

Management Plan for the Commercial Harvest and Export of  
**Brush-tail Possums** in Tasmania

ANNUAL REPORT 2010-2011

## Summary

The Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE) is responsible for the sustainable management and protection of the State's natural and cultural assets for the benefit of Tasmanian communities and the economy. This includes the management of wildlife populations under the *Nature Conservation Act 2002* and its associated Regulations.

Common brushtail possums (*Trichosurus vulpecula*) are taken in the wild in Tasmania for commercial purposes in areas where they are causing damage to crops. The commercial industry produces a variety of products, however these can only be exported overseas if the possums are taken under the conditions of a management plan approved under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Accordingly, a management plan has been developed by the Wildlife Management Branch (WMB) of the DPIPWE and the Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) for the commercial harvest of the Tasmanian population of the common brushtail possum. This plan (*Management Plan for the Commercial Harvest and Export of Brushtail Possums in Tasmania, 2010-2015*) outlines the management regime in place and has been written to demonstrate how it also meets the requirements of the EPBC Act for the purpose of commercial export.

One of the requirements of the plan is annual reporting of activity under the plan by the DPIPWE to the DSEWPC. This document fulfills that requirement.

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## Introduction

The Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE) is responsible for conservation and protection of the State's natural and cultural heritage for the benefit of the Tasmanian community. The management of wildlife populations is provided for by the *Nature Conservation Act 2002* and its associated Regulations.

Common brushtail possums (*Trichosurus vulpecula*) are taken in the wild in Tasmania for commercial purposes in areas where they are causing damage to crops. The commercial industry produces a variety of products, however these can be exported overseas only if the possums are taken under the conditions of a management plan approved under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Accordingly, a management plan was developed by the Wildlife Management Branch (WMB) of DPIPWE for the commercial harvest of the Tasmanian population of the common brushtail possum. The management plan outlined a management regime that satisfied the requirements of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) for the purposes of export.

The *Management Plan for the Commercial Harvest and Export of Brushtail Possums in Tasmania 2010-2015*, (the plan), relates to the commercial harvesting of brushtail possums that occurs under Commercial Brushtail Possum permits. The non-commercial culling of brushtail possums for crop protection is not managed under the plan however the number of possums taken non-commercially is taken into account in the management of the commercial harvest. The aim of the plan is to manage brushtail possum populations on a regional basis to ensure their conservation across their existing geographical range.

The plan requires an annual report to be provided to the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) four months after the conclusion of the previous Quota Year. The plan specifies that the annual report is to provide statistics on take and details management actions undertaken during that previous Quota Year, including:

1. Details on the number of staff and the proportion of their time spent on compliance activities;
2. Instances of non-compliance with the requirements of the management plan;
3. Penalties imposed for non-compliance;
4. An update of operation against specified performance measures;
5. Final statistics on numbers of brushtail possums taken in the non-commercial harvest;
6. Final statistics on the amount of 1080 used and number of brushtail possum carcasses recovered following any poison operations;
7. Final statistics on numbers of brushtail possums harvested within the allocated commercial quota; and
8. Final statistics on the export of brushtail possum products.

This report fulfils this requirement and is presented as the Annual Report for the 2010-2011 Quota Year.

## **Required Information**

The following sections list the various matters to be addressed and provide an update on each matter. Each heading relates to one of the points listed above, while the update on specified performance measures referred to at point 4 above is provided as Attachment A.

### **Details on the number of staff and the proportion of their time spent on compliance activities**

Due to this trade management plan being approved in October 2010 and only limited market development having occurred subsequent to that, there has been a very low level of activity under this plan in this reporting period.

Nevertheless, general wildlife compliance activities have been undertaken by Wildlife Enforcement Officers, across those parts of Tasmania where possums are harvested, at levels equal to that of previous years. In total, two full-time Wildlife Rangers and two part-time Wildlife Rangers are involved in regular wildlife compliance work, including for brushtail possum, across Tasmania. Enforcement and compliance activities are undertaken on an intelligence driven basis.

