

Managing native vegetation

27 JUNE 2019



NEW SOUTH WALES AUDITOR-GENERAL'S REPORT

PERFORMANCE AUDIT

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In accordance with section 38E of the *Public Finance and Audit Act 1983*, I present a report titled **'Managing native vegetation'**.

A handwritten signature in black ink, appearing to read 'Margaret Crawford'.

Margaret Crawford

Auditor-General
27 June 2019

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Managing native vegetation

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Section one

Managing native vegetation



Executive summary

In 2014 an expert panel completed a review of biodiversity legislation in NSW. The panel's recommendations included repealing the *Native Vegetation Act 2003*, proposing a new Act with the goal of maintaining a healthy, productive and resilient environment for the greatest wellbeing of the community, and recommending that management of native vegetation in the context of existing agricultural management would be assisted and supervised by Local Land Services (LLS).

Following the panel report, the NSW Government undertook major biodiversity conservation and land management reforms which saw the introduction of the *Biodiversity Conservation Act 2016* (NSW) and the *Local Land Services Amendment Act 2016* (NSW). The reforms commenced in August 2017. The *Native Vegetation Act 2003*, the *Threatened Species Conservation Act 1995*, the *Nature Conservation Trust Act 2001*, and parts of the *National Parks and Wildlife Act 1974* were repealed.

Under the legislative reforms, the *Biodiversity Conservation Act 2016* and *Local Land Services Amendment Act 2016*, which amended the *Local Land Services Act 2013*, aim to ensure a balanced approach to land management and biodiversity conservation in NSW.

A core objective of the *Biodiversity Conservation Act 2016* is to conserve biodiversity at bioregional and state scales. A core objective of the *Local Land Service Act 2013* is to ensure the proper management of natural resources in the social, economic and environmental interests of the state, consistently with the principles of ecologically sustainable development.

The integrated package of reforms included:

- new arrangements that allow land owners to improve productivity while responding to environmental risks
- new ways to assess and manage the biodiversity impacts of development
- a new state Environmental Planning Policy for managing impacts on native vegetation in urban areas
- significant investment in conservation of private land
- a risk-based system for regulating human and business interactions with native plants and animals
- streamlined approvals and dedicated resources to help reduce the regulatory burden.

Transition to this land management framework began on 25 August 2017 with the commencement of the Land Management (Native Vegetation) Code.

The overall objectives of the reforms are:

- to arrest and ultimately reverse the current decline in the state's biodiversity while facilitating ecologically sustainable development, in particular efficient and sustainable agricultural development
- enable landholders to improve the efficiency of their agricultural systems and take a more active role in providing incentive and supporting landholders to improve the condition and function of their ecological systems.

The objective of this audit is to assess whether the clearing of native vegetation in rural areas is effectively regulated and managed by the Office of Environment and Heritage (OEH) and LLS under these legislative frameworks. The audit also examined the progress of the Biodiversity Conservation Trust in implementing the Biodiversity Conservation Investment Strategy as a counterbalance to rural land clearing.

At the time of this audit OEH was responsible for preparing the Native Vegetation Regulatory map and for compliance enforcement in relation to unlawful land clearing. Post 1 July 2019, under machinery of government changes, OEH will be abolished and its activities relevant to this audit will be moved to the new Department of Planning, Industry and Environment. For the purposes of this audit we will continue to refer to it as OEH.



Conclusion

The clearing of native vegetation on rural land is not effectively regulated and managed because the processes in place to support the regulatory framework are weak. There is no evidence-based assurance that clearing of native vegetation is being carried out in accordance with approvals. Responses to incidents of unlawful clearing are slow, with few tangible outcomes. Enforcement action is rarely taken against landholders who unlawfully clear native vegetation.

There are processes in place for approving land clearing but there is limited follow-up to ensure approvals are complied with.

Procedures and systems are in place for assessing applications and issuing approvals for land clearing. Approvals contain conditions for managing clearing and setting aside land for conservation as a counterbalance to permitted clearing.

There is limited follow-up or capacity to gauge whether landholders are complying with the conditions of approvals and effectively managing areas of their land that have been set aside for conservation (i.e. 'set asides').

Certificate assessments are used to grant landholders permission to clear. All assessments we reviewed generally complied with the Land Management (Native Vegetation) Code 2018 (the Code).

The rules around land clearing may not be responding adequately to environmental risks.

The Code, which contains conditions under which the thinning or clearing of native vegetation can be approved on regulated land, is intended to allow landholders to improve productivity while responding to environmental risks. That said, it may not be achieving this balance. For example, the Code allows some native species to be treated as 'invasive' when they may not be invading an area, provides little protection for groundcover and limited management requirements for set asides. There is also limited ability under the Code to reject applications for higher risk clearing proposals.

The release of the Native Vegetation Regulatory (NVR) map has been delayed, limiting landholders' ability to determine if their plans for clearing are lawful.

OEH has applied significant effort in developing a native vegetation regulatory map to guide landholders on which land they can and can't clear without approval. However, in November 2016 the then Minister for Primary Industries advised Parliament that the two largest land categories of the NVR map will not come into effect until the relevant Ministers are satisfied stakeholders have sufficient confidence in the maps' accuracy. Not releasing the map has made it harder for landholders to identify the portions of their land that are regulated and ensure they comply with land clearing rules. It has also limited OEH's ability to consult on and improve the accuracy of the map.

There are significant delays in identifying unlawful clearing and few penalties imposed.

Unexplained land clearing can take over two years to identify and analyse, making it difficult to minimise environmental harm or gather evidence to prosecute unlawful clearing. Despite around 1,000 instances of unexplained clearing identified by OEH and over 500 reports to the environmental hotline each year, with around 300 investigations in progress at any one time, there are only two to three prosecutions, three to five remediation orders and around ten penalty notices issued each year for unlawful clearing. Further, OEH is yet to commence any prosecutions under the current legislation which commenced in August 2017.

Land clearing and private land conservation investment have both increased.

Clearing of native vegetation has increased in recent years. At the same time, the government is also investing in properties with high environmental value with a focus on improving the mix of endangered ecological communities conserved in perpetuity. Processes are in place for identifying and prioritising areas of land for investment but the funding provided to each region is not always consistent with these priorities.



1. Key findings

The decision not to release the two largest categories of the NVR map makes it harder for landholders to determine if they can clear

OEH is responsible for producing the native vegetation regulatory (NVR) map, designed to show landholders where approval is required for land clearing, and where clearing is not permitted. The 2014 review of biodiversity legislation in NSW recommended OEH be provided with adequate resources to ensure the maps were developed and ready to use before the new arrangements commenced.

The NVR map is intended to show landholders where clearing of native vegetation can occur without an authorisation (Category 1 – Exempt land), where clearing requires an authorisation (Category 2 – Regulated land) and where it is restricted (vulnerable and sensitive regulated land).

OEH has applied significant effort in producing the NVR map to a reasonable level of accuracy. Categories covering vulnerable and sensitive regulated land, and excluded land, have been released to the public. OEH has developed strategies for releasing the categories covering exempt land and regulated land, which make up almost 80 per cent of the land area in NSW, as drafts. These strategies include the ability for landholders to apply to OEH for a map review if they believe portions of their land have been incorrectly categorised.

The then Minister for Primary Industries stated on 9 November 2016 that the two largest land categories of the NVR map will not come into effect until the Ministers (i.e. Minister for Primary Industries and Minister for the Environment) are satisfied stakeholders have sufficient confidence in their accuracy. Even though OEH has done further work to improve the accuracy of the map, there is no approved timetable for the release of the final two categories.

LLS has limited oversight of notifications for land clearing

There is limited oversight of notifications to LLS by landholders which relate to the thinning or clearing of native vegetation. Notifications, which are completed by landholders to advise LLS of proposed activities, are generally for lower risk activities than those authorised under certifications. Landholders can choose to progress notifications without input or assistance from LLS, or they can seek assistance with their notification preparation.

Notification forms do not cover all key requirements of the Code, meaning that these requirements could be overlooked by landholders. Some notifications we reviewed were incomplete, meaning the landholder may not have a valid authorisation to clear.

LLS has detailed processes for assessing proposals that are generally higher risk

LLS has a systematic assessment process in place for approving certificates for land clearing and has most of the information necessary to determine what land can be cleared and what land should be included in set asides where these are required. LLS provides support to landholders in determining the categorisation of their land using transitional arrangements set out in the *Local Land Services Act 2013*. The current internal draft of the Native Vegetation Regulatory map provides some support and guidance to LLS officers.

There was a lack of recent satellite images used for mapping areas of land proposed for clearing or set asides in the sample of certificate assessments we reviewed. LLS advised it uses the latest images available and sourced from Land and Property Information. However, some images were up to nine years old, and there were no photographs available at ground level for these areas. This increases the risk that it will not be possible to confirm the type of vegetation, its current density and condition in areas being thinned or cleared and in set asides.

LLS field staff prepare treatment area and set aside area assessments during site visits. However, these are not supported by recent satellite and photographic images that would provide a more comprehensive record, especially in relation to threatened ecological communities and the integrity of vegetation in set asides.

There is limited monitoring of whether requirements of approvals are being met

LLS undertakes limited monitoring of whether landholders are meeting the requirements of approvals for land thinning or clearing, and whether set asides are being effectively established and managed. While the regulatory role of ensuring compliance with land clearing rests with OEH, LLS does have a role to play in monitoring the implementation of the Code, including the establishment and management of set asides, to gauge whether the Code is meeting its objectives.

The Code, and associated land management plans, provide only general guidance on the management requirements for set asides. Few specific requirements are included in plans and goals for set asides have not been identified. This creates the risk that these areas will not be properly managed to restore vegetation and improve biodiversity values.

Over 200,000 hectares of native vegetation has been approved for thinning or clearing under certificates since the Code commenced in August 2017 to February 2019. Of this around 170,000 hectares authorises the thinning of Invasive Native Species (INS) and over 30,000 hectares covers thinning or clearing under other parts of the Code. Around 20,000 hectares has been approved for inclusion in set asides associated with some of these clearing approvals. During the same period, notifications were made to LLS for a further 43,000 hectares of clearing, of which around 39,000 hectares related to thinning of INS.

The Code may not be responding adequately to environmental risks

The Code contains the requirements for the clearing or thinning of native vegetation on Category 2 - Regulated land, which is land requiring a notification or certificate for clearing under the Code.

The Code is intended to allow landholders to improve productivity while responding to environmental risks, but it may not be achieving this balance.

There are problems with the Code regarding:

- the discounting, or reduction in the area, of set asides when they contain threatened ecological communities
- the treatment of some native species as 'invasive' when they may not be invading an area
- limited oversight of authorisations for clearing native groundcover
- the limited ability of LLS to withhold approval for higher risk clearing proposals.

There are lengthy delays in identifying unlawful land clearing

Processes are in place to verify estimates of the overall level of land clearing and identify potentially unlawful clearing, although there are lengthy delays in processing this information. The identification of unlawful land clearing can take up to two years, because OEH compares state-wide satellite imagery at 12-monthly intervals to identify changes in vegetation cover, then examines clearing approvals and exemptions over the same period to identify potentially unlawful land clearing. Some larger events can be detected sooner.

This delay results in a decreased ability for OEH to reduce the environmental harm caused by unlawful clearing, as well as its ability to take enforcement action in cases of unlawful clearing. To better respond to unlawful land clearing events, OEH is developing an early detection system for unlawful clearing and piloted the system in May 2019.

The amount of land clearing has increased but the latest data is yet to be publicly released

Clearing of native vegetation on rural land has increased in recent years, OEH estimates the rate of loss of woody vegetation from cropping, pasture and thinning increased from 9,200 hectares in 2013–14 to 20,200 hectares in 2016–17. Over the same period the extent of unexplained clearing of woody vegetation has almost doubled from around 5,600 hectares to around 10,300 hectares. The latest information compiled regarding the amount of land cleared (i.e. for 2016–17) was released to a media outlet in May 2019 as the result of a request for information under the *Government Information (Public Access) Act 2009*. This information has since been reported and is now in the public domain, although it is yet to be officially released to the public at large.

OEH is still processing information for the 2017 calendar year comparing clearing prior to and following the reforms. There is no publicly available information on the amount of non-woody vegetation (scrubs and native grasslands) which has been cleared.

There is a lack of enforcement activity in response to unlawful land clearing

OEH has resources, policies and guidance to support its compliance and enforcement activities, but there is limited evidence of effective enforcement activity being undertaken in response to unlawful land clearing. Around 500 calls are made to the environmental hotline and around 1,000 instances of unexplained¹ land clearing are identified by OEH each year, with around 300 OEH investigations currently in progress.

Despite the high number of reports and the substantial number of investigations opened, only two or three prosecutions for unlawful clearing take place each year, and few remedial directions and penalty notices are issued to landholders.

Processes to guide conservation investment decisions could be improved

The Biodiversity Conservation Trust (BCT) is responsible for encouraging landholders to enter into co-operative arrangements for the management and protection of the natural environment that is significant for the conservation of biodiversity.

BCT has processes in place for identifying and prioritising areas of land for investment but the funding provided to each region is not always consistent with these priorities. For example, one region of the state has received the largest proportion of funding, but the areas selected for conservation have the lowest biodiversity values.

We also note that the published information on the selection of conservation tenders does not accurately reflect BCT's current approach to meeting its investment priorities, especially in relation to the funding allocation between regions and tenders for koala habitats.

¹ Unexplained clearing refers to areas of clearing detected through OEH's satellite monitoring program that have not been associated with an approval or exemption. It includes areas of woody vegetation cleared for an agricultural purpose for which OEH does not yet know the background or specific details of the clearing. This can include clearing for routine agricultural management activities, clearing of regrowth and clearing under various legislative exclusions and also unlawful clearing. These figures do not include instances of unexplained clearing of non-woody vegetation.



2. Recommendations

Local Land Services should:

1. By December 2019, improve administration of the clearing of native vegetation by:
 - ensuring notification forms include all relevant conditions of the Code to ensure these conditions are adequately communicated to landholders
 - enhancing the recording of areas authorised for thinning and clearing and set asides by capturing recent satellite images and on-ground photographs of these areas
 - progressing ICT system improvements to ensure notifications and certificates, and associated spatial data, can be delivered to OEHL in a timely manner
 - ensuring landholders are required to resubmit notifications that do not comply with the Code
 - ensuring assessments of compromised groundcover are calculated at a time of year when the proportion of the native groundcover is likely to be at its maximum in compliance with the Code
 - establishing guidelines for:
 - the extent of clearing allowed under the allowable activity of sustainable grazing
 - treatment methods that result in nil and minimal ground disturbance, especially in relation to invasive native species and thinning other native vegetation
 - selection of set-aside areas that seek to maximise environmental benefits from these areas
 - defining and reporting on measures to determine the impact of the Code on agricultural productivity, and the management of environmental risks.
2. By June 2020, review the Code to address issues identified in this audit, including:
 - the inability of LLS to reject a notification or proposal for a certificate on the basis it would likely result in poor environmental outcomes
 - the lack of oversight of authorisations for the clearing of compromised native groundcover
 - the absence of the requirement to demonstrate that a species is invading a landscape prior to approving its clearing as an invasive native species
 - discounts (i.e. reductions) in the area of land required in set asides when they contain threatened ecological communities or are of strategic landscape importance.
3. By December 2019, ensure all field staff receive specific training in the identification of plant community types and threatened ecological communities, with regular refresher courses.
4. By June 2020, effectively monitor the establishment and management of set asides and provide support to landholders to achieve required restoration outcomes.

