Factors influencing property selection for conservation revolving funds

Hardy, Mathew J.\textsuperscript{1} mat.hardy@rmit.edu.au

Fitzsimons, James A.\textsuperscript{2,3}

Bekessy, Sarah A.\textsuperscript{1}

Gordon, Ascelin.\textsuperscript{1}

\begin{enumerate}
\item School of Global, Urban and Social Studies, RMIT University, GPO Box 2476, Melbourne, Victoria 3001, Australia
\item The Nature Conservancy, PO Box 57, Carlton South VIC 3053, Carlton, Victoria 3053, Australia
\item School of Life and Environmental Sciences, Deakin University, 221 Burwood Highway, Burwood, Victoria 3125, Australia
\end{enumerate}

Corresponding author: Mathew J. Hardy, School of Global, Urban and Social Studies, RMIT University, GPO Box 2476, Melbourne, VIC, 3001, Australia.

Keywords: conservation buyer, covenant, easement, acquisition, private land, Privately Protected Areas

Running head: Conservation-Property Selection
Abstract

Finding sustainable ways to increase the amount of private land protected for biodiversity is a challenge for many conservation organizations. In a number of countries, organizations use ‘revolving fund’ programs, whereby land is purchased, and then on-sold to conservation-minded owners with a condition to enter into a conservation covenant or easement. The proceeds from sale are then used to purchase, protect and on-sell additional properties, incrementally increasing the amount of protected private land. As the effectiveness of this approach relies upon selecting the right properties, we sought to explore the factors currently considered by practitioners and how these are integrated into decision-making. We conducted exploratory, semi-structured interviews with managers from each of the five major revolving funds in Australia. Responses suggest that whilst conservation factors are important, financial and social factors are also highly influential, with a major determinant being whether the property can be on-sold within a reasonable timeframe, and at a price that replenishes the fund. To facilitate the on-sale process, often selected properties include the potential for the construction of a dwelling. Practitioners are faced with clear trade-offs between conservation, financial, amenity and other factors in selecting properties; and three main potential risks: difficulty recovering the costs of acquisition, protection, and resale; difficulty on-selling the property; and difficulty meeting conservation goals. Our findings suggest that the complexity of these decisions may be limiting revolving fund effectiveness. We draw from participant responses to identify potential strategies to mitigate the risks identified, and suggest that managers could benefit from a shared learning and adaptive approach to property selection given the commonalities between programs. Understanding how practitioners are dealing with complex decisions in the implementation of revolving funds helps to identify future research to improve the performance of this conservation tool.
**Introduction**

Increasing the amount of private land protected for biodiversity is widely recognized as an essential part of conservation policies in many countries, with permanent agreements such as conservation covenants or easements being an important component of these efforts (Fishburn et al. 2009; Bingham et al. 2017). Established voluntarily between landholders and an administering body (typically a land trust or government agency) (Kamal et al. 2015), these binding, usually in-perpetuity agreements restrict harmful activities and/or encourage proactive conservation management (Figgis 2004). The agreements are commonly used to protect land with high conservation value or benefit (Fitzsimons & Carr 2014) or under threat from development (Armsworth & Sanchirico 2008). However, these agreements usually require landholders to volunteer their property for protection, often limiting their application to properties owned by conservation-minded landholders (Comerford 2013). Encouraging landholders to enter into a permanent agreement can be difficult, although this is sometimes assisted through offering financial incentives (Farmer et al. 2015).

An alternative to covenants and easements is to purchase and permanently hold a property for conservation (‘acquisition’). Through this approach, private land of high conservation value is purchased, owned and managed for conservation (Bernstein & Mitchell 2005), commonly by a conservation organization (Pasquini et al. 2010; Fitzsimons 2015) or government agency (where it usually reverts to public land; Taylor et al. 2014). A number of studies have looked at the issues involved in acquiring private land for conservation, which range from prioritizing inexpensive land with intact ecosystems (Czech 2002), to accounting for funding and assessment periods and market volatility (McDonald-Madden et al. 2008). Studies have also looked at the strategic purchasing and long-term management costs for private land conservation (Pasquini et al. 2011), and the need to account for non-ecological factors, such as equity and public access (Fairfax et al. 2005). However, purchase and ongoing management costs can make acquisition an expensive approach, and typically covenants and easements cost significantly less for a conservation agency (e.g. Main et al. 1999), partly through transferring management responsibilities onto landholders. In addition, multiple...
purchases in the same area can also inflate land prices making future acquisitions more expensive (Armsworth et al. 2006).

