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1 Co-opting and resisting market based instruments for private 2 land conservation

3 4 Abstract

5 The growing popularity of private land conservation (PLC) globally has quickly
6 translated into an array of policies and programs aimed at achieving ecological benefits.
7 The rise of PLC is entwined with the era of prominence for neoliberal governance, with
8 private land proving congruous with the promotion of market-based instruments
9 (MBIs) and the increasing reliance on private protected areas for conservation in lieu of
10 government investment in public lands. Despite a growing literature on the implications
11 of neoliberal environmental governance, there remains a need for specific insights into
12 the way that individual landholders and ecologies can co-opt or resist the rationalities
13 of MBIs in the practice of private land conservation. Through semi-structured
14 interviews and property walks with 18 landholders, this research examines the
15 implementation of a reverse-auction tender scheme called 'EcoTender' in Victoria,
16 Australia. We uncovered four main tensions between the market logic of the program
17 and conservation practice: 1) some landholders used the payment scheme to increase
18 regulatory protections on their property through covenants/easements; 2) many
19 landholders struggled to conceive of their stewardship practice as contractual labour; 3)
20 landholders were producing novel ecosystems that challenged land management
21 focused at the property parcel scale, but EcoTender encouraged a return to historical
22 benchmark ecologies, and; 4) landholders wanted social collaboration when the
23 program required competition for cost efficiency. Our insights show that PLC must
24 create room for a diverse trajectory of conservation practice in dynamic socio-ecological
25 contexts. This means careful reflection on the validity of assumptions underpinning
26 MBIs, the trade-offs that come with applying market logic to conservation and the long-
27 term implications of these instruments for policy and practice.

28
29 **Key words:** market-based instruments; reverse auction; environmental governance;
30 qualitative; novel ecosystems; payments for ecosystem services

35 **Introduction**

36 Private land conservation (PLC) is generating significant interest and investment from
37 governments, NGOs and communities around the globe (Clements, Cumming, and
38 Kerley 2016). While the opportunities that PLC presents for complementing public
39 protected areas continue to be championed in the field, recent scholarship has turned a
40 critical eye to the environmental governance contexts in which PLC sits, and the
41 implications of these governance arrangements for the way that conservation plays out
42 in practice (Selinske et al. 2016; Lockie 2013; Logan and Wekerle 2008). The
43 implications of neoliberal policy instruments for PLC has been central to this analysis,
44 with questions centred around the transparency, equity and effectiveness of public
45 expenditure for private conservation, especially in the form of conservation
46 easements/covenants (Rissman et al. 2017; Morris 2008). The recent rise of market-
47 based instruments (MBIs) as a conservation tool presents an important yet under-
48 examined context in which to extend this analysis to policy mechanisms as they play out
49 in practice (Selinske et al. 2016).

50

51 Unpacking the systematic assumptions of neoliberal governance critiques has shown
52 that governance mentalities are rarely all encompassing when it comes to the creation
53 of neoliberal policy subjects (Van Hecken, Bastiaensen, and Windey 2015). As Stuart,
54 Benveniste, and Harris (2014) note, we need detailed case studies to examine how these
55 approaches “succeed or fail when they move from ideas into practice” (p35). Existing
56 research into the practice of MBIs has centred largely on payments of ecosystem
57 services (PES) in the Majority World (McElwee et al. 2014; Pattanayak, Wunder, and
58 Ferraro 2010; Sattler and Matzdorf 2013), and the capacity of PES to affect ongoing land
59 use change (Van Hecken and Bastiaensen 2010). We build on this work by examining
60 how MBIs that use a reverse auction tender model for private land conservation in a
61 western capitalist context are materialising in practice, with a specific focus on how
62 individual landholders as policy subjects are co-opting or resisting the logic of MBIs
63 (Higgins et al. 2014; Roth and Dressler 2012; Van Hecken, Bastiaensen, and Windey
64 2015; McElwee et al. 2014). Given rapid environmental change processes that are
65 challenging traditional approaches to conservation, we also explore how *ecologies* might
66 resist the logic of MBIs. Empirical analysis of neoliberal environmental governance in
67 action is critical if we are to properly assess the diverse forms neoliberalism can take,

68 and how the outcomes it generates can depart from policy intentions (Engel, Pagiola,
69 and Wunder 2008).

70

71 This paper centres on a reverse-auction MBI called 'EcoTender' in Victoria, Australia.
72 Through interviews, property walks and a participant forum with landholders, we
73 examine the types of conservation actions that have emerged through landholder
74 participation in EcoTender. We explore the tensions between the reverse auction tender
75 model and landholder aspirations for permanent protection, how landholders approach
76 the costing of their own labour as part of the bidding process, the ways that ecologies
77 can resist program prescriptions framed around private property parcels and the desire
78 for social interaction amongst participants in a program that requires competition
79 between participants to drive down costs. We conclude by discussing the role for MBIs
80 amidst local socio-ecological contexts and environmental change.

81

82 **1. The governance context of MBIs for PLC**

83 Neoliberal governance has traditionally been defined by increased marketisation,
84 privatisation, and deregulation, in which state intervention is reduced (Mansfield 2009).
85 However, more recent incarnations have seen state agencies take an active role in
86 regulating through market processes, with the aim of increasing cost efficiency. This has
87 been referred too by (Tickell and Peck 2002, p. 384) as "roll-out" neoliberalism, which
88 denotes a shift in concern from deconstructing and denouncing "Keynesian-welfarist
89 and social-collectivist institutions" and is "focused on the purposeful construction and
90 consolidation of neoliberalized state forms, modes of governance, and regulatory
91 relations" (ibid p. 384). Unsurprisingly, this complex process of both de-regulation and
92 *re-regulation* has characterised recent approaches to environmental governance (Lockie
93 and Higgins 2007; Stuart, Benveniste, and Harris 2014).

94

95 The neoliberalisation of environmental governance in particular consists of the
96 promotion of market based programs and activities, the commodification and
97 marketisation of the natural environment, and the increase in privately owned
98 conservation sites, all of which result in decentralisation of conservation programs and
99 control (Fletcher and Breitling 2012). The underlying assumption here is that market
100 logic provides the most effective and efficient way to govern, as it promotes
101 "competition, creativity and innovation" (Lockie 2013, p. 31; Fletcher and Büscher

102 2017). This means approaches to environmental governance are touted as
103 simultaneously strengthening economic and ecological sustainability, and increasing
104 both policy efficiency and flexibility (Fletcher et al. 2016). For private land conservation,
105 the discourses of efficiency and flexibility have helped to legitimise market-based
106 mechanisms (Cooke and Moon 2015).

107

108 **1.1. Hybrid governance in practice**

109 Efforts to generate social and ecological benefits through neoliberal policy have
110 underscored the competing logics that can be inherent in this form of governance
111 (Owley and Rissman 2016; Roth and Dressler 2012; Wynne-Jones 2012). MBIs can
112 contribute to nature commodification, while at the same time promoting social learning,
113 community empowerment and the protection of threatened species (Higgins, Dibden,
114 and Cocklin 2012; Zammit 2013). Recognising these competing logics creates room for
115 diverse outcomes and dismisses any notion of neoliberalism as a project that generates
116 homogenous results (Fletcher and Breitling 2012; Roth and Dressler 2012; McElwee
117 2012). This combination of socio-environmental values within economically rationalist
118 programs has been described as form of '*hybrid*' governance (Lockie and Higgins 2007;
119 Muradian and Rival 2012; Lemos and Agrawal 2006; Igoe and Brockington 2007).
120 However, we are of the view that the embedded market rationalities in MBIs as a policy
121 instrument makes them fundamentally neoliberal in conception. As Fletcher and
122 Büscher (2017) note, it is the conceit that market logics are both the cause of and
123 solution to environmental problems that make MBIs inherently neoliberal.

124

125 Hybrid governance reflects that "purely market-, state-, or civil society-based
126 governance strategies depend for their efficacy on support from other domains of social
127 interactions" (Lemos and Agrawal 2006. p. 298). While much of the work on neoliberal
128 conservation has centred on structural critiques (Schwartz 2013), a growing body of
129 research has begun to unpack hybrid governance by showing the divergence that can
130 occur between the intentions of neoliberal conservation and the on-ground outcomes
131 (McElwee et al. 2014; Vatn 2015; Van Hecken, Bastiaensen, and Windey 2015; Roth and
132 Dressler 2012). Yet, in the context of western capitalist systems of governance, the
133 analysis of MBIs for PLC in practice remains a largely understudied component of
134 neoliberal conservation policy (Holmes 2015; Higgins, Dibden, and Cocklin 2012). We
135 are specifically interested in understanding how and why individual landholders and

136 ecologies can co-opt, resist or re-appropriate MBIs to generate unanticipated
137 conservation outcomes. Unpacking the way that ecologies conform or resist enrolment
138 as a policy subject is particularly important given growing attention to nonhuman
139 agency in conservation and the capacity for conservation policy to respond to
140 environmental change in the Anthropocene (Head et al. 2015). As we will explore, MBIs
141 can carry embedded assumptions about how different species might flourish and spread
142 (or not) which can be heavily contingent on socio-ecological context.

143

144 **1.2. EcoTender – a reverse auction tender scheme for private land conservation**

145 To explore MBI implementation we focus on landholder participation in a reverse-
146 auction tender scheme called ‘EcoTender’, operated by the state government of Victoria,
147 Australia. EcoTender, along with its partner scheme ‘BushTender’, were active between
148 2001 and 2016, and represent some of the earliest trials of reverse auction MBIs for
149 conservation (Whitten et al. 2013; Zammit 2013). Both schemes were part of a broader
150 ‘EcoMarkets’ initiative that aimed to provide incentives to private landholders to
151 manage land for conservation through the use market mechanisms (Stoneham et al.
152 2003; Blackmore and Doole 2013; Whitten et al. 2012). Both EcoTender and
153 BushTender operated the same way, with the Victorian government serving as the
154 buyer of environmental goods “on behalf of the public” (DEWLP, 2017). EcoTender saw
155 landholders in a specified region competing for a finite pool of government funds
156 through a blind auction. Landholders were invited to submit bids for the cost of
157 conservation work they sought to undertake on their property. Like all reverse auctions,
158 the process was designed to increase cost efficiency by creating competition for funds
159 between landholders (Stoneham et al. 2003). Bids that represented the best value for
160 money in terms of the conservation benefits generated (according to an Environmental
161 Benefits Index developed by the government) would then be funded (Hajkowicz 2009).
162 With the conclusion of the EcoTender contracts that are the focus of this research, there
163 are no expressions of interest for new tenders currently open – conservation tenders
164 are now primarily operated by catchment/watershed management agencies in Victoria.

165

166 Reverse auction tenders like EcoTender are considered an example of a payment
167 approach to MBIs for conservation (Pirard 2012; Cooke and Moon 2015). The existence
168 of competition between landholders for funds, the way landholder costs and ecological
169 benefits are revealed through the bidding process, and the framing of the state as a

170 buyer of conservation benefits are the primary MBI characteristics of EcoTender (Pirard
171 2012; Wunder, Engel, and Pagiola 2008; Wunder 2015). These characteristics, in
172 combination with the emphasis and reliance on private land rights for program
173 delivery, reveal an assumption that market logics offer the solution to managing the
174 problems of environmental degradation (Fletcher and Büscher 2017). It is the
175 facilitation of “market-oriented arrangements” (Pellizzoni 2011, p796) by the state as a
176 means for addressing environmental issues that reveals the neoliberal rationality of
177 EcoTender.