By December 2019, the Office of Environment and Heritage should improve the monitoring and regulation of land clearing by:

5. Implementing a staged release of draft maps Category 1 - Exempt and Category 2 - Regulated land to landholders and the public, allowing sufficient time for landholder review and input.
6. Ensuring adequate resources are in place, during the release of the last two map categories, to process category explanation reports and NVR map reviews, and to update the NVR map.
7. Ensuring staff have sufficient systems and resources to adequately investigate unlawful land clearing and to gauge compliance with the Code, including accurate spatial data on all land clearing approvals.
8. Continuing to improve systems and processes for monitoring the rate of clearing of woody and non-woody native vegetation.
9. Publishing data on the rate of land clearing, including woody and non-woody vegetation, on an annual basis.

By September 2019, the Biodiversity Conservation Trust should ensure:

10. The published selection processes for conservation tenders, fixed rate offers, and land purchases accurately reflects the selection methodologies.
11. The methodology used for tender selection aligns with BCT's investment priorities.



1. Introduction

1.1 Background

In 2014 an expert panel completed a review of biodiversity legislation in NSW. The panel's recommendations included repealing the *Native Vegetation Act 2003*, proposing a new Act with the goal of maintaining a healthy, productive and resilient environment for the greatest wellbeing of the community, and recommending that management of native vegetation in the context of existing agricultural management would be assisted and supervised by Local Land Services (LLS).

Following the panel report, the NSW Government undertook major biodiversity conservation and land management reforms which saw the introduction of the *Biodiversity Conservation Act 2016* (NSW) and the *Local Land Services Amendment Act 2016* (NSW) which commenced in August 2017. The *Native Vegetation Act 2003*, the *Threatened Species Conservation Act*, the *Nature Conservation Trust Act*, and parts of the *National Parks and Wildlife Act 1974* were repealed.

Roles and responsibilities for regulating and managing native vegetation

LLS is responsible for administering the land management framework, including processing notifications and issuing certificates for the management of native vegetation on rural land under the 'Land Management (Native Vegetation) Code 2018'. This work includes monitoring set aside requirements under the Code.

The Office of Environment and Heritage (OEH) is responsible for compliance enforcement in relation to unlawful land clearing. It is also responsible for producing the Native Vegetation Regulatory (NVR) Map. The NVR Map is intended to show landholders where land clearing can occur without approval, where approval is required, and where land clearing is not permitted. Post 1 July 2019, under machinery of government changes, OEH will be abolished and its activities relevant to this audit will be moved to the new Department of Planning, Industry and Environment.

The Biodiversity Conservation Trust (BCT) is responsible for encouraging landholders to enter into co-operative arrangements for the management and protection of the natural environment that is significant for the conservation of biodiversity. The purpose of the Biodiversity Conservation Investment Strategy is to guide investment in biodiversity conservation in NSW and guide the Biodiversity Conservation Trust's prioritisation of government investment in private land conservation.

The key relevant legislation for the above activities are the *Local Land Services Act 2013* and the *Biodiversity Conservation Act 2016*.

About the Native Vegetation Regulatory Map

The NVR Map is intended to show landholders where land clearing can occur without approval, where approval is required, and where land clearing is not permitted. The categories of land identified in the NVR map are:

- Category 1 - Exempt land is land that allows native vegetation clearing without approval from LLS. Exempt land includes land cleared of native vegetation as at 1 January 1990 or lawfully cleared after 1 January 1990, low conservation grasslands and land containing other low conservation groundcover. This category makes up around 25 per cent of land in NSW.

- Category 2 - land is divided into:
 - Regulated land, which is land where authorisation for native vegetation thinning or clearing is usually required from LLS. This category makes up around 54 per cent of land in NSW.
 - Vulnerable regulated land is land where clearing of native vegetation may not be permitted under the Code, and a limited suite of allowable activities apply). This category includes steep or highly erodible land and protected riparian areas. It makes up around three per cent of land in NSW.
 - Sensitive regulated land - where clearing is not permitted under the Code. This category includes land set aside under the Code, land subject to a private land agreement, coastal wetland and littoral rainforests, critically endangered plants and critically endangered ecological communities. It makes up around two per cent of land in NSW.

Excluded land refers to land outside of the land management framework which is listed in part 5A of the *Local Land Services Act 2013*. This includes National Parks, urban areas which 'State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017' applies and state forests. The category makes up around 16 per cent of land in NSW.

Transitional arrangements included in Part 5 of the *Local Land Services Act 2013* currently apply regarding Category 1 - Exempt land and Category 2 - Regulated land. This means that landholders must self-assess the category of their land and whether certification or notification is required to authorise clearing. Landholders who are unsure how the current legislation applies to their land can seek advice from LLS.

About the *Land Management (Native Vegetation) Code 2018* and allowable activities

The Code was developed to facilitate native vegetation management and is intended to support more efficient farming methods and systems while responding to environmental risks. It provides options for native vegetation management and clearing under the categories: invasive native species, pasture expansion, continuing use, equity and farm plan.

The *Local Land Services Act 2013* establishes programs and advisory services, including natural resource management and planning. The *Local Land Services Amendment Act 2016* amended the *Local Land Services Act 2013* and inserted a provision which allowed the Minister for Primary Industries to make the 'Land Management (Native Vegetation) Code 2017 and 2018'. Concurrence is required from the Minister for Energy and Environment in making the Code and any changes to the Code.

The Code enables the following clearing on Category 2 - Regulated land, following notification to or approval from LLS, for:

- **Part 2, Invasive Native Species (INS)** - enables the removal of invasive native species that have reached unnatural densities and dominate an area. These activities are to promote the regeneration and regrowth of native vegetation.
- **Part 3, Pasture Expansion** - enables the removal of woody native vegetation by uniform or mosaic thinning to promote native pastures.
- **Part 4, Continuing use** - enables the continuation of lawful land management activities that had been in place between 1990 and the commencement of the Land Management Framework.
- **Part 5, Equity** - enables the removal of paddock trees, compromised native groundcover, and native vegetation from small areas in exchange for set aside areas containing remnant vegetation.
- **Part 6, Farm Plan** - enables the removal of paddock tree areas and clearing regulated rural land in exchange for set aside areas containing remnant vegetation and/or set aside areas where revegetation will be required.

About certifications and notifications

The Code provides two mechanisms, to thin or clear native vegetation - notifications and certifications. Notifications, which generally apply to lower risk activities, must be provided to LLS on a standard form at least two weeks prior to the first date on which the clearing is carried out and are valid for 15 years or until a change of ownership in the landholding. Notifications are valid for thinning or clearing under Part 2, Division 1: Low impact clearing of invasive native species, Part 3, Division 1: Uniform thinning of woody native vegetation and Part 5, Division 1: Removing native vegetation from paddock tree areas and Part 5, Division 2: Clearing compromised native groundcover.

Landholders who require more certainty on whether they have approval to clear land under a notification can apply for a voluntary code compliant certificate. This involves LLS assessing and ensuring the proposed clearing complies with the Code.

Where specified in the Code, clearing of native vegetation may only be carried out after LLS has issued a mandatory code compliant certificate that the intended clearing complies with the Code. Certificates without set aside requirements are valid for 15 years, while certificates requiring set asides apply in perpetuity.

Mandatory Code compliant certification is required for the following Code Divisions:

- Part 2, Division 2 (Moderate impact clearing of invasive native species)
- Part 3, Division 2 (Uniform thinning of woody native vegetation - certification)
- Part 3, Division 3 (Mosaic thinning of woody native vegetation)
- Part 4, Division 2 (Continuation of land management activities undertaken after 1990)
- Part 4, Division 3 (Continuation of rotational activity undertaken prior to 1990)
- Part 5, Division 3 (Removing native vegetation from small areas)
- Part 5, Division 4 (Removing native vegetation from regulated rural areas)
- Part 6, Division 1 (Removing native vegetation from paddock tree areas)
- Part 6, Division 2 (Removing native vegetation from regulated rural areas).

About set asides

A set aside is land on the property that must be actively managed to offset the impacts of clearing under a statutory requirement for landholders to 'make reasonable efforts to manage the set aside area in a manner expected to promote vegetation integrity in the set aside area'.

Set asides are required under Part 5 and Part 6 of the Code. Set aside ratios identify how much land must be set aside in exchange for clearing in another area of the property. Set asides must be in addition to any publicly funded conservation initiative, offset or existing set asides.

Allowable activities cover a range of routine land management activities associated with agriculture and other common practices in rural areas including clearing for firewood and construction material for use on the same property, powerlines, airstrips, fire breaks and sustainable grazing. Clearing for allowable activities does not require approval under the *Local Land Services Act 2013*.

For clearing proposals that cannot be accommodated by the allowable activities and the Land Management Code, an approval process will be established by the Native Vegetation Panel that will enable landholders to offset the biodiversity impacts of developing their land for agriculture.

About this audit

The objective of this audit is to assess whether the clearing of native vegetation in rural areas is effectively regulated and managed by OEH and LLS. The audit also examined the progress of the Biodiversity Conservation Trust in implementing the Biodiversity Conservation Investment Strategy as a counterbalance to rural land clearing. The audit included an examination of ten per cent of notification and certificate assessments to gauge whether they were being adequately administered by LLS.



2. Approvals for clearing of native vegetation

Local Land Services (LLS) is responsible for processing notifications and issuing certificates to landholders for managing the thinning or clearing of native vegetation on rural land through the 'Land Management (Native Vegetation) Code 2018' (the Code). This work includes monitoring and reporting on the implementation of the Code, including the establishment and management of set asides.

2.1 Advice and guidance to landholders on land management and biodiversity conservation

LLS has established a regionally based workforce of around 50 regional services officers, across the 11 LLS regions, to assist landholders with implementing the Code. It has produced a range of relevant information, guidelines, fact sheets and forms that are available on the LLS website explaining the categories of land, allowable activities on regulated land and guidance for applying the Code. This includes a fact sheet for each part of the Code, guidance for determining slope, soil texture and buffer distances, examples of approvals provided under the Code, notification forms and the Expression of Interest form to apply for a certificate. The LLS website also refers to opportunities for funding private land conservation through the Biodiversity Conservation Trust (BCT).

Without the NVR map landholders are required to self-assess their land

OEH is responsible for developing the Native Vegetation Regulatory (NVR) map. The maps for excluded land, Category 2 - Vulnerable land and Category 2 - Sensitive land have been released. The release of a draft version of the native vegetation regulatory map for the two largest land categories, Category 1 - Exempt land and Category 2 - Regulated land, was expected to commence in September 2017.

In November 2016 the then Minister for Primary Industries advised Parliament that the two largest land categories of the NVR map will not come into effect until the relevant Ministers are satisfied stakeholders have sufficient confidence in the map's accuracy. These two categories are yet to be released.

In the absence of these key categories of the NVR map, landowners are responsible for determining the categorisation of their land, in accordance with the *Local Land Services Act 2013*. LLS has provided information on transitional arrangements that landholders will need to apply until the remaining draft NVR map categories are released. LLS provides fact sheets and offers to assist with this process.

LLS supports landholders to prepare applications for thinning and clearing

LLS offers a site visit to discuss options for each property prior to assisting landholders to complete the necessary forms for notifications and certifications under the Code. Landholders may complete a notification without a site visit whereas assisting a landholder to prepare an application for a certificate requires at least one site visit. We saw site assessments for all the certificates we reviewed.

LLS ran information workshops around NSW following the introduction of the Code. It also commissioned research which identified that around 50 per cent of landholders sampled were aware of the Code, though most were not aware of how it works. The research also showed similar level of awareness of approval processes for land clearing prior to the reforms.

Procedures and guidance are available, but notification forms could be improved

LLS has a range of procedures and processes for managing enquiries and requests for information from landholders. These include a training guide to manage queries, a notification process guide and a range of process maps used to develop the processes for dealing with the range of parts and divisions of the Code.

Information provided on the website appears consistent with the Code. However, notification forms do not cover all the requirements of the Code and how they are meant to be implemented. This means requirements in some sections of the Code may be overlooked by landholders.

For example:

- The Part 2 Division 1 notification form for thinning INS does not specify clearing of non-invasive native species is permitted to only the minimum extent necessary (Clause 25(4) of the Code) and the plant retention requirements for clearing other than by burning (Clause 25(7)).
- The Part 3 Division 1 notification form for thinning native vegetation does not specify the requirement for all native trees with a diameter at breast height over bark greater than 90 centimetres must be retained (Clause 35 (1)).
- The Part 5 Division 1 notification form for clearing paddock tree areas does not include a question about the area (in hectares) of the land to be cleared (Schedule 6 (3) (f)). We also note that the landholder is not required to declare that there are no critically endangered species on the land despite this being a requirement for notification forms for Part 5 Division 2 and Part 3 Division 1.
- The Part 5 Division 2 notification form for clearing compromised native groundcover does not require the landholder to provide the dates in which intended clearing is taking place (Schedule 6 (3) (g)) nor the species of vegetation intending to be cleared (Schedule 6 (3) (j)).

There is also limited current guidance available from LLS on what methods of clearing and thinning can be used to provide nil or minimal ground disturbance. Previous guidance under the *Native Vegetation Act 2003* indicated clearing of plants at paddock scale with nil to minimal disturbance to soil and groundcover could be done by chaining, slashing, roping or stick raking.

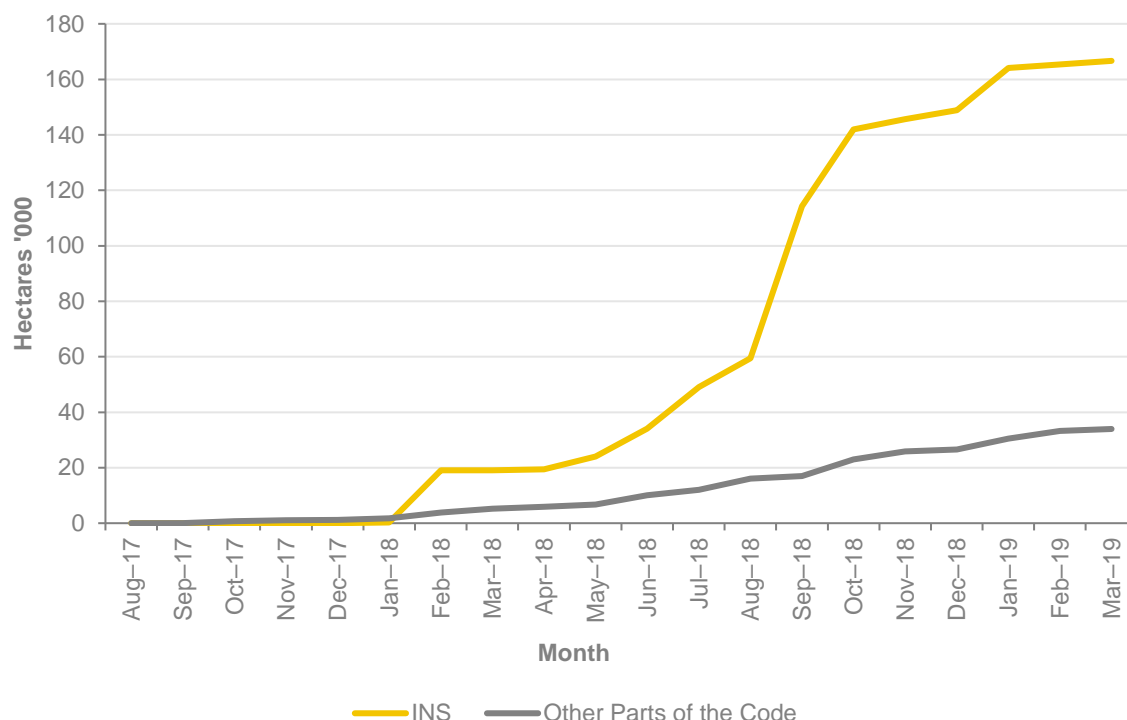
2.2 Assessment process for land clearing approvals

LLS has detailed operational procedures and guidelines in place to support the assessment process. Since August 2017, LLS has processed around 350 notifications and over 450 certifications. These certifications cover a combined area of over 170,000 hectares for thinning invasive native species and over 37,000 hectares for other clearing or thinning under the Code. The notifications cover an area of over 43,000 hectares, the majority being for thinning of INS.

