

GROUNDWORK

Conservation Volunteers

**UPDATED SUMMARY OF EVIDENCE OF LOSS OF RHODODENDRON “CLEAR”
STATUS IN SELECTED OAKWOOD AREAS OF KILLARNEY NATIONAL PARK**

30th May 2018



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PREAMBLE

The sections of this report that are additional to the Summary of Evidence of June 2017 are the following:

Section 3.2 Gallavally Wood which includes the results of the Groundwork survey of this wood in May 2018

Section 4.8 Ullauns Wood which includes new information of seed production in that wood

Section 5 Rhododendron Seed Production Status of Eastern Oakwood of Killarney National Park 2018

1. INTRODUCTION

This report presents an updated summary of important elements of the evidence presented in Groundwork's formal complaint to the European Commission (CHAP(2014)03205) including Attachments 1 – 14 which accompanied the formal complaint, and Addenda 1 – 15 which contained supporting evidence and were submitted subsequent to the original complaint. For the details of Groundwork's formal complaint the reader is referred to these documents.

The focus of this report is on the evidence which establishes that significant and widespread deterioration has taken place of the Oakwoods of Killarney National Park which are a qualifying interest Habitats Directive Annex I habitat in the Killarney National Park, Macgillycuddy's Reeks and Caragh River Catchment Special Area of Conservation, and which evidence thereby establishes that a breach of Article 6(2) of the Habitats Directive has occurred and is continuing to occur.

Invasive Rhododendron is generally accepted to be the most serious threat to the Killarney oakwoods. If any oakwood area which was previously clear of Rhododendron (either because it was never infested or because it was previously successfully cleared) loses its cleared status, it is incontrovertible that the oakwood area in question has deteriorated. If these instances of deterioration are widespread, have continued over a period of years and are ongoing, we see no reasonable alternative to accepting that a deterioration in a qualifying interest Annex I Habitat has occurred, which habitat is by far the largest and best area of native ancient woodland surviving on the island of Ireland.

Irish Wildlife Manual No. 33 published by NPWS in 2008 defines what constitutes Rhododendron cleared status as follows:

“

- 1. Any area that has not been systematically checked within the last 10 years cannot be classified as clear of rhododendron.*

2. *Any area that has been systematically checked, and in which no rhododendron with seed capsules has been found, and in which all other rhododendron if any (i.e. small plants which have not yet flowered) have been removed, can be classified as clear of rhododendron for the following 8 years.*
3. *Where a seed producing rhododendron is found and removed, the area within 50 m radius (of the seed producing plants) cannot be classified as clear for a period of at least four years, and only if it has been revisited and systematically cleared of seedlings at least three years after the last seed was produced.*

Adoption of such a rigorous definition will mean that areas maintained in such 'cleared' condition will not revert to dense rhododendron nor will they become a seed source for new infestation."

<http://www.npws.ie/sites/default/files/publications/pdf/IWM33.pdf>

Cleared Status as defined in Irish Wildlife Manual No. 33 corresponds closely with "Maintenance Phase" as defined by Snowdonia National Park Authority (2008). Maintenance Phase: *"By this stage, all mature bushes will have been located and successfully treated and there will be no more than occasional seedlings (say 100/ha). Flowering Rhododendron should be absent or extremely rare (say one small bush/ha). A 5-yearly sweep to locate and treat these plants (mainly handweeding) will progressively reduce and remove these plants. The maintenance phase will never be reached if significant seed sources remain."*

<http://www.nonnativespecies.org/index.cfm?pageid=225>

Information is provided in this report on:

1. Clearance & re-infestation history of sections of the oakwoods previously cleared and maintained by Groundwork in the period 1981 – 2005
2. Clearance & re-infestation history of sections of the oakwoods managed by NPWS (including contractors & volunteers working under the direct supervision of NPWS)

3. Information of Rhododendron seed sources in the Eastern Oakwoods of Killarney National Park as indicated in “Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023” (Cahalane January 2018)

A full survey of the Rhododendron infestation status of the entire Killarney oakwoods area (c.1,200ha much of which is in steep, complex and inaccessible areas) would require systematic coverage of the entire oakwood areas by lines of closely placed operatives – such a survey is entirely beyond the resources available to Groundwork.

(N.B. A detailed survey of Rhododendron infestation in Killarney National Park was completed by Dr G. Therese Higgins in 2006 as part of: “*A strategy for rhododendron control in Killarney National Park*” by Dr G. Therese Higgins which was commissioned for the NPWS Irish Wildlife Manual Series by NPWS. (see AHG/AIE/2014/33 Record No. 216) (AHG/AIE/2014/33 Record No. 216 in EC complaint Addendum 2). The final draft of this document of 26 April 2007 was favourably reviewed by the NPWS Divisional Ecologist Dr Jervis Good (see AHG/AIE/2014/33 Record No. 215 in EC complaint Addendum 2). The Higgins *strategy for rhododendron control in Killarney National Park* was apparently withheld from publication by NPWS. Much of the content of the Higgins Report was incorporated into Irish Wildlife Manual No. 33 “*Rhododendron ponticum: A guide to management on nature conservation sites*” (Higgins 2008). The survey of Rhododendron in Killarney National Park was never published.)

The rhododendron status of the oakwoods previously cleared and maintained by Groundwork is therefore based on visits in 2013 – 2018 by Groundwork operatives to widely placed representative sections of the woods which Groundwork previously cleared and maintained, i.e. to date sections of:

- Glaisín na Marbh Wood
- Glasha Wood
- Tomies Wood
- Eamonn’s Wood
- Cahnicaun Wood
- Looscaunagh (Cabernabane/ Cahernaduv) Wood

and representative sections of two woods previously cleared by NPWS

- Eagle's Nest Wood
- Gallavally Wood

The rhododendron status of the oakwoods cleared by NPWS is based largely on information on Rhododendron contained in Rhododendron Eradication Programme Progress Reports prepared for NPWS by Mr Tim Cahalane between August 2015 and February 2016 and "Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023" (Cahalane January 2018). Specifically information on the following woodland areas is utilised in the present report:

- Gortderraree Woods
- Bula Woods
- Tower Wