirements, such as the National Pollutant Inventory and the prescribed waste certificate system. Several expressed a desire for EPA to provide training and guidance on how to perform these compliance practices.

### 3.3.3 Intermediaries

Intermediaries is a term used to describe an actor, agency or 'go-betweens' that make connections and 'enable[s] a relationship between different persons or things' (Moss et al. 2011). The BBC team's research identified several types of intermediaries that operate 'in-between' the environmental management and compliance practices of businesses and EPA. Like all intermediaries (Moss et al. 2011), they are not 'neutral', but actively shape industry practices and perform practices of their own. The research revealed intermediaries who are positioned to 'bridge the gap' between the day-to-day realities of running a business, and the environmental management practices of EPA. Engagement with intermediaries varies by industry and business type.

This section discusses some key intermediaries in the practices of environmental management.

#### 3.3.3.1 Environmental Consultants

Consultants were widely considered to be trusted sources of advice on environmental management and compliance. For larger companies in both industries, consultants are often the first port of call when they need to address an environmental management or compliance issue:

*that first phone call – if something's gone off site then I know what my obligations are, but where I'm not sure whether I should be reporting, and [I'm not] spewing toxic gas across the road or something, then I'd ask internally [or] ring a consultant who we'd have on the line... P12*

*It's just [P3] and I who are experts in [our company], so our work is tendered to consultants. They provide us with the proposal to do the work, carry out the work and provide us with the report. P2*

*we're quite selective on the consultants that we use. [We choose consultants] who have experience in managing these projects and we can rely on them to be our eyes and ears ... P3*

Even those businesses that have dedicated environmental management staff may struggle to stay up to date with the regulatory environment, and consultants can play a significant role in interpreting compliance obligations. Consultants typically bring extensive bureaucratic and project management skills, as well as industry knowledge and technical competency, to the table.

*I took some advice on that from a consultant because I was relatively new in the chair, and I said 'well what should I do?', and they said 'well if you were in NSW this is what you'd have to do, but this is the regs in Victoria...' P12*

Consultants are important mediators between EPA and industry: businesses may be more likely to disclose issues to a consultant, for example, and the consultant may then advise them not only on how to comply, but also how to navigate through EPA's bureaucratic processes and practices.

**P5:** So what we tell [clients] generally is that it's in your interests to tell EPA because then you're likely to have some kind of control over the notice that they [issue], or some participation in the process that leads to the notice you will get.

**Interviewer:** And do you think they do, from that point?

**P5:** Quite often they do.

**Interviewer:** Do they say, 'do I have to tell EPA?'

**P5:** If they ask [I'll say] 'go and talk to a lawyer because we're not lawyers; but our reading is that you don't have a mandatory obligation to report, but we still think you should. And here's why...'

the consultants would say, 'don't talk to the EPA! We know the standards; we'll do that. Because if you bring [EPA] in that's just gonna complicate [things]'; which it did ... **P4**

we do have a lot of contact with EPA, obviously in the role of appointed auditor but also when we're the consultant doing the assessment or remediation: we're often acting in consultation with EPA just to make sure that what's being undertaken is what's required. So for instance EPA issues a notice and says certain things have to happen; there might be an auditor appointed separately from us and an owner, and just to make sure everyone's on the same page and things are happening. And quite often people aren't on the same page, or notices have been issued but haven't necessarily been followed so we do a fair bit of liaising with the EPA. **P5**

Consultants may also perform auditing services to comply with EPA requirements under Section 53V and 53X of the Environment Protection Act. In these situations auditors may essentially define the terms of compliance:

*EPA will typically issue a notice that says these things: by a certain date, appoint an environmental auditor to conduct an audit under Section 53V of the Act, that delineates contamination and describes risks ... so you basically get an audit report that says, this is the delineation of the contamination and these are the risks associated with it. [And] that forms the basis for what you need to do to clean it up. P5*

In this sense, P5 felt that auditors make up for gaps in EPA's technical competence; it can be inferred that consultants sometimes perform a 'street-level bureaucrat' role (Lipsky 1980):

*to a certain extent [EPA] kind of rely on the audit system to, not outsource but to provide some of that nous. So a lot of the notices say, 'er, get someone in who can figure this out for you'. You know – get an auditor to oversee this ... [In a recent example] the notice said 'do the plan like your consultant wrote'. So when they did that they basically complied with the notice. So EPA can be fairly variable about how they issue notices; in some cases they won't even issue one, they'll say 'oh you've got an auditor, everything's travelling along okay'. P5*

P4, who regularly works with consultants, felt they add significant value to the industry:

*Everything [my company] does we use contractors, so essentially our business has very low overheads in the core business; I bring the experts in ... I want people who will help me on the problem, and that's what consultants do. The environmental companies have been really good at getting networks going and talking; they play a huge role. And you want them to be like they are - practical but uphold the standard. They're what you want the EPA to be like. P4*

It is important to point out that while consultants are key actors in environmental management practices (and have practices of their own), smaller companies typically have less opportunity to benefit from the competences consultants offer as they are less able to afford their fees. These companies often rely to some degree on advice from product suppliers and other service providers instead, as discussed in section 3.3.3.6; or simply struggle to understand and meet compliance obligations.

### 3.3.3.2 **Centralised staff**

In larger companies and retailer networks, centralised staff – including network managers – are key performers of environmental management and compliance practices. They can be viewed as intermediaries in that they intervene in the practices of numerous businesses while typically being located at arm's length from the site itself. As described in section 3.3.1.1, many of the major oil companies and service station chains actively minimise the role franchisees or site operators play; and where site operators do have roles their practices are often mediated or shaped by centralised actors and requirements. P4, for example, is a very active network manager who spends significant time onsite advising network members about which works should or must be done, and prides himself on being proactive about environmental management.

P2 and P3, who work in the environment team for a large service station chain, interact with several other teams and departments internally as well as external contractors and consultants to perform environmental management and compliance practices such as replacing tanks and remediating sites. They are typically not directly engaged in on-the-ground practices, although they may visit sites when there is a large or unusual problem.

This finding again highlights key differences between large and smaller companies, who have different opportunities to utilise dedicated staff to perform environmental management practices. Centralised staff have time and resources to develop the required competences; they also often have access to financial resources to procure necessary equipment (materials) and/or engage external consultants to assist in managing works and meeting requirements.

### 3.3.3.3 **Industry associations**

Interviewees were asked about their engagement with the relevant industry associations generally, and with regard to environmental management and compliance. While all the independent electroplaters interviewed were members of the Australasian Institute of Surface Finishing (AISF), most did not see it as a good source of advice on environmental management and compliance.

*All [AISF] seem to be doing is forwarding on releases from the EPA anyway. P10*

*I did approach [AISF] when [I had an issue with EPA]... But they couldn't do anything about it – they couldn't do nothing about it. They just said I had to work through it myself. P7*

Those who did access AISF's services tended to do so in relation to issues such as wages, and many felt the organisation caters mostly to large businesses and powder coaters.

*I've been a member for seven or eight years but I'm not bothering to renew because it almost seems to be more set up for the big places, and they're also covering the powder coating industry. There's no training available – like there's one really basic training course, introductory level training for electroplaters – and that's it. I can't see the benefit anymore. P10*

Some electroplaters held membership of the Australian Industry Group, and P8 found them to be a good source of advice on all issues including environmental compliance:

*Where I fall back on now if I have any issues at all [is] the Australian Industry Group; whilst it's not the cheapest group to belong to, it's worth every penny because all I've gotta do is get on the phone. And that's what I do quite often: if I'm not sure, they have so many experts down there ... I can spend three hours trying to find answers to stuff which they can answer in two minutes. P8*

Electroplating businesses that were part of larger companies tended not to be members of AISF and typically had low engagement with industry associations in general. Several felt industry associations could not offer much beyond the support already available internally and through consultants; or because they did not strongly identify with the broader electroplating industry.

*We're definitely a member of Australian Industry Group, and there's [a manufacturing association] which a couple of our guys are going to; but we don't have a lot of involvement because the perception is we don't have a lot in common with an electroplater who's making, I don't know, bullbars, or whatever other electroplaters do ... P12*

The key industry associations for the UPSS industry are the Victorian Automobile Chamber of Commerce (VACC), the Service Station Association (SSA) and the Australasian Convenience and Petroleum Marketers Association (ACAPMA). There was a general perception that smaller



independents would be members of VACC or SSA, while larger companies and networks are involved with ACAPMA. In keeping with this perception, small independent P1 was a member of VACC while P4, P5 and P6 were reasonably engaged with ACAPMA. P2 and P3 were members of ACAPMA and sometimes attended its conferences but said they were unlikely to seek advice from ACAPMA on environmental compliance:

*for our department it's less likely for us to [contact ACAPMA]. It's more the construction guys when it comes to vapour recovery, more of industry issues ... [ACAPMA] don't have the expertise from an environmental perspective – they're more associated with the contractors. P2*

P2 and P3 were also members of the Australian Land and Groundwater Association (ALGA) and attended its seminars and “any kind of clean up conferences”.

P1 was not heavily engaged with VACC but said the organisation would notify him if EPA were “clamping down on something”. P4 said that while he was not very familiar with VACC or SSA, he felt they might be disengaged with environmental management and compliance:

*In my personal opinion a lot of them still do not face up to the industry issues; they look at protecting their members as opposed to educating their members. Because let's go back to the old EPA: if your members are under attack you just find yourself in a conflict situation, and supporting them against the EPA as opposed to working with the EPA. And if you suddenly worked with the EPA you could lose members – that's what the EPA didn't realise. P4*

In summary, the potential for industry associations to assist businesses in performing environmental compliance practices is currently going largely unmet, and most interviewees do not consider industry associations as an authoritative source of guidance in this area.

### 3.3.3.4 **Water authorities**

Water authorities are heavily implicated in business's trade waste management practices, and electroplaters particularly mentioned them often.

*we have an agreement with [a water authority] who take our effluent for further treatment; so, we have a series of criteria that we've gotta meet, with regards to the outflow, the volume of outflow, the heavy metals that are involved in that outflow; and there's criteria we have to meet before we can actually discharge to the sewer system. P9*

*we have an agreement with South East Water to bring the pH within a certain range, and once we achieve that range then we discharge to our sewer line and it goes to the treatment plant further ... they come once a month, do the sampling and testing; and we also do it once a month ourselves to make sure everything is within the control and within the limit ... P13*

Most spoke in neutral or positive terms about their interactions with water authorities, with some comparing their enforcement approach favourably against EPA's.

*people say to me, 'how do you find Yarra Valley Water' – I mean, they come in here for random checks every month, twice a month, to make sure that I'm treating my water properly and all the rest of it; and we can ask them questions, we can do anything we like – we can talk to them, and [get] advice. And if you're doing something wrong, okay, they give you a pink slip; they wanna know why it's happened and all the rest of it, and they give you time to correct it; but, that's it. You know? I don't know, [the EPA's] whole approach to it is totally wrong, I think. P7*

Clearly, water authorities are a significant actor in business's trade waste management practices and are reasonably well-regarded by businesses. These findings suggest there may be lessons for EPA to take from the way water authorities perform compliance and enforcement practices, and particularly from the styles of communication they use when engaging with industry.

### 3.3.3.5 **Banks and other lenders and developers**

Banks and other lenders and land developers appear to play a significant role in shaping environmental practices in the UPSS industry. For example, banks may refuse to provide finance for site purchases or upgrades without evidence of good environmental management:

*So the bank says, 'Well I'm actually not gonna lend you that money unless you get that part cleaned up'. So what's happening is, for the developers and everyone else, they're doing that*

*[remediation] so they can sell the property or divest the property or rebuild the property or do something with the property... P4*

P4 believes this has been a driving force behind remediation of sites in the fuel retail industry:

*it should be that the EPA and industry work together now to clean up the environment, because there's far more of it happening out there now than has ever happened before; [but] it's not the EPA that did it, it's the banks ... P4*

Land developers can have a similar effect: as discussed in section 3.3.1.2, small retailers may avoid remediating a site until interest from a land developer makes it worthwhile, giving them an incentive to clean it up so it can be sold for residential or other sensitive development. Large companies also deal with developers, and for P2 and P3's company developers are engaged in carrying out the environmental standards specified by head office for new sites:

*A developer will come to us and say 'I've got a site, and I think it would be good for [your company]'. [Our company] looks at it and says 'yes we agree with you, here's our specifications: you build it, tell us when it's ready and we come in and run it'. And so [the developer] puts in the tanks, he puts in the lines; we provide him with specifications for what we want, such as double wall fiberglass tanks, double lined, dispensers, whatever; and they just install it for us. P2*

### 3.3.3.6 Product and service suppliers

Those companies that are too small to have ongoing relationships with consultants and are not members of a retailer network or chain may rely on companies that supply their industry for advice on environmental management and compliance. For example, when asked how he had learnt how to deal with waste P8 replied:

*I think just basically as we dealt with it over the years, [and] we got a fair bit of information off our suppliers of the chemicals – they say, 'oh look this is what x customer are doing, they're using this mob to get rid of the waste'... P8*

Similarly P1, the owner of a small service station and mechanic workshop, said his accountant would notice if he had any leaks because his accounts would not balance; and that if he ever had a problem with his tanks he would contact the company that supplies his fuel for advice. According to P4, fuel suppliers have traditionally played a significant role in the practices of individual site operators:

*the oil company used to say, 'don't worry about that' or 'we'll tell you how to do that'; they really had this motherhood type approach to the business. The same as, you never asked an oil company where the fuel came from – it just arrives, sort of thing. The same as, the sites you leased and ran the business from, you never asked about underground [equipment] – they said 'we will look after that'. P4*

Several interviewees said they receive advice on waste management from waste transport companies, and in some cases this included compliance advice – for example, P12 and P13 had engaged a waste transport company to advise them on how best to comply with EPA's prescribed waste management requirements.

As mentioned previously, product suppliers and service providers such as those described above may fill some gaps in competence for small businesses who cannot or do not engage consultants.

### 3.3.4 Summary of BBC findings

Businesses perform a range of wide range practices, from plating products or serving fuel to developing business cases and liaising with authorities. The BBC team's findings indicate there can be misalignment or disconnection between these practices and the compliance practices EPA expects industry to perform. This finding is much more pronounced among smaller independent businesses, where waste management practices are often performed without dedicated environmental management staff, and where key technical competences are likely to be lacking. As such, they may be insufficient to meet EPA requirements – at least to the same degree that larger companies can. The resulting disconnections can be found across all elements of practices, from the materials that shape and inform them through to the competences and meanings

associated with environmental compliance and management. These different elements collectively constitute practices that are not viewed as being readily adaptable to EPA's expectations.

On the other hand, most interviewees saw EPA's practices as being inconsistently performed and found the organisation's style of enforcement to be out of touch with the realities of operating a business; too inflexible; and/or not collaborative enough. EPA communication materials were considered too generalised to be useful or too technical to be understood; and complaints of unresponsiveness in communications with EPA were common. The recent electroplater blitz has brought some of these disconnections into sharp focus for the electroplating industry, while in the fuel retail industry historical perceptions of EPA are continuing to shape business practices.

The BBC team also found that intermediaries play an important role in shaping business practices across both the fuel retail and electroplating industries. These can include environmental consultants, centralised staff, industry associations, water and other authorities, banks and other lenders, developers, and product and service suppliers. In some cases these intermediaries actively perform environmental compliance practices on behalf of clients or franchisees, and in other cases they give advice or shape practices in various ways. They operate with a level of purposivity and intentionality 'working deliberately towards achieving an objective' (Fischer and Guy, 2009: 2587). The same authors have derived four simple mediator categories based on a reading of European research, although originally applied in a different context these categories have relevance to how EPA could engage with different intermediaries in different ways (Fischer and Guy, 2009: 2588):

1. Bridge-builders, mediators, go-betweens or brokers, facilitating dialogues, resolving conflicts or building partnerships;
2. 'Info-mediaries', disseminating information, offering training and providing technical support;
3. Advocates, lobbyists, campaigners, gatekeepers or image-makers, fighting for particular causes; and
4. Commercial pioneers, innovators and 'eco-preneurs'.

There are opportunities for EPA to identify, work with and support intermediaries in various ways across the above categories, in order to improve compliance practices.

## 4 Recommendations

The recommendations described in this section have been designed to correspond with the project deliverables for this research, as set out below in Table 2. Table 2 also shows which team took the lead for each deliverable.

The recommendations are set out in two sections. In Section 4.1 BWA presents its recommendations under the subheadings of the corresponding project deliverables. In Section 4.2 BBC outlines two possible 'pathways' EPA could take in its ongoing approach to enforcement. Taken together, the two sections cover all project deliverables while allowing each team to ensure its recommendations speak directly to its findings, and reflect the different theoretical bases from which the teams worked.

**Table 2: Stage 2 deliverables**

	<b>Deliverable</b>	<b>Lead</b>
1	Recommendations for further indicators to be included in EPA's business behaviour quadrants based on qualitative insights from the interviews and quantitative insights from the outcomes research	BWA
2	Recommendations for improving compliance outcomes based on business workplace practices and compliance/non-compliance practices observed and reported during interviews	BBC
3	Recommendations for any advised changes to improve the relevance and applicability of the Outcomes research survey questions	BWA
4	Business feedback on the effectiveness and impacts of recent EPA activity and interventions (e.g. inspections, LORA questions, media releases, online resources)	BBC

5	Gap analysis between what interventions are currently delivered versus what might be desired from the business perspective	BWA
6	Insights for when and how to partner with an industry association	BBC
7	Insights for when and how to use media, and EPA communications	BBC

## 4.1 BWA recommendations

### 4.1.1 Additional compliance indicators for EPA's business behaviour quadrants

One of the key reasons for undertaking this study, specifically from the behaviour change perspective, was to document the 'other side of the story' of EPA's business behaviour quadrants. While BWA's Stage 1 report documented EPOs' opinions of the factors and circumstances that influence business compliance behaviour, the actual business perspective was missing, and so there was a desire to explore how accurate were the insights provided by the EPOs and whether other compliance indicators might be missing that only businesses are able to articulate (using UPSS and electroplaters as sample industries).

While the original intent was to collect these perspectives from an indicative sample of businesses across the four quadrants, the recruitment challenges that have been articulated previously meant that a much narrower set of perspectives (based on the BWA sample) were collected, and from those responses, they appeared to be from businesses that were biased towards being 'willing to comply'. With this in mind, the following indicator discussion is predominantly focussed on quadrants 1 ('willing and able') and 2 ('willing but not able').

For the most part, there were a number of synergies between EPOs and businesses about key motives and capabilities that impact on compliance (for businesses in quadrants 1 and 2). To this end, EPOs experiences in the field provide a reasonably robust account of the different factors at play that influence business behaviour. But one of the key observations that emerged during the BWA interviews with businesses was that some of these factors were not restricted to just one quadrant (which was the case at times in the previous report), but were applicable to other quadrants as well. For example, small to medium sized electroplaters (in quadrant 2) can be just as sensitive to business reputation as larger businesses (in quadrant 1); larger businesses, especially when they are charged with managing multiple sites in a portfolio, can also appreciate a step-by-step approach when directed to implement compliance actions; and the relative influence of financial penalties can be equally contested across different quadrants. Given that these insights suggest a blurring of the boundaries across the different quadrants, we would recommend that the compliance indicators articulated in BWA's Stage 1 report should not be viewed as definitive 'black and white' indicators specific to particular quadrants, but as guiding indicators that, while potentially having more relevance to particular quadrants, could also be influential among businesses in the other quadrants. Indeed, this was already flagged in the previous report, which concluded that the quadrants are best viewed as a heuristic resource, offering an audit of different possible compliance indicators to assist (but not pre-empt) the choice of intervention strategies based on any given circumstances.

One point that was raised among some of the EPOs last year was the belief that all businesses have the capability to comply. And while a number of EPOs took different levels of business capability into consideration when outlining courses of action to achieve compliance, the capability indicators that were developed (which were referred to as 'capacity' indicators in BWA's Stage 1 report) received the least attention in terms of the range of possible indicators, and were largely focussed on ones that the business could exert direct control over.

But capability issues, unsurprisingly, were far more pronounced and nuanced from the business perspective in this study, often involving highly fluid situations and factors that are beyond the businesses' control (e.g., loss of key industry clients, increased overseas competition, uncertain regulatory directions). They were also at times quite sector specific. For example, UPSS concerns about compliance capability revolved more around the lack of 'clarity' for future investment and

planning rather than resources and financing, often in the context of the uncertainty created by guidelines (as opposed to laws) and the time being taken by the EPA to make certain decisions. In contrast, electroplaters were genuinely questioning their current and future financial capability to comply, especially when looming or uncertain threats to commercial survival might overshadow the perceived smaller risk of receiving a fine or the need to invest in expensive infrastructure. As a result, electroplaters felt that the EPA and the government could do more in providing financial assistance to the industry. Given such nuanced insights, translating these into some “semi-universal” compliance indicators would appear to be a challenge. Nevertheless, BWA would recommend that greater attention needs to be placed on business capability among the compliance indicators articulated in EPA’s business behaviour quadrants. Indeed, businesses’ willingness to comply almost becomes of secondary importance if they do not possess the capability to comply, and it is well established that differences in business compliance behaviour can often be accounted for through variations in economic resources, technical knowhow, knowledge of the law, and managerial capacity and support.

BWA also recommends that the EPA and its EPOs demonstrate a better knowledge of the industries they are dealing with as part of any intervention strategy (to assist in building a foundation for collaboration). But the question still remains about the boundaries of EPA’s role and influence in supporting businesses to comply. One way to address this would be to restrict EPA’s business behaviour quadrants to considerations that are under the authority’s direct control and influence. While many of the strategies that the EPOs articulated for quadrants 1 and 2 in the BWA Stage 1 report fall into this category, many don’t necessarily address some of the fundamental challenges that particular sectors are confronted with. To this end, clarity is required on the role the EPA has in providing capability support to businesses (especially with its own challenges to do ‘more with less’).

In combination, these recommendations for additional compliance indicators are summarised in Table 3.

**Table 3: Recommendations for additional compliance indicators within EPA’s business behaviour quadrants**

	Recommendation	Description	Corresponding deliverable
1	Acknowledge that a number of the compliance indicators have applicability across more than one quadrant	Responses from businesses suggested that certain compliance indicators are applicable across multiple quadrants (e.g., business reputation, staged implementation approaches). This re-emphasises a key conclusion from BWA’s Stage 1 report—that the quadrants are best viewed as an audit of possible compliance indicators to assist (but not pre-empt) the choice of intervention strategies based on any given circumstances.	1
2	Develop additional indicators around business capability	Responses from businesses articulated more nuanced and detailed capability concerns than those elicited from EPOs. Failure to fully appreciate these is likely to reinforce gaps in what EPA delivers and what businesses need in order to fulfil their compliance obligations.	1
3	Include “develop mutual goals and understanding” as an intervention strategy	With EPOs and other EPA staff being able to demonstrate a better understanding of business needs and capability, this will assist in the development of mutually agreed goals and the achievement of compliance outcomes.	1

### 4.1.2 Implications for EPA's Outcomes research

EPA's Outcomes research was sourced a number of times during the course of the study, with each interaction yielding some potential implications for future rounds of the survey program. First, respondents to the Outcomes research can grant permission for their contact details to be shared with other parties in relation to other EPA matters, including future research projects. A list of UPSS and electroplating operators who had completed the Outcomes research survey, and who had granted this permission, was therefore provided to both research teams as a means of recruiting potential participants to the research. However, when this list was used to contact potential UPSS participants, it was apparent that the phone numbers supplied were often for the business premises rather than the named contact. Those answering the phone were often the only one on the premises (e.g., a cashier), did not know the person we were asking for, or knew the person but advised that he or she was off-site, was reluctant to pass on their contact details, or advised that the person was no longer working with the business. To avoid future scenarios like these, both research teams recommend that the Outcomes research survey makes a specific request for "direct lines" of contact rather than those of the business premises (especially when larger businesses are involved).

A second point that the BWA researchers came across was whether certain responses to the Outcomes research could be used to segment potential respondents along the dimensions of willingness and ability in order to get a cross-section of respondents across the four quadrants. For this exercise, the items used to measure business 'attitudes to compliance' were used from EPA's outcomes research, which in turn is based on the 'Table of 11' (Dutch Ministry of Justice 2004). While a combined measure of willingness was developed based on a number of individual items from the Outcomes research, capability was largely reduced to the single measure of 'knowledge of the rules', which is not an accurate representation of the different dimensions of capability elicited by businesses, or in regulatory studies that have looked at these capability issues in more detail (May 2005; Winter & May 2001). Although the Outcomes research survey contains the question that asks 'Do you agree or disagree that the advantages to your business of complying with the environmental laws outweighs the cost incurred to your business to meet these laws', this is more of an attitudinal question rather than one focused on capability. Indeed, while the modified Table of 11 instrument that EPA uses is more of an attitudinal measure rather than a capability measure, we would recommend that there would be value in introducing additional capability measures, especially if EPA is interested in tracking more nuanced changes in business capability over time in response to EPA initiatives (as well as to external factors that are beyond the control of the EPA but might still have implications on compliance issues). If such measures are included in a future survey, it would be critical to ensure they are sensitive enough to distinguish between different sectors (e.g., we'd suspect everyone would nominate cost as a key barrier to compliance).

A third point relates to the checklists of additional willingness and capability items that were presented to participants as part of BWA's interview instrument. This was an attempt to ascertain whether some compliance predictors might be missing from EPA's outcomes research instrument, which has already been alluded to in the previous paragraph. These additions were based on research from authors such as Kagan et al. (2011), May (2005), and Winter and May (2001), and had a particular emphasis on a broader list of social and capability considerations not captured in the current outcomes research instrument. While all but one received at least one nomination, it is hard to draw any significant conclusions given the small numbers involved. Nevertheless, we would recommend that items linked to business reputation and other social license to operate considerations (beyond the "community", which the outcomes research seems to focus on) would appear to offer some value, as well as additional capability considerations that have been mentioned previously. Findings from both research teams found that such considerations had an influence on the behaviours and practices of businesses. Examples of possible questions could involve (based on the current 7-point agreement response scale used in the Outcomes survey):

- Complying with environmental laws is important to protecting my business reputation
- My business feels a sense of moral obligation to comply with environmental laws

- Gaining the approval of [e.g., the local community; the EPA/EPOs; customers; shareholders; other businesses; leadership] encourages my business to comply with environmental laws
- My business has dedicated resources to support its capability to comply with environmental laws
- The costs of compliance makes complying with environmental laws difficult
- The current economic climate makes complying with environmental laws difficult
- The EPA provides my business with sufficient support, advice and guidance to comply with environmental laws.

While these recommendations for EPA's outcomes research are summarised in Table 4, it is important to acknowledge that they are largely restricted to the Table of 11 questions in EPA's Outcomes survey given their alignment to the research focus of BWA. However, some additional comments (rather than recommendations) regarding the Outcomes survey will be made in the next section, specifically in the context of how certain response themes from the BWA interviews compare to the data collected in the survey.

**Table 4: Recommendations for EPA's outcomes research**

	<b>Recommendation</b>	<b>Description</b>	<b>Corresponding deliverable</b>
1	Ask survey respondents who are willing to participate in follow-up research to provide contact details that represent direct lines of contact	Being provided with the contact details of the survey respondents rather than the business premises will assist in re-establishing contact with respondents.	3
2	Add questions in the Outcomes research survey that focus on capability and social approval dimensions of compliance	The current Table of 11 based questions in the Outcomes research survey focus predominately on attitudinal and some social dimensions of compliance. Broadening this scope of questions will capture considerations that impact on business compliance.	3

#### **4.1.3 Gap analysis between what is delivered and desired by businesses from EPA**

Both the BWA and BBC research teams asked businesses about their various responses to different types of EPA activities and initiatives, and whether there was a gap in what is currently delivered compared to what is desired from a business perspective.

While some businesses welcomed the wealth of information and detail on EPA's website, others found it challenging to navigate to locate key sources of information, and even if they did, found it difficult to translate and apply the information to their everyday business behaviours and practices. Based on this feedback, we would recommend that the EPA review its website and online material in terms of its accessibility and relevance to the audiences and behaviours/practices it is targeting. Furthermore, if a business had a question for EPA (either in regards to a piece of information, a notice, a future decision, a follow-up to an inspection, or a media release), a number of BWA interview participants simply found the EPA to be either too slow or unresponsive to their enquiries and needs (although acknowledging the EPA probably had its own resourcing challenges). At the other end of the spectrum, some respondents felt they were getting too many calls and points of contact from EPA, which was something that at times contributed to businesses declining to participate in the study. Despite this latter concern, both research teams recommend that the EPA establishes some clear protocols for providing timely responses to business enquiries and needs (and if such protocols do exist, then review how well they are being adhered to).

Many businesses also emphasised a desire for mutually agreed, staged implementation approaches to assist them in fulfilling specific compliance expectations (e.g., following an EPO

visit). While not all non-compliant situations will justify taking such an approach (i.e., when there are immediate risks to the environment or to human health), a number of EPOs mentioned in the BWA Stage 1 study that they would often take an outcomes-oriented approach and use their discretion when giving directions and orders to businesses (especially those “willing” businesses with genuine capability limitations). Retaining EPOs’ ability to use their discretion was a key recommendation from the BWA and BBC Stage 1 studies, and we would again support this recommendation based on the current study. However, a possible consequence of individual discretion among EPOs is a lack of consistency, and this is something that was expressed as a source of frustration among the businesses interviewed. That is, one EPO might say “this approach is fine”, while a different EPO might say something completely different six months later. Some businesses welcomed the thought of having something like an “assigned EPO” they could build a relationship with and develop some ongoing and mutually agreed compliance outcomes. Improving the consistency of advice provided by EPOs and other EPA staff is therefore a recommendation from this research.

While the uncertainty created by EPA guidelines, as well as suggestions for pre-inspection amnesties, were also raised, one of the most common recurring themes was the perceived lack of specific technical expertise (including knowledge of the industry as a whole) among EPOs and EPA staff, which had implications on businesses’ willingness to cooperate and a belief that EPA can genuinely help them improve their capability to comply. Similar findings were reported by the BBC research team. The businesses who were interviewed typically demanded this expertise and understanding, and while some EPOs and other EPA staff possess these skills, others do not. In the absence of these skills, it was felt that EPOs were sometimes moving more towards a policing function rather than a compliance role, which was also reinforced by certain communication styles and demeanours. Regardless of this latter concern, the feedback from participants in the current study suggests that the business perspective might at times be missing from the ‘EPA problem solving steps’ approach (Appendix 6), and as a result, reinforces a gap in what EPA delivers in terms of interventions and what businesses need to assist them fulfilling their environmental obligations. While these processes currently articulate steps that include mapping out the problem, identifying key causes and drivers, acknowledging gaps in knowledge that need to be filled, which later inform theories of change that guide the choice of interventions, we are concerned that the business perspective remains undervalued in these steps, with the focus being more on the environment and the EPA. So when EPA is faced with an environmental problem that in some way involves businesses changing their behaviours or practices, we would recommend that the EPA allocate time and dedicated resources to understanding the business perspective as a key ingredient to addressing the problem. This issue is discussed further in Section 4.2 below.

To this end, while some businesses have expressed frustration with industry associations like AISF, others saw the value of EPA partnering with such groups in order to address this issue. To the authors’ knowledge, these partnerships, from the EPA perspective, are less about building EPA knowledge and expertise, but are more strategic in terms of taking advantage of influential communication channels or using these associations as surrogate regulators to assist the EPA in its duties. EPA staff who are unfamiliar with particular industries might therefore benefit from being able to demonstrate improved knowledge of particular industries in their communications with businesses through links with industry associations, increasing the chances of achieving some mutual understanding (provided it is aligned to EPA and EPO expectations of their individual roles). So while we might recommend that EPA uses its partnerships with industry associations as a learning opportunity to improve the skills and expertise of its staff, the question remains whether such associations are truly representative, influential and respected among the sectors they represent.

While these recommendations are summarised in Table 5, it is important to acknowledge that they are based entirely on the responses that were elicited during the course of this study. When compared to some of the survey responses collected from UPSS and electroplaters by the EPA through its Outcomes research, there is evidence of both alignment and contradictions in the data. For example, when asked about their level of satisfaction with particular interactions with the EPA, a large proportion of electroplaters were only somewhat satisfied with EPA’s guidance documents



(38% - although a battery of questions later in the survey that is more specific to the guidance documents paints a more positive story), while 48% ranged from only somewhat satisfied to very dissatisfied with the website. Although such responses appear to be aligned with the interview responses, the survey sample for electroplaters and UPSS is somewhat small and therefore sensitive to small variations. Other common themes was that both UPSS and electroplater operators expressed high levels of satisfaction when working with a known contact at the EPA, which supports one of our recommendations, and that the local community is likely to report them if they pollute (emphasising some previously mentioned social license to operate considerations). However, the perceived lack of technical expertise and understanding of EPOs and other EPA staff expressed in our interviews were not necessarily repeated in the survey responses, with both electroplaters and UPSS operators generally agreeing that the EPA is balanced, competent, effective, respected, fair and capable. Admittedly, this might be a case of businesses saying what they think the EPA wants or should here (so to avoid regulatory attention), and that there isn't really a question in the current survey that asks something along the lines, 'During my interactions with the EPA, they demonstrate a strong understanding of the drivers/barriers impacting on my business'. While further comparisons could be made, they can only be formative at best given the limited samples in both the current study as well as the outcomes research.

**Table 5: Recommendations to reduce the gap between what EPA delivers and what is desired by businesses**

	Recommendation	Description	Corresponding deliverable
1	Review EPA website and online materials in terms of their accessibility and relevance to the audiences it is targeting	Based on the current study, some respondents have encountered difficulties in accessing, translating and applying EPA's online materials into their everyday business behaviours and practices.	5
2	Establish and adhere to clear protocols for providing timely responses to business enquiries and needs	Businesses seeking information and follow-ups from the EPA have experienced delays in getting a response, and in some instances, get no response at all.	5
3	When the circumstances permit, support mutually agreed, staged implementation approaches	Businesses place high value on taking such an approach, as it takes into account their capability and establishes a foundation of collaboration to assist them meet their compliance obligations. Allowing EPOs to use their discretion based on the circumstances they are confronted with would assist in this task.	5
4	Improve the consistency of advice provided by EPOs and other EPA staff	By improving consistency, this will diffuse some levels of frustration that have been occurring among businesses when receiving different advice from EPA staff about what constitutes compliance. Having an assigned compliance contact from the EPA might be one option.	5
5	Where relevant, improve efforts to capture the business perspective within EPA's environmental problem solving processes	There is a risk that the business perspective might either be missing or undervalued in EPA's current environmental problem solving processes. Capturing this perspective will assist EPA to better tailor effective intervention efforts.	5
6	Use EPA's partnerships with industry associations as a learning opportunity to improve the skills and expertise of EPA's staff	Given a perceived lack of technical expertise and understanding among EPA staff, businesses felt that this gap could be addressed through partnerships and training with industry associations.	5

## 4.2 BBC recommendations

The BBC team's recommendations are focused on addressing the following deliverables for this project:

2. Recommendations for improving compliance outcomes based on business workplace practices and compliance/non-compliance practices observed and reported during interviews
4. Business feedback on the effectiveness and impacts of recent EPA activity and interventions (e.g. inspections, LORA questions, media releases, online resources)
6. Insights for when and how to partner with an industry association
7. Insights for when and how to use media, and EPA communications

As well as responding to the corresponding deliverables, BBC's recommendations align with the objectives of this research, particularly Objective 2:

*Document and analyse the practices that Victorian businesses participate in (or are unable to participate in) that influence compliance outcomes (with a specific focus on membership of industry associations).*

And Objective 3:

*Identify business expectations of EPA, including the role of EPOs and regulatory interventions in assisting them to achieve compliance outcome.*

Our analysis of the BBC research findings suggests two possible pathways EPA could take for engagement with industry into the future: the first represents a modified continuation of the organisation's current approach, under which businesses are required to perform environmental management and compliance practices that align with EPA's own practices; by contrast, the second option requires a fundamental reshaping of EPA's approach to align its practices with those already performed within businesses. These two pathways are outlined at Sections 4.2.1 and 4.2.2, with recommendations included for each pathway.

BBC does not necessarily suggest that EPA should choose one or the other pathway to apply across the entire organisation; another option would be to apply it on a case-by-case basis – that is, EPA may decide that a Pathway One approach is appropriate for certain businesses or types of businesses within a sector, while choosing to apply Pathway Two for others. We envisage that Pathway Two, for example, may be most applicable for smaller independent businesses that do not have dedicated environmental staff and/or have limited financial resources.

In developing these recommendations BBC has also considered the work EPA has already done to establish best-practice approaches to enforcement and engagement. Of particular relevance is the 'EPA problem solving steps' approach (Appendix 6). While this approach complements pathway one with only minor modifications to its current format, it would require significant re-shaping to be used as part of a pathway two approach. Suggested modifications to the problem solving steps are outlined within the descriptions of each pathway, below.

### 4.2.1 Pathway One

This pathway focuses on bringing businesses into line with EPA's own practices. Applying this pathway enables EPA to continue with its current approach, under which EPA determines which outcomes need to be achieved and then encourages or requires businesses to perform various practices to meet them. Accordingly, the practices of both businesses and EPOs have become increasingly bureaucratic and codified in an effort to reduce risks to EPA and the environment, and to improve environmental outcomes. This finding is supported by the BBC team's Stage 1 research, which found that EPOs were concerned about the increasing bureaucratisation of compliance practices and their ability to achieve effective environmental compliance outcomes (Strempe et al. 2013).

BBC notes that EPA's 'problem solving steps' process fits primarily within Pathway One, although there is an opportunity to focus more sharply on businesses themselves within Stage 5 (Implementation). More specifically, our findings suggest EPA may achieve better compliance

outcomes by tailoring its approach more closely to the needs of businesses, recognising that competences and access to resources (materials) vary between different types of businesses. Table 6 lists recommendations about specific actions EPA could take during Stage 5 of the 'problem solving steps', with a focus on providing businesses with the necessary competences, materials and shared meanings needed to perform environmental management and compliance practices in the way EPA deems necessary. We acknowledge that some of these steps are already being undertaken by EPA; however, they are not specifically included or mentioned as part of the 'problem solving steps'.

**Table 6: Pathway One recommendations**

	Recommendation	Description	Corresponding deliverable
1	Develop training and capacity building for businesses	Develop training and capacity building programs to help businesses perform the environmental management and compliance practices as EPA expects them to be performed. This would involve providing training in key areas of competency and/ or providing key resources and materials on expected practices, for example, in how to use the trade waste certificates system.	2, 4
2	Establish ongoing contact persons for industry groups	Establish ongoing contact persons within EPA for each industry group, to respond to questions and provide tailored compliance advice and technical competency. This could be modelled on the WorkSafe hotline, whereby key staff are available to give technical advice.	2, 4, 7
3	Work with industry associations and other intermediaries	Work closely with consultants, industry associations and other intermediaries to develop key competencies and shared meanings, and source relevant materials about regulatory requirements. The Fischer and Guy (2009) categories (Section 3.3.4) is a useful way of identifying intermediaries and their potential roles – and ways in which EPA can intervene to improve compliance practices through working with and through intermediaries on mediation, training, advocacy and/or eco-innovation.	6

## 4.2.2 Pathway Two

In contrast with Pathway One, which facilitates a continuation of EPA's current approach, Pathway Two would require EPA to reshape its own practices so they better align with those that businesses perform in their day-to-day operations. This approach responds to BBC's finding that businesses already perform a range of practices to achieve environmental compliance, and aims to address the disconnection or misalignment between those and EPA's own practices. While it holds promise for all business types, our research suggests this pathway is particularly relevant for small business owners and operators, who may be less able to perform compliance practices in the way EPA deems necessary or expects (see Section x).

In its current form, EPA's 'problem solving steps' process is not immediately compatible with Pathway Two: while the problem solving steps start from EPA defining a 'problem' in terms of environmental impact, a Pathway Two approach would require EPA to start by establishing how businesses define the 'problem' and what this means for resulting environmental impacts. For example, if the environmental impact in question were contamination of soil and groundwater by underground petroleum storage systems, under a Pathway Two approach EPA's first step would

be to find out why that contamination was happening. While EPA may view the ‘problem’ as soil and groundwater contamination, the relevant businesses may view the problem as a lack of affordable disposal options for contaminated soil; or the fear they would go out of business were they to undertake leak discovery and remediation works. Understanding how businesses define the problem and its causes would require undertaking research on their business practices, and in particular those that are likely to lead to (and seek to remediate) soil or groundwater contamination.

Stage 1 of this research suggests EPOs may be well placed to undertake this type of investigation. Indeed, in their everyday work at the ‘frontline’ of enforcement EPOs already develop significant competences regarding the industries and duty holders they engage with. EPOs are, in a sense, carrying out this ‘problem definition’ work already, but at present the usefulness of their insights is constrained by the stage at which it occurs (i.e. the enforcement stage, well after EPA has defined the ‘problem’ internally and decided how to address it). A further constraint for EPOs is the increasing bureaucratisation and codification of their enforcement practices, as outlined in the Stage 1 report (Strempel et al. 2013).

As mentioned in Section 3.3.2, the staging of the enforcement process is also relevant here: while EPA needs to ensure that the environment is protected and holds significant powers to do so, businesses participating in this research consistently called for a more collaborative approach where notices are not issued in the first instance. While the businesses interviewed understood and accepted that they should not be allowed to pollute the environment, they often felt they were unable to keep up with and understand what was required of them. Were EPA to involve businesses in the problem definition process right from the start, it may go some way towards addressing this issue.

Having first undertaken to understand how businesses define the problem, and the competences, materials and meanings employed in the performance of their business practices (including any differentiation based on business size and type), EPA could then focus on designing an engagement and enforcement process that works within or alongside the practices those businesses perform.

Drawing on these insights, recommendations for Pathway Two and the corresponding deliverables are listed in Table 7, below. We acknowledge that some of these steps are already being undertaken by EPA; however, they are not specifically included or mentioned as part of the ‘problem solving steps’

**Table 7: Pathway Two recommendations**

	Recommendation	Description	Corresponding deliverable
1	Conduct pre-enforcement research into industry practices	Before designing an enforcement ‘blitz’, conduct research to understand how businesses within the relevant industry/s define the ‘problem’: what practices do they already perform; what materials, shared meanings and competences shape those practices; and how do they reduce environmental impacts and achieve compliance outcomes? EPOs may be well placed to play a key role in gathering these insights.	2, 4
2	Identify key opportunities to enlist intermediaries in shaping practices	The Fischer and Guy (2009) categories (Section 3.3.4) is a useful way of identifying intermediaries and their potential roles – and ways in which EPA can intervene to improve compliance practices through working with and through intermediaries on mediation, training, advocacy and/or eco-innovation. Specific examples from this study are provided in the following	

		recommendations below.	
3	Peer-review communication materials	Invite industry members and businesses to peer-review EPA communications materials and identify what is relevant/useful for how they currently achieve environmental management and compliance outcomes. Consider revising materials to better fit with the competences, materials and shared meanings businesses already draw on to achieve environmental management and compliance outcomes.	7
4	Provide funding support based on business practices	Develop funding mechanisms that meet pre-existing needs of businesses, informed by the relevant industries and targeted for different businesses sizes and types. Providing funding mechanisms for key waste management and compliance equipment is particularly important.	2
5	Tailor approach for small independent operators	Tailor engagement and compliance approaches to meet the needs of small independent businesses, recognising their specific needs for financial and technical support.	2
6	Reshape enforcement practices and notice timing	Reconsider how notices to comply are issued and whether there are opportunities to take a more collaborative approach to enforcement that works with businesses and their practical realities to achieve compliance outcomes.	2, 4
7	Build relationships with industry associations	Work alongside industry associations and other intermediaries to build strong relationships with industry, recognising how past engagements may continue to shape shared meanings about EPA and its compliance practices.	6
8	Build industry-specific technical competence within EPA	Build industry-specific technical competence within EPA to enable a more collaborative and flexible approach to industry engagement.	2, 4, 6

## 5 Conclusion

Building on the Stage 1 reports from BWA and BBC that documented the experiences of EPOs, this pilot study shifted the focus to understanding the behaviours and practices that shape the environmental performance of businesses. While the two research teams applied different conceptual and methodological approaches to capture the business perspective of environmental compliance, the study has produced a complementary set of insights and recommendations. This research highlights the value of applying regulatory behaviour and social practice approaches in parallel to understand some of the current compliance challenges faced by businesses and the EPA.

Importantly, both stages of this research are considered a pilot, and further research is needed to test these findings more broadly. This Stage 2 study was limited by the small sample size and potential biases noted in the methodology (Section 2). Despite these limitations, research findings and recommendations are mainly consistent and complementary across the two stages of

research, and the two research teams. This suggests that the findings and recommendations presented in both stages of research can be taken forward by EPA with confidence.

In the Stage 1 reports, BWA articulated a range of tailored intervention strategies that EPOs either currently or could employ to improve the compliance behaviour of businesses in response to EPO interpretations of different motives and capabilities that exist across the business behaviour quadrants. Concurrently, the BBC team explored the practices EPOs perform in their everyday work and the meanings, competences and materials that shape them, identifying a tension between EPO practices and the increasingly codified nature of EPA's broader approach to enforcement. A similar story has emerged from the current study. While BWA's research produced insights about specific business motives, capabilities and responses that could inform more tailored interactions, investigations and interventions, BBC's research identified two separate approaches, or 'pathways', EPA could apply to future industry engagement—one is based on the current practices of EPA, while the other calls for a more significant reshaping of EPA's approach whereby businesses' practices form the starting point for EPA strategy and intervention.

The recommendations collectively emphasise the value of EPA taking a more active approach to understanding the behaviours and practices of businesses, to inform a shared and collaborative definition of environmental and/or compliance problems. Businesses define and understand 'problems' differently from EPA, and these differences will likely vary significantly between different types of businesses. By analysing these differences, EPA can tailor its ongoing engagement with industry. This has significant implications for the 'EPA problem solving steps' (Appendix 6), which currently appear to define problems from a perspective largely set by the EPA and technical environmental compliance parameters.

A recurring question that has emerged throughout this study concerns the boundaries of EPA's support to assist businesses meet their environmental compliance obligations. While the interviews provided a selection of positive and negative accounts of EPA's understanding and support of businesses, the EPA is ultimately charged with the responsibility of protecting the environment and monitoring industry for compliance, rather than 'resourcing' it to comply. Nevertheless, part of EPA's operating model involves 'support to comply'. The insights gained during this research suggest that supporting compliance can involve a range of methods of engagement to foster compliance. More specifically, improving compliance involves understanding the business perspective and tailoring 'support to comply', using the tools of engagement at EPA's disposal. This engagement extends to 'intermediaries' or industry associations and other stakeholders in the compliance system. Through this understanding EPA cannot only better conceptualise the problems businesses face, but also work towards shared solutions.

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## Appendix 1: BWA interview instrument

### Background questions

1. Tell me a little bit about your business
  - Years of operation and how long have you been here
  - Type of business activities
  - Own or lease the site
  - Number of sites the business manages
  - Number of staff
  - Interactions with EPA
2. Describe one of the most important achievements or challenges that you have faced in recent years in relation to implementing environmental business behaviours and/or complying with environmental standards. What factors led to this achievement/caused this challenge?

### Motivation to comply

3. When it comes to meeting obligations related to protecting the environment, businesses are often confronted with different motives that influence their willingness to meet these obligations. In your business, what factors or circumstances *positively* influence your willingness to implement environmental business behaviours and/or comply with environmental standards? [PROVIDE EXAMPLE BEHAVIOURS] [PROBE] [ANYTHING ELSE?]
4. In your business, what factors or circumstances *negatively* influence your willingness to implement environmental business behaviours and/or comply with environmental standards? [PROBE] [ANYTHING ELSE?]
5. Looking at this table, which of the following factors also influence your willingness to implement environmental business behaviours and/or comply with environmental standards? Please describe the nature of this influence (e.g., positive versus negative). [SHOW TABLE ] [PROBE] [ANYTHING ELSE?]

Likelihood of being inspected by the EPA
Likelihood of non-compliant behaviour being detected
Likelihood of receiving a fine or sanction
The severity of potential fines or sanctions
Awareness of penalties against other businesses
The belief that other businesses are meeting their compliance obligations
A personal sense of civic duty to comply with environmental laws
Protecting your business reputation
Business profitability (e.g., cost savings/burdens, business competition, winning contracts)
Gaining the approval of the EPA (including its environment protection officers)
Gaining the approval of the local community
Gaining the approval of the industry association
Gaining the approval of other businesses
Gaining the approval of other influential stakeholders (e.g., customers, suppliers)

### Capability to comply

6. When it comes to meeting obligations related to protecting the environment, businesses are often confronted with different factors that influence their capability to meet these obligations. In your business, what factors or circumstances *positively* influence your capability to implement environmental business behaviours and/or comply with environmental standards [PROVIDE EXAMPLE BEHAVIOURS] [PROBE] [ANYTHING ELSE?]
7. In your business, what factors or circumstances *negatively* influence your capability to implement environmental business behaviours and/or comply with environmental standards? [PROBE] [ANYTHING ELSE?]

8. Looking at this table, which of the following factors also influence your capability to implement environmental business behaviours and/or comply with environmental standards? Please describe the nature of this influence (e.g., positive versus negative). [SHOW TABLE] [PROBE] [ANYTHING ELSE?]

Knowledge of the rules
Staff and financial resources
Costs of compliance
Business size
Business location
Site limitations
Resources provided by the EPA
Advice provided by EPA's environment protection officers
Expertise of the EPA environmental protection officers
Advice provided by industry associations

### Business responses to EPA initiatives

9. In the context of your business, what do you think is the main role of the EPA? [PROBE] [ANYTHING ELSE?]
10. In your opinion, how successful is the EPA in performing this role? [PROBE] [ANYTHING ELSE?]
11. As Victoria's environmental regulator, the EPA offers a number of forms of compliance assistance. These include:
- Support to comply programs
  - Inspection reports
  - Informal advice from environment protection officers
  - EPA's call centre and website resources
  - Partnerships with industry associations
  - Media releases

Based on your experience, how useful have these initiatives been (if any) in supporting your business to implement environmental practices and/or comply with environmental standards? Please give examples. [PROBE] [ANYTHING ELSE?]

12. How has your business responded to these initiatives (if at all)? [PROBE] [ANYTHING ELSE?]
13. Are there any gaps in what EPA delivers and what is desired by your business? Please give examples. [PROBE] [ANYTHING ELSE?]

### Environmental condition and risks

14. Do you have anything to add about the conditions at your site that either assist or challenge the implementation of environmental practices and/or compliance with environmental standards?
15. Is there anything else you'd like to add??
16. Or any questions you have for me?

## Appendix 2: Table of 11 item comparison

"Table of 11" items	EPA outcomes research items	BWA items
<b>1. Knowledge of the rules</b> <i>The familiarity with and clarity of legislation among the target group</i>	"It's easy to break the laws of the EP Act without knowing it"	Knowledge of the rules
		Awareness of penalties against other businesses
<b>2. Costs/benefits</b> <i>The tangible/intangible advantages and disadvantages arising from compliance or non-compliance with the rule(s), expressed in time, money and effort.</i>	"Do you agree or disagree that the advantages to your business of complying with the environmental laws outweighs the cost incurred to your business to meet these laws"	Business profitability (e.g., cost savings/burdens, business competition, winning contracts)
<b>3. Extant of acceptance</b> <i>The extent to which the policy and legislation is considered acceptable by the target group.</i>	"The laws of the EP Act are effective in protecting the environment"	A personal sense of civic duty to comply with environmental laws
	"In my organisation, complying with environmental laws is not given a high priority"	The belief that other businesses are meeting their compliance obligations
<b>4. Target group's respect for authority</b> <i>The extent to which the target group respects the government's authority</i>	"Even if the EPA noticed that we had broken the law, they wouldn't be able to make us do anything about it"	Gaining the approval of the EPA (including its environment protection officers)
<b>5. Non-official control (social control)</b> <i>The risk, as estimated by the target group, of positive or negative sanctions on their behaviour other than by the authorities</i>	"The local community are likely to report businesses in my sector who pollute"	Protecting your business reputation
		Gaining the approval of the local community
		Gaining the approval of the industry association
		Gaining the approval of other businesses
		Gaining the approval of other influential stakeholders (e.g., customers, suppliers)
<b>6. Risk of being reported</b> <i>The risk, as estimated by the target group, of a violation detected by others than the authorities, being reported to a government body.</i>	None	None
<b>7. Risk of inspection</b> <i>The risk, as estimated by the target group, of an inspection by the authorities as to whether rules are broken.</i>	"EPA inspections happen so rarely that my business is not very concerned about breaking environmental laws"	Likelihood of being inspected by the EPA
<b>8. Risk of detection</b> <i>The risk, as estimated by the target group, of a violation being detected in an inspection carried out by the authorities.</i>	"It is hard to detect pollution coming from my organisation"	Likelihood of non-compliant behaviour being detected
	"Businesses in my sector are likely to report other businesses breaking environmental laws"	
<b>9. Selectivity</b> <i>The perceived (increased) risk of inspection and detection of a</i>	"EPA has a history of systematically targeting the inspections at businesses in my industry"	None

<i>violation resulting from the selection of businesses, persons, actions or areas to be inspected.</i>	“EPA will hold you and others to account for the pollution you/they generate”	
<b>10. Risk of sanction</b> <i>The risk, as estimated by the target group, of a sanction being imposed if an inspection reveals that a rule has been broken.</i>	None	Likelihood of receiving a fine or sanction
<b>11. Severity of sanction</b> <i>The severity and nature of the sanction associated with the violation and additional disadvantages of being sanctioned.</i>	“The punishments for breaking environmental laws aren’t strong enough to stop businesses from breaking the laws”	The severity of potential fines or sanctions
		Other items focused on “capability”: <ul style="list-style-type: none"> <li>• Staff and financial resources</li> <li>• Costs of compliance</li> <li>• Business size</li> <li>• Business location</li> <li>• Site limitations</li> <li>• Resources provided by EPA</li> <li>• Advice provided by EPA’s environment protection officers</li> <li>• Expertise of EPA environmental protection officers</li> <li>• Advice provided by industry associations</li> </ul>

## Appendix 3: BBC interview instrument – electroplaters

### RMIT University: Draft interview schedule – Improving compliance outcomes: Understanding the behaviours and practices of business environment performance

#### *Interviews with business owners/managers/employees: Electroplaters*

##### About the business / everyday business practices

Can you describe this business? (What does it sell/ produce/ provide? How many employees? How long in operation? How many locations/ offices? etc.)

What is your role in this business?

What work did you do prior to running/working in this business? Qualifications?

Why did you decide to start/takeover/work in this business?

How many people work on this site? What kinds of roles do they have?

What does your business do on a day-to-day basis?

Is it a closed site or open to the public?

What are the main pieces of equipment/ machinery used in your business?

##### Environmental condition and risks

How would you describe the current environmental condition of the land, water and air on your site?

Do you know what the site was used for previously? If so, have other businesses contributed to the environmental condition of the site?

What would you say are the main risks to the environment posed by your own business activities?

What types of waste products does your business produce?

How do you manage these waste products now?

Has this changed over time? How and why?

Do you think your current waste management system/ strategies work well for your business? In what ways do they work well/ not?

##### Compliance practices

Who is responsible for environmental compliance in this business? Why was that person/s selected?

Do you have any workplace procedures to manage your environmental compliance, such as committees, policies, regular meetings?

Which environmental protection laws are you aware of that are relevant to your business's activities?

How well do you feel you understand these laws?

Do you feel like these laws are appropriate for your business? How so/ not?

Have you experienced any difficulties with responding to/ managing the environmental protection laws that are relevant to your business? Please describe them.

What would make it easier for your business to comply with environmental protection laws?

How important is environmental compliance to you? Why?

What do you think would happen if you didn't comply with environmental protection laws?

If you were to leave this site, what do you think the next business operating here would need to know about, that would affect their ability to comply with environmental protection laws? How is/ will this knowledge be passed along?

##### EPA expectations / experiences

What do you think the EPA expects of you?

What sort of contact have you had with the EPA since being in this business? How did you find it?

Has someone from the EPA ever visited your site? If yes:

- Do you know why they visited your site? (Was there a specific issue/ complaint?)
- Was the visit pre-arranged, or did the EPO arrive without notice?
- If pre-arranged: what did you do to prepare for the visit?
- Who was present during the visit?

- What happened during the visit? Walk us through from start to finish.
- How was information captured during the visit – did you take notes?
- During the visit, did you feel confident the EPO understood your particular situation?
- By the end of the visit, did you feel clear about what was required of you?
- What did you do after the visit – meet with key staff? Send an email to staff?
- What was the outcome of the visit – were you issued a notice to comply?
- If you were issued a notice, did you comply with it?
- Was it easy or difficult to comply?
- Did the EPO give you any suggestions about how you could comply?
- Did you seek any information or help to comply with EPA's requirements? Was it helpful?
- What was the final outcome?

Based on your experiences, do you think EPOs are effective in the way they deal with businesses?

What do you think would improve how EPOs interact with businesses?

Do you think your experiences with EPA have improved your business's ability to comply with environmental protection laws?

### **Community & consumer expectations**

What do you think your customers expect of your business?

What do you think the community expects of your business in terms of environmental protection?

Do you think these expectations are reasonable?

How are these expectations changing/ how do you think they might change?

Does your business have any ability to change these expectations?

Is it easy or difficult to meet customer and community expectations at the same time?

### **Experience with industry associations**

Are you aware of any industry associations relevant to your business?

Are you a member of any industry associations? Why/why not?

Do industry associations currently help you to manage environmental impacts and compliance?

Do you think industry associations could or should do more to help you manage environmental management and compliance? What kinds of things would be helpful?

### **Final questions**

Is there anything you would like to ask us?

## Appendix 4: BBC interview instrument – UPSS

### RMIT University: Draft interview schedule – Improving compliance outcomes: Understanding the behaviours and practices of business environment performance

#### *Interviews with business owners/managers/employees: UPSS*

##### About the business / everyday business practices

Can you describe this business? (What does it sell/ produce/ provide? How many employees? How long in operation?

How many locations/ offices? etc.)

What is your role in this business?

What work did you do prior to running/working in this business? Qualifications?

Why did you decide to start/takeover/work in this business?

How many people work on this site? What kinds of roles do they have?

What does your business do on a day-to-day basis?

Is it a closed site or open to the public?

What are the main pieces of equipment/ machinery used in your business?

##### Environmental condition

How would you describe the current environmental condition of the land, water and air on your site?

Do you know what the site was used for previously? If so, have other businesses contributed to the environmental condition of the site?

##### Environmental management

What would you say are the main risks to the environment posed by your own business activities?

What do you currently do to manage these environmental risks?

- Who is responsible for environmental management in this business? Why was that person/s selected?
- Do you have any workplace procedures relating to environmental management, such as committees, policies, regular meetings?

Are you aware of any environmental protection laws or guidelines that are relevant to your business's activities?

How well do you feel you understand these laws or guidelines?

Do you feel these laws or guidelines are appropriate for your business? How so/ not?

Have you experienced any difficulties responding to environmental protection laws or guidelines relevant to your business? Please describe them.

What would make it easier for your business to comply with environmental protection laws or guidelines?

How important is environmental management to you? Why?

What do you expect would happen if you didn't comply with environmental protection laws or guidelines?

If you were to leave this site, what do you think the next business operating here would need to know about, that would affect their ability to manage environmental risks? How is/ will this knowledge be passed along?

##### Community & consumer expectations

What do you think your customers expect of your business?

What do you think the community expects of your business in terms of environmental protection?

Do you think these expectations are reasonable?

How are these expectations changing/ how do you think they might change?

Does your business have any ability to change these expectations?

Is it easy or difficult to meet customer and community expectations at the same time?

##### EPA expectations / experiences

What do you think the EPA expects of you?

What sort of contact have you had with the EPA since being in this business? How did you find it?

Has someone from the EPA ever visited your site? If yes:

- Do you know why they visited your site? (Was there a specific issue/ complaint?)
- Was the visit pre-arranged, or did the EPO arrive without notice?
- If pre-arranged: what did you do to prepare for the visit?
- Who was present during the visit?
- What happened during the visit? Walk us through from start to finish.
- How was information captured during the visit – did you take notes?
- During the visit, did you feel confident the EPO understood your particular situation?
- By the end of the visit, did you feel clear about what was required of you?
- What did you do after the visit – meet with key staff? Send an email to staff?
- What was the outcome of the visit – were you issued a notice to comply?
- If you were issued a notice, did you comply with it?
- Was it easy or difficult to comply?
- Did the EPO give you any suggestions about how you could comply?
- Did you seek any information or help to comply with EPA's requirements? Was it helpful?
- What was the final outcome?

Based on your experiences, do you think EPOs are effective in the way they deal with businesses?

What do you think would improve how EPOs interact with businesses?

Do you think your experiences with EPA have improved your business's ability to comply with environmental protection laws?

#### **Experience with industry associations**

Are you aware of any industry associations relevant to your business?

Are you a member of any industry associations? Why/why not?

Do industry associations currently help you to manage environmental impacts and compliance?

Do you think industry associations could or should do more to help you manage environmental management and compliance? What kinds of things would be helpful?

#### **Final questions**

Is there anything you would like to ask us?



## Appendix 5: BBC interview instrument – UPSS Large companies

### RMIT University: Draft interview schedule – Improving compliance outcomes: Understanding the behaviours and practices of business environment performance

#### *Interviews with business owners/managers/employees: UPSS – Large companies*

##### About the business / everyday business practices

What is your role at [COMPANY]?

- Do you spend much time at [COMPANY]’s various sites?
- What work did you do prior to this role? Qualifications?
- Why did you decide to start/takeover/work in this business?

What, if any, interaction do you have with franchisees?

- Do/can they seek assistance from you for environmental compliance?

##### Environmental management

*For the following questions please think specifically about sites with UPSS.*

Which (types of) [COMPANY] sites have UPSS?

What would you say are the main risks to the environment posed by these sites?

What does [COMPANY] currently do to manage these environmental risks?

- Do you have any workplace procedures relating to environmental management, such as committees, policies, regular meetings?

Are franchisees bound by [COMPANY]’s environmental policies/standards? How is that enforced?

Who is responsible for purchasing UPSS?

- Do they have to follow any standards or procedures?
- Is there a set supplier?

Who is responsible for maintaining UPSS?

- What is done to prevent leaks?
- If there were a leak, what would happen? OR, have you ever had a leak & what happened?

What would happen if a franchisee mismanaged a site/UPSS?

How well do you think [COMPANY]’s franchisees understand their environmental compliance obligations?

What happens to the UPSS if a franchise is sold or moves?

##### Environmental compliance

Which environmental protection laws or guidelines are you familiar with that are relevant to [COMPANY]’s activities?

How well do you feel you understand these laws or guidelines?

Do you feel these laws or guidelines are appropriate for [COMPANY]? How so/ not?

Have you experienced any difficulties responding to environmental protection laws or guidelines?

What would make it easier for [COMPANY] to comply with environmental protection laws or guidelines?

How important is environmental management to you? Why?

What do you expect would happen if [COMPANY] didn’t comply with environmental protection laws or guidelines?

##### Community & consumer expectations

What do you think your customers expect of your business?

What do you think the community expects of your business in terms of environmental protection?

Do you think these expectations are reasonable?

How are these expectations changing/ how do you think they might change?

Does your business have any ability to change these expectations?

Is it easy or difficult to meet customer and community expectations at the same time?

### **EPA expectations / experiences**

What do you think the EPA expects of you?

What sort of contact have you had with the EPA since being in this business? How did you find it?

Has someone from the EPA ever visited one of your sites? If yes:

- Do you know why they visited your site? (Was there a specific issue/ complaint?)
- Was the visit pre-arranged, or did the EPO arrive without notice?
- If pre-arranged: what did you do to prepare for the visit?
- Who was present during the visit?
- What happened during the visit? Walk us through from start to finish.
- How was information captured during the visit – did you take notes?
- During the visit, did you feel confident the EPO understood your particular situation?
- By the end of the visit, did you feel clear about what was required of you?
- What did you do after the visit – meet with key staff? Send an email to staff?
- What was the outcome of the visit – were you issued a notice to comply?
- If you were issued a notice, did you comply with it?
- Was it easy or difficult to comply?
- Did the EPO give you any suggestions about how you could comply?
- Did you seek any information or help to comply with EPA's requirements? Was it helpful?
- What was the final outcome?

Based on your experiences, do you think EPOs are effective in the way they deal with businesses?

What do you think would improve how EPOs interact with businesses?

Do you think your experiences with EPA have improved your business's ability to comply with environmental protection laws?

### **Experience with industry associations**

Are you aware of any industry associations relevant to your role?

Are you a member of any industry associations? Why/why not?

Do industry associations currently help you to manage environmental impacts and compliance?

Do you think industry associations could or should do more to help you manage environmental management and compliance? What kinds of things would be helpful?

### **Final questions**

Is there anything you would like to ask us?

## Appendix 6: EPA Problem Solving Steps

### Document Purpose

To outline the approach EPA will use, and continue to develop, to solve problems and develop state-wide Operational Strategies and regionally based Local Strategic Initiatives (LSI). The process outlines key steps to be followed and provides links to the outputs that are either required in a particular format or examples that can be adapted.

### What is Environmental Problem Solving

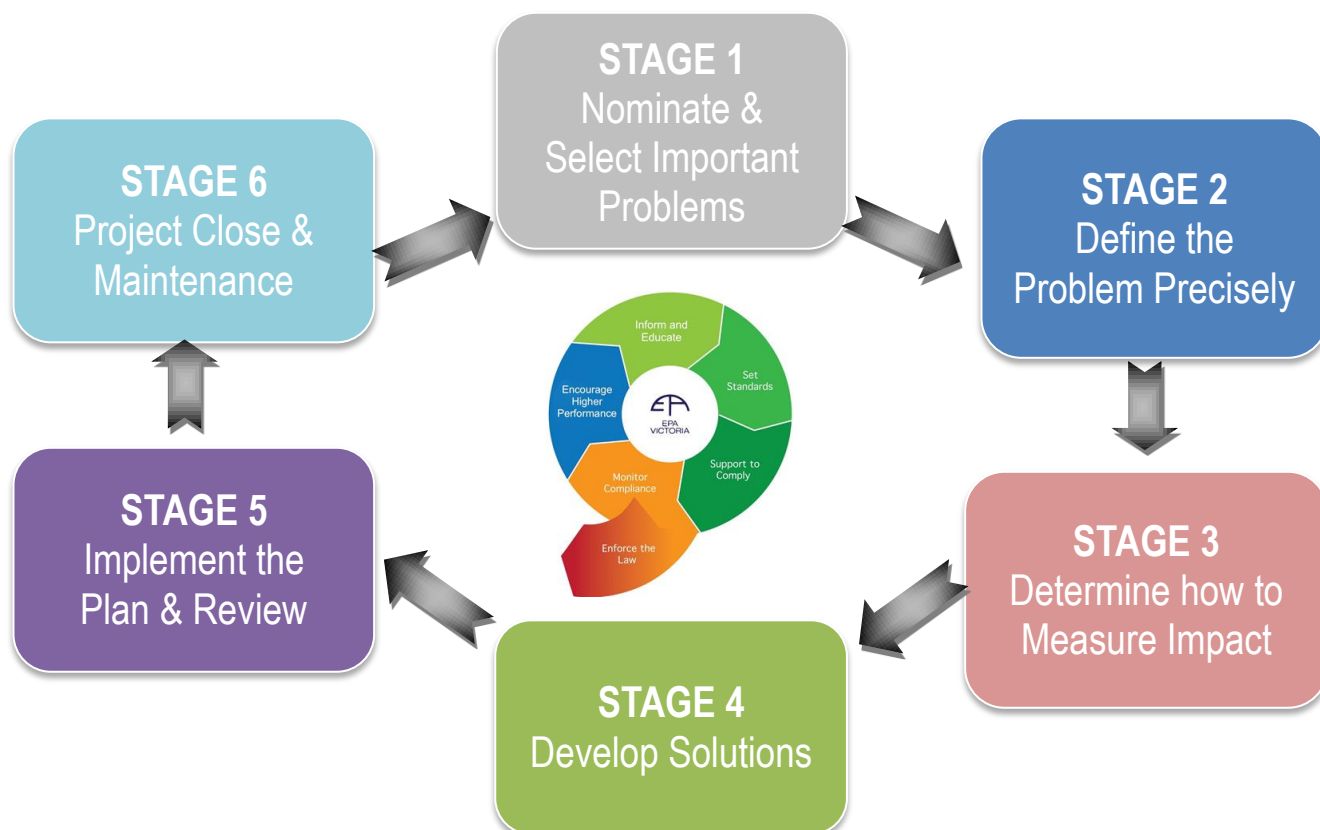
Environmental problem solving is a structured approach to solving environmental problems that are not getting fixed by routine or conventional efforts.

It is a straight-forward information driven process, that is meant to be taken step-by-step. The order of the steps helps to identify the problem, analyse it, measure it, and create tailored and targeted solutions. When the solution is implemented, its effectiveness is measured, and adjusted if needed. When success is achieved the project is closed, with ongoing monitoring to ensure the problem does not arise again.

### How and why has this Approach Been Developed?

This approach is the composite of a number of processes developed by Operational Strategy Unit, the Compliance Strategist Reference Group, other staff and approaches by EPA Victoria and other environmental regulators, and is based on the work by leading regulatory academic Professor Malcolm Sparrow.

The approach to solving problems, be it for an Operational Strategy, Local Strategic Initiative or other regulatory problem, involves a number of common steps. Adopting a single approach enables the lessons from Operational Strategy Unit and Regional offices to be shared and the problem solving process to be collectively improved across the state.



## Strategy planning steps

<p><b>STAGE 1</b></p> <p><b>Nominate &amp; Select Important Problem for Attention</b></p>	<p><b>1. Nominate &amp; Select Important Problems for Attention (conducted as part of the Organisational Issues Prioritisation Process lead by Corporate Strategies Unit):</b></p> <ol style="list-style-type: none"> <li>Identify</li> <li>Analyse</li> <li>Prioritise (and allocate responsibility)</li> </ol>
<p><b>STAGE 2</b></p> <p><b>Define the Problem Precisely</b></p> <p><b>CONCEPT BRIEF</b></p>	<p><i>“Not analysis paralysis.....but close”</i></p> <p><b>2. Define the Problem Precisely:</b></p> <ol style="list-style-type: none"> <li>Develop simple project plan to map out the concept brief stage.</li> <li>Write down your initial understanding of the problem and the factors that drive it (Problem Context) and what change EPA is seeking to make (Problem Statement) – This may come from Stage 1. Use Herbster one pager.</li> <li>Identify and map out what is known about the current state of the problem (cause-effect relationships, key causes/drivers, past-present-future scenarios). Includes finding the right people and building a team to assist.</li> <li>Identify what are the gaps in knowledge, how they can be filled, who will be responsible and involved, and by when it will be done.</li> <li>Collect additional information, synthesise and refine problem understanding (depending on the scale or research this may need to be documented in a project brief).</li> <li>Develop hypothesis of critical elements/paths/nodes of the problem and analyse the likely effect of EPA’s intervention on different parts of the problem. Theory of change at a high level</li> <li>Develop Concept brief on what can be done to address the problem with options to tackle.</li> <li>Seek endorsement of Concept brief.</li> </ol> <p><i>“It acknowledges the complexity of the choices in setting the scale and picking the right dimensions by which to characterise a harm...and the need to consider multiple and competing perspectives on what the problem is”</i></p>
<p><b>STAGE 3</b></p> <p><b>Determine how to Measure Impact</b></p> <p><b>PROGRAM PLANNING</b></p>	<p><i>“The most critical step that requires just as much effort and creativity as the development of solutions”</i></p> <p><b>3. Determine how to Measure Impact:</b></p> <ol style="list-style-type: none"> <li>Find right people to assist</li> <li>Analyse the problem for all those aspects that will change from the current to future state, how they are likely to change throughout the intervention and how they can be measured.</li> <li>Identify the goals and metrics for each of the individual measures that will indicate a successful intervention.</li> <li>Identify interim targets or trigger values to help monitor and track progress, and how they may move over the project life cycle.</li> </ol> <p><i>“If it has not been determined ahead of time which indicators count, and how they are expected to behave, then there is no way to evaluate whether any plan is actually working or not”</i></p>
<p><b>STAGE 4</b></p>	<p><i>“No new action, until the relevant metrics have been selected, and benchmarked, and you have a clear understanding of the you expect the problem to change if you succeed”</i></p>

<p><b>Develop Solutions / Interventions</b></p> <p><b>PROGRAM PLANNING AND TACTICAL PROJECTS</b></p>	<p><b>4. Develop Solutions/Interventions:</b></p> <ol style="list-style-type: none"> <li>Using hypothesis – develop a range of possible interventions (consider brainstorming, review of other successful initiatives, approaches to ‘control’, ‘eliminate’, ‘mitigate’, ‘prevent’, ‘reduce’, ‘supress’).</li> <li>Develop your theory of change – why what is planned would work based on the context that the problem sits in.</li> <li>Establish criteria for choosing/prioritising possible interventions (for example - cost, efficiency, effectiveness)</li> <li>Select best methods (one, mix etc) and plan out sequence of events that will deliver desired future state.</li> <li>Review measures and metrics and confirm goals, targets and indicators.</li> </ol>
<p><b>STAGE 5</b></p> <p><b>Implement the Plan &amp; Periodic Monitoring and Review / Adjustment</b></p> <p><b>IMPLEMENTATION</b></p>	<p><i>“Picking an intervention is not a once time thing”</i></p> <p><b>5. Implement the Plan &amp; Periodic Monitoring and Review/Adjustment (conducted within the EPA Project Management Governance processes):</b></p> <ol style="list-style-type: none"> <li>Identify key tasks, preferred timeline and milestones</li> <li>Identify skills and capabilities required to deliver and secure resources</li> <li>Build team understanding and commitment to project, develop engagement strategy and risk management plan and adjust tasks, project timeline and milestones.</li> <li>Draft project brief for endorsement and approval.</li> <li>Announce and begin</li> <li>Ongoing review and adjustment – expand, refine, reject, continue, add ..etc</li> </ol> <p><i>“Any presumption that the first plan chosen must necessarily succeed drives out the possibility of honest and timely evaluation, and leaves organisations doing what public agencies seem to do so often – running a program for ever, without regard for its effects, just because once-upon-a-time it seemed like a good idea”</i></p>
<p><b>STAGE 6</b></p> <p><b>Project Closure, and Long Term Monitoring / Maintenance</b></p> <p><b>PROJECT CLOSE</b></p>	<p><i>“It is often much easier to open projects than to close them”</i></p> <p><b>6. Project Closure, and Long Term Monitoring/Maintenance:</b></p> <ol style="list-style-type: none"> <li>Develop and Implement transition/exit plan – approaches to be maintained, resources, responsibilities to sustain changes made to the problem</li> <li>Develop End of Project Report – performance story – what has changed, what has improved</li> <li>Evaluation, program outcomes and process, lessons learnt</li> <li>Acknowledge, Announce, Celebration</li> <li>Long term monitoring/maintenance (to “spot and squish” emerging issues)</li> <li>Formal handover</li> </ol>

## Strategy planning – Steps, Outputs and Outcomes

Strategy planning steps	Outputs	Outcomes
<b>1. Nominate and Select Problem</b>		
<b>PROBLEM DEFINITION</b>		
a. Work with Top 6 Focus Area Manager, Problem Nominator and others to develop a more refined problem definition	Input from focus area manager- Problem Statement ( <a href="#">link to Herbster Doc</a> ) Output more refined Problem Statement	The initial problem nominated has been refined and a more focused problem definition has been developed to a stage that agreed that this is work that Operations Strategy should progress
<b>2. Define the problem precisely</b>		
<b>CONCEPT BRIEF</b>		
a. Develop brief project plan that maps out how you will complete the work to complete the concept brief stage	Short project plan	Agreement and direction on scope of work and what needs to be done to develop the concept paper.
b. Write down your initial understanding of the problem issue (but not too complex)	Problem Statement ( <a href="#">link to Herbster Doc</a> )	You understand, and can convey to others, the general problem you are tackling
c. Identify what is known and find right people to assist	List of information or people to assist	General understanding of problem and who can assist.
d. Identify gaps in knowledge	List of gaps and actions to address. (put in Herbster doc)	Understanding of additional information that is required
e. Collect, synthesise and refine. Could include conduct of inspections to gather information on problem.	Revised problem statement. Background report.	Good understanding of problem and its context. Involvement of field in understanding the problem
f. Develop hypothesis	Statement about the nature of problem what could cause change	Understanding of nature of problem the context, what change is required and why this change would work
g. Concept brief	Concept brief and indicative costings? Attach a strategy doc including Herbster doc + G2G assessment, industry background and categorisation, theory of change, intelligence gaps etc	Understanding at a high level about what is required to enable decisions to be made. Also high level mapping of problem including context and likely levers for change and key gaps.
h. Endorsement	Summary paper and possible presentation. Example 1, Example 2, Example 3	Agreement on approach at management levels required to enable next stages to be undertaken.
<b>3. Determine how to measure impact</b>		
<b>PROGRAM PLANNING</b>		
a. Find the right people (internal and external to EPA)	List of people to assist and what required Example 1	People enlisted understand their role and are the right people to help you understand and work through the problem. In

Strategy planning steps	Outputs	Outcomes
		particular, managers are aware of their potential commitment. MAU engaged and aware.
b. Analyse the problem for all those aspects that will change from the current to future state, how they are likely to change throughout the intervention and how they can be measured	One – two page document with key dependencies and linkages identified. Example 1 program logic	People involved now understand the various components of the problem (its size and shape) and what, and who, can help to resolve it
c. Identify the goals and metrics for each of the individual measures that will indicate a successful intervention	List of goals and measures Example 1	Clear what change is expected to be seen if interventions are successful, commensurate with size and scale of problem
d. Identify interim targets or trigger values to help monitor and track progress, and how they may move over the project life cycle.	List of possible causes to problem or things that you may need to test to verify your problem statement.	Problem is narrowed to a few distinct causes with clarity on changes that will be expected
<b>4. Develop strategy</b>		
<b>PROGRAM PLANNING AND TACTICAL PROJECTS</b>		
a. Using hypothesis – develop a range of possible interventions (consider brainstorming, review of other successful initiatives, approaches to ‘control’, ‘eliminate’, ‘mitigate’, ‘prevent’, ‘reduce’, ‘supress’).	List of interventions that link to the Q	Team has understood the specific nature of the problems and identified the range of possible interventions that will be most effective
b. Develop your theory of change – why what is planned would work based on the context that the problem sits in	Detailed theory of change linked to interventions that are planned. Example 1	Statement on theory of change at detailed level – why will these particular tactics work within this industry or problem context
c. Establish criteria for choosing/prioritising possible interventions (for example - cost, efficiency, effectiveness)	List of criteria and good to great assessment Example 1 Example 2	Review measures and metrics and confirm goals, targets and indicators
d. Select best methods (one, mix etc) and plan out sequence of events that will deliver desired future state	List of interventions that you will try and order of these. One pager Example 1	Interventions that are likely to be most effective. Simple document you can use to communicate about the project.
e. Review measures and metrics and confirm goals, targets and indicators –	Monitoring and evaluation plan	Based on planned interventions confirmation of approach to evaluate effectiveness of project. MAU on board with approach
<b>5. Implement the Plan</b>		
<b>IMPLEMENTATION</b>		
a. Identify key tasks, preferred timeline and milestones	Project brief and gantt chart and budget	Confidence that you have right people to work on the problem and \$
b. Identify skills and capabilities required to deliver and secure resources	List of skills you need with the people to help you implement interventions	People enlisted understand their role and are right people to help you implement intervention and

Strategy planning steps	Outputs	Outcomes
		have had opportunity to refine. Their manager is aware of their commitment
c. Build team understanding and commitment to project, develop engagement strategy and risk management plan and adjust tasks, project timeline and milestones	Refined project brief and gantt chart (signed by managers)	Organised effectively to tackle key components of problem and people understand their role with supportive managers
d. Draft project brief for endorsement and approval	Endorsed project brief and comms and engagement and monitoring and evaluation plan	Clarity of purpose, timelines and senior support
e. Announce and begin	Broadcast or other notification Example	Organisation aware of project
f. Ongoing review and adjustment – expand, refine, reject, continue, add	Reviewed project brief and gantt chart Review report/change request/issues log PCB update	Project on track or adjusted and PCB aware and endorsed any changes
<b>6. Project Closure and Long Term Monitoring/Maintenance</b>		
<b>PROJECT CLOSE</b>		
a. Develop and Implement transition/exit plan – approaches to be maintained, resources, responsibilities to sustain changes made to the problem	Transition Plan	Understand who will continue work (if needed) and they have accepted ownership of it
b. Develop End of Project report – performance story – what has changed, what has improved	Project Report	Able to convey success of program
c. Evaluation, program outcomes and process, lessons learnt	Close out report - Lessons learned	Understand what went well and what can be improved
d. Acknowledge, Announce, Celebration	Presentation, report, broadcast, Party!	Acknowledgement of work done and sense of close out
e. Long term monitoring/maintenance (to “spot and squish” emerging issues)	List of key things to look for to prevent reoccurrence	Vigilance to ensure problem doesn’t re-emerge
f. Formal handover	Endorsed transition plan and closeout	Acceptance of role