Meat processing plants that process brushtail possum were audited by AQIS according to normal export accreditation requirements. This included a 2 day and a ½ day audit in the reporting period.

### **Instances of non-compliance with the requirements of the management plan**

There have been no instances detected of non-compliance with the requirements of this management plan.

### **Penalties imposed for non-compliance**

There have been no penalties imposed for non-compliance with the requirements of this management plan.

### **Final statistics on numbers of brushtail possums taken in the non-commercial harvest**

Statistics on the number of brushtail possums taken in the non-commercial harvest are based on analysis of crop protection permit returns provided by permit holders to the DPIPW upon expiry of the permit. At the time of analysis, a significant proportion of crop protection permits issued during 2010/11 remain current and are therefore not due to be returned. In addition, landholders who may initially neglect to provide a return upon expiry of the permit are required to do so when they next request a permit, resulting in a lag effect. Because the return rate is less than 100% at the time of reporting an estimate of total take is calculated and included in the statistics provided below.

To provide historical context to the take reported for this year, comparable figures are provided for the previous 9 years. Table 1 provides the state-wide statistics, while Tables 2-5 show the non-commercial take for each of the four quota regions.

**Table 1: State-wide estimates of the number of brushtail possums taken by non-commercial shooting under crop protection (CPN) permit in Tasmania.**

Year	Number of property permits	Reported take	Total estimated CPN take	% returns
2001-02	1648	118218	202730	58.31%
2002-03	1644	137702	218094	63.14%
2003-04	1529	135815	206628	65.73%
2004-05	1573	174660	262909	66.43%
2005-06	1572	216488	295930	73.16%
2006-07	1689	284576	338724	84.01%
2007-08	1974	293459	371101	79.08%
2008-09	1676	243131	301843	80.55%
2009-10	1584	160902	201956	79.67%
2010-11	1696	69339	135327	51.24%

**Table 2: Estimate of numbers of brushtail possum taken by non-commercial shooting under crop protection (CPN) permit in Central Region.**

Year	Number of property permits	Reported take	Total estimated CPN take	% returns
2001-02	188	31365	50833	61.70%
2002-03	208	44457	58526	75.96%
2003-04	210	44394	60933	72.86%
2004-05	185	33687	51083	65.95%
2005-06	190	42521	58971	72.11%
2006-07	199	51141	60940	83.92%
2007-08	231	57600	65869	87.45%
2008-09	205	36243	42700	84.88%
2009-10	218	32924	39221	83.94%
2010-11	224	12193	28750	42.41%

**Table 3: Estimate of numbers of brushtail possum taken by non-commercial shooting under crop protection (CPN) permit in South East Region.**

Year	Number of property permits	Reported take	Total estimated CPN take	% returns
2001-02	561	45720	59510	76.83%
2002-03	585	60804	77327	78.63%
2003-04	567	52914	67878	77.95%
2004-05	599	67189	83672	80.30%
2005-06	613	83492	103815	80.42%
2006-07	625	100277	118699	84.48%
2007-08	663	112401	132366	84.92%
2008-09	609	68875	81289	84.73%
2009-10	555	56910	68366	83.24%
2010-11	597	25475	42721	59.63%

**Table 4: Estimate of numbers of brushtail possum taken by non-commercial shooting under crop protection (CPN) permit in North East Region.**

Year	Number of property permits	Reported take	Total estimated CPN take	% returns
2001-02	538	30846	62154	49.63%
2002-03	504	26049	48988	53.17%
2003-04	515	33547	61265	54.76%
2004-05	495	63465	110229	57.58%
2005-06	481	79507	112811	70.48%
2006-07	546	116199	135566	85.71%
2007-08	599	102455	128930	79.47%
2008-09	569	123075	153238	80.32%
2009-10	564	56441	73347	76.95%
2010-11	605	26701	56286	47.44%

**Table 5: Estimate of numbers of brushtail possum taken by non-commercial shooting under crop protection (CPN) permit in North West Region.**

Year	Number of property permits	Reported take	Total estimated CPN take	% returns
2001-02	353	10287	24703	41.64%
2002-03	343	6392	14424	44.31%
2003-04	237	4960	9184	54.01%
2004-05	253	9577	16944	56.52%
2005-06	263	7449	11592	64.26%
2006-07	301	16659	20219	82.39%
2007-08	383	19561	26567	73.63%
2008-09	273	14484	20382	71.06%
2009-10	233	14604	18800	77.68%
2010-11	265	4918	10025	49.06%

### **Final statistics on the amount of 1080 used and number of brushtail possum carcasses recovered following any poison operations**

The number of properties on which 1080 was used declined in the quota year, from 46 properties in 2009/10 to 26 in 2010/11. The amount of 1080 used increased slightly, from 0.7 kg to 0.93 kg (see Table 6).

Due to the mobility of wildlife following consumption of 1080 and prior to death, and the resulting difficulty in locating the carcasses of poisoned animals, the number of carcasses collected following the use of 1080 poison gives little indication of the number killed. Instead, 1080 usage is provided below, as it is a more reliable indicator of potential impact on the population than the number of carcasses collected.

**Table 6: Annual Usage of 1080 Poison in Tasmania,**

Year	Number of property permits issued	1080 usage (kg)
2001-02	484	9.7
2002-03	682	10.4
2003-04	436	6.1
2004-05	426	8.1
2005-06	287	5.0
2006-07	52	1.4
2007-08	49	0.7
2008-09	73	1.0
2009-10	46	0.7
2010-11	26	0.93



## Final statistics on numbers of brushtail possums harvested within the allocated commercial quota

Quotas for the year 2010-11 were allocated only from March 2010. As a consequence, commercial harvesting of brushtail possum under this management plan was substantially delayed. In addition, markets for possum products are not yet fully developed.

As a result, the commercial harvest was considerably below the available quota for the quota year 2010-11. Quota utilisation ranged from 0% to 28% across the four management regions (see Table 7).

Table 7: Total number of brushtail possums harvested in each quota region under the commercial quota

Quota Region	Male (or sex unknown)	Female	Total Harvest (Quota)	% of Available Quota Harvested
South East	451	487	938 (5310)	17.7
Central	1051	426	1477 (5293)	28.0
North East	1881	83	1964 (6808)	28.8
North West	0	0	0 (2611)	0
<b>Tasmania (total)</b>	<b>3383</b>	<b>996</b>	<b>4379 (20022)</b>	<b>21.9</b>

## Final statistics on the export of brushtail possum products.

Table 8: Total number of brushtail possums exported as either meat or fur

Year	Possums Exported as Fur	Possums Exported as Meat
2010-11	491	0

## Attachment A: An update of operation against specified performance measures

The following table the actions undertaken in relation to each of the Performance Measures contained in the Management Plan.

Section	Performance measures	Response
<b>5. Conservation of brushtail possums in Tasmania</b>	<ul style="list-style-type: none"> <li>• Brushtail possums are not elevated to a higher conservation status due to factors attributed to the commercial harvest;</li> <li>• Management is modified should the conservation status or distribution of brushtail possums in Tasmania change through factors not attributable to the commercial harvest; and</li> <li>• The system of reserves in Tasmania where brushtail possums cannot be harvested continues to be identified and managed as an important refuge for this commercially harvested species.</li> </ul>	<ul style="list-style-type: none"> <li>• Commercial harvesting of brushtail possums in the reporting period had no impact on the conservation status of the species; it represented only 3% of estimated crop protection harvest.</li> <li>• No modifications required.</li> <li>• Proportion of Tasmanian land reserved and not subject to possum harvesting as at 30th June 2011 was 45.1%, up from 44.8% in 2010.</li> </ul>
<b>6. Non commercial culling of possums</b>	<ul style="list-style-type: none"> <li>• Records are entered into a database system in a timely manner and analysed quarterly; and</li> <li>• At least 70% of take returns from expired crop protection permits are entered within four months of the end of the financial year. If the percentage drops below 70% then additional steps will be undertaken to correct the situation.</li> </ul>	<ul style="list-style-type: none"> <li>• Records of 1080 use were entered and analysed monthly.</li> <li>• As at October 2011 the following percentage of take returns had been entered. <ul style="list-style-type: none"> <li>Central – 46.9%</li> <li>North east – 51.9%</li> <li>North west – 51.7%</li> </ul> </li> </ul>