The amount of land approved for thinning and clearing slowed initially and has been increasing since July 2018

Exhibit 1 shows the amount of thinning and clearing approved by certificates over the last 18 months. Almost 170,000 hectares of this is approval for thinning invasive native species (INS).

Exhibit 1: Total area approved for clearing under certificates (cumulative)



Note: Approvals for a proportion of certificates were still pending for applications submitted after September 2018.

Source: Audit Office analysis based on LLS data 2019.

These areas do not include clearing for allowable activities under the *Local Land Services Act 2013*, such as clearing around fence lines and farm structures, for firewood and construction material for use on the same property, powerlines, airstrips, fire breaks and sustainable grazing. Allowable activities on regulated land do not require approval under the Code. Under the *Local Land Services Act 2013*, LLS is required to estimate the amount of clearing from allowable activities and report on it annually but is yet to do this.

Most notifications and certifications represent approval for thinning trees, with fewer approvals for clearing trees. Most are valid for 15 years, so much of the treatment may not occur for some time. Around 800 authorisations for thinning and clearing have been processed since the Code was implemented in August 2017. This represents fewer than one per cent of the estimated 130,000 rural landholders across NSW.

Authorisations for thinning and clearing, in the form of Property Vegetation Plans (PVPs) and notifications, were also issued prior to the August 2017 reforms, under the *Native Vegetation Act 2003*. For example, from 2012–13 to 2016–17 the average amount of land authorised for thinning or clearing was around 365,000 hectares per annum. Details of these authorisations are contained in Appendix two. Most of the authorisations are valid for 15 years.

Assessment times have improved, but processing times have not

LLS has a customer service strategy in place which establishes timeframes for a range of customer service metrics including:

- contact with landholders following an enquiry (two business days)
- the assessment team providing an approved certificate to landholders following receipt of the necessary information from regional services (21 business days).

The Natural Resources Commission (NRC) undertook an audit of LLS' implementation of sustainable land management reforms. Its report was finalised in November 2018. The report indicated one of the key reasons for delays in processing documentation for certification was inadequate or inaccurate information provided to the assessment team by regional staff. LLS advised it is addressing these concerns by improving its systems and processes, including implementing the 'Landmap' ICT system, which will be used to improve the mapping of land areas covered by notifications and certificates.

Average assessment processing time since commencement of the legislation in 2017 was 42 days and this has since dropped to an average assessment time of 12 days in 2019. Processing times have been reduced by allocating experienced Regional Services staff to the Assessment Services Team to reduce the backlog created in 2018 with the reform of the Code. LLS had stopped issuing certificates for a period and reissued the certificates that had been issued under the 2017 Code.

Even though the assessment times have been reduced, overall processing times have not declined significantly. Processing time for applications for certificates, from the time the expression of interest is received from the landholder to the assessment team issuing the certificate, have remained relatively constant at around 160 days between October 2017 and March 2019. LLS advised that it is often waiting on information or decisions from the landholder to proceed with proposals and the processing time can also include time required to change proposals.

The lack of a complete NVR map can make categorising land more difficult

OEH is responsible for preparing the Native Vegetation Regulatory (NVR) map. The then Minister for Primary Industries stated on 9 November 2016 that the two largest land categories of the NVR map will not come into effect until the Ministers (i.e. Minister for Primary Industries and Minister for the Environment) are satisfied stakeholders have sufficient confidence in their accuracy. Even though OEH has done further work to improve the accuracy of the map, there is no approved timetable for the release of the final two categories which make up around 80 per cent of land in NSW. In the interim, LLS provides support to landholders in determining the categorisation of their land using transitional arrangements set out in the *Local Land Services Act 2013*.

LLS advised that senior staff and team leaders have access to the draft maps but regional service officers, who conduct the on-ground assessments, do not. Instead they are given information on the proportion of each relevant property that is Category 2 - Regulated land. This means that staff need to apply a greater level of judgement when determining the categories of land. Staff have access to property and vegetation information to assist in this task.

The lack of a complete NVR map can make categorising land more difficult. This is especially true for areas of groundcover, such as shrubs and grasslands, that may require a notification prior to clearing. One certificate assessment we reviewed under Part 6 of the Code included a comment from field staff that they did not have access to the NVR map making it harder to determine if the land was Category 1 or 2. This comment was in relation to identifying suitable land for a set aside which is required to be at least 50 per cent Category 1 - land under that part of the Code.

The assessments team ensures a consistent approach to approvals

An LLS assessments team is in place to process notifications and assess certificate applications to improve the consistency and accuracy of authorisations in accordance with the Code. We reviewed a sample of notifications and certificates, across each Part and Division of the Code and across each region, to gauge whether adequate information was available to assess applications and whether approvals were in accordance with Code.

All certificates we reviewed were generally in compliance with the Code, although we did identify problems with some assessments that are outlined below. All certificate assessments have been peer reviewed by another regional services officer prior to submission to the assessment services team.

Some certificate assessments indicated that compliance checks had been carried out with OEH, for any potentially unlawful clearing, and for potential matters under Commonwealth legislation in relation to endangered species.

There is a lack of visual information supporting certificate assessments allowing land clearing

The aerial/satellite images used to produce maps in around half the certificate assessments we examined were over five years old, with some up to nine years old. It is unclear whether the vegetation on the ground had changed in the intervening period. LLS field staff prepare treatment area and set aside area assessment reports during site visits. LLS advised that maps are normally checked against more recent satellite images but there was no evidence that these images were retained.

Further, only one of 40 samples we reviewed included photos of areas proposed to be thinning or cleared and set asides. This makes it harder for a reviewer to confirm the type of vegetation, its density and condition in areas to be thinned or cleared and in set asides. This is particularly important for recording threatened ecological communities in these areas and for gauging vegetation integrity in set asides.

The lack of definition on maps also makes it difficult to tell if applications for clearing were exceeding the 500 square metre maximum size limit for paddock tree areas. LLS advised that lines on maps are indicative and these areas are normally checked in a mapping program called ArcGIS.

Landholders notify LLS of an intention to clear land but may not comply with the Code

If a landowner intends to undertake lower risk forms of land clearing, under some Divisions of the Code they do not require a certificate assessment and instead can notify LLS at least two weeks before the clearing activity is to take place. LLS has prepared a form to allow landholders to notify of an intention to clear land under the Code and may ask a landholder to provide more information before clearing if required.

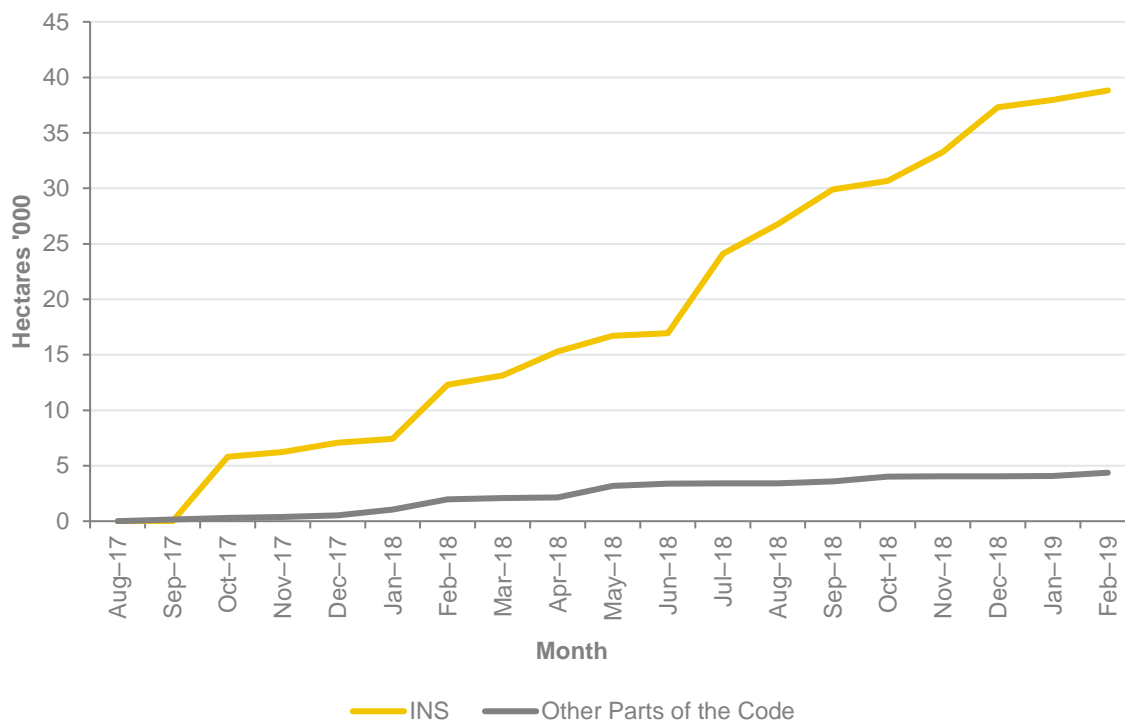
We reviewed a sample of the notifications that have been processed. Some notifications we reviewed were not completed in accordance with the requirements of the Code and therefore may not have been valid. These included:

- 3 notifications did not include a date of intended clearing.
- 1 notification did not include the lot number or the deposited plan number.
- 2 notifications had 'no' answers for questions covering requirements under the Code when they should have answered 'yes'. For example, in response to the question 'the area does not contain a critically endangered ecological community?'. The landholders answered 'No' indicating the area did include a critically endangered ecological community. We note that this could highlight a problem with the wording of the form.
- 1 notification included maps indicating the treatment area did not include vulnerable regulated land, but the landholder has indicated 'chainsaw removal for any trees within vulnerable regulated land'.
- 3 notifications for invasive native species thinning where the Code conditions require 'minimal disturbance to soil and groundcover' but the landholder had nominated the clearing method as 'dozer' or 'loader'. We note that an implement towed by a bulldozer such as a stick rake may be permissible, however it is not clear in the notification that this approach is to be used. Removing trees with a bulldozer (without a towed implement) is unlikely to result in minimal ground disturbance.
- Notifications for clearing compromised native groundcover during periods of drought when it is difficult to assess the suitability of vegetation for clearing. This is despite the Code requiring that the percentages of native grasses must be calculated at the time of year when the proportion of the native groundcover is likely to be at its maximum and must not be calculated if the groundcover has been significantly disturbed in the preceding six months, for example by fire, drought or heavy grazing.

Most notifications are for the thinning of invasive native species

Exhibit 2 below displays the total amount of land subject to thinning and clearing under notifications to LLS.

Exhibit 2: Total area of thinning and clearing notified to LLS, by Invasive Native Species (INS) (Part 2) and other Parts of the Code



Source: Audit Office analysis based on LLS data 2019.

LLS has limited ability to reject notifications and certifications under the Code

There are limited options to refuse an application for a certificate if it complies with the Code, even if LLS is concerned about the level of impact of the clearing and how well it will be managed.

LLS can only refuse an application for land clearing if the land was subject to a previous land clearing approval in the last five years and providing a further approval will result in broad scale clearing. Under Section 16 of the Code, LLS may refuse to issue a voluntary code compliant certificate or a mandatory code compliant certificate, or may withdraw the authority to clear by revoking a notification, if:

- the area of land on which clearing of native vegetation is proposed was subject to a notification, voluntary code compliant certificate or mandatory code compliant certificate at any time in the five years prior to the notification or the consideration of the application for a voluntary or mandatory code compliant certificate, and
- in the opinion of LLS, the cumulative impact of all clearing, including the proposed clearing, is more than would be permitted under any single Part of this Code, would undermine the effectiveness of any condition of this Code or would result in excessive or broad scale clearing.

The Code and LLS guidance material do not define what might constitute excessive or broad-scale clearing or what the test would be for undermining effectiveness. The two clauses in combination make it very difficult for LLS to reject an application.

Our review of issued certificates highlighted several examples where the decision was made to approve clearing, despite potential inconsistencies with the intent of the Code:

- We reviewed three examples of certificates being issued over properties where most of the regulated land could be thinned or cleared, potentially resulting in a significantly altered landscape. One example had a treatment area larger than the total amount of Category 2 - Regulated land on the property, because vulnerable land was also included in the treatment area.
- Another certificate assessment raised doubts as to whether the landholder would manage set aside requirements because they involved new fencing and specified stocking rates. LLS was still required to issue a certificate under the Code despite concerns it would not be complied with.
- Another certificate allowed the establishment of 11 set asides, most adjacent to the property boundary. The biodiversity value of such an arrangement is uncertain because smaller isolated patches of native vegetation are generally less resilient than patches within continuous native vegetation. LLS advises that, under Part 5 of the Code, LLS cannot direct the landholder in terms of size and location of the set aside.
- One certificate we examined allowed the clearing of almost all the individual paddock trees under Part 5, Division 4 of the Code. In this instance the LLS Applied Science team recommended 'proceed' despite not being supportive of the set aside or the large tree removal on the property. Exhibit 3 below displays a map of the property. Yellow denotes the property boundary and the purple dots are the paddock trees proposed to be removed. The set aside to be established is displayed in green on the bottom left corner of the property. The land immediately adjacent to the set aside, (displayed in purple on the map) was to be thinned under a separate Part 2, Division 2 certificate for invasive native species. Both certificates were issued on the same date.

Exhibit 3: Areas of a property being cleared and thinned under multiple approvals



Source: Audit Office analysis based on LLS information 2019.

Certificates requiring set asides are issued during drought when it is difficult to restore native vegetation in these areas

Certificates for parts of the Code that require set asides to be established are being issued in drought affected areas where restoration is unlikely to be achieved for some time. This is particularly relevant for Part 6: Farm Plan, which requires the establishment of a set aside that is not less than 50 per cent Category 1 - Exempt land and is on the same landholding, within 12 months after the certificate is issued.

This means that native vegetation will likely need to be planted to establish the set aside during times when it will be difficult to cultivate due to drought conditions. Landholders may require support to restore these areas, including improved access to water and tube stock (i.e. young plants). LLS staff have commented in some assessments that a set aside should only be planted if the conditions are suitable.

The 12-month period revegetation requirement can be extended by means of a Code variation certificate. LLS advised that only eight certificates are due to have fulfilled this revegetation requirement. Of these eight, none have fully completed the requirement due largely to drought (non-suitable planting conditions and low success rate). All eight landholders have been contacted but only two of the eight have been issued a current authorised Code variation.

Part 6 of the Code also requires that clearing cannot take place until LLS is satisfied that the landholder has substantially met any set aside revegetation requirements specified in the certificate. We examined three letters from LLS to landholders indicating they had substantially met revegetation requirements. However, there is a lack of clarity about what is meant by 'substantially met' with one letter indicating the landholder had only fenced the area and sprayed for weeds but was deemed to have substantially met the revegetation requirements.

LLS staff are required to determine the viability of endangered ecological communities, but do not always have the capability or enough information to do so

For the purposes of the Code, native vegetation is taken to be an instance of a vulnerable ecological community or an endangered ecological community (EEC) both are a subset of threatened ecological communities – (TECs) where, in the opinion of LLS, the vegetation forms a functioning ecological community that is likely to be viable over the long term.

LLS has produced guidelines to assist regional service officers to determine the viability of TECs in the long term however they lack specific criteria and training to adequately guide such decisions. This is important because, under the set aside calculations, if a viable EEC is part of treatment area then the size of the set aside will need to increase and if a viable EEC is located in a set aside then the area of set aside can be reduced. It is also important because Part 3 of the Code places restrictions on the thinning or clearing of TECs.

2.3 Support for administrative processes

There are five regional teams across 11 LLS Regions that deal directly with landholders for notifications and certifications. These regional teams are supported by several business units including policy, legal, assessments, science, IT, a contentious issues group and an operations working group.