An alternative approach is the use of ‘revolving funds’, sometimes operating as ‘revolving loan funds’ (Clark 2007) (hereafter referred to as ‘revolving funds’). Organizations use these funds to preemptively intervene in the real estate market (Low 2003) and purchase land with conservation value, and then on-sell it to a willing third party (the conservation buyers) (Brewer 2003) in the process adding a conservation covenant to the property (Fitzsimons & Wescott 2001) (also referred to as an organization ‘retaining an easement’). Any proceeds from the sale are returned to the fund to repeat the cycle (Figgis 2003), offering a potentially sustainable approach to the permanent protection of private land without relying on voluntary protection from landholders or locking up capital by purchasing to hold. As revolving funds often seek freehold land with residential potential, they could be considered part of the broader ‘conservation development’ approach (Milder 2007), allowing for limited development in appropriate parts of the property whilst using the covenant or easement to ensure ecological assets are protected (Pejchar et al. 2007). With minor variations, revolving funds currently operate in at least four countries, including the USA, Canada, Chile and Australia (see Cowell & Williams 2006; Freedman 2013; The Nature Conservancy 2015; Patagonia Sur 2016).

Choosing land to protect through revolving funds is somewhat different for conservation organizations compared to regular covenanting or acquisition-to-hold, as each purchase and subsequent resale directly impacts the potential for future purchases (Hardy 2017). Ideally, land is turned over frequently, recouping costs or providing a profit, to ensure the fund remains self-sustaining (Brewer 2003) and in continuous use. Purchases can pose a risk to the fund if the land cannot be on-sold within a reasonable timeframe and/or fails to recoup its costs. The suitability of land likely depends upon a mix of conservation, economic and social/amenity factors, and managers will likely need to make trade-offs between these factors when selecting properties.
Here, we explore the challenge of revolving fund property selection by exploring how fund managers are approaching this issue, using a case study of all major Australian programs. The aim of this research was to identify the mix of factors that influence managers’ perceptions of the suitability of properties for revolving funds and the trade-offs between them, through interviews with managers. Understanding how practitioners are dealing with these complex decisions can then allow us to better understand how future research may help improve the performance of this conservation tool.

**Methods**

**Case study**

Australia currently has five major revolving fund programs in operation (Table 1). These programs predominantly focus on purchasing private freehold land from willing sellers (comprising a parcel or several parcels of land, hereafter referred to as a revolving fund ‘property’) in rural or semi-rural landscapes, with a mix of lifestyle amenity and ecological values (and occasionally agricultural values), and often with some residential development potential. After purchase, the properties are on-sold to new owners and in the process an in-perpetuity conservation covenant, specifically designed to protect land with high conservation value (Cowell & Williams 2006), is placed on the property’s title(s) or required from the new owner as a condition of sale. The new owners are then required to manage and use the property in accordance with the covenant obligations (Figgis 2004), with most receiving an annual phone call and site visit every 3-5 years from covenanting organizations as part of monitoring, compliance and stewardship support (Fitzsimons & Carr 2014). Adding the covenant controls the land use of revolving fund properties to activities compatible with conserving biodiversity, protected by an enduring conservation mechanism (Fitzsimons 2006; Hardy et al. 2017). Up to 2016, Australian revolving funds have generated 155 covenants covering more than 145,000 hectares (Table 1).

Trust for Nature (Victoria) was the first organization to establish a revolving fund in Australia (Table 1), which led to similar programs in other States (Cowell & Williams 2006). All programs are run by
non-profit organizations, were established with government start-up capital, and rely on property transactions and philanthropic donations to replenish funds. Each program operates only within its home state, although some focus on particular regions within that state. Revolving fund activities form the core work of Queensland Trust for Nature and the Nature Conservation Trust of NSW, whereas revolving funds are run within the other organizations alongside other conservation activities (such as conservation covenants or acquisition-to-hold).

Insert Table 1 here

Although run independently by separate organizations, these programs operate in similar ways, maintaining a pool of financial capital for the purpose of increasing the amount of private land protected for biodiversity. Potential purchases are first identified by staff, the community, partner organizations or offered by landholders, they are then assessed against the organization’s internal acquisition criteria (typically conservation and resale criteria) via desktop and on-site assessments. Once deemed suitable and available for purchase, a price is negotiated with the vendor (based on formal valuation advice) and a recommendation then made to a board or committee who make the final decision. Purchasing decisions are often constrained by time (occasionally within weeks – particularly where vendors are motivated to sell), available capital, resources (e.g. number of staff for assessments), and information (e.g. the likely impact of the covenant on resale). Not all properties assessed are identified as suitable, and not all properties identified as suitable are purchased, particularly if the asking or sale price is above current market value. How the suitability assessment process relates to securing conservation covenants and the ongoing sustainability of these funds is the main focus of this paper.

Interviews
We held semi-structured interviews with a manager from each of the five major revolving fund programs operating in Australia (Table 1) (five interviews in total). These executive-level managers are both responsible for, and involved in, the entire revolving fund process within their organizations, and also have deep working knowledge of revolving fund purchases and sales. The
organizations they work within are relatively small, and all managers interviewed would be highly
cognizant of the organizational decision-making related to revolving funds, as well as the other
conservation approaches such as covenan
ting and purchasing to hold (acquisition). All interviews
were conducted between November 2014 and February 2015, either in person or via telephone, and
each lasted approximately one hour. Interviews were conducted in accordance with RMIT University
Human Research Ethics approval (Project No. CHEAN A 000018556-03/14).
The first section of the interview asked participants to provide background information on their
program, including its size, objectives and preferences. In the second section, participants were
asked to nominate all the factors they considered important when assessing the suitability of a
property for their revolving fund, and what makes a successful or unsuccessful revolving fund
property. In the third section, we asked about any other factors or challenges that influence their
property selection decisions. The interviews were conducted through a series of open-ended
questions (following Bryman 2016; pp 466-475; see also Supporting Information), with participants
given the freedom to discuss as many issues as they thought relevant.

Data analysis
All interviews were audio-recorded and transcribed, and participants were invited to review their
transcript for accuracy before analysis. Drawing from themes raised in the literature, we developed a
coding manual (see Supporting Information) of factors likely to influence property suitability, and the
main trade-offs in property selection decisions. We coded the relevant transcript phrases according
to the manual, adding extra factors and trade-offs as they emerged (following Bryman 2016; pp 584-
587). Once all relevant factors (as mentioned collectively by the participants) had been coded, we
recorded the proportion of participants who mentioned each factor, and arranged the common
factors into a generalized influence diagram representing a typical purchasing decision for revolving
fund managers. Drawing from participant responses, we also identified the main risks present in
property selection, their likely causes, and potential mitigation strategies.
Results

Influences on property suitability
Ten factors influencing the selection of a property for purchase were identified from the interviews (Table 2). These fell into three broad categories – ecological, financial and social.

Insert Table 2

All participants identified the presence of threatened species and threatened ecological communities as important, as well as landscape conservation attributes, such as connectivity between existing conservation reserves. Most (4 out of 5) also identified the property’s contribution to the reserve system as influential, targeting ecosystems that are under-represented in the public conservation estate. Purchase costs (e.g. acquisition, holding and administrative costs), likely resale price (how much the program expected to receive from on-selling the property) and resale time (expected time before the property would be on-sold) were also identified as important influences by all participants.

Focusing on the social values of a property that they thought important to prospective buyers, revolving fund managers identified amenity values (particularly the ability to live on the property), and aesthetic value (such as attractive views or vegetation types). Two participants identified the community context within which the prospective buyer would be living (e.g. within a local community that supports conservation), and the property’s ‘conservation story’, which they described as something that gives potential buyers a context and understanding about the conservation benefits they are contributing to by purchasing the property (e.g. providing a crucial connectivity link), as influential and beneficial attributes for property on-sale.

Trade-offs affecting property selection
There were five common trade-offs identified in the transcripts as affecting property selection, and these are illustrated with a selection of quotes from the interviews regarding specific properties (Table 3).

Insert Table 3

The trade-offs identified were: 1) conservation and property turnover (the need for revolving funds to continuously acquire and sell property to achieve conservation gains); 2) conservation and
financial viability (where properties are on-sold at an acceptable financial return to the fund (preferably cost recovery or at profit, although properties that could lead to a financial loss or long resale time are still considered if they have exceptional conservation value)); 3) conservation and amenity value (finding properties with conservation values but also amenity or aesthetic values); 4) conservation and development (finding properties with conservation values that are suitable for residential development); and 5) conservation and landholder management (finding properties with a suitable level of management effort).

The property selection problem
Information from the interviews was synthesized into an influence diagram depicting the factors affecting property selection (Fig. 1). There are two main components to the diagram, with the first focusing on participants’ responses to property suitability, which fell into three clear categories: 1) conservation value (the property’s contribution to the reserve system, landscape scale attributes, and threats), 2) financial value (the costs of acquisition and ongoing support, resale time and resale price), and 3) social value (amenity values and community context). The second component focuses on factors we propose are relevant when determining how much to pay, drawing from the interviews and the literature: the property’s suitability, the funds available for purchasing, internal guidelines on following independent valuations of the property’s market value, and exogenous factors such as the desire to avoid inflating land prices in the region (which may make future purchases more difficult).