		<p>South east – 66%</p> <ul style="list-style-type: none"> <li>•Obtaining more rapid take return rates has been an ongoing issue for DPIPW. New permits are generally not issued until outstanding returns are provided.</li> <li>•The permit database is currently being redeveloped to enable more timely returns to be obtained.</li> </ul>
<b>7. Management strategies</b>	<ul style="list-style-type: none"> <li>•The extent of hunter compliance with brushtail possum harvesting and licensing requirements is measured at or near 100%.</li> </ul>	<ul style="list-style-type: none"> <li>•Routine wildlife compliance activities were maintained across the possum harvest region. No instances of failing to comply with harvesting and licensing requirements were detected.</li> </ul>
<b>7.2 Control of the trade in brushtail possum products.</b>	<ul style="list-style-type: none"> <li>•At least two periodic inspections, to ensure compliance, of each licensed dealer and processor per annum;</li> <li>•The extent of compliance with brushtail possum processing and trading requirements is measured at or near 100%; and</li> <li>•Focus of compliance efforts on areas in which past breaches have been recorded.</li> </ul>	<ul style="list-style-type: none"> <li>•Audits have been undertaken by AQIS and the Food Safety Branch of DPIPW on a quarterly basis (one two-day and one half-day in th reporting period).</li> <li>• No instances of failing to comply with processing and trading requirements were detected.</li> <li>•No breaches have yet been recorded.</li> </ul>
<b>7.4.4 Special quotas</b>	<ul style="list-style-type: none"> <li>•Annual regional commercial quotas are set in accordance with the provisions of this management plan;</li> <li>•DSEWPC is advised of the commercial harvest quotas for the following financial year by 1 June; and</li> </ul>	<ul style="list-style-type: none"> <li>•Annual regional commercial quotas were set in accordance with the provisions of this management plan and reported to DSEWPC in March 2011.</li> <li>• DSEWPC was advised of the commercial harvest quota for 2011-12 prior to June 1 of 2011. A quota report was submitted to DSEWPC in March 2011.</li> </ul>

	<ul style="list-style-type: none"> <li>•Special commercial quotas are set and utilised in accordance with the provisions of this management plan and DSEWPC is notified if and when any special quotas are issued.</li> </ul>	<ul style="list-style-type: none"> <li>•No special quotas were required or set in the reporting period as a consequence of the very low harvest during the reporting period.</li> </ul>
<b>7.5 Monitoring of brushtail possum take</b>	<ul style="list-style-type: none"> <li>•Records entered into database system and analysed quarterly, with monthly analysis carried out once quotas are approached within 85%;</li> <li>•Maintain an up-to-date database to inform quota management as required; and</li> <li>•The annual number of commercially-harvested possums is within the allocated commercial quota issued for that quota year.</li> </ul>	<ul style="list-style-type: none"> <li>•Records are entered into database system as they are submitted by permit holders and analysed quarterly. Monthly analysis has not yet been required due to the total harvest not having reached 85% of total quotas.</li> <li>•An up-to-date database is maintained by DPIPW and used to inform quota management.</li> <li>•The number of commercially harvested possums was within the allocated commercial quota for the 2010-11 Quota Year. The quota was 20,000 possums and harvest was 4379 possums, or 21.9% of the available quota.</li> </ul>
<b>7.6 Monitoring of regional brushtail possum populations</b>	<ul style="list-style-type: none"> <li>•Population surveys are conducted in accordance with the management plan and between November and February or April and May each Quota Year throughout the life of this plan;</li> <li>•Population trends determined and monitored;</li> <li>•Sudden or acute changes in the sex</li> </ul>	<ul style="list-style-type: none"> <li>•Population surveys were conducted in accordance with the management plan between November 2010 and February 2011.</li> <li>•Population trends were determined and monitored (see Appendix 1: Current brushtail possum population trends).</li> </ul>