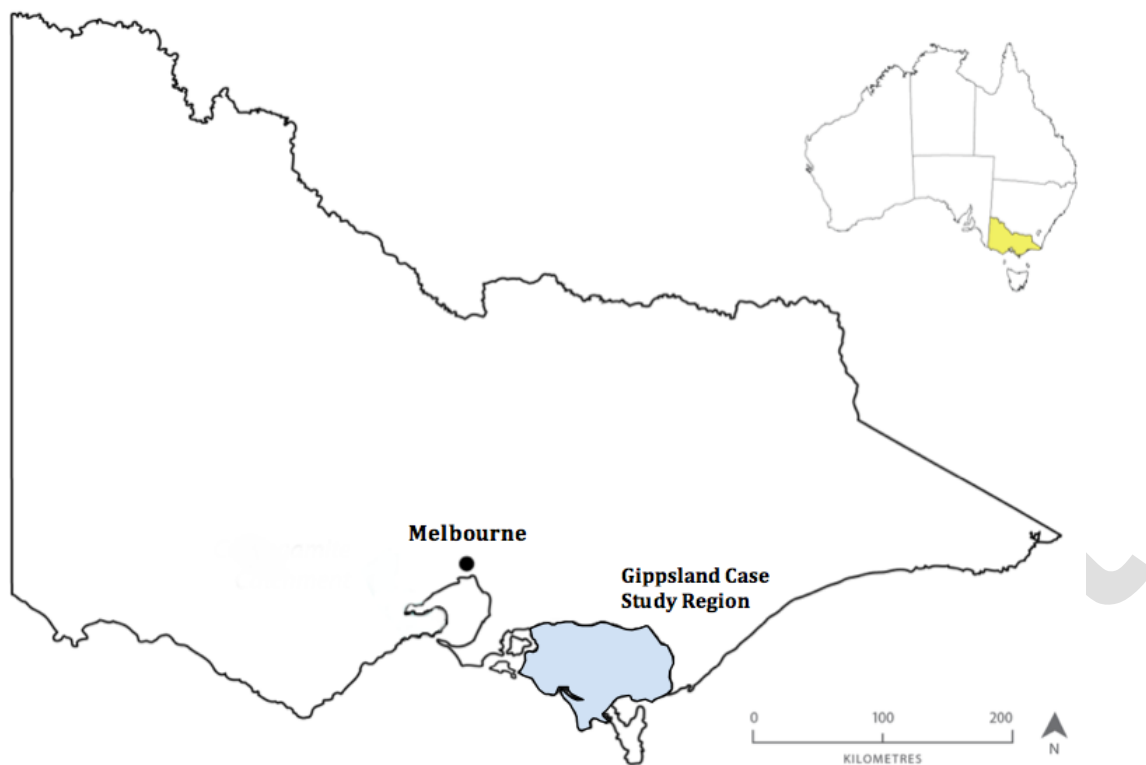
178
179 The conservation actions sought by EcoTender focused on ecological restoration to pre-
180 colonial benchmarks, the eradication of invasive weeds and the management and
181 protection of existing patches of native vegetation (including fencing these patches). To
182 date there has been widespread adoption of tender schemes in Australia and growing
183 interest and implementation globally (Whitten et al. 2013; Zammit 2013), hence the
184 importance of exploring the nuances of how they work in practice for both the subjects
185 of those policies and the ecologies of which they are a part.

186

187 **2. Methodology**

188 ***2.1 Qualitative case study research design***

189 This research involved a qualitative case study design that enabled an engagement with
190 participants in the context of their surrounding environment. The aim here was to
191 situate the research encounter within the EcoTender management sites, aligning the
192 methodology with the research aim of exploring on-ground practices. The research
193 design sought to understand the situated experiences, perspectives and practices of
194 landholders. At the time the research was conducted, all landholders had recently
195 concluded (within the last six months) or were soon to conclude (in the next six
196 months) their five-year EcoTender contract. Interviewing this cohort was a deliberate
197 intention of the research, as being near the end of their contract enabled reflection on a
198 longer participation timeframe in EcoTender. In order to reach a cohort near
199 completion, the research focused on the West Gippsland area, where a conservation
200 tender program had been rolled out in 2011 (Figure 1). All participants were recruited
201 through the Department of Environment, Land, Water and Planning (DELWP) who
202 convened the program via an email to all participants in the West Gippsland region.



203

204 **Figure 1.** Map of the Gippsland study area to the east of Melbourne in Victoria, Australia.

205

206 The two research methods directed by this research design were semi-structured
207 interviews and participant observation. The semi-structured interviews encouraged
208 participants to talk through their land management practices both prior to EcoTender
209 and during their EcoTender contract, followed by discussion of the land management
210 priorities they gained through the conclusion, or impending conclusion, of their
211 contracts. The interview questions also enabled room for landholders to tell stories
212 about their experiences with EcoTender, with the aim of capturing specific events or
213 activities of importance to landholders. Participants were prompted for specific stories
214 relating to both the way their EcoTender-funded work had progressed over the course
215 of their participation, and the experience of costing a tender bid.

216

217 Following the interview, the first author walked participants' properties with them to
218 explore how management practices had played out through EcoTender. The participant
219 observation was vital as it explicitly acknowledges that the physical environments that
220 are of importance to people's lives will serve as repositories of memory and experience
221 in those spaces (Trigger, Toussaint, & Mulcock, 2010; Strang 2010). During the
222 participant observation walks, photos were taken of management activities and
223 ecological features encountered. Notes were also recorded in a research journal to help

224 document the process, which was then expanded upon later in greater detail. The
225 participant led the walk and told stories about management activities, prompted by the
226 researcher when passing areas of visible management interventions. This included
227 discussions of how specific fencing or restoration works unfolded, how issues or
228 challenges were identified and dealt with, and what work still remained to be done.
229 These walks averaged around 90 minutes in length.

230

231 Table 1 provides an outline of the land use and conservation activities of the
232 participants involved in this research. Rather than provide comprehensive profiles of
233 participants, this table serves as a reference for later discussion about the conservation
234 actions of landholders and their experience of EcoTender. In broad terms, productive
235 farmers were landholders who derived the majority of their income from the land,
236 hobby farmers undertook small-scale agricultural activities for sale or self-sufficiency,
237 and lifestyle or conservation landholders did not use their land for agriculture. No
238 discernable differences emerged across these different cohorts in relation to the themes
239 discussed below.

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Participant	Land use	Conservation activities
Participant 1	Hobby farming/conservation	Landscape restoration through planting linear fence lines; weed control; fencing
Participant 2	Hobby farming/conservation	Restoration of large forest patch in gully; general weed control; fencing; covenant
Participant 3	Lifestyle landholding with no livestock; bushland preservation	Large scale pine tree removal, general weed control; restoration planting; covenant
Participant 4	Conservation	General weed control; pest animal trapping
Participant 5	Hobby farm/small orchard/conservation	Creek line restoration planting; general weed control; fencing
Participant 6	Hobby farming/conservation	Restoration planting around remnant patch; fencing; weed control; covenant
Participant 7	Hobby farming/conservation	Linear restoration planting; weed control
Participant 8	Hobby farming/conservation	Large scale weed removal from creek gully; restoration planting; general weed control
Participant 9	Productive farming (sheep, cattle)/conservation	Spot planting in remnant patch; general weed control
Participant 10	Hobby farming/conservation	Fencing; spot planting; general weed control
Participant 11	Productive farming (cattle)/conservation	Restoration planting; fencing; general weed control; covenant
Participant 12	Productive farming (cattle)/home business/conservation	Fencing; large scale weed removal (blackberries); spot planting
Participant 13	Small scale cattle grazing/home business/conservation	Fencing; linear restoration plantings; general weed control; covenant
Participant 14	Small scale cattle grazing/conservation	Fencing; linear restoration planting; general weed control; spot planting; covenant
Participant 15	Small scale cattle grazing/conservation	Fencing; spot planting; general weed control; covenant
Participant 16	Productive dairy farm/conservation	Large scale restoration; weed control; fencing; spot planting
Participant 17	Lifestyle landholding/conservation	Large scale restoration planting; general weed removal
Participant 18	Productive farming (mixed)/conservation	Large scale restoration planting; weed control; fencing

260 There is always an expectation that research relying on voluntary responses to a call for
261 expressions of interest will only engage with the most willing, interested and compliant
262 EcoTender participants. However, the willingness of participants to talk frankly of their
263 experience, and the chance to walk participants' properties with them, revealed a wide
264 range of landholder perspectives on EcoTender and private land conservation more
265 generally. While the total number of participants in this research is 18, this represents
266 nearly a quarter of the 81 participants from the West Gippsland EcoTender region.

267 ***2.2 Landholder participant forum***

268 The landholder participant forum was an opportunity for participants to gather
269 together with the researcher at the end of the research process to discuss findings and
270 talk with each other about their EcoTender experience. There were 24 participants in
271 the forum, including some local catchment/watershed management officers and DELWP
272 staff. The forum was held on October 14, 2016 at the offices of the West Gippsland
273 Catchment Management Authority in Traralgon, Gippsland. The forum was open to all
274 EcoTender participants from the West Gippsland trial, whether they were interviewed
275 for the research or not. The engagement with landholders and their interactions during
276 the forum were part of the research process, with particular emphasis on how the
277 discussions facilitated between participants reinforced the importance of social
278 networks for conservation.

279
280 The forum provided an opportunity for the researcher to present the six themes
281 discussed in the next section back to participants, allowing the forum to serve as a
282 triangulation method for checking whether the themes identified by the researcher
283 were those that participants themselves considered central to their experience. While
284 participants did not substantively challenge any of the themes, there were some
285 revisions made to the themes as a result of participant feedback. Most notably here was
286 the point that some landholders priced their labour comprehensively as they wanted to
287 be able to cover all management costs should they be successful in the auction process.
288 From this perspective, the forum proved invaluable for validating findings as well as for
289 facilitating landholder interaction.

290

291

292

293 **3. Tenders in practice - the socio-ecological process of participation**

294 In this section we cover four themes that reveal the ways that conservation tenders
295 operate in practice: under-bidding for permanent protection, uncosted labour in bids,
296 emergent novel ecosystems and the absence of social networks. We place a strong
297 emphasis on the creative and unanticipated co-option of payments, given their
298 prominence, and the implications this raises for using MBIs in PLC. However, we also
299 highlight the alignments that occur between landholder practice and the logic of
300 conservation tenders, to ensure a comprehensive and representative engagement with
301 the empirical material.

302

303 ***3.1 Under-bidding to protect landscape legacies***

304 As part of the tender bidding process, landholders were offered the opportunity to place
305 a legal covenant/easement over remnant vegetation or revegetation sites. Covenants
306 provide permanent protection for ecologies by placing legally binding constraints on
307 land use, such as the ability to subdivide or clear the property of vegetation.

308 Landholders were encouraged to adopt permanent protection by the allocation of a
309 higher assessment weighting to those bids, meaning landholders would have a greater
310 chance of their bid being successful. Seven of the landholders involved in this study had
311 secured a covenant on their land through EcoTender, but four of those landholders had
312 used this mechanism in a manner that departed from the scheme's intention. Rather
313 than using the covenant as a means for enhancing the competitiveness of their bid and
314 increasing the likelihood of receiving money to cover conservation work, these four
315 landholders reduced the value of their bid as a way to increase the chance of getting a
316 covenant. Participant 6 explained the process of under-bidding to get a covenant:

317

318 "Oh, I just took a punt (on costing the bid), what I thought might get through,
319 what it would cost, and what I was prepared to accept as a fair deal... I paid half
320 of (the management costs)."

321

322 The covenant, rather than the money to cover management costs, became the 'hook'
323 that enticed some landholders to participate. Participant 6 and Participant 11 employed
324 the same strategy of estimating the land management costs associated with their bid
325 (for example, tree planting or weed removal) and then only requested half of that
326 money.

327

328 The desire to protect these mixed remnant and revegetation sites revealed an important
329 consideration for programs offering permanent protection – landholders are seeking to
330 protect the legacy of their land management effort and labour as well as the
331 conservation values on their land (Cooke and Lane 2015). Participant 6 noted that the
332 covenant will “stop a developer coming in and knocking it all over” when they do
333 eventually sell (Figure 2). Or in the words of Participant 1, “I don’t want somebody to
334 come in in a future time and bugger it up again. That would be an incredible waste.” The
335 sense that landholders could secure their conservation work against future threats gave
336 them confidence that the ecological benefits they had helped to generate could be
337 retained if they sold the property.

Pre-print



338

339 **Figure 2.** A small strip of linear remnant vegetation that has been covenanted through EcoTender.
340 Protecting this against a future landholder who may seek to extend paddock space on either side was
341 consider vital by Participant 6.

342

343 Three of the four participants who pursued this underbidding strategy had sought
344 advice from a local conservation land trust (Trust for Nature), who had informed them
345 that the ecologies on their properties were not of sufficient value or size to qualify for
346 protection through that land trust. As such, EcoTender filled a gap in the permanent
347 protection options previously available to landholders from either government or land
348 trusts. Moreover, as Participant 11 noted, the cost associated with the covenant process

349 is substantial, so the opportunity to have your conservation legacy protected was an
350 attractive proposition:

351

352 “The covenants are the important thing. Because when I’m too old to do this and
353 we sell this, the [advertisement] in the paper... will say, ‘covenanted trees’”

354

355 While this process reduces government expenditure and satisfies landholders, under-
356 bidding for a covenant raises questions about whether participants can meet the
357 financial costs associated with their contract if their bid does not cover the full costs of
358 the proposed works. For example, the bid from Participant 6 included fencing of
359 remnant vegetation. However, the costs that were included in the bid only covered half
360 the fencing costs. Should financial circumstances change, there is a risk that the
361 landholder portion of the investment may not be met. Moreover, when landholders use
362 their own funds to fulfil contract obligations, it may reduce the funds they have
363 available for conservation work once the five-year payment period of the contract
364 concludes. While the four participants noted here had few regrets about under-bidding
365 as the covenant was “the main thing we wanted” (Participant 6), it was clear that
366 participants’ would have liked more money for conservation work regardless of
367 whether they had permanent protection.

368

369 For the majority of participants who did not seek permanent protection, some were not
370 aware of its existence as a mechanism (two participants), others were unsure about its
371 implications but were open to future covenanting (four participants) and two
372 participants were firmly focused on funding fencing works and had not entertained any
373 other activities. Beyond this cohort, three participants spoke about deliberately not
374 pursuing a covenant. Participant’s 5 and 8 decided not to covenant due to concerns
375 about reducing the future value of their land, as their retirement savings had been
376 invested in the property. For Participant 8, this was to protect their retirement savings,
377 which were tied up in the property. Participant 7 did not want to impinge on a “future
378 owners’ right” to exploit the land in a way they might see fit, even if that meant the
379 conservation work they had done would be impacted. This shows that there can be clear
380 alignment between landholders with an absolutist perspective on private property
381 rights, and conservation programs that align with a neoliberal governance mentality
382 (Fletcher 2010).

383

384 **3.2. Not costing personal labour in the EcoTender bid**

385 The idea that some conservation work should exist outside the ‘service contract’ that
386 had been established through the tender process proved to be a unique insight into the
387 way environmental stewardship was perceived and practiced. Of the 18 research
388 participants with an EcoTender contract, only five of the participants included the cost
389 of their own labour as part of their bid. There was a strong sense that the labour of land
390 management was the altruistic contribution that participants could provide as part of
391 the conservation process. As Participant 16 noted, “(The labour is) my part, you’ve got
392 to put in yourself”.

393

394 For landholders who possess a strong conservation ethic already (a large proportion of
395 participants here, given their pre-existing conservation efforts already noted), the
396 money associated with EcoTender provides a unique opportunity to implement existing
397 plans. However, the desire to be an active steward and contribute altruistically to
398 conservation meant most landholders sought to volunteer their labour. As Participant
399 13 identified, “at the end we’re only custodians of the land”, and the goal of land
400 management must be to leave land in a better condition than in which it was inherited.
401 The desire to be an environmental steward and to leave a positive legacy is a well
402 established motivation for landholders involved in PLC (Lokocz, Ryan, and Sadler 2011;
403 Selinske et al. 2015):

404

405 Participant 17: “I put all the labour in (for rigging) the fences and planting the
406 trees, so it was really we were looking for the cost of the materials and the cost of
407 the trees”

408

409 First Author: Did you cost your labour?

410

411 Participant 17: No. No... just materials. Because when we bought the property, I
412 wanted to do this, before I even knew what an Ecotender was... we thought,
413 wouldn’t that be great revegetating, just as a project to do for ourselves sort of
414 thing.”

415

416 This reveals the way that conservation practice is bound up with other expressions and
417 experiences of land management, which might align more with intrinsic, recreational or

418 even aesthetic motivations for doing conservation work (Cooke and Lane 2015; Fischer
419 and Bliss 2009). The difference here is that this conservation work is being done under
420 contract, which changes the dynamic and the obligation for delivery. Participant 3 noted
421 this it will be nice to “just plug along at my own pace and not be subject to a timeframe”
422 now their contract is complete.

423

424 *3.2.1 Concern about bid competitiveness*

425 The landholder forum conducted at the conclusion of the fieldwork emphasised the
426 uncertainty that many landholders had about how the process of pricing their bid.
427 Terms like “flying blind” and “guess work” were used on a number of occasions to
428 emphasise the level of uncertainty about what might constitute a competitive bid.
429 Moreover, landholders feared missing out on getting at least some funding for
430 conservation work they were already doing, even if it did not cover the total cost of the
431 works proposed in their bid. While this bodes well for the program in terms of showing
432 how the reverse-auction mechanism can increase cost effectiveness, it also reveals a
433 risk to the maintenance of conservation benefits in the longer term. As Participant 2
434 noted, the only question about whether their conservation efforts would continue
435 beyond their contract would be “how long are we going to be able to physically manage
436 this property?” For example, most participants did not cost the labour associated with
437 weed management, meaning there is a risk to achieving the intended management
438 objectives should landholders no longer be capable of doing the work.

439

440 As Participant 17 noted, it was very difficult “trying to keep up with things” when you
441 are volunteering your labour and the work was unfamiliar. Experiences like this saw a
442 number of landholders reflect on the fact that “it would be good to get some help with
443 (labour)” (Participant 2) if they were to apply for funding in the future. One participant
444 who did cost their labour did so at low rates to reduce costs, but also because they
445 considered themselves to be lay conservation practitioners:

446

447 Participants 3: [we costed labour at] about \$40 per tree, because we’re just rank
448 amateurs, we’re not worth that much.”

449

450 There was however four landholders that sought to cost their bids accurately. For two
451 of these participants, including a “realistic” (Participant 4) costing was important, as

452 they did not have the financial capacity to undertake the work if the full costs were not
453 reflected in the bid. This was particularly important for two participants who were
454 relying heavily on contractors to do the work in their bids. While all of these realistic
455 bidders found it “very difficult to judge” (Participant 8) what their costs would be, they
456 did not want to be burdened with having to fund too much of their project themselves.
457

458 ***3.3 Novel ecologies and landscape-scale ecological flows***

459 The region in which EcoTender operates has a history of intensive landscape
460 modification for agriculture following colonial invasion in 1788. While Aboriginal
461 people prior to this time shaped the landscape, the large-scale clearing and rapid
462 intensification of grazing, cropping and dairy are the reason why ecological restoration
463 efforts are being pursued. However, changes to soil composition, introduced flora and
464 fauna, and climate change mean that traditional efforts to bring back benchmark pre-
465 colonial ecologies have been roundly identified as challenging, if not undesirable, given
466 future climate scenarios and major environmental change (Mansfield et al. 2014).
467 EcoTender restoration was largely informed by a combination of historical benchmark
468 ecologies, with some flexibility for amendments on a case-by-case basis. Given that
469 restoration was a common component of landholder bids, landholders encountered the
470 difficulties historical benchmarks pose for restoration. Most importantly here, we see
471 the way that ecologies – with a focus on plants in particular – can be difficult to enrol as
472 willing participants in neoliberal conservation efforts.

473
474 Many participants dealt with the challenge of managing plantings that had not
475 materialised in the way they had intended. All but two research participants had a
476 restoration component to their conservation work, so the ecologies that were emerging
477 possessed a high degree of novelty. The types of novel outcomes included a failure of
478 seedlings to grow, the dieback of new plantings and established plants around them,
479 secondary infestation of weed species that had been cleared prior to planting,
480 environmental change factors like drought or flooding and the grazing of plantings by
481 native and introduced fauna. Another common experience was the spread of plants
482 from adjoining properties through seeds blow through on the wind or washed over
483 through flooding.

484

485 The ubiquity of eucalypt species in Victoria means there were few restoration efforts
486 that did not include eucalypts in the approved Ecological Vegetation Class (EVC) list of
487 plantings. Yet, there are many regions in Victoria where eucalypts are not considered to
488 be part of the pre-colonial ecology. This was the case for Participant 7, who did not have
489 eucalypts in their planting. However, there were sections of property with an adjoining
490 public land reserve that was a different EVC, which did include eucalypts. Subsequent to
491 the EcoTender planting, Participant 7 observed eucalypts from public land that adjoined
492 his property starting to sprout in this patch, going on to become the most dominant
493 species in the planting. The rate of growth and substantial number of recruiting species
494 led to a belief on the part of this landholder that eucalypts did indeed “belong” in this
495 highly modified landscape. Indeed, six other participants noted the growth of native
496 species in their planting that they did not plant themselves.

497

498 This experience reinforces that restoration sites are not blank canvases that exist in a
499 spatial and temporal vacuum – the history of land use and the ecologies on surrounding
500 lands will play a substantial role in how restoration unfolds. With the potential for
501 historical ecological benchmarks to become an even more difficult restoration target
502 into the future, there is a need to consider what we aim to achieve through PLC
503 restoration work, and the ways in which conservation programs might need to be de-
504 coupled from private property as a scale of emphasis. While some participants took a
505 hands-off approach to managing unexpected plant growth in their restoration site,
506 noting that “it will work itself out” (Participant 5), others felt a level of anxiety that the
507 unexpected plant growth may mean they have breached their EcoTender contract.

508

509 The planting process also generates habitat interactions that participants do not
510 anticipate as being an issue at the outset. A notable example is the impacts that fauna
511 grazing and habitat creation have on the health and survivability of the species planted.
512 Often, the grazing species were native animals (such as wallabies or wombats), and
513 landholders developed a negative perception of these animals as they had undone all
514 their hard work to establish the planting. As participant 17 noted, “if it weren’t for the
515 bloody Wombats” grazing on her new plantings then she would not have had to spend
516 additional money from her own pocket to replace some of the species lost. When
517 surrounding ecologies are fragmented and resources are scarce, grazing fauna can
518 target new growth in restoration areas (depicted in Figure 3).



520

521 **Figure 3.** Participant 17 noted that resident Wombats in the forested segment of the adjacent property
522 (top of image) had come onto her property to eat the planted seedlings (centre-centre left of image).

523

524 When native plants spread across property boundaries, they can call attention to the
525 range, distribution and reproduction of that species in ways that reveal wider ecological
526 function. As in the example above, the presence and movement of species were
527 powerful catalysts for triggering awareness that the property scale was not always
528 suited to conservation efforts. Five participants asked why the planting list was
529 different to what plants they observed growing in the surrounding landscape, with
530 others also discussing their uncertainty about the accuracy of the revegetation lists that
531 had been provided for their area.

532

533 Moreover, while landholders were aware that ecological flows across the boundary
534 might mean ongoing weed presence on their property, the contractual obligation
535 through EcoTender to keep restoration free of weeds made them acutely aware that the
536 fortunes of their property cannot be separated from what goes on in the wider
537 landscape. As Participant 18 noted when looking across the district from a high point on

538 the property, “on a windy day you can see the seed heads blowing across the hill”.
539 Species movement across boundaries can challenge the logic of property-centricity in
540 the process of conducting conservation work, reinforcing the importance of working
541 collaboratively across boundaries.

542

543 ***3.4. The desire for social networks and cooperation***

544 The downside to a model that requires competition between bidding landholders to
545 drive down costs is that participants can go the duration of their contract without
546 encountering other participants. EcoTender has no direct mechanism for gathering
547 people together before, during or after bids are awarded. A key criticism of auction-style
548 programs, therefore, is that they can fail to build collaborative, cross-boundary
549 conservation efforts (Cooke & Moon 2015).

550

551 Eight landholders spoke directly and unprompted about the fact that they would like to
552 meet other participants and have an informal network where they could contact each
553 other. The central reason for wanting social connection was to gain some reassurance
554 that they were not the only ones who were encountering challenges, difficulties or
555 unexpected management outcomes from their activities (plants not growing, weeds
556 returning, for example). Participant 3 captured this feeling when describing the fact that
557 it would be nice to have a sense of “shared experience” in EcoTender. In terms of shared
558 experience, landholders spoke about being interested in knowing what other
559 landholders had been doing as part of their contract, and that specific advice or support
560 was not really necessary. For some landholders this point was related to the fact that
561 the EcoTender contract creates a sense of obligation that they had not felt with the
562 conservation work they had been doing previously.

563

564 The landholder participant forum was particularly incisive for reiterating the value of
565 knowledge sharing as part of conservation work. Both the formal and informal
566 discussions revealed the value of having a community of shared practice and experience
567 for specific conservation programs – a principle that has underpinned past conservation
568 programs (Tennent and Lockie 2012). Forum participants discussed different strategies
569 for protecting plants from grazing animals, different materials and construction
570 methods for nesting boxes and other funding sources that they might know about for
571 continuing their conservation work. Many of the issues discussed by landholders had

572 emerged through trial and error as they had attempted restoration or weed
573 management practices that had not gone to plan. Participants at the forum requested of
574 the EcoTender coordinators that the database of their contact details be shared amongst
575 the participants so they could contact one another should they have further questions
576 or wish to visit one another.

577

578 While it could be argued that EcoTender need not concern itself with enabling social
579 interaction and learning when learning can happen outside of the program, there are a
580 host of issues that arise through program participation and the specifics of EcoTender
581 operation that participants would like to be able to discuss with one another. The ability
582 to work through issues or uncertainties surrounding PLC programs (Moon, Marshall,
583 and Cocklin 2012) and tender programs in particular (Blackmore and Doole 2013) has
584 been previously reported by landholders. Moreover, not all participants enjoy
585 neighbours who are interested and informed about conservation practices, which can
586 leave some landholders isolated.

587

588 Despite the general view that a network would be beneficial, five landholders struggled
589 to think of any benefits that might come from interaction with other participants. One
590 landholder wondered, “what’s there to talk about?” (Participant 16) concerning
591 conservation work. Conservation programs cannot assume all participants will see
592 value in knowledge sharing, as some are happy working individually on their own
593 property. This appears especially true amongst exurban and rural-amenity landscapes,
594 where new in-migrants can be more inwardly focused on managing their own property
595 without wider interaction and engagement (Gill, Klepeis, and Chisholm 2010; Yung and
596 Belsky 2007). For participants like this, the property-centric, individual landholder
597 engagement model suited their approach to conservation.

598

599 **4. Policy implications and discussion**

600 The ways in which people engage with EcoTender are dependent on their experiences
601 with the land management and ecological change over time. These experiences do not
602 always align with the logics of conservation tenders. Indeed, many of the narratives
603 explored above show the way people used EcoTender to leverage conservation efforts
604 that did not align with the intent of a program centred on financial incentives, or the
605 way ecologies are not easily entrained to the property-centric conservation efforts that

606 often accompany MBIs like EcoTender. Despite these limitations, there is a need to
607 acknowledge the role of EcoTender in generating ecological benefits as part of a
608 recognition that the neoliberalising of environmental governance can open up some
609 conservation opportunities amongst those that it forecloses (Sandbrook et al. 2013;
610 Fletcher et al. 2016). Moreover, where market instruments and neoliberal governance
611 structures are entrenched, there is an imperative to explore how they can be orientated
612 (or reorientated) to meet socio-ecological needs (Jackson and Palmer 2014; Holmes
613 2015). As such, this section discusses what can be done to open up MBIs like reverse
614 auctions to a wider trajectory of contingent management practices and ecologies where
615 they exist, whilst questioning the capacity of MBIs as a policy tool for responding to the
616 emergent challenges presented by PLC.

617

618 ***4.1 Starting with the setting – socio-ecological context***

619 The program adoption narratives of landholders have brought to light the need for the
620 prioritisation of local socio-ecological dynamics in the design and implementation of
621 market instruments (Selinske et al. 2016). The point that environmental policy must
622 consider local social context has been established in the private land conservation
623 literature (Cooke et al. 2012). What must now be explicitly acknowledged is the need to
624 challenge PLC policy that uncritically adopts MBIs due to their compatibility with
625 neoliberal governance logics (Peck and Theodore 2010) rather than their alignment to
626 the needs and circumstances of people and ecologies on the ground (Sorice and Donlan
627 2015; Trigger, Toussaint, and Mulcock 2010; Muradian et al. 2013). The way many
628 EcoTender participants struggled to conceptualise their stewardship labour as a service
629 to be costed and delivered to a contractual deadline, presented a unique insight into the
630 mismatch between policy logic and landholder practice; the real consequences of this
631 mismatch being uncertainty and anxiety on the part of landholders about their capacity
632 to fund and fulfil their conservation contracts. Thus, despite the hybrid governance
633 characteristics of EcoTender that enable some co-option of program intentions to meet
634 socio-ecological needs, a more flexible and responsive governance framework might
635 limit the extent to which co-option was necessary.

636

637 Local context also drove the desire on the part of some participants for using EcoTender
638 to gain a covenant, as a growing desire for perpetual preservation of their land
639 management legacy amidst dynamic land use change (Farmer, Chancellor, and Fischer

640 2011). The somewhat perverse outcome of achieving increased regulation through a
641 market mechanism further signals the need to question the assumptions that PLC
642 programs make about the drivers of conservation practice. In this case specifically, it
643 highlights that reverse auction tenders may not be the most cost effective means of
644 delivery when financial motivations for participation are not strong (Muradian et al.
645 2013). To ignore this context is to render invisible the socio-ecological dynamics of
646 conservation practice that are innately familiar to policy makers, researchers and
647 landholders alike.

648

649 MBIs for PLC must explicitly acknowledge that ecologies act and react to human
650 intervention through conservation practices in ways that are not uniform, easily
651 anticipated or isolated from surrounding socio-ecological processes (Head et al. 2015;
652 Ogden et al. 2013). When MBIs engage people through private property, there is a risk
653 that the mobility of plants and fauna (both wanted and unwanted) at scales above the
654 property parcel are not reflected. As this study demonstrated, wider ecosystem
655 interactions can draw people into landscape-scale management challenges that
656 EcoTender had no formal mechanism for addressing. In this way, ecologies themselves
657 showed how they can push back against neoliberal environmental governance that
658 positions private property as the foundation around which the policy is conceived
659 (Schwartz 2013; Büscher et al. 2012). However, MBIs for PLC have been geared towards
660 valuing cross-boundary collaborative efforts in the past (e.g. the Desert Uplands
661 Landscape Linkages Program), suggesting that attention to landscape-scale ecological
662 interactions may be feasible in some cases. Furthermore, payments schemes have been
663 rolled-out in contexts where individual property rights do not exist (McElwee et al.
664 2014). Constraining PLC policy to individual contracts at the scale of individual
665 properties risks closing down opportunities for collective and cohesive policy at a time
666 when landscape-scale responses are deemed increasingly necessary for conservation
667 (Fitzsimons et al. 2013).

668

669 ***4.2 Working with novel ecosystems and environmental change***

670 The experiences of landholders in this study raises questions about the rigidity of MBI
671 contracts if we are anticipating uncertainty in the way ecologies respond to the types of
672 interventions pursued through land management. This is especially true when we
673 consider the knock-on effects that are created by the initial management interventions

674 undertaken by landholders (such as triggering new weed infestations) that will have
675 impacts well beyond discrete contracts. MBIs like reverse-auctions also require
676 landholders to commit to a program of works at the outset, given the need to formulate
677 a bid based on proposed works, restricting landholders' capacity to respond to
678 unanticipated outcomes along the way. As finite interventions, programs like EcoTender
679 that often run for short periods (5-10 years) need to accommodate the history of
680 landscape modification and the contingent ways people and ecologies are responding to
681 change. The tensions between short-term contracts and ongoing stewardship suggest
682 payments must be part of a wider PLC response in which landholders have a stronger
683 role in policy design, rather than being the lynchpin around which those programs
684 operate (Muradian et al. 2013; Selinske et al. 2016). Given the redemptive aspirations of
685 restoration in many MBIs, landholders could play an important role in negotiating the
686 make up of species types that are used in restoration, allowing participants to draw on
687 their experiential learning, landscape observations and local histories, whilst still
688 ensuring that ecological function, diversity and abundance are enhanced by the
689 restoration process (Collard, Dempsey, and Sundberg 2014).

690
691 Thinking through the implications of novel ecosystems for MBI design may suggest a
692 role for collective bidding processes that enable landholders to work across property
693 boundaries and at larger ecological scales (Cooke and Moon 2015). Encountering
694 uncertainty and working through problems with others was a key part of the reason
695 landholders wanted ongoing social networks that were not facilitated by EcoTender.
696 This desire echoes the promoted benefits of Landcare in Australia, which centres on
697 social learning benefits, given the emphasis on collective, community-based responses
698 to land management challenges, rather than individual, property-centric responses
699 (Tennent and Lockie 2012). Trade-offs like collaboration versus competition that are
700 associated with MBIs must be better thought through, so the apparent cost efficiency
701 benefits of a blind, competitive funding model are weighed against the value of social
702 learning and collaboration (Sorice and Donlan 2015; Muradian et al. 2013). An enduring
703 network of participants can offer a point of contact and support for conservation efforts
704 once the connection with the environment department or direct extension officer is lost
705 (Selinske et al. 2016).

706

707

708 **5. Conclusion**

709 Conservation pursued through programs like EcoTender will not entrain all practices to
710 the logic of market instruments or private property ownership. As we have shown,
711 private land conservation policy inevitably forms part of a broader entanglement of
712 humans, ecologies, property, incentives, land use legacy and regulation that shape
713 dynamic conservation practices (Gill, Klepeis, and Chisholm 2010; Mansfield et al.
714 2014). Being attentive to the way neoliberal conservation connects to landscape and
715 land use histories, and environmental change factors, has been an oversight in private
716 land conservation research (Holmes 2015). From a policy perspective, MBIs used for
717 PLC must do more to create room for a diverse trajectory of conservation efforts in
718 dynamic socio-ecological contexts (Roth and Dressler 2012). This means conscious and
719 careful reflection on the validity of assumptions embedded in MBIs, an honest critique
720 of the trade-offs that come with applying market logic to conservation efforts, and a
721 discussion of the socio-ecological implications of these initiatives over the long term
722 (Lockie 2013). To ignore this imperative is to risk being “lulled into complacency”
723 (Muradian et al. 2013, p277) regarding the effectiveness of market instruments, as
724 conservation becomes further entrained by capital and private ownership (Fletcher et
725 al. 2016).

726

727 The ongoing experimentation with the use of reverse-auctions and tenders for
728 allocating conservation funding (Jindal et al. 2013) underlines the value of assessing
729 their structural and practical implications. EcoTender payments enabled positive
730 conservation outcomes for many landholders. Yet, the need for MBIs to pursue context-
731 specific policy design and implementation was clearly evidenced by landholders’
732 expressions of stewardship values and a collaborative ethics that clashed with a market
733 framing of their conservation work. Moreover, the flourishing of novel ecologies in ways
734 that challenged the logic of MBIs showed how policy must countenance abundance and
735 diversity goals that include local knowledge, especially in the context of highly modified
736 landscapes subject to substantial environmental change. Private land conservation
737 challenges will require more collective, contingent and adaptive policy that better
738 reflects the “diverse relations” (Fletcher and Büscher 2017, p230) between and
739 amongst people and ecologies – a task that may be incompatible with reverse-auction
740 MBIs in the long term.

741

742

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