Insert Figure 1

Risks in property selection
We identified three main risks in revolving fund property selection, derived from participant responses: 1) the inability to recover the costs of acquisition and protection, and resale; 2) the inability to on-sell the property, or within a reasonable timeframe, and; 3) the inability to meet conservation goals (Table 4). Each of those risks had a number of potential causes, and managers mentioned a number of ways to mitigate these risks. For example, the inability to recover costs upon
property resale could arise from the covenant having a larger than anticipated impact on property value. In response, managers mentioned adapting the covenant design (e.g. providing adequate space for recreational activities, a house and/or hobby farming, provided ecological assets remained adequately protected).

Discussion

Finding sustainable ways to increase the amount of private land protected for biodiversity is a challenge for many conservation organizations. Revolving funds offer potential as a sustainable conservation tool, but choosing properties appropriate for this approach is central to their success. Drawing directly from the experience of managers from each of the major revolving funds operating in Australia, we identified the factors and trade-offs that influence their property selection decision-making. Here we discuss these further with a view to improving the application of revolving funds.

Conservation and property turnover

Our study shows a variety of factors that managers consider when choosing revolving fund properties. In terms of conservation objectives, revolving fund managers are seeking properties with significant conservation value (i.e. threatened species, under-represented ecosystems, or landscape conservation attributes), with the intention of contributing to broader conservation efforts. However, beyond conservation values the purchasing decision requires complex trade-offs between multiple interacting objectives, many of which center on property turnover. This is evident through the managers’ focus on resale time, and also through social factors that they believe are important to prospective buyers (especially amenity and aesthetic values of a property).

This attention to resale is not surprising, considering that a key driver of conservation gains from revolving funds is frequent turnover (continuous acquisition and resale) (e.g. Binney & Whiteoak 2010). However, in response, managers are searching for properties that match their conservation priorities but provide assurance that they can be on-sold, which likely limits the types of properties that are purchased. Potentially, properties with a low likelihood of being resold within a reasonable
timeframe may receive a lower priority than those that can. Depending on the conservation objectives of the program this may not be a problem, but it is likely that some properties with high conservation value will occur outside of areas with buyer demand. Regularly assessing where demand exists for conservation properties, and ensuring this aligns with the organization’s conservation objectives, could be beneficial, and some managers mentioned regular contact with real estate agents to evaluate market demand, and in some instances engaging them to help sell properties. Where opportunities to acquire properties with exceptional conservation value appear outside of these areas, managers may need to consider accepting extended resale times (or consider other conservation mechanisms).

**Conservation and financial viability**

Generally, managers appear to be selecting properties likely to deliver a profit or cover the costs to the fund, with a view to maintain fund sustainability. However, for a conservation tool, buying properties that are expected to recover costs is likely to preclude the acquisition of properties with higher conservation values that are unlikely to recover costs. Managers did state their willingness to accept a financial loss for properties with high conservation value, but it is not clear how often or how much loss is acceptable, or for which types of conservation values. In this research, managers highlighted instances where cost precluded the acquisition of properties with exceptional conservation values, where in hindsight, they felt a financial loss may have been acceptable (Table 3). Whilst using revolving funds for protection may not be appropriate for all properties, it would be beneficial for managers to ensure they have criteria to identify when it is acceptable for the fund to make a loss (thresholds of conservation values for example).

Relating to fund viability, the responses from managers show they are making acquisition decisions as opportunities arise in a dynamic, fluctuating property market. There appears to be uncertainty about resale prices and/or times, and the current demand and the future supply of suitable properties – the latter a common issue in conservation property acquisition (McDonald-Madden et al. 2008). Moreover, placing a protective covenant on title potentially reduces its financial value due
to reduced development rights, which is particularly problematic for fund sustainability as high conservation value land can be expensive (Newburn et al. 2005). In response, managers mentioned that they are engaging property valuers to estimate a property’s ‘covenanted value’ and often use that as the upper limit on acquisition prices, a risk-averse strategy that likely limits the financial impact on the fund. However, there may be other mechanisms contributing to fund sustainability, such as the covenant having a limited impact on the market value of a conservation property, or the organization’s effectiveness in marketing these properties to conservation-minded buyers, or that these types of properties attract those willing to pay a premium for this type of property. In some cases covenants may have a low impact on financial value, although the effect is uncertain (Winfree et al. 2006). Aside from risk averse purchasing, the mechanisms behind fund sustainability are currently unclear and would be worthy of future research.