More specific training to LLS staff would improve their capability to identify threatened ecological communities

Identification of plant types and threatened ecological communities (TECs) is a technical area. According to LLS' sustainable land management operations manual, regional service officers must determine if the vegetation in the treatment area and set aside is a TEC. LLS field staff use NSW BioNet, a repository for biodiversity data products managed by OEH, which contains data on species sightings, flora surveys, threatened biodiversity, vegetation classification and vegetation maps. The operations manual also states that it is important that staff feel confident in identifying Plant Community Types (PCT) in the treatment and set aside to ensure accurate records and reporting.

The Natural Resources Commission report found that training and guidance relating to applying the Code could be enhanced. This included providing additional formal training in key aspects of the Code such as plant identification and evaluation of endangered ecological communities.

LLS advised that frontline staff generally have tertiary level qualifications in natural resource management, agriculture and farm management, or environmental science. Many staff also have experience in administering the previous native vegetation regime. LLS regional staff have attended field days and vegetation classes to enhance their knowledge of vegetation and its identification.

LLS staff in most regions have received some specific training in plant ecology, including the identification of plant community types, but limited training in identifying threatened ecological communities. Records provided indicate that staff in two of the larger regions have received little or no such formal training since the reforms were implemented in 2017.

There are delays in sharing information on land clearing approvals between LLS and OEH

LLS provides OEH with copies of notifications and certificates, although there are delays in providing approvals and the associated spatial data. LLS advised it provides a copy of the relevant information for certificates and notifications immediately after they are processed, including maps. The associated spatial data is exchanged in batches every two or three months.

LLS advises it is limited in its ability to provide spatial data by its current IT systems. It has recently established a web service link through its new 'LandMap' ICT system, which should enable approvals and spatial data to be provided to OEH almost immediately after issuing. This information is important for compliance activities because OEH needs to know which areas of land are approved for clearing and those that are not. Spatial data is also critical for the re-categorisation of land from Category 2 to Category 1 after it has been cleared.

LLS undertakes compliance checks with OEH and advises it will withhold certificates for landholdings that have compliance issues until they are resolved. LLS highlighted a range of instances where there were delays of over a month in obtaining compliance information from OEH, delaying the issuing of certificates.

LLS indicated its staff have advised two landholders during site visits to seek advice from OEH when the landholders expressed concern about the lawfulness of the clearing they (i.e. the landholders) had done and the approvals they might need. LLS is yet to report any potentially unlawful incidents directly to OEH.

Interagency working groups have been established to improve communication but an MoU between LLS and OEH is yet to be finalised

Several interagency working groups have been established between LLS, OEH and BCT. Their purpose is to increase collaboration, including information and data sharing, and discuss operational issues. A memorandum of understanding has been drafted to improve and formalise the working relationship between LLS and OEH, including the exchange of information such as spatial data and compliance checks, however it is yet to be finalised.

The LLS and OEH Senior Executive meet regularly (every six weeks) to facilitate coordination on the implementation of the Land Management and Biodiversity Conservation reform matters. A CEO committee of all the relevant agencies involved in the reform provides a mechanism for collaboration and resolution of issues.

2.4 Monitoring land clearing and set asides

Measures of success for the Code are yet to be developed

LLS is yet to develop measures to gauge whether the Code is allowing landholders to improve productivity while responding to environmental risks, or how it will achieve an appropriate balance. The Code allows for an increased land area dedicated to agricultural use, but there are currently no measures to gauge the extent of improvement in agricultural productivity, nor are there measures to assess the success of managing environmental risks.

There has been no assessment under the Code to gauge whether a thinning or clearing will improve productivity or result in a decline in the condition of the land. This is especially important for instances of large scale thinning in the western region and clearing treatments on vulnerable land such as steep slopes. Similarly, there is no assessment as to whether set aside selection and management are effectively counter balancing the impact of land clearing.

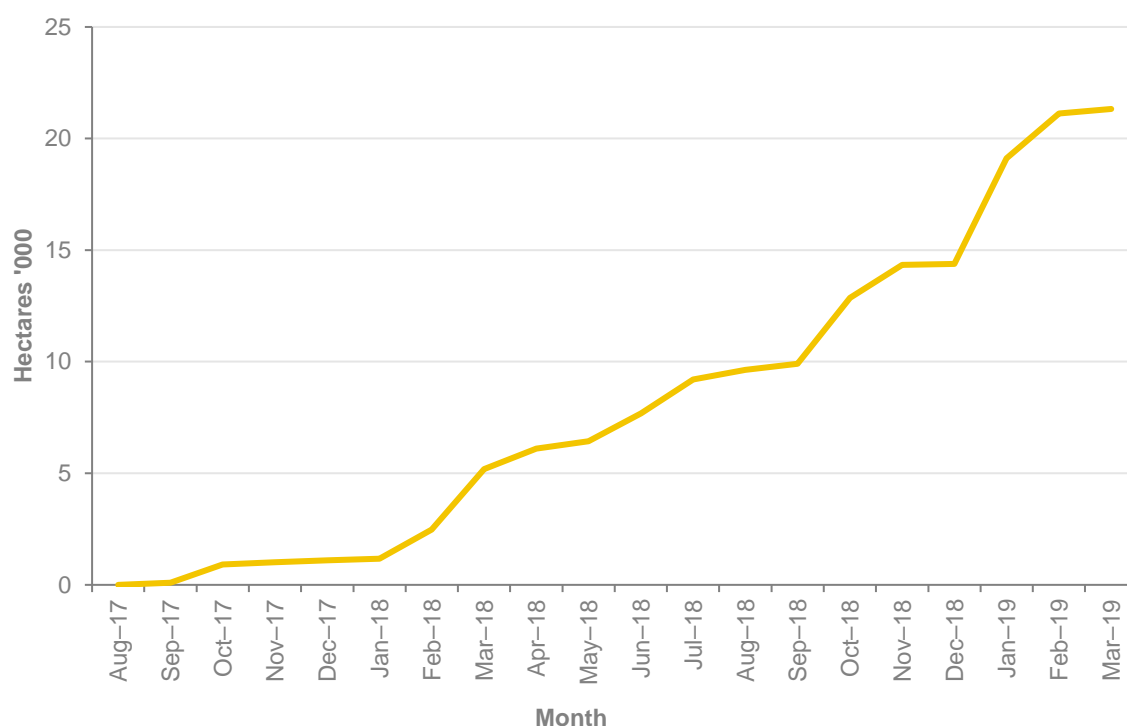
For example, a certificate issued under Part 3, Division 3 of the Code authorises clear felling of native trees and shrubs in up to 70 per cent of an area covered by the approval. This 'mosaic thinning' method is also permitted on vulnerable land under the Code, including steep slopes. It is unclear how this thinning method can achieve the dual objectives of improving farm productivity and managing environmental risks.

To help assess the impact of the Code, LLS is developing a predictive model to estimate its social, economic and environmental outcomes. A combination of site inspections, contextual information and predictive modelling will be used to predict outcomes, then measurements will be made on a sample of sites to validate the predictions.

Over 20,000 hectares of rural land has been placed in set asides

Exhibit 4 displays the amount of land required to be managed as set asides in perpetuity by landholders. To date, over 20,000 hectares of land has been placed in set asides.

Exhibit 4: Total area to be established as set asides under Part 5 and 6 of the Code



Source: Audit Office analysis based on LLS information 2019.

A range of mechanisms to conserve and restore native vegetation were in place prior to the August 2017 reforms, under the *Native Vegetation Act 2003*. The average amount of land being conserved or restored under these new agreements between 2012 and 2017 varied from around 330,000 hectares in 2012–13 to around 85,000 in 2016–17. Additional information on these agreements and conditions is contained in Appendix two.

Requirements for the establishment of set asides may not be maximising environmental benefits

The intended purpose of set asides is to compensate for the biodiversity values lost from areas of thinning and clearing and to create the opportunity for a net positive biodiversity outcome.² LLS provides the requirements for the establishment and management of set asides for certificates issued under two parts of the Code: Part 5, Equity (Divisions 3 and 4) and Part 6, Farm Plan (Divisions 1 and 2) in an attachment to the certificate.

Under Part 6 of the Code, LLS may determine the land on which the set aside will be established. In determining this, the Code requires LLS to seek to maximise environmental benefits from the set aside. In practice LLS advises it negotiates the location of the set aside with landholders. For set asides established under Part 5 of the Code, LLS advises it provides advice to a landholder about the configuration of set asides but cannot direct the landholder in terms of the size and locations of the set asides.

It is unclear whether LLS is maximising the benefits of the set asides as limited criteria have been established for set aside selection. There are few requirements as to what 'type' of vegetation is to be included in the Category 2: Regulated land being set aside.

Neither the Code or LLS guidelines specify whether the vegetation in the selected set aside should be the similar vegetation as the area being cleared or what condition it should be in. There are no requirements in terms of the density of vegetation, the size of trees and the amount of tree cover. This means that the biodiversity values of large trees in the area being cleared under Part 5 of the Code could potentially be compensated by a set aside dominated by scrubs with limited canopy cover.

There are limited requirements and no specific goals for the management of most set asides

The Code requires that LLS must not set conditions that require the landholder to make more than reasonable effort to manage the set aside area and must be consistent with the management strategies and tactics set out in the Code. LLS negotiates management actions with landholders and advises requirements are assessed and discussed between the regional services officer and the Applied Science team.

Advice to guide staff on the management of set asides is contained in guidelines prepared by LLS in August 2017. These guidelines list a range of management options to manage disturbance, limit degradation and rehabilitate a set aside. This includes activities to manage grazing pressure, manage water, control pests and weeds, and improve vegetation and habitat enhancement, such as installing nesting and shelter boxes.

The LLS guidelines on set asides state that if set asides are to deliver biodiversity values through improved vegetation integrity, their management will require high levels of local knowledge, skills in native vegetation restoration, and significant commitment by landholders.

Conditions in most set aside management plans we reviewed, mostly for certificates under Part 5 of the Code, were generic with few specific management actions required and no clearly defined goals. General conditions in plans include activities such as weed and feral animal control, rotational grazing and erosion control. LLS recognises that some of the early set aside management plans could have included additional detail to provide better and more helpful guidance to the landholder. It advised that further training and updated forms have been provided to regional services officers to improve performance in this area.

Certificates issued under Part 6 of the Code have management plans that include more specific revegetation requirements for set asides established on Category 1 - Exempt land regarding species mix and plants per hectare. Some landholders will not have the capability and resources to restore an area in accordance with these requirements and may need support with management activities such as replanting, including access to tube stock, and erosion control works.

² LLS Guidelines for set aside management.

The Code states that management actions on set asides are expected to promote vegetation integrity and achieve restoration. However, there are no clear measures or goals in management plans to indicate whether such restoration is being achieved.

For example, a goal for the restoration of a set aside might be to recover 50 per cent of composition, structure, and function to the regional benchmark within five years. The lack of such measures or goals makes it harder to gauge whether management actions are achieving their stated purpose.

There are no specific requirements to control grazing

There are no specific requirements in the Code for set asides to be fenced, but it is difficult to manage one area of land differently from the surrounding area without a fence, especially on heavily grazed land. Fencing does not necessarily prevent livestock access, but it allows a landholder to control it. Fencing would also provide protection for newly established vegetation on set aside areas of Category 1 - Exempt land for conversion to Category 2 - Regulated land under Part 6 of the Code.

Only two of the six certificates we reviewed under Part 6 required fencing around the set asides. One certificate for Part 6 required a fence to be installed, but it was not until after clearing had occurred. However, the fence would need to be in place to ensure new vegetation in the set aside is properly established prior to any clearing. We also saw one example of a landholder refusing to fence a set aside and intending to continue to use the land for grazing.

There are multiple references to the allowable activity of 'sustainable grazing' throughout the Code indicating it is not restricted by the Code even in set asides. There is little explanation as to limitations of this activity, which permits landholders to clear native vegetation provided this clearing does not result in the 'long-term decline in the structure and composition of native vegetation'. Landholders are permitted to do this work without approval or notification and there is no guidance in place as to how far clearing of native vegetation could extend without altering 'structure or composition'.

There is limited monitoring of set aside management requirements

Set asides are legally established when a certificate is issued with the areas being thinned or cleared and set aside areas shown on the map. The location and management of set asides is negotiated between the LLS regional service officer and the landholder during the development of the certificate and the agreed actions are recorded in a Set Aside Management Plan. This plan is attached to the certificate as a record of agreed actions.

There is limited monitoring in place to ensure the adequate management of set aside areas required under certificates issued by LLS, especially in relation to certificates issued under Part 5 of the Code. Landholders are required to make 'reasonable efforts' to maintain set asides and keep records of this work, but there is no program in place to review and support these efforts.

Consequently, large areas of land identified for conservation and restoration may not be adequately restored or be left in poor condition. LLS advised it will use a risk-based approach to audit the maintenance of set asides although it is yet to develop a program for this.

LLS advises it is developing a predictive model by comparing real and expected outcomes. This may enable it to identify the management practices that deliver the best outcomes in set aside areas.

2.5 Specific concerns with the Code

The Code is intended to allow landholders to improve productivity while responding to environmental risks. The Code aims to improve agricultural productivity by providing a mechanism for authorisations to thin or clear native vegetation. The Code also responds to environmental risks by:

- Providing protection for Category 2 - Sensitive regulated land, which includes land set aside under the Code, land subject to a private land agreement, coastal wetland and littoral rainforests, critically endangered plants and critically endangered ecological communities.
- Providing some protection for Category 2 - Vulnerable regulated land which includes steep or highly erodible land and protected riparian areas.
- Requiring notification and certification of thinning or clearing and the establishment of set asides under two parts of the Code. Higher risk clearing requires certification by LLS, which usually involves a property visit.
- Specifying limits on the amount of clearing that can occur under some parts of the Code.

Despite these, some areas of the Code may not be responding adequately to environmental risks.

There is no test to determine if 'invasive native species' are invading a property

There are problems with the use of the term invasive native species (INS) and the lack of evidence of 'invasiveness'. One check for INS under the Code is excessive stem density, but this implies that any natural variation in stem density across the landscape that is above this 'standard' represents a poor environmental outcome. Another check is the proportion of INS relative to other species, but the species classed as INS under the Code are the predominant naturally occurring species in the areas from where they are being cleared.

There are no requirements under the Code for demonstrating that a species is behaving aggressively and invading an area for it to be treated as an INS. There is no test for increasing density, dominance, numbers or cover. Such an invasion should be straightforward to evidence with historical information, satellite images and photographs. It is therefore unclear whether the vegetation to be removed are 'invasive' or just stable and naturally occurring. INS approvals for thinning to date cover around five times the area of other thinning and clearing approvals under the Code.

There was more rigour in the assessment of invasiveness prior to the implementation of the Code. For example, the Clearing of the Invasive Native Species Ministerial Order (INS self-assessable code) required that, in addition to being declared as an invasive native species, the vegetation to be cleared need to be regenerating densely or invading plant communities. The guidelines stated that this will usually lead to, or may have already caused, a change in the structure and composition of the plant community. This could result in the vegetation being dominated by a particular species (or a few similar species) or the structure changing; for example, open grassy woodland may become a shrubby forest with little grass.

An additional eight native species have been added to the list of INS under the Code compared with the arrangements prior to the reforms.

Discounting of set aside areas containing Threatened Ecological Communities

Under the Code the amount of land required to be set aside can be halved (i.e. discounted) if it contains a threatened ecological community (TEC) or is of strategic landscape importance (SLI) and the area to be thinned or cleared does not contain a viable TEC or SLI. Encouraging landholders to preserve TECs is important, however halving the area of a set aside undermines its environmental value. Further, if the set aside is reduced by 50 percent, it is unclear whether it will still be of strategic landscape importance, especially as there is no clear test for this importance.

The LLS Threatened Ecological Communities (TEC) approach guidelines note that smaller isolated patches of native vegetation are less resilient than patches within continuous native vegetation. This further undermines the rationale for halving an area that contains a TEC or is of strategic importance.

LLS should examine other mechanisms for encouraging landholders to preserve threatened ecological communities, including assisting landholders with any options for conservation investment.

There is limited oversight of authorisations for the clearing of native groundcover

One notification for removing compromised groundcover under Part 5, Division 2 of the Code included the calculations for proportion of native species and introduced species. If such an assessment indicates an area has less than 50 per cent native vegetation, and other Code requirements are met, then it may be cleared.

Despite the relevance of this information, the provision of this assessment is not a requirement of the Code. None of the other sample notifications under this Division included how the landholder had assessed groundcover. The Code does require landholders to maintain records of how groundcover was calculated. However, there is no monitoring program in place to assess such records and there is a low likelihood of being able to validate them after clearing has occurred. As previously noted, LLS is also accepting notifications that involve calculating groundcover during periods of drought, at a time when it is difficult to do this assessment.

The Legislative Review Report in 2014 stated that modification of grasslands should be allowed automatically if the grasslands are of low conservation value. However, adequate checks are not in place to ensure the conservation value is adequately assessed. It is also the case that the 'modification' of grasslands may be different from converting pasture to crops.

LLS could better manage this Division of the Code if it either requested that landholders provide records of how the groundcover was calculated with the notification or verified the groundcover itself through a certificate assessment process.



3. Regulation of land clearing

OEH is responsible for compliance and enforcement in relation to unlawful land clearing. It is also responsible for producing the NVR map, designed to show landholders where land clearing can occur without approval, where approval is required, and where land clearing is not permitted. Post 1 July 2019, under machinery of government changes, OEH will be abolished and its activities relevant to this audit will be moved to the new Department of Planning, Industry and Environment.

3.1 Identifying areas requiring approval for clearing

Landholders do not have access to the full NVR map to guide land clearing decisions

Native vegetation areas requiring approval for clearing are not effectively communicated to landholders because the two main categories (Category 1 - Exempt land and Category 2 - Regulated land) of the NVR map are yet to be released.

The 2014 review of biodiversity legislation in NSW recommended OEH be provided with adequate resources to ensure the maps are developed and ready to use before the new arrangements commence, to ensure the maps will be updated annually and for reviews requested by landholders to be processed efficiently.

The *Local Land Services Act 2013* requires the Environment agency head to prepare and publish native vegetation regulatory maps. The purpose of the native vegetation regulatory map is to designate areas of the state:

- a) where the clearing of native vegetation is not regulated (Category 1 - Exempt land), and
- b) where the clearing of native vegetation is regulated (Category 2 - Regulated land), and
- c) where the clearing of native vegetation is regulated (because of its vulnerability) is subject to additional restrictions (Category 2 - Vulnerable regulated).

A significant amount of data and information was used in developing the NVR map

OEH has developed a detailed map methodology to support the mapping process. A broad range of technology, including satellite and aerial imagery, other data and historical information was used to prepare the map layers and update the maps. Field validation and peer reviews were carried out to support the quality of the mapping. The map methodology is available on the OEH website.

This methodology and process should provide a level of quality sufficient for a staged release of the final two categories of the NVR map as drafts for consultation with landholders. This will improve the accuracy of the map by allowing landholder input into the categorisation of land on their properties.

In mid-2017 OEH ran a series of workshops for landholders explaining the map, category explanation reports and map reviews. Around 120 landholders were provided with a certified copy of the map for their properties with all categories displayed. Research commissioned by OEH on the perspectives of these landholders' prior and following the workshops indicated the knowledge of the reforms had improved from 2.1 out of 5 to 3.2 out of 5 and their knowledge of the maps had improved from 1.9 to 3.7 out of 5. The research report concluded that landholder knowledge of the maps across NSW is likely to be low. Given the draft map was ready and a free map review period was in place, the research recommended the release of all categories of the map simultaneously.

The Ministers did not agree to the release of the two largest map categories

The then Minister for Primary Industries stated in November 2016 that the two largest land categories of the NVR map, which make up almost 80 per cent of the land area in NSW (i.e. Category 1 - Exempt land that is not covered by Code and Category 2 - Regulated land that is covered by the requirements of the Code), will not come into effect until the relevant Ministers (i.e. Minister for Primary Industries and Minister for the Environment) are satisfied that stakeholders have sufficient confidence in their accuracy.

Although OEH has produced a strategy for releasing these map categories, proposing a staged implementation, this is yet to be approved and there is no timetable for this to occur.

Three categories of the NVR map have been released. They are:

- Category 2 - Vulnerable land
- Category 2 - Sensitive regulated land
- excluded land.

In the absence of a full NVR map, landholders are responsible for categorising their own land. Whilst the Code allows for transitional arrangements to be in effect until the full NVR map is released, without the map landholders may be less certain of land that requires approval to clear and areas that do not, increasing the risk that land will be cleared unlawfully. It also means that OEH has limited opportunity to further improve the mapping based on stakeholder input.

OEH reviewed some notifications and certificates, authorising thinning or clearing under the Code, to gauge whether land under these authorisations aligned with the NVR map categories. For Part 5, Division 1 notifications (which authorise the removal of native vegetation from paddock tree areas), 45 per cent of the 139 notifications provided by LLS with spatial data were for areas not completely surrounded by Category 1 - Exempt land. However, the Code requires areas to be cleared to be surrounded by Category 1 - Exempt land. This highlights the difficulties of identifying Category 2 and Category 1 land without the maps.

For certificates issued under Part 5, Division 4 (which authorise the removal of native vegetation from regulated areas and requires set asides be established), six of the 35 certificates OEH reviewed had set aside areas that were partially on Category 1 land. However, the Code requires that set aside under this part are to be entirely Category 2 - Regulated land. This again highlights the difficulty of identifying land categories without the complete NVR map.

For Part 5, Division 2 (which authorises the clearing of compromised native groundcover), of the 14 notifications, one treatment area was on Category 1 and three others had treatment areas that were mostly on Category 1 land. This means that these landholders may not have needed to notify LLS of this clearing.

LLS provides copies of certificates and notifications, and associated spatial data, to OEH although there have been delays in the provision of the information. OEH uses this information to update the NVR map including recategorising Category 2 – Regulated land that has been legally cleared to Category 1 – Exempt land and recategorising land in set-asides to Category 2 – Sensitive.

An NVR map review team is in place to review maps for landholders

OEH currently provides two NVR map product services to landholders – the category explanation report and the map review. The category explanation report displays the property according to the NVR map and explains the information layers that have gone into the map. The map review allows for input from landholders.

There has been a relatively low level of interest in these reviews with around 100 category explanation reports and 60 map reviews being completed. Around 90 per cent of the reviews have resulted in portions of land being re-categorised. Around two thirds of these properties had less than 30 per cent of their land area re-categorised.

The value of category explanation reports and map reviews is limited because the two largest categories of mapped land are not part of the review as these parts of the map are yet to be released to landholders.

Some landholders have concerns with property boundaries within the NVR map

Some landholders have expressed concerns regarding the accuracy of property boundary mapping used in the preparation of NVR maps. This is because of the limited accuracy associated with converting large scale paper maps into digital records. Digitising of property boundaries began in 1988. Digitising is a process of converting paper plans into a digital format.

The source cadastral plans were of variable quality and scales. Less developed rural areas were smaller scales such as 1:50,000 and urban areas larger scale such as 1:5000. A 1 mm line on a 1:50,000 scale hard copy source map is 50 metres wide on the ground whereas a 1 mm line on a 1:5000 scale source map is five metres wide on the ground. Displacement for cadastre occurs when the cadastral map lines are compared to another map or image of higher locational precision.

Ideally the cadastral map should be defined directly from survey plans produced by surveyors using high precision equipment. These are accurate to within millimetres but the cost to benefit ratio of doing this work on a state-wide scale needs to be assessed. Rural mapping has recently improved with enhancements in spatial imagery.³

OEH has improved the categorisation of grasslands

Some landholders have expressed concerns regarding the accuracy of NVR mapping of grasslands. OEH uses the seasonal Cover Disturbance Imagery (SCDI) method to analyse changes in seasonal proportional composition of green, dead and bare cover over time to distinguish native pastures from exotic pastures. Following workshops with landholders in 2017, OEH updated the mapping method applied to grazing areas, particularly in the cool-temperate tablelands such as the Monaro region. This included:

- incorporating a review of the available aerial photography circa 1990, to identify agricultural activity present around that time, and
- changing the SCDI parameters to increase sensitivity to disturbance, calibrating them with the land use history and other feedback provided by land holders and OEH staff with on-ground regional expertise.

Fifteen landholders in the Monaro region, with landholding covering around 26,000 hectares, agreed to participate in an on-farm interview and field surveys of groundcover across the land holdings from February to May 2019. OEH advises the results indicated the mapping of this area is now better than 80 per cent accurate.

When the two final map categories are eventually released in draft form, landholders who believe their land has been incorrectly categorised can apply to OEH for a map review which may result in a portion of Category 2 - land being recategorised to Category 1 - land. Further, landholders may also seek authorisations from LLS for managing Category 2 - land under the Code.

3.2 Supporting mapping and compliance activities

There is sufficient information and expertise for mapping

Sufficient systems and expertise are available for maintaining the NVR map. OEH identifies changes in vegetation cover over time and updates the map layers within resourcing constraints.

The NVR map is updated as information comes to hand. This includes:

- new and discontinued conservation agreements which end or vary
- new or changed threatened species or ecological community determinations
- use of Land Management Code and allowable activities
- legislative amendments
- improvements in technology.

There have been some delays in completing this work, especially in relation to processing changes resulting from approvals for land clearing.

³ This can be positioned typically +/- one pixel or better, which means an ADS40 aerial imagery with a pixel size of 50cms can be positioned +/- 50cms on the ground and a SPOT5 satellite imagery with a pixel size of 5 m can be located within half a pixel i.e. +/- 2.5 m on the ground. NSW Spatial Service constantly maintain the digital cadastral database (DCDB) and it is updated on a daily basis from registered plans (including E-Plan), registration of land transactions in NSW and changes in administrative boundaries as gazetted. The NSW DCDB upgrade program commenced in 2007 and is ongoing, improving the spatial accuracy of different feature classes.

Resourcing and processes for compliance work need to improve

Staff have the necessary skills and training for compliance and enforcement work. Staff also have a range of systems, including detailed mapping, satellite surveillance and historical information to enhance their ability to identify unlawful land clearing. However, staff cannot easily access information on current land clearing approvals and exemptions under the Code. The lack of this information is hampering OEH's response to unlawful clearing incidents.

Investigation guidelines are in place for investigating non-compliance under the *Native Vegetation Act 2003*, although OEH does not have guidelines for dealing with non-compliance regarding the *LLS Act* and the Code. There is also no strategy for reviewing and auditing compliance with the Code.

There is no organisation-wide procedures or process maps explaining the complete process for undertaking enforcement activities. For example, OEH staff indicated the involvement of legal services and a project control group in the decision-making process to progress investigations, but this was not detailed in the procedures provided to us. OEH advises it is collating its processes, which are currently documented individually.

The number of investigations and the caseload for staff can vary significantly between regions, with one region receiving over eight investigations per staff member per month in 2018 and another receiving fewer than four per staff member per month. Despite resources for compliance activities being increased from 18 compliance staff in July 2017 to 28 in February 2018, OEH staff advised that the caseload is not manageable for the busiest regions. Cases vary in complexity, which means caseloads may not be compared as like for like. OEH advised it plans to reduce the backlog of around 170 cases under the *Native Vegetation Act 2003* and has improved coordination by establishing a Native Vegetation Taskforce to fast track the resolution of these legacy cases.

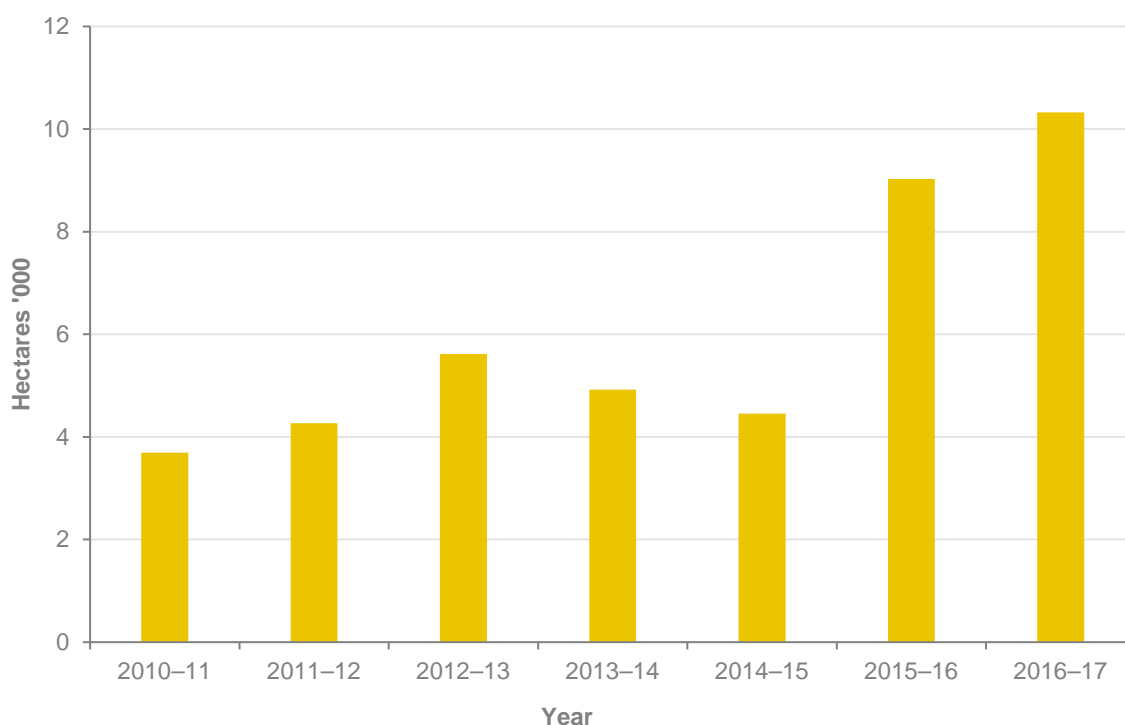
Unlawful land clearing is not identified in a timely manner

The current process to identify areas of unlawful land clearing can take over two years after an event. This is because OEH compares available satellite imagery at 12-monthly intervals to identify any changes in woody vegetation cover, then compares this information to existing clearing approvals over the same period to identify potentially unlawful land clearing events. This delay results in a decreased ability for OEH to reduce the environmental harm caused by unlawful clearing, as well as its ability to take enforcement action in cases of unlawful clearing.

Satellite surveillance of unlawful land clearing has improved. From 2008 to 2017 compliance analysis, which identifies land clearing events, was based on the state wide Landcover and Trees Study (SLATS). A single state-wide satellite image was purchased every 12 months for comparison with the previous year. Clearing was identified through a combination of automated algorithm and expert interpretation. For 2017–18 there was a change to sourcing imagery from a different satellite, which is available every seven to ten days. It provides a greater range of scenes making it easier to get a cloud free image.

Since 2012–13 the extent of unexplained clearing of woody vegetation has almost doubled from 5,600 hectares to around 10,300 hectares in 2016–17. The graph below displays the amount of unexplained clearing each year. This may not all be unlawful as OEH does not know the background or specific details of the clearing. OEH advised that it does not yet have figures on the loss of non-woody vegetation, such as scrubs and native grasses.

Exhibit 5: Estimated amount of unexplained clearing of woody vegetation by year



Note: Unexplained clearing refers to areas of clearing detected through OEH's satellite monitoring program that have not been associated with an approval or exemption. It includes areas of woody vegetation cleared for an agricultural purpose for which OEH does not yet know the background or specific details of the clearing. This can include clearing for routine agricultural management activities, clearing of regrowth, clearing under various legislative exclusions and unlawful clearing. These figures do not include instances of unexplained clearing of non-woody vegetation.

Source: Audit Office analysis based on OEH data 2019.

OEH has recently reviewed land clearing for the period Jan 2017 to Jan 2018 to allow for analysis of clearing before and after the LLS Act reforms commenced on 25 August 2017. To monitor clearing of non-woody regulated land under the *LLS Act*, clearing will be assessed through analysis of changing land use, e.g. conversion of Category 2 - grassland to crops.

OEH has indicated that up to 776,000 hectares of cleared land is currently uncategorised under the NVR mapping. Some of this land has been cleared lawfully and should be re-categorised to Category 1 - Exempt land, and some has been cleared unlawfully, in which case it would remain Category 2 - Regulated land. Over 50 per cent of the uncategorised land is in the western region and 30 per cent in the north west region.

OEH is currently developing an Early Detection System (EDS) which is intended to provide a rapid assessment of change to detect large clearing events and regularly report vegetation changes every seven to 14 days across an area of around 20 per cent of NSW. This information will be sent to regional compliance teams for action. The system is not likely to pick up smaller clearing events and is unlikely to represent the full extent of clearing, but instead will act to indicate where clearing is taking place. The information from this system is intended to facilitate timely detection of, and rapid compliance responses to, unexplained clearing and more proactively work to minimise environmental harm. OEH advised that the EDS was trialled in May 2019.

OEH undertakes limited compliance enforcement

Although OEH has a range of policies and guidance, access to detailed mapping and satellite surveillance, and staff with the necessary skills to support its compliance and enforcement activities, there are very few prosecutions, penalties, remediation orders and stop work orders issued for unlawful clearing.

As well as processing information on unexplained clearing, the OEH Compliance branch relies on reports through the environmental hotline for a more current picture of clearing taking place. However, OEH staff have indicated that many of the reports which come through this line are made some time after clearing has occurred and many of these reports cover lawful clearing activities.

Around 500 calls in relation to land clearing are made to the environmental hotline, and around 1,000 instances of unexplained land clearing are identified each year, with around 300 investigations currently in progress.

OEH issues between 150 and 180 advisory and warning letters each year in response to reported land clearing events. The following table displays the compliance and enforcement action taken by OEH over the last six years in relation to unlawful clearing.

Exhibit 6: Compliance and enforcement action for unlawful land clearing

Action	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
Stop work orders	--	--	--	--	8	--
Remedial directions	2	7	6	5	3	2
Advisory and warning letters	130	155	164	184	154	78
Prosecutions – commenced	2	10	2	2	4	5
Prosecutions – convictions	2	1	4	2	3	1
Penalty notices	11	20	25	18	12	1

Note:

1. 2018–19 data is to February 2019.
2. Statistics include some double counting for letters and penalty notices as some prosecutions are for failure to comply with notices rather than unlawful clearing.
3. Remedial directions became remediation orders with the commencement of the *Biodiversity Conservation Act 2016* on 25 August 2017.
4. Disregarding letters, none of the remediation orders or prosecutions in the table were for LLS Act matters. Two of the penalty notices issued in 2017–18 were for LLS Act cases.

Source: Audit Office analysis based on OEH information 2019.

Despite the high number of calls to the environmental hotline, the substantial number of unexplained land clearing events and the substantial number of investigations opened, only 2 to 3 prosecutions for unlawful clearing take place each year, and few remedial directions and penalty notices are issued to landholders. Further, OEH is yet to undertake any prosecutions under current legislation which commenced in August 2017.

OEH field staff advised they have limited ability to intervene during unlawful clearing activities. To respond to an incident, staff must confirm a report through the environmental hotline, identify the potential perpetrator and obtain contact details, undertake checks to see whether the clearing is part of an existing approval or an allowable activity, obtain permission from senior management to follow-up the report, and then contact the landholder to proceed with the investigation. Because of the time it takes to identify unlawful clearing, OEH has little opportunity for intervention, which limits its ability stop or reduce environmental harm caused by unlawful clearing. OEH advised the implementation of the Early Detection System will improve their capacity to identify unlawful clearing and take appropriate compliance action earlier.

OEH previously had access to an application named Industry View, which compiled information from various NSW Government agencies to assist with compliance activities, including accessing landholder contact information. Access to this application was withdrawn due to privacy concerns raised by LLS, who input the contact data layer into the application. OEH advised that, following interagency meetings with LLS, access to Industry View will be reinstated for OEH compliance staff.

Without easy access to landholder contact information, OEH has difficulty communicating with landholders to discuss investigations of unlawful clearing. Staff advised that, in a low-priority investigation, if several attempts have been made to contact a landholder to no avail, the case is likely to be closed with no further action taken.

Because of the lag in compiling information on unexplained clearing and the time it takes to investigate and undertake enforcement action for unlawful clearing, OEH resources are currently focused on investigations under the *Native Vegetation Act 2003* rather than the LLS Act. The backlog of investigations under the *Native Vegetation Act 2003* is diminishing over time and a Native Vegetation Taskforce has been established to fast track the resolution of these legacy cases.

As at April 2019, there were 170 cases under the *Native Vegetation Act 2003* being investigated and there were 159 investigations in progress under the LLS Act.

3.3 Reporting on land clearing and its impact on biodiversity

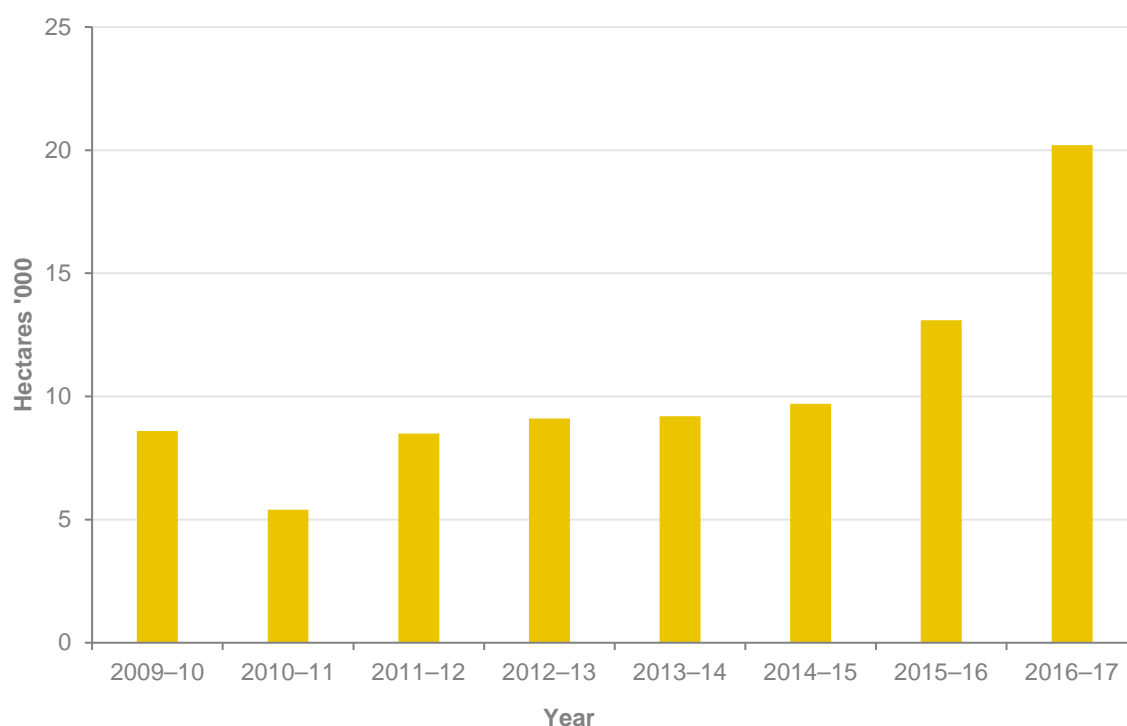
There are significant delays in compiling information on land clearing

OEH has systems, procedures and processes in place to support information gathering and verification of the accuracy of information on land clearing. Because it currently takes a full year to assess data from the previous year, data from the 2017 calendar will not be compiled and assessed until mid-2019. This limits OEHs ability to provide timely public reporting on the amount of land clearing, including the amount of unexplained clearing, and to gauge its impact on the environment.

OEH advised it is still analysing information for the 2017 calendar year, which will include clearing and approvals under previous native vegetation laws and five months of data under the current legislation.

OEH estimate the clearing of woody vegetation from cropping, pasture and thinning increased from 9,200 hectares in 2013–14 to 20,200 in 2016–17. Note that these figures do not include clearing of non-woody native vegetation, including scrubs and grasslands.

Exhibit 7: Estimated amount of clearing of woody vegetation by year - Crop, pasture and thinning



Source: Audit Office analysis based on OEH data 2019.

There are also delays in releasing information on land clearing to the public after it has been prepared. The last information release was for 2015–16 but this was not released until 2018. Information on the amount of land cleared in 2016–17 was released to a media outlet in May 2019 as a result of a request for information under the *Government Information (Public Access) Act 2009*. This information has since been reported and is now in the public domain, although it is yet to be officially released to the public at large.

OEH has developed a program to report on the status of biodiversity in NSW

OEH has developed a Biodiversity Indicator Program under requirements from the *Biodiversity Conservation Act 2016*, intended to report on the status of biodiversity in NSW at the state-wide and regional level by examining long-term effects and short-term trends. Currently, nearly 1,000 species of plants and animals and over 100 ecological communities are threatened with extinction at the state level.

OEH currently reports on a few indicators of biodiversity, including expected survival of biodiversity, ecosystem quality, ecosystem management and ecosystem integrity. OEH advised it began the process to develop the next set of indicators in April 2019.

The first program report concluded that the expected survival of threatened species declined between 1997 and 2017. Around 33 per cent of the original habitat remained effective for supporting native species, with the pattern of degradation varying between bioregions. The report also noted that land tenures outside of National Parks and reserves contain three times the biodiversity but are spread over ten times the area. These conclusions highlight the importance of preserving biodiversity in the rural landscape.



4. Conservation investment

4.1 Impacts of clearing are counterbalanced with conservation investment

The Biodiversity Conservation Investment Strategy includes a map of priority areas for investment across NSW, ranked from one to five based on their environmental value. The strategy and map were developed by OEH and approved by the Minister for the Environment. The BCT has since developed a Business Plan to guide its investments in private land conservation. Under the plan, BCT's principal program for investment in private land conservation is the Conservation Management Program. The program uses three delivery mechanisms: Conservation Tenders, Fixed Rate Offers and the Revolving Fund. Conservation Tenders and Fixed Rate Offers are available to landholders in priority areas, or in other locations containing conservation assets.

The conservation tender program invites landholders to submit an expression of interest, nominating a total price to conserve and manage their land and the amount of land to be conserved. The fixed-rate offer program involves landholders submitting an expression of interest to receive a fixed price (per hectare, per year) set by BCT to conserve their land.

The BCT also maintains a revolving fund used to purchase properties within priority investment areas or properties that contain conservation assets. Properties acquired will be sold to the public with a pre-commitment to enter into an in-perpetuity conservation agreement.

Most agreements are in-perpetuity, but some are for a fixed term

The Conservation Tenders result in agreements with landholders that are designed to operate for a minimum of 15 years or in perpetuity. Bids for Conservation Tenders are required to be ranked using the Biodiversity Value Index (under the Conservation Tender Plan) which considers their conservation value, length of agreement, risk and land size.

Offering agreements for a fixed term (minimum of 15 years) only goes part way to supporting long-term environmental outcomes compared with in-perpetuity agreements. BCT advised that it places a higher value on in-perpetuity agreements than it does fixed term agreements, and this is reflected in its Biodiversity Value Index used to rank bids. All agreements will include a provision for the conservation management plan and associated payments to be reviewed and in limited circumstances renegotiated every five years. Landholders that have signed fixed term agreements will be able to upgrade to in-perpetuity agreements at any time.

BCT may not have considered the best offers in the first-round of tenders, but is now considering the EOIs that missed out

For the Conservation Tender Expression of Interest (EOI) assessment process, there were limited resources and time available for delivering the round one tenders. EOIs were prioritised on a first-come-first serve basis rather than by the proposed length of agreement and biodiversity value of the land. This means that only the first 25 EOIs were considered for inclusion in the bidding process.

The use of a first-come-first-serve approach limits the use of the Biodiversity Value Index to rank all bids, meaning BCT may not have considered the best offers in the first-round of conservation tenders. BCT advised that they are now considering the EOIs that missed out in round one as part of round two.

The decisions to award conservation tenders are not always transparent

The tender evaluation panel uses a biodiversity value score (BVS) to compare bids. The BVS score is comprised of four elements:

- **Conservation value** – the conservation value of the investment. This involves a field officer assessing the ecological condition of the site, the predicted future condition of the site based on the proposed management actions and the types of environment values on the property e.g. threatened ecological species.
- **Security score** – the enduring nature of the agreement, either in perpetuity or termed (minimum of 15 years). The BVS gives greatest weight to in-perpetuity agreements and greater weight to long term agreements.
- **Risk score** – the risks of conservation values being lost or impacted in the future, having regard to the land and soil capability class of the site.
- **Area score** – the size of the site proposed to be protected.

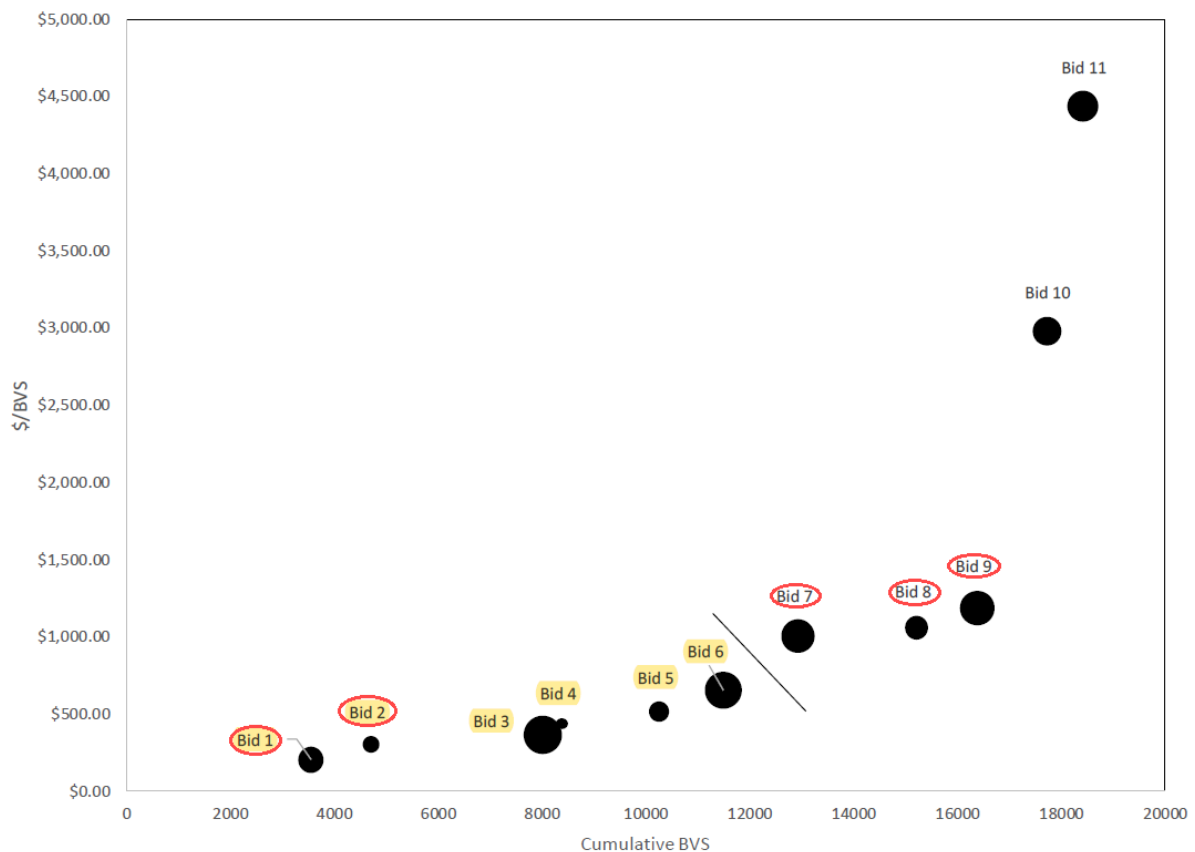
Exhibit 8: Calculation of the Biodiversity Value Score (BVS)



Source: Biodiversity Conservation Trust 2019.

We reviewed bids for conservation tenders and the process for determining which tenders represent best value. The graph in Exhibit 9 shows the bids nominated by the tender evaluation panel for the conservation tenders. It compares the bid value divided by the Biodiversity Value Score (BVS) for each bid with the cumulative BVS value for all the bids.

Exhibit 9: Bids accepted by the BCT Board



Note: Yellow highlights reflect the bids the Panel recommended. Red circles identify the bids the Board approved. The bids are normally selected for inclusion in the conservation program if they fall below a line as indicated in the graph.

Source: Audit Office analysis based on BCT information, 2019.

In this instance, four of the bids that were nominated by the tender evaluation panel were unsuccessful as they were rejected by the Board. Justification was provided in the board minutes for selecting these bids however they had a lower biodiversity index value than the unsuccessful bids.

It is unclear why the criteria for selecting these bids was not part of the methodology for calculating BVS scores. For example, if an area is adjacent to a national park we would have expected it to have a higher BVS score because of this proximity. It is unclear how the selection methodology caters for regional and underrepresented landscapes, and why these are not incorporated into the calculations for determining the BVS scores. This means that the BCT has varied from its published methodology for determining successful bids.

Conservation investment varies between regions and is not always transparent

Exhibit 10 below provides details of agreements awarded for the conservation tender program. It includes the range of biodiversity value scores (BVS) and the biodiversity value index scores (BVI) for each region. The BVI is calculated by dividing the BVS score by the contract price for each property agreement. The table also includes total investment in each region.

We found that the funding for conservation tenders varies between regions. For example, the largest proportion of money to date has been invested in the Central West region, however this region has the lowest BVI scores. The Northern Inland region has the lowest investment but has higher BVI scores. It is unclear why this has occurred. We note that the BCT Board rejected several agreements in the Northern Inland region with higher BVI values than agreements in the Central West. The BCT advised that the value of contracts between regions can fluctuate based on land values, conservation asset values and the scarcity of assets. However, the BCT does not have a documented process explaining the funding split between regions.

Exhibit 10: Conservation tenders awarded by region

Signed conservation tender agreements	Region				
	Central West	Monaro Grassland	Murray Riverina	Northern Inland	North Coast (Koala)*
Highest BVI	0.09	2.11	0.29	0.81	0.0049
Lowest BVI	0.02	0.88	0.04	0.10	0.0008
Total land size (ha)	3,255.6	1,698.9	4,972.8	2,698.1	173.0
Total agreements signed	13	9	11	12	5
Total present value of contracts	\$14.4 m	\$11.28 m	\$13.1m	\$4.7 m	\$6.31 m
Total Biodiversity Value Score (BVS)	491,886	16.08 m	1.65 m	1.11 m	Unknown
Total BVI [BVS/(\$)]	0.03	1.43	0.13	0.24	0.0015
Approximate contract price per hectare per annum	\$59–229	\$150–290	\$38–120	\$51–152	\$423–1182
Number of unrepresented landscapes under agreement	3	Unknown	1	0	--
Number of under-represented landscapes under agreement	9	Unknown	6	4	--

* The BVS for North Coast Koala Habitat is calculated under a different methodology to the regions.

Source: Audit Office analysis based on BCT data 2019.

The table below provides details of agreements awarded for the fixed rate offer program.

Exhibit 11: Fixed rate offers awarded

Signed conservation fixed rate agreements	All regions
Highest BVI	0.26
Lowest BVI	0.06
Land size (ha)	3,463
Total agreements signed	9
Total present value of contracts	\$5.95 m
Total Biodiversity Value Score (BVS)	997,471
Total BVI [BVS/(\$)]	0.17
Approximate contract price per hectare per annum	\$19–60

Source: Audit Office analysis based on BCT data 2019.

BCT provides additional funding to landholders with historical agreements

BCT is also managing around 1,750 existing in-perpetuity conservation agreements with landholders that entered into conservation agreements with the OEH under the *National Parks and Wildlife Act 1974*, or the Nature Conservation Trust under the *Nature Conservation Trust Act 2001*, or an in-perpetuity Registered Property Agreement under the *Native Vegetation Conservation Act 1997*. The BCT advised that these landholders have not received ongoing conservation management payments, and most have received very little financial or technical assistance in the past. The BCT offers small grants to assist these existing agreement holders and it has approved funding for around 60 grants to date.

The BCT can award up to 25 per cent of conservation tender agreements to landholders with existing in perpetuity agreements. Seven signed agreements have been awarded to these landholders to date. The BCT advised that where an existing agreement is in place, bids cannot be made for capital costs or management actions that have already been committed under the existing agreements. As such any funding awarded to pre-existing agreement holders must include actions that increase the conservation value of the site and measured against the BVIs of other competing sites.

The following table displays the area of land preserved under new conservation agreements prior to the legislative reforms implemented in 2017.

Exhibit 12: New Conservation agreements each year (hectares)

	2012–13	2013–14	2014–15	2015–16	2016–17
Private conservation areas - conservation agreements (BCT)	3,170	2,660	1,740	4,460	4,460
Private conservation areas - NCT covenants (BCT)	1,940	5,130	29,750	1,560	5,490

Notes:

1. Conservation agreements are in-perpetuity agreements administered by the BCT (They were previously administered by OEH).
2. NCT Covenants are in-perpetuity agreements administered by the BCT (They were previously administered by Nature Conservation Trust). No new Trust Agreements could be signed since 25 August 2017.

Source: Audit Office analysis based on OEH information 2019.

BCT has not finalised procedures to monitor compliance with conservation agreements

Although some measures are in place to preserve investments in perpetuity, BCT are yet to finalise procedures for monitoring compliance with conservation agreements. The draft policy details that BCT's role extends to ensuring compliance with the provisions of private land conservation agreements. Beyond this, the BCT is not established as a regulator to act on alleged offences under the Act.

If an agreement holder is alleged to have committed an offence against the Act, such as removing a protected or threatened plant species, this would be a matter for the appropriate regulatory authority e.g. OEH. Because all conservation agreements have 12 monthly reporting and have recently been established, there are no examples of compliance reporting yet.

Landholders are required to sign a conservation agreement outlining their responsibilities for land management under the agreement. Conservation agreements include management action plans which detail restrictions on use of the land and actions the landholder must take. For example, all the management action plans we reviewed included a requirement to construct or maintain fencing around the conservation area.

Landholders are required to submit an annual report to the BCT to demonstrate completion of each action in the management action plan, including providing supporting documentation such as photographs or receipts to show that work has been carried out. The BCT has the right to withhold or not make a payment if the owner has not completed management actions within the required timeframe or if they suspect the owner has not complied with the agreement.

BCT has a strategy to prioritise protection of biodiversity

The Biodiversity Conservation Investment Strategy has as a five-year target that, by 2023, private land conservation agreements will protect examples of 30 NSW Landscapes that are either not represented within, or are inadequately protected in, the protected area system in 2017. BCT advised it has so far protected 29 landscapes out of 30.

Section two

Appendices



Appendix one – Response from agencies

Responses from Local Land Service, Office of Environment and Heritage & Biodiversity Conservation Trust



Planning,
Industry &
Environment

DOC19/440334
D1911283

Mr Ian Goodwin
Acting Auditor-General
NSW Audit Office
GPO Box 12
SYDNEY NSW 2001

Dear Mr Goodwin

Performance Audit – Managing Native Vegetation

Thank you for the opportunity to consider and respond to your *Performance Audit – Managing Native Vegetation*.

I welcome the findings and recommendations from the Performance Audit which identify areas for improving the Department of Planning, Industry and Environment's operations.

The audit recommended the department ensure sufficient systems and processes are in place to adequately investigate unlawful land clearing and the implementation of a number of measures to improve the administration of clearing native vegetation.

The Department accepts the recommendations of the Performance Audit noting Government approval is required to implement the recommendations to release unpublished map categories and for annual publication of data on the rate of land clearing. Please find attached the Departmental response to the audit recommendations.

I would like to express my appreciation for the significant work undertaken by the audit team and their ongoing commitment to working through issues with my team.

Should your office have any further questions, they may contact Emma Roxanas, Director Conservation and Planning Policy, on 9995 5472 or at emma.roxanas@environment.nsw.gov.au.

Yours sincerely

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Attachment 1 – Departmental response to NSW Audit Office's Performance Audit Recommendations

Local Land Services

Recommendation	Response	
Recommendation 1 By December 2019, improve the administration of the clearing of native vegetation by:	Agreed	LLS is committed to continuous improvement of its administration of the Land Management Code for regional communities in line with triple bottom line outcomes intended by the Land Management and Biodiversity Conservation Reform. LLS will respond to the Audit Office findings and recommendations to improve systems, processes, performance and customer service delivery.
a. ensuring notification forms include all relevant conditions of the Code to ensure these conditions are adequately communicated to landholders		The notification forms are available to landholders through the Local Land Services (LLS) website. The forms are regularly reviewed and updated to ensure the notification forms incorporate all relevant conditions of the Code. The findings of the final report will be used to inform this process to ensure all forms remain up to date. In addition, LLS will prioritise the development of an online notifications portal to further improve customer service.
b. enhancing the recording of areas authorised for thinning and clearing and set aside areas by capturing recent satellite images and on-ground photographs of these areas		LLS agrees mapping software, imagery and systems can be improved. LLS will ensure that it accesses the most up to date imagery available to assess treatment and set aside area and will regularly review and update its internal processes. For certifications, LLS will supplement the assurance of mapping products through site inspection and ground-truthing.
c. progressing ICT system improvements to ensure notifications and certificates, and associated spatial data, can be delivered to OEHS in a timely manner		LLS will improve the timeliness of data to Environment, Energy and Science (EES includes former OEHS). Documentation on notifications and certifications is shared with EES, in real time, while at present spatial data is provided every three months. LLS acknowledges real time provision of spatial data to EES is a priority. LLS is currently building a comprehensive ICT system that will provide EES with a direct portal to spatial data. This will greatly improve timeliness.

Recommendation	Response	
d. ensuring landholders are required to resubmit notifications that do not comply with the Code		The Government is committed to the continuous improvement of administrative processes and customer service for regional communities, consistent with the framework recommended by the Independent Panel and will adopt process improvements wherever possible. To address the findings of the final report LLS will ensure all landholder notifications are fully completed to meet the relevant Code requirements within the 14 day period. An online notifications portal is being developed. This will further enhance customer service and data integrity.
e. ensuring assessments of compromised groundcover are calculated at a time of year when the proportion of the native groundcover is likely to be at its maximum in compliance with the Code		LLS will provide further guidance on how to undertake on-ground assessments of compromised groundcover. The Code requires that assessments for compromised groundcover are undertaken at the correct time of year. LLS provides advice to landholders to assist them meet these requirements of the Code. The guidelines used by LLS to support landholders through this process will be improved to further support sound decision making for groundcover assessments.
f. establishing guidelines for: - the extent of clearing allowed under the allowable activity of sustainable grazing - treatment methods that result in nil and minimal ground disturbance, especially in relation to invasive native species and thinning other native vegetation - selection of set-aside areas that seek to maximise environmental benefits from these areas		LLS will review its guidance materials to address the issues identified by the Audit Office. The Government is committed to the continuous improvement of administrative processes and customer service for regional communities and results consistent with triple bottom line outcomes. LLS will develop guidance recommendations for sustainable grazing, invasive native species and thinning consistent with the risk based approach recommended by the Independent Panel for low risk activities. LLS is already revising its internal Set-Aside Management guidelines and will develop advisory material for landholders explaining these set aside requirements.
g. defining and reporting on measures to determine the impact of the Code on agricultural productivity, and the management of environmental risks.		The Government acknowledges the importance of having in place monitoring and evaluation programs. LLS has designed its monitoring and evaluation programs to inform the Government on the environmental, economic and social outcomes of the Code. LLS also

Recommendation	Response	
		has review processes in place through which evidence from these programs can be considered and recommendations made for changes in policy, where appropriate, for consideration by the Government. LLS will continue work to further refine and improve its processes for documenting and reporting on the outcomes from landholders applying the Code, both for agricultural productivity and for biodiversity.
Recommendation 2 By June 2020, review the Code to address issues identified in this audit, including:	Agreed	LLS will address the matters (Recommendations 2a – 2d), and amendments required, in a broader review of the Code by June 2020.
a. the inability of LLS to reject a notification or proposal for a certificate on the basis it would likely result in poor environmental outcomes		The Government has review processes in place through which evidence from the experience of Code implementation can be considered and recommendations made for changes in policy where appropriate. In this way, options for further improving the Code, including appropriate grounds for requiring amendment of proposals can be explored and provided to the Government for consideration. Under the Code LLS can only grant approvals that conform to the requirements of the Code. The Code has many detailed requirements; failure to meet any one of them is potentially grounds for requiring amendment of proposals. The LLS operations manual lists all of these requirements for all the Parts and Divisions of the Code.
b. the lack of oversight of authorisations for the clearing of compromised native groundcover		LLS will examine evidence from its monitoring and evaluation programs to assess the effectiveness of this policy setting for low risk activities. Compromised groundcover refers to paddocks containing a mix of native and introduced grasses. The Code establishes a risk-based regulatory framework that balances production with environmental risk. Compromised groundcover was deemed low risk, and therefore requiring notification only. This means landholders are required to retain written records of their assessment. LLS will review

Recommendation	Response	
		its comprised native groundcover assessment guidelines to further assist landholders with this process.
c. the absence of the requirement to demonstrate that a species is invading a landscape prior to approving the clearing of it as an invasive native species		LLS will examine evidence from its monitoring and evaluation programs to assess the effectiveness of this policy setting for low risk activities. Managing invasive native species (INS) has been regarded as an environmental improvement technique since native vegetation has been regulated in NSW. The management of INS by low impact methods as provided for under Part 2 Division 1 of the Code was therefore deemed low risk and requires notification only; however, use of moderate impact methods to control Division 2 activities requires an invasiveness test. LLS will review evidence from the experience of the Code and the risk levels presently assigned to invasive native species requirements to determine if an invasive test should also apply to Part 2 Division 1 activities.
d. discounts (i.e. reductions) in the area of land required in set asides when they contain threatened ecological communities or are of strategic landscape importance.		This aspect of the Code is designed to incentivise landholders to focus their conservation activities on high conservation value vegetation and their development activities in areas of lower conservation value. LLS will examine evidence from its monitoring and evaluation programs to assess the effectiveness of this policy setting to ensure it is having the effect intended.
Recommendation 3 By December 2019, ensure all field staff receive specific training in the identification of plant community types and threatened ecological communities, with regular refresher courses.	Agreed	LLS will implement a program of ongoing training for all staff on plant community types and threatened ecological communities. Currently the LLS workforce comprises highly qualified staff with expertise in on-ground flora and threatened ecological communities (TECs) identification, and these staff are supported by many ongoing initiatives to continuously improve their capability and efficacy in this technical discipline. However, further training will be made available to all staff to ensure technical knowledge and identification skillsets relating to TECs are up to date and regionally appropriate.

Recommendation	Response	
Recommendation 4 By June 2020, effectively monitor the establishment and management of set aside areas and provide support to landholders to achieve required restoration outcomes.	Agreed	LLS will establish a protocol for monitoring set aside management and assisting landholders with restoration activities. LLS has been developing this monitoring program for set-aside management for some time. It is scheduled to begin by early 2020.