	<p>ration of harvested possums, as ascertained from permit returns, are investigated to determine where practicable the cause of the change; and</p> <ul style="list-style-type: none"> <li>•Monitoring results published in the Annual Quota Report to DSEWPC.</li> </ul>	<ul style="list-style-type: none"> <li>•No sudden or acute changes in the sex ratio of harvested possums have been detected.</li> <li>•Monitoring results are provided as Appendix 1 in this annual report and were also provided in the Annual Quota Report in March 2011.</li> </ul>
<b>8. Animal welfare</b>	<ul style="list-style-type: none"> <li>•The extent of compliance with the requirements of commercial brushtail possum hunting permits determined through compliance activities and is at or near 100%;</li> <li>•All harvesters operating under a commercial brushtail possum permit and selling carcasses for meat processing are accredited for competence in shooting; and</li> <li>•A code of practice for the humane shooting of brushtail possums for commercial or crop-protection in Tasmania is developed within the first year of this plan.</li> </ul>	<ul style="list-style-type: none"> <li>•Routine wildlife compliance activities were maintained across the possum harvest region. No instances of failing to comply with animal welfare requirements were detected.</li> <li>•All harvesters selling possums carcasses for processing are accredited.</li> <li>•A '<i>Code of Practice for Shooting Brushtail Possums in the Field in Tasmania</i>' has been developed and accepted by the Tasmanian Animal Welfare Advisory Committee as an Animal Welfare Guideline under Section 44B of the <i>Animal Welfare Act 1993</i>.</li> </ul>
<b>9. Compliance and enforcement</b>	<ul style="list-style-type: none"> <li>•Details on the number of staff and the proportion of their time spent on compliance activities are recorded in the annual report to DSEWPC;</li> </ul>	<ul style="list-style-type: none"> <li>•Two full-time Wildlife Rangers and two part-time Wildlife Rangers are involved in regular wildlife compliance work across Tasmania. Enforcement and compliance activities are undertaken on an intelligence driven basis.</li> <li>•Pet food processing premises</li> </ul>

	<ul style="list-style-type: none"> <li>•All human consumption and pet food premises inspected by the food safety branch at least once annually;</li> <li>•Instances of non-compliance with the requirements of the Management Plan are monitored and acted upon. A decrease over time might indicate improved self-regulation of industry; and</li> <li>•Reports of unlicensed activities and activities in breach of licence conditions are investigated to the fullest extent possible, and where sufficient evidence is available offenders are issued with a corrective action request or prosecuted as appropriate.</li> </ul>	<p>have been audited annually as required and premises processing for human consumption are audited twice per year.</p> <ul style="list-style-type: none"> <li>•No instances of non-compliance with the requirements of the Management Plan were detected.</li> <li>•No reports received</li> </ul>
<b>10. Community awareness</b>	<ul style="list-style-type: none"> <li>•Landholders, commercial possum industry members, interested groups, government and the public have adequate opportunity to comment on possum management in Tasmania through placement of monitoring results and quotas on the DPIPWE and DSEWPC websites; and</li> <li>•Publicly available information on possum management is distributed to interested parties as soon as practicable after such a request.</li> </ul>	<ul style="list-style-type: none"> <li>•Prior to October 2010, government, stakeholders and the public had opportunity to comment on possum management in Tasmania through placement of the Management Plan, including recent monitoring results, on the DSEWPC website. Current quotas are also available on the DSEWPC website.</li> <li>•DPIPWE complies with the Tasmanian <i>Right to Information Act 2010</i> with information on possum management being distributed to interested parties upon request.</li> </ul>
<b>11.2 Annual Report</b>	<ul style="list-style-type: none"> <li>•An Annual Quota Report is provided to DSEWPC by 1<sup>st</sup> June; and</li> <li>•An annual report is provided to DSEWPC by 31<sup>st</sup> October.</li> </ul>	<ul style="list-style-type: none"> <li>•An Annual Quota Report for the 2011-12 quota year was provided to DSEWPC prior to 1<sup>st</sup> June 2011.</li> <li>•An annual report on the 2010/11 quota year is to be provided to</li> </ul>

		DSEWPC by 31 <sup>st</sup> October 2011.
<b>11.3 Review</b>	A review of this plan has commenced by 1 <sup>st</sup> July 2014.	<ul style="list-style-type: none"> <li>•A review in accordance with this performance indicator is scheduled to be completed as required.</li> </ul>

## APPENDIX 1: Current Brushtail Possum Population Trends

As required by the *Management Plan for the Commercial Harvest and Export of Brushtail Possums* (the Plan), regional brushtail possum population trends continued to be monitored through the annual program of statewide spotlight surveys. Referred to as the 2010 surveys, the most recent set of surveys were undertaken during the period November 2010 to February 2011.

Monitoring of trends in regional brushtail possum populations is undertaken through a system of standardised spotlight survey counts performed annually on mainland Tasmania. The standardised surveys are carried out in accordance with the method set out in the *Tasmanian Spotlight Survey Manual* (Hocking 1992) and analysed in accordance with section 7.6 of the Plan. The results of these surveys provide the basis for the regional commercial quotas set under the Plan. Analysis of the current population trend for each region (with the exception of South West Region due to the limited data available and the absence of commercial activity in this region) is provided below.

### Central Region

In the spotlight surveys undertaken in the Central Region in 2010, the observed density of brushtail possums decreased to 29.6/km<sup>2</sup>, consequently the three-year Exponentially Weighted Moving Average (EWMA) decreased to 43.8/km<sup>2</sup>. This continues a declining trend evident over several years (see Figure 1). However, the EWMA is still considerably higher than the trigger point (density = 20/km<sup>2</sup> or below) that initiates additional management controls under the Plan.