**Conservation and amenity values**

Managers raised amenity values and aesthetics from the buyer’s perspective as important decision factors (amenity value was also the most frequently mentioned factor throughout the interviews; see Supporting Information). Some programs also appear to consider amenity more broadly, including the social/community context that prospective buyers will be situated within, and a property’s conservation story (Table 2), although it was not clear from the results what an appropriate mix of amenity and conservation values might be for revolving funds. Revolving fund managers identified aesthetic reasons (e.g. a cold and dark house site, the presence of power lines; Table 3), or problems accessing the property, as reasons why some properties have been difficult to on-sell. This highlights a potential misalignment between conservation and resale considerations. Further research exploring the types of amenity values important to the buyers of revolving fund properties, and their relationship to conservation values, would be valuable. This information could also be used to align program communications with the value orientations of prospective buyers (Kusmanoff et al. 2016).
**Conservation and development**

Evident in the managers’ reference to amenity value (Table 2) and the property examples (Table 3), is the influence of residential potential in property selection. Seen by managers as a way to increase the likelihood of resale, it appears that properties without the potential for a dwelling would only be selected in rare cases. The trade-off here is that development potentially affects the conservation gains of revolving funds, as establishing a dwelling likely has some localized ecological impacts. Presumably there are properties where the establishment of a dwelling is not suitable (e.g. highly sensitive ecological communities). Managers’ responses suggest they minimize these development impacts by using the covenant to restrict damaging activities to appropriate areas of the property and permanently protecting the ecologically important areas.

Another important consideration for managers is how the covenant will affect resale, including how potential buyers perceive the nature, extent, cost, and location of the land use restrictions and any associated management obligations (Comerford 2013). The effect of the covenant on resale is uncertain and not well understood. Some participants mentioned they manage this through covenant design that aligns conservation and development concerns (e.g. an attractive house site in an existing cleared area), and to some extent by explaining the covenant conditions to prospective buyers. Whilst revolving funds generally allow for the establishment of a dwelling, the approach appears to provide conservation organizations with a way to limit development to appropriate areas of the property. Moreover, this is happening on properties that, by the managers’ own assessment, have development potential (predominantly residential, but also sometimes agricultural), and are thus at risk of losing ecological values. Understanding development impacts and what would have happened on past revolving fund properties without such an intervention would be a useful part of evaluating the effectiveness of this tool.

**Conservation and landholder management**

Managers are also considering the management effort that future owners would need to undertake, and how that would be perceived by prospective buyers. Both of these relate to resale, where
properties with high management requirements (e.g. fencing, intensive weed control, large property sizes) could be harder to on-sell. As well as affecting resale, management requirements are also important considerations for the ongoing conservation value of the property, and potentially the compliance and enforcement effort needed from the conservation organization to ensure management obligations are met (Rissman & Butsic 2011). Whilst adding a protective agreement means that the property will likely receive beneficial conservation management by landholders that it otherwise may not receive, in some cases it may be unsuitable for private owners even if the property satisfies other revolving fund criteria (e.g. where experienced management is required; see Parker 2004). These types of properties may be better protected through approaches such as acquisition-to-hold (Pasquini et al. 2011) or incorporation into the public conservation estate (Fitzsimons et al. 2008).

**A shared learning approach**
Revolving funds are a relatively novel form of private conservation, where the influence of resale sets it apart from other approaches to covenants or easements. Given the desired attributes sought by managers (Fig. 1), it is likely that only a small proportion of available properties are immediately suitable for revolving funds, and in most cases managers will need to trade-off between conservation and other factors to keep the fund operating. The multiple factors and trade-offs involved, uncertainty over resale outcomes, and limited literature on revolving funds suggest it is challenging for managers to evaluate the implications of individual purchases, particularly given time and resource constraints. This likely limits the potential of revolving funds.

The small number of revolving fund programs, and similarities in the process and objectives between programs, suggest a shared learning approach could be a useful way to refine decision-making. There are already occasional, ad-hoc conversations between managers of Australian revolving funds, and extending this into a more formalized approach could be beneficial. Programs could share their property selection experience to improve responses to the common trade-offs and refine the decision tools (often implemented via spreadsheets) that some programs have developed. This could
include, for example, strategies on how to move properties that are proving difficult to on-sell (Table 4). In addition, the sequential nature of revolving fund decisions makes them ideal candidates to implement approaches developed for adaptive management (Grantham et al. 2010). During the interviews, managers mentioned that within their organizations they are already using previous experience to inform future decisions (albeit in varying capacities). Using the knowledge shared amongst programs, managers could refine their purchasing decisions, monitor and share the outcomes from individual transactions, and use an adaptive process to continuously improve property selection. The information gained from this shared, adaptive process could also provide broader insight into the successes and challenges of revolving funds as a conservation tool to guide future implementation.

**Key questions for further research**
Combining the experience and knowledge of revolving fund managers in Australia has provided an insight into the mix of conservation, financial and social factors that influence the way they select properties. Whilst some trade-offs between these factors have been identified, the extent to which they interact, or which mix determines the most suitable properties, is not yet clear. In many cases, amenity values may be more important for successful resale than conservation values, or contribute greater certainty over financial returns. Developing structured approaches to help managers and programs with these trade-offs could be beneficial. Further, systematic analysis of past transactions across multiple funds could help answer questions, such as: (i) Do the characteristics of ‘suitable’ properties identified in this study align with the outcomes of historical purchases, and does this differ between jurisdictions?, (ii) Which types of properties sell more quickly, or are more likely to recover costs and how does this interact with property market conditions?, (iii) What is the impact of a covenant or easement on resale potential (either positive or negative)?

Our study did not attempt to evaluate the conservation gains provided by revolving funds but this is also an important area of future research. What are the ecological characteristics of past revolving fund properties (e.g. Pejchar et al. 2007) and how does that correlate with different measures of
revolving fund effectiveness? What are the ecological gains compared to the counterfactual where no protection is applied? What are revolving funds contributing to broader conservation efforts, and is this different to regular covenants or easements, or acquisition to hold?

Combining the experience of managers from all five major revolving fund programs in Australia, our study has identified a wide variety of influences affecting property selection. Whilst some of these influences may vary in different contexts, the trade-offs required to keep the funds operational are likely to be similar. Managers have developed constructive responses to these trade-offs and we have shown how sharing this experience could assist in future implementation. Although a relatively novel conservation tool, revolving funds show potential as a sustainable and effective approach when properties have both conservation and resale value, and may provide opportunity for conservation where land prices make outright purchase without resale infeasible. However, as a market-based approach, the central influence of property resale on the conservation gains made by revolving funds likely constrains the applicability of this tool to certain types of properties, meaning its role needs to be considered as part of a broader conservation policy mix. Revolving funds appear worthy of further consideration amongst the existing public and private approaches to conservation.

Acknowledgments

This research was supported by the Australian Research Council’s Centre of Excellence for Environmental Decisions, the Australian Government’s National Environmental Science Program – Threatened Species Hub and RMIT University. The authors wish to thank Trust for Nature (Victoria), Queensland Trust for Nature, Tasmanian Land Conservancy, Nature Foundation SA and the Nature Conservation Trust of New South Wales for their participation in the interviews, and the five anonymous reviewers for their constructive comments on earlier versions of this manuscript. M Plancarte Fexas assisted with the development of the property selection influence diagram. S.B. was supported by an Australian Research Council Future Fellowship (FT130101225). Ethics approval for
this research was granted through RMIT University Human Research Ethics, Project No. CHEAN A 0000018556-03/14.

**Supporting Information**

The interview questions (Appendix S1) and coding manual (Appendix S2) used in this study, and additional results (Appendix S3), are available online. The authors are solely responsible for the content and functionality of these materials. Queries (other than absence of the material) should be directed to the corresponding author.
Literature cited


Fitzsimons JA, Williams C, Walsh V, FitzSimons P, U’Ren G. 2008. Ecological attributes of strategic...


Rissman AR, Butsic V. 2011. Land trust defense and enforcement of conserved areas. Conservation


Tables

Table 1. Major revolving fund programs currently operating in Australia*.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Australian State</th>
<th>Year</th>
<th>Total fund size (AUD approx.)</th>
<th>Properties “revolved”</th>
<th>Area protected (hectares)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature Conservation Trust of NSW</td>
<td>New South Wales</td>
<td>2002</td>
<td>$10m</td>
<td>25</td>
<td>19,567</td>
</tr>
<tr>
<td>Queensland Trust for Nature</td>
<td>Queensland</td>
<td>2004</td>
<td>$7m</td>
<td>17</td>
<td>104,000</td>
</tr>
<tr>
<td>Nature Foundation SA</td>
<td>South Australia</td>
<td>2002</td>
<td>$1.4m</td>
<td>28</td>
<td>12,242</td>
</tr>
<tr>
<td>Tasmanian Land Conservancy</td>
<td>Tasmania</td>
<td>2004</td>
<td>$6.5m</td>
<td>28</td>
<td>2,928</td>
</tr>
<tr>
<td>Trust for Nature (Victoria)</td>
<td>Victoria</td>
<td>1989</td>
<td>$4m</td>
<td>57</td>
<td>6,834</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>$28.9m</strong></td>
<td><strong>155</strong></td>
<td><strong>145,571</strong></td>
</tr>
</tbody>
</table>