Environment, Energy and Science (formerly the Office of Environment and Heritage)

Recommendation	Environment, Energy and Science response	
By December 2019, the Office of Environment and Heritage should improve the monitoring and regulation of land clearing by:		
Recommendation 5 Implementing a staged release of draft maps Category 1 - Exempt and Category 2 - Regulated land to the public, allowing sufficient time for stakeholder review and input.	Agreed – subject to Government approval	<p>The Department of Planning, Industry and Environment (DPIE) has developed a strategy for implementing a staged release of the remaining map categories Category 1 – Exempt land and Category 2 – Regulated land.</p> <p>The strategy can be implemented once approved by Government.</p> <p>The strategy involves releasing the map in stages to provide a reasonable opportunity for landholders to consider the draft map and to seek a map review before the draft map becomes final.</p>
Recommendation 6 Ensuring adequate resources are in place, during the release of the last two map categories, to process category explanation reports and NVR map reviews, and to update the NVR map.	Agreed	DPIE is reviewing resourcing needed for map releases, map updates and map reviews to ensure sufficient resourcing is in place for effective delivery of these functions.
Recommendation 7 Ensuring staff have sufficient systems and resources to adequately investigate unlawful land clearing and to gauge compliance with the Code, including accurate spatial data on all land clearing approvals.	Agreed	<p>DPIE has made improvements in compliance systems and resourcing:</p> <ul style="list-style-type: none">• an early change monitoring system became operational – this system will provide regular reporting on vegetation changes to facilitate timely detection of and rapid response to unexplained clearing and allow DPIE to more proactively work to minimise environmental harm• a Native Vegetation Taskforce was established to fast track resolution of cases under the <i>Native Vegetation Act 2003</i>• systems and operational guidance are being upgraded for effective case management.

Recommendation	Environment, Energy and Science response	
		DPIE is also progressing other mechanisms for ensuring that unlawful clearing is adequately addressed. DPIE will seek additional resourcing to support these measures for future years.
Recommendation 8 Continuing to improve systems and processes for monitoring the rate of clearing of woody and non-woody native vegetation.	Agreed	DPIE is continuing to improve systems and processes for monitoring the rate of clearing of woody and non-woody vegetation. Additional resources have been assigned to satellite monitoring in the short term to support the early change monitoring system and to reduce the timeframe for analysing annual satellite monitoring data. This will deliver a more effective monitoring program overall for native vegetation. DPIE will seek additional resourcing to support this initiative over future years. DPIE has developed a Biodiversity Indicator Program, as required under the <i>Biodiversity Conservation Act 2016</i> , intended to report on the status of biodiversity in NSW at the state-wide and regional level, examining long-term effects and short-term trends.
Recommendation 9 Publishing data on the rate of land clearing on an annual basis.	Agreed – subject to Government approval	Starting this year, DPIE will be able to regularly report on annualised clearing rates of woody and non-woody vegetation once approved by Government.

Biodiversity Conservation Trust

Recommendation	Response
By September 2019, the BCT should ensure:	
Recommendation 10 The published selection processes for conservation tenders, fixed rate offers, and land purchases accurately reflects the selection methodologies.	Agreed The recommendation is supported. By September 2019, the BCT will review and publish updated information on the BCT's website to accurately describe the processes used to competitively select tender bids and applications for fixed price offers, and the processes used to acquire land using the revolving fund.
Recommendation 11 The methodology used for tender selection aligns with BCT's investment priorities.	Agreed The recommendation is supported. The BCT queries the pretext for this recommendation: 'the funding provided to each region is not always consistent with these priorities.' The Biodiversity Conservation Investment Strategy (BCIS) made by the Minister guides the BCT's investment in private land conservation by identifying ranked priority investment areas, setting five investment principles, and setting targets for inadequately protected NSW Landscapes and income diversification. Cost-effectiveness is one of the five investment principles guiding the BCT. To meet these various aims, the BCT may fund agreements with differing Biodiversity Value Scores and value-for-money rankings (BVI) across different regions. The various drivers of BCT investment may lead to variable funding outcomes across regions that are nonetheless consistent with the BCIS's priority investment areas, investment principles and targets. The BCT will, by September 2019, publish further and clearer information to show how BCT investment decisions align with the priorities, principles and targets set in the Biodiversity Conservation Investment Strategy.



Appendix two – Authorisations for thinning and clearing, and restoration initiatives under the *Native Vegetation Act 2003*

The following table displays the amount of land covered by new PVPs and notifications since 2012.

Exhibit 13: Notifications and approvals for thinning or clearing native vegetation (hectares)

	2012–13	2013–14	2014–15	2015–16	2016–17
Invasive native scrub PVPs	441,150	124,380	415,620	284,300	375,740
Invasive native scrub notifications under <i>Native Vegetation Act 2003</i>	--	--	28,720	68,430	72,520
Clearing PVPs approved where environmental outcomes maintained or improved	2,900	900	1,370	5,650	1,630
Paddock tree notifications under <i>Native Vegetation Act 2003</i>	--	--	900	1,740	1,690

Notes:

1. Invasive Native Scrub Property vegetation plans (PVPs) were issued under the *Native Vegetation Act 2003* and are valid for 15 years. The species had to be assessed as acting invasively by Local Land Services staff. No new PVPs could be signed after 24 August 2017.
2. Invasive Native Scrub notifications under the *Native Vegetation Act 2003* were subject to transition arrangements that limited the proposed clearing. Existing notifications allowed clearing up to 25 Feb 2019 only (18 months after repeal of *Native Vegetation Act 2003*).
3. Clearing PVPs approved where environmental outcomes maintained or improved were PVP approvals for general clearing and clearing for paddock trees. These PVPs also involved offsets which ensure the net outcome maintained or improved environmental values (biodiversity and threatened species, water quality, salinity, and soils).
4. Paddock tree notifications under *Native Vegetation Act 2003* authorised via a clearing exemption called a routine agricultural management activity (RAMA). These included the establishment of set aside areas.

Source: Audit Office analysis based on OEH data 2019.

The following table displays the amount of land placed under these agreements and conditions since 2012.

Exhibit 14: Conservation/restoration (hectares)

	2012–13	2013–14	2014–15	2015–16	2016–17
Private conservation areas - PVPs in perpetuity	4,970	7,610	8,980	17,020	1,500
PVPs not in perpetuity	62,000	22,630	80,070	35,010	26,790
PVP Offsets	12,620	2,970	8,260	23,130	8,630
Notification set-asides under <i>Native Vegetation Act 2003</i>	--	--	3,220	4,870	3,160
Revegetation through other Incentives (non-PVP)	252,370	152,970	18,500	35,440	47,170

Notes:

1. Private conservation areas are in-perpetuity agreements for the protection and management of native vegetation administered by LLS. No new PVPs can be signed after 25 August 2017.
2. Property Vegetation Plans (PVPs) not in perpetuity are temporary agreements for protection and management of native vegetation. They are generally from 5 to 20 years and are administered by LLS. No new PVPs can be signed after 25 August 2017.
3. PVP Offsets are in-perpetuity agreements administered by LLS. PVP Offsets must have a positive effect on the environment that is equal to or greater than the impact of the associated clearing. No new PVPs can be signed after 25 August 2017.
4. Notification set-asides under *Native Vegetation Act 2003* are statutory temporary conditions over areas of land to balance the clearing of paddock trees. The set aside area must include either mature native trees, or re-established native trees, or a combination of both. The Minister for the Environment made Orders under the *Native Vegetation Act 2003* and LLS administers them. They are binding on the landholder until land is sold. No new notifications and set sides under the paddock tree RAMA/exemption could be submitted after 25 August 2017.
5. Revegetation through other Incentives (non-PVP) are non-statutory temporary agreements (common law contracts) for the protection and management of native vegetation. They are for periods varying from five to 20 years and are administered by LLS.

Source: Audit Office analysis based on OEH data - the government is yet to release the 2016–17 data.



Appendix three – About the audit

Audit objective

To assess whether the clearing of native vegetation in rural areas is effectively regulated and managed.

Audit criteria

We addressed the audit objective with the following lines of enquiry:

1. Is land clearing administered effectively and consistently?
 - Adequate guidance and advice is provided to landholders on land clearing and biodiversity
 - A systematic assessment process is in place to approve or reject requests to clear land
 - Adequate resourcing, information, guidance and training is available to staff to support administrative processes
 - Effective processes are in place to ensure approved requests to clear land are carried out in accordance with approvals.
2. Is land clearing being effectively regulated and the impacts of clearing counterbalanced with conservation investment?
 - Native vegetation areas requiring protection, areas requiring approval for clearing, and areas exempt from approval are adequately identified and communicated to stakeholders
 - Adequate resourcing, information and training is available to support mapping, monitoring and enforcement activities
 - Illegal land clearing is identified, steps taken to prevent or remediate harm and appropriate enforcement action undertaken
 - Land clearing and its impact on biodiversity are effectively monitored and reported
 - The biodiversity impacts of land clearing in rural areas are being counterbalanced with investment in conserving areas of native vegetation.

Audit scope and focus

In assessing the criteria, we checked the following aspects.

The scope covered administrative processes for managing land clearing under the *Local Land Services Act 2013* (LLS Act) and the *Land Management (Native Vegetation) Code 2017 and 2018* (the Code). It will also examine relevant enforcement action undertaken under the LLS Act, the *Biodiversity Conservation Act 2016* and previous legislation covering land clearing, such as the *Native Vegetation Act 2003*.

The audit scope included:

- The activities of Local Land Services in identifying and categorising areas of native vegetation, in establishing guidelines and providing advice and information to landholders and developing and implementing administrative processes for managing land clearing.
- The activities of the Office of Environment and Heritage in identifying and categorising areas of native vegetation, including the development of regulatory mapping, and compliance and enforcement activities regarding unlawful clearing. It also examined how OEH estimates the amount of land clearing occurring each year.
- The activities of the Biodiversity Conservation Trust in implementing the Biodiversity Conservation Investment Strategy as a counterbalance to rural land clearing.

Audit exclusions

The audit did not examine:

- approvals for land clearing in urban areas or for major development under the SEPP (Native Vegetation in Non-rural areas) 2017
- any work undertaken in National Parks and State Forests
- forestry on private lands
- the operation of Biodiversity Offsets Schemes.

Audit approach

1. Interviewing:
 - key LLS, OEH and BCT staff, including staff at select regional offices
 - representatives of key stakeholder organisations.
2. Examining:
 - legislation, government policies, directions and regulations relating to LLS's role in providing guidance and advice to landholders and processing of applications
 - legislation, government policies, directions and regulations relating to OEH's role in developing and releasing Native Vegetation Regulatory maps and regulation of land clearing
 - LLS guidance to landholders, including publications policies, strategies and procedures
 - agency strategies, plans, policies, reports and procedures for reviewing and administration of authorisations for clearing
 - agency strategies, plans, policies, reports and procedures for Native Vegetation Regulatory mapping and regulation activities
 - agency strategies, plans, policies, reports and procedures for implementing the Biodiversity Conservation Investment Strategy
 - communications between LLS and OEH regarding mapping of land, oversight, management and regulation of land clearing
 - any relevant data pertaining to land clearing, including mapping of land, oversight, management and regulation activities
 - internal audits or reports produced by other bodies / agencies on relevant topics.
3. Analysing data, including:
 - any relevant data pertaining to mapping of land, including satellite imagery
 - any relevant data pertaining to oversight, management and regulation activities.

The audit approach was complemented by quality assurance processes within the Audit Office to ensure compliance with professional standards.

Audit methodology

Our performance audit methodology is designed to satisfy Australian Audit Standard ASAE 3500 Performance Engagements and other professional standards. The standards require the audit team to comply with relevant ethical requirements and plan and perform the audit to obtain reasonable assurance and draw a conclusion on the audit objective. Our processes have also been designed to comply with requirements specified in the *Public Finance and Audit Act 1983* and the *Local Government Act 1993*.

Acknowledgements

We gratefully acknowledge the co-operation and assistance provided by liaison staff in BCT, OEH and LLS.

Audit cost

Including staff costs and overheads, the estimated cost of the audit is \$326,846.



Appendix four – Performance auditing

What are performance audits?

Performance audits determine whether state or local government entities carry out their activities effectively, and do so economically and efficiently and in compliance with all relevant laws.

The activities examined by a performance audit may include a government program, all or part of an audited entity, or more than one entity. They can also consider particular issues which affect the whole public sector and/or the whole local government sector. They cannot question the merits of government policy objectives.

The Auditor-General's mandate to undertake performance audits is set out in section 38B of the *Public Finance and Audit Act 1983* for state government entities, and in section 421D of the *Local Government Act 1993* for local government entities.

Why do we conduct performance audits?

Performance audits provide independent assurance to the NSW Parliament and the public.

Through their recommendations, performance audits seek to improve the value for money the community receives from government services.

Performance audits are selected at the discretion of the Auditor-General who seeks input from parliamentarians, state and local government entities, other interested stakeholders and Audit Office research.

How are performance audits selected?

When selecting and scoping topics, we aim to choose topics that reflect the interests of parliament in holding the government to account. Performance audits are selected at the discretion of the Auditor-General based on our own research, suggestions from the public, and consultation with parliamentarians, agency heads and key government stakeholders. Our three year performance audit program is published on the website and is reviewed annually to ensure it continues to address significant issues of interest to parliament, aligns with government priorities, and reflects contemporary thinking on public sector management. Our program is sufficiently flexible to allow us to respond readily to any emerging issues.

What happens during the phases of a performance audit?

Performance audits have three key phases: planning, fieldwork and report writing.

During the planning phase, the audit team develops an understanding of the audit topic and responsible entities and defines the objective and scope of the audit.

The planning phase also identifies the audit criteria. These are standards of performance against which the audited entity, program or activities are assessed. Criteria may be based on relevant legislation, internal policies and procedures, industry standards, best practice, government targets, benchmarks or published guidelines.

At the completion of fieldwork, the audit team meets with management representatives to discuss all significant matters arising out of the audit. Following this, a draft performance audit report is prepared.

The audit team then meets with management representatives to check that facts presented in the draft report are accurate and to seek input in developing practical recommendations on areas of improvement.

A final report is then provided to the head of the audited entity who is invited to formally respond to the report. The report presented to the NSW Parliament includes any response from the head of the audited entity. The relevant minister and the Treasurer are also provided with a copy of the final report. In performance audits that involve multiple entities, there may be responses from more than one audited entity or from a nominated coordinating entity.

Who checks to see if recommendations have been implemented?

After the report is presented to the NSW Parliament, it is usual for the entity's audit committee to monitor progress with the implementation of recommendations.

In addition, it is the practice of Parliament's Public Accounts Committee to conduct reviews or hold inquiries into matters raised in performance audit reports. The reviews and inquiries are usually held 12 months after the report received by the NSW Parliament. These reports are available on the NSW Parliament website.

Who audits the auditors?

Our performance audits are subject to internal and external quality reviews against relevant Australian and international standards.

The Public Accounts Committee appoints an independent reviewer to report on compliance with auditing practices and standards every four years. The reviewer's report is presented to the NSW Parliament and available on its website.

Periodic peer reviews by other Audit Offices test our activities against relevant standards and better practice.

Each audit is subject to internal review prior to its release.

Who pays for performance audits?

No fee is charged for performance audits. Our performance audit services are funded by the NSW Parliament.

Further information and copies of reports

For further information, including copies of performance audit reports and a list of audits currently in-progress, please see our website www.audit.nsw.gov.au or contact us on 9275 7100.

OUR VISION

Our insights inform and challenge government to improve outcomes for citizens.

OUR PURPOSE

To help parliament hold government accountable for its use of public resources.

OUR VALUES

Purpose – we have an impact, are accountable, and work as a team.

People – we trust and respect others and have a balanced approach to work.

Professionalism – we are recognised for our independence and integrity and the value we deliver.

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