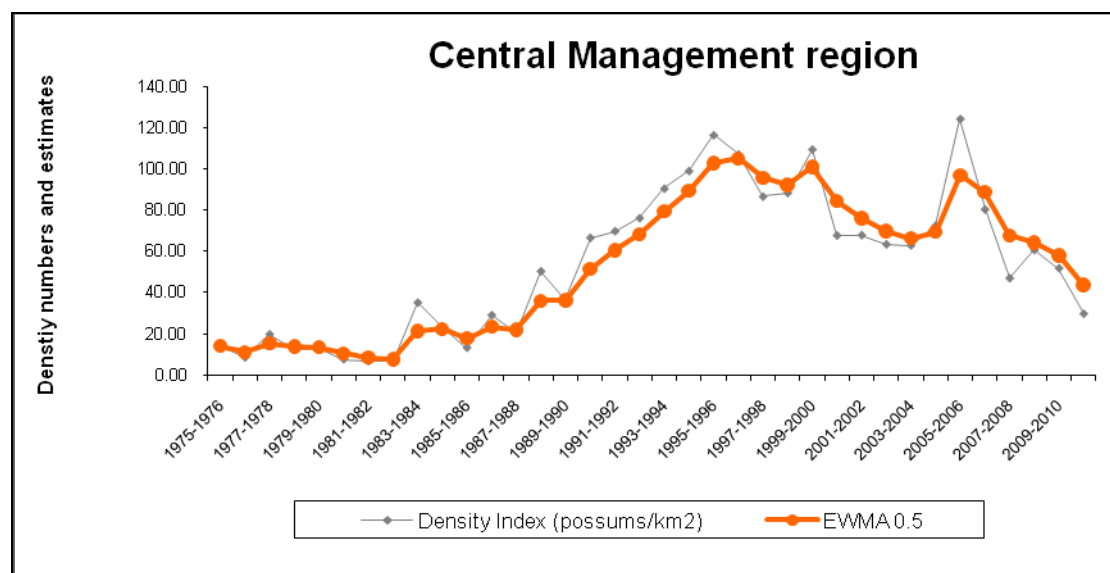
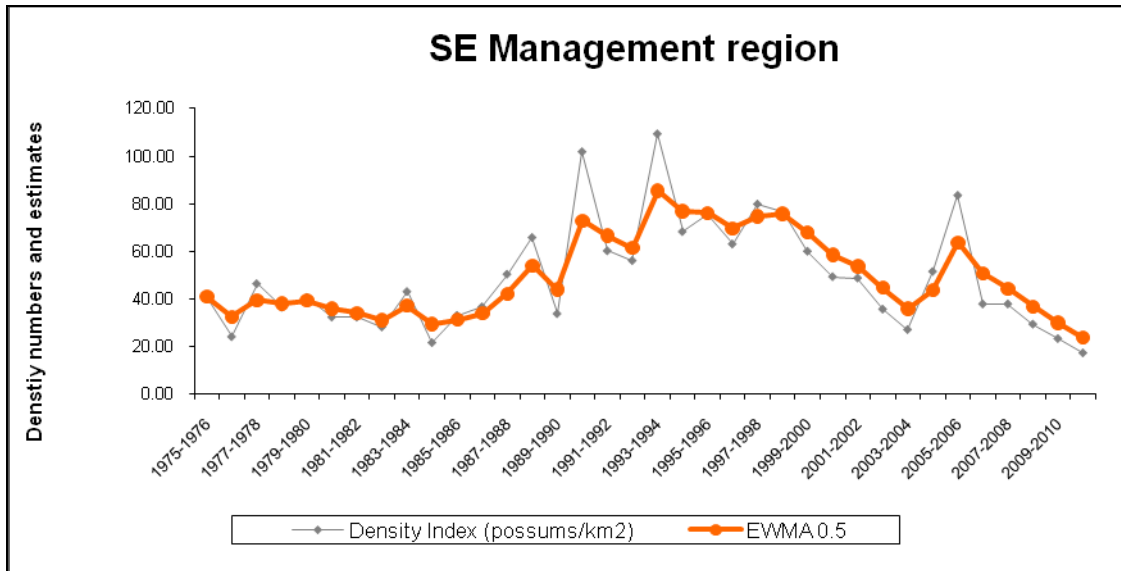


Figure 1: Central Region historical and current Density Index and three-year density trend



### South East Region

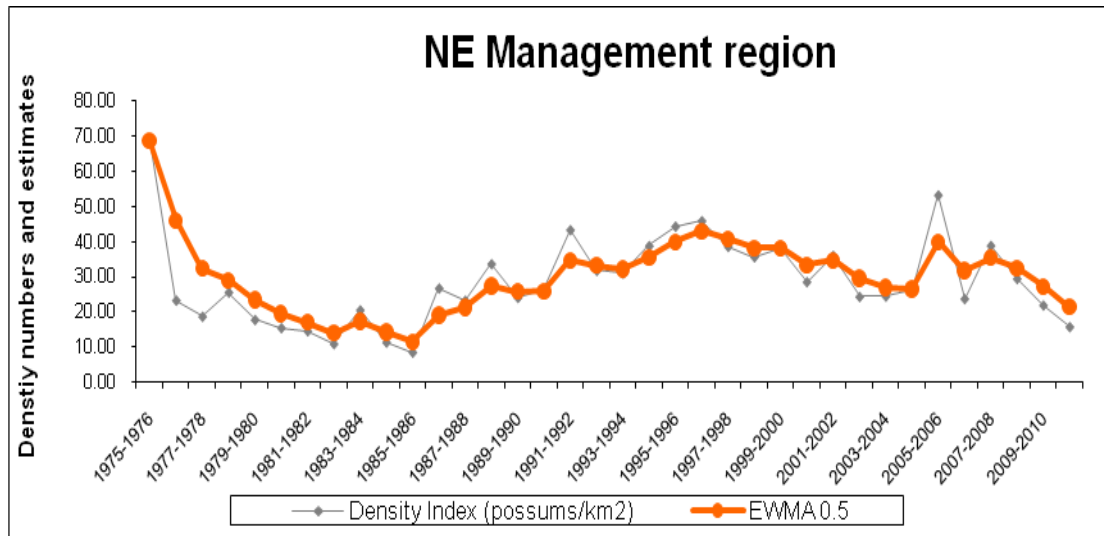
In the South East Region the observed density of brushtail possums decreased to 17.18/km<sup>2</sup>, consequently the three-year Exponentially Weighted Moving Average (EWMA) decreased to 23.6/km<sup>2</sup>. This continues a declining trend evident over several years (see Figure 2). However, the EWMA is still above the trigger point (density = 20/km<sup>2</sup> or below) that initiates additional management controls under the Plan.