* As of June 2016
Table 2. Factors influencing property selection for revolving funds.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Example quote</th>
<th>Proportion of respondents mentioning factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amenity</td>
<td>“Whilst it might be the best ... property to be conserving a particular ecosystem, if it doesn’t have legal and physical access, and it doesn’t have development, an area for domestic ability, then it’s just not suitable” (Participant 5)</td>
<td>5/5</td>
</tr>
<tr>
<td>Landscape attributes</td>
<td>“We look to add to connectivity in the existing reserves wherever possible” (Participant 4)</td>
<td>5/5</td>
</tr>
<tr>
<td>Purchase costs</td>
<td>“As soon as you pay too much, you’re chasing your tail. So you’ve got to be able to negotiate the right acquisition price.” (Participant 2)</td>
<td>5/5</td>
</tr>
<tr>
<td>Resale price</td>
<td>“A ‘revolve’ costs money, and it doesn’t just cost money in terms of making sure that you return your price that you’ve purchased it for, it costs money in terms of all of your transactions and holding costs.” (Participant 5)</td>
<td>5/5</td>
</tr>
<tr>
<td>Resale time</td>
<td>“You want to turn things over regularly, so that you can purchase and protect as much as you can in a given time period” (Participant 3)</td>
<td>5/5</td>
</tr>
<tr>
<td>Threatened species and/or communities</td>
<td>“Protect assemblages of biodiversity, plants and animals that are under threat” (Participant 4)</td>
<td>5/5</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>“It’s the aesthetic, the intrinsic and external characteristics of a property, that make it appealing to the particular target real estate market we’re looking for” (Participant 5)</td>
<td>4/5</td>
</tr>
<tr>
<td>Complements reserve system</td>
<td>“We’re looking for [ecological] communities and ecosystems that are poorly reserved” (Participant 5)</td>
<td>4/5</td>
</tr>
<tr>
<td>Conservation story</td>
<td>“There is another amazing fact about a property that can make it massively easy to purchase and on-sell. And that’s something with a compelling conservation story.” (Participant 1)</td>
<td>2/5</td>
</tr>
<tr>
<td>Social/community</td>
<td>“You have to do research into the area and size and what other people”</td>
<td>2/5</td>
</tr>
</tbody>
</table>
context have bought and whether there’s a conservation ethos in the local community” (Participant 1)

Table 3. Examples of the trade-offs made by managers when selecting properties for revolving funds.

<table>
<thead>
<tr>
<th>Trade-off category</th>
<th>Property examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation and property turnover</td>
<td>“It’s the aesthetic, the intrinsic and external characteristics of a property, that make it appealing to the particular target real estate market… and that is within a price point, where it’s also able to be revolved ..., bearing in mind that we need to make sure that we revolve these properties quickly so that the capital is back in the revolving fund in order for us to reinvest.” (Participant 5)</td>
</tr>
<tr>
<td></td>
<td>“We do have a couple of problem properties, in terms of resale... and [for] one of them it was recognized at the time of purchase as a significant challenge for resale. But with [a] very short timeframe [to purchase], and the availability of a very large, significant property in the highest priority bioregion in the state, in a place where purchase opportunities come up very rarely, the decision was taken to purchase despite the risk. We do get regular, if infrequent enquiries about that property, ... it’s been sitting there for 6 years now. Certainly in the current market if we sell it we’re going to lose a significant amount on it, but it is a very significant conservation outcome, and we will eventually find a buyer.” (Participant 3)</td>
</tr>
<tr>
<td>Conservation and financial viability</td>
<td>“There was another one...a bat cave, and it was a paddock, it was right on the cliff past [this location], and it had this cave for a rare bat, and that was another thing where the CEO at the time just said we should have just gone for it, and bought it, because it was just such a compelling conservation story, you could justify holding it in your revolving fund [for an extended period] or even selling it for less. So... [we] can justify losses with the revolving fund, for conservation benefit.” (Participant 1)</td>
</tr>
<tr>
<td></td>
<td>“Once you get past that first bit, and you say well this has got appeal, it’s attractive, ultimately it’s securing the property for a price that will allow you to do what is required to prepare it for sale again, and still maintain some margin, or profitability, or at the very least break even. And a lot of the times, you know properties with good conservation values don’t proceed because you can’t get to that point with the vendor.” (Participant 4)</td>
</tr>
</tbody>
</table>
“[We] had very good solid evidence to suggest that the property ... was worth [this amount], ... and straight after we purchased them, the market took a nose dive and didn’t recover for 5 years. And so in retrospect ... we paid way too much for those properties and it’s been a real struggle to sell them and recover our money.” (Participant 3)