**Figure 2: South East Region historical and current Density Index and three-year density trend**

### North East Region

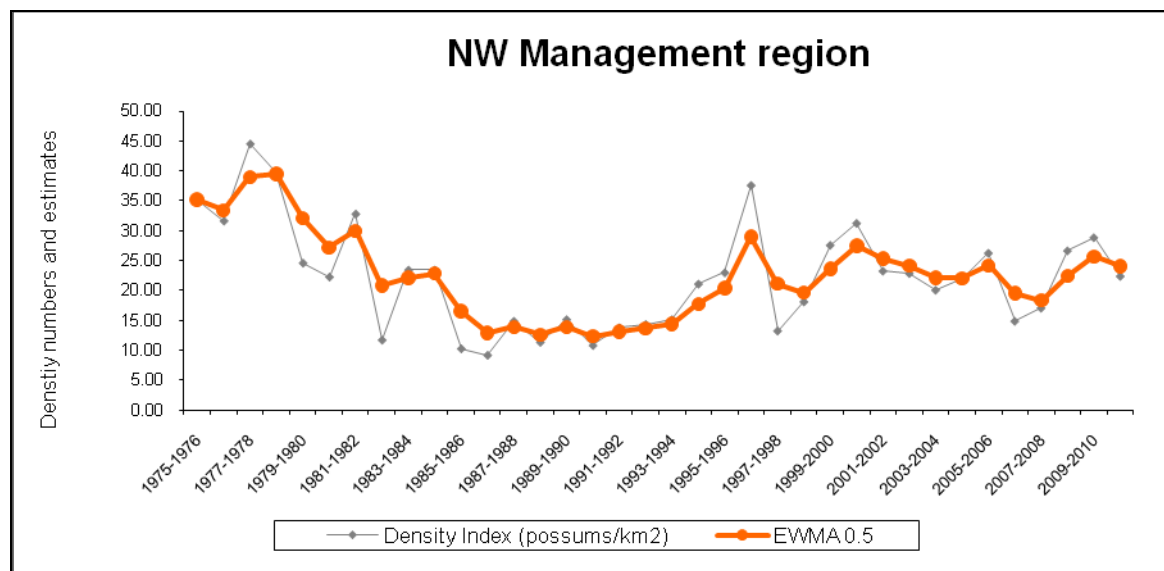
In the North East Region the observed density of brushtail possums decreased to 15.83/km<sup>2</sup>, consequently the three-year Exponentially Weighted Moving Average (EWMA) decreased to 21.5/km<sup>2</sup>. This continues a declining trend evident over several years (see Figure 3). However, the EWMA remains above the trigger point (density = 20/km<sup>2</sup> or below) that initiates additional management controls under the Plan.



**Figure 3: North East Region historical and current Density Index and three-year density trend**

### North West Region

In the North West Region the observed density of brushtail possums decreased to 22.43/km<sup>2</sup>, consequently the three-year Exponentially Weighted Moving Average (EWMA) decreased slightly to 24.1/km<sup>2</sup> (see Figure 4). The EWMA remains above the trigger point (density = 20/km<sup>2</sup> or below) that initiates additional management controls under the Plan.



**Figure 4: North West Region historical and current Density Index and three-year density trend**