Conservation and amenity value

“[Sometimes] you get to places and you find a lovely little high point with a view out to the coast with only a short distance to travel from the road frontage, that you can immediately see how you’re going to market it. And you can immediately see the appeal... [There are] practical considerations like we don’t buy too many properties on... steep, south facing slopes because you know they might have nice views to the south but they’d be so cold and dark that you know you’ve got a real risk in resale because you can’t offer people a sunny house site.” (Participant 3)

“We bought a property with high tensile power lines cutting through the entrance so at an angle right through the property, and so people would look at it and ... see the power lines and [say], ‘I don’t want to buy that’. That took forever to sell, which is a shame, it was a good, cheap property that achieved a fair bit of conservation but it just took years to sell. And really it was sold at a discount even then so it was sold very, very cheap.” (Participant 1)

Conservation and development

“It might have enough space for a little hobby farm, or it might just be ... a domestic zone, and then the majority of the property has really quite good quality vegetation and it’s got those lifestyle components, or that sort of private national park kind of feel about it.” (Participant 5)

“So the covenant design is also everything, and needs to be well thought about so that when a property’s returned to market it’s a design that’s practical for the incoming buyer and that it’s practical for maintaining the property value where we’re able to, so that we’re going back into the market and able to revolve it.” (Participant 5)

Conservation and landholder management

“[We avoid] a particularly troublesome stewardship block, or something like that, that you know is going to present ongoing management problems for the [future] owner” (Participant 2)

“[During the acquisition process we] would sort of ask ... ‘is this manageable for a future owner?’. [We] don’t want to have someone buying this property and then having all these difficulties in doing the conservation.” (Participant 1)
<table>
<thead>
<tr>
<th>Risk to revolving fund sustainability and/or effectiveness</th>
<th>Potential causes</th>
<th>Potential mitigation strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unable to recover costs (low resale prices)</td>
<td>Purchasing above market value</td>
<td>Independent assessments of property value with covenant/easement, and setting this as upper limit on acquisition price</td>
</tr>
<tr>
<td></td>
<td>Larger than anticipated impact on resale proceeds from covenant or easement</td>
<td>Ensure appropriate covenant / easement design for each property, including a balance between conservation, amenity and recreational values (e.g. residential and/or hobby farming areas)</td>
</tr>
<tr>
<td></td>
<td>Weak demand in property market</td>
<td>Regular assessment of the extent of demand for conservation properties</td>
</tr>
<tr>
<td>Unable to on-sell property, or unreasonable resale times</td>
<td>Purchasing properties that are unattractive to conservation buyers (e.g. too expensive, too far from population centers, wrong size, unable to build, difficult or expensive management, poor aesthetics, poor amenity values, unfavorable social context)</td>
<td>Regular assessment of the extent and type of demand for conservation properties</td>
</tr>
<tr>
<td></td>
<td>Negative perceptions of voluntary protection agreements (e.g. the obligations contained within covenants or easements)</td>
<td>Communication and public engagement over voluntary protection agreements</td>
</tr>
</tbody>
</table>

Table 4. The risks affecting revolving fund property selection, their causes and potential mitigation strategies.
<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small market for conservation properties</td>
<td>Active searches for and marketing to conservation buyers</td>
</tr>
<tr>
<td>(extended resale times, market fluctuations)</td>
<td></td>
</tr>
<tr>
<td>Unable to meet conservation goals</td>
<td>Mapping of areas where conservation and fund sustainability objectives coincide</td>
</tr>
<tr>
<td>Low purchase frequency due to over-emphasis on financial returns or fund sustainability</td>
<td>Consideration of accepting financial loss for some properties (establishing clear criteria for which this is acceptable)</td>
</tr>
<tr>
<td>Low purchase frequency due to limited supply of suitable conservation properties</td>
<td>Active searches for conservation properties</td>
</tr>
<tr>
<td>Emphasis on resale potential means some ecosystem types or properties with high conservation values would not be suitable</td>
<td>Consider other conservation tools (e.g. acquire or voluntary covenant/easement) for high conservation value land not suitable for revolving fund (e.g. ecologically sensitive properties, those with high management requirements)</td>
</tr>
<tr>
<td>Ecological impact from residential development</td>
<td>Designing the covenant/easement agreement in a way that limits the impact on important conservation areas</td>
</tr>
</tbody>
</table>
Figure legends

Figure 1. Influence diagram of the revolving fund purchasing decision. Solid boxes represent factors influencing the suitability of the property, dashed boxes represent factors influencing the decision of how much fund managers are willing to pay for the property. Exogenous factors in the decision of how much to pay may include, for example, the current trend in the property market or the manager’s desire to avoid inflating land prices in the region (which may make future purchases more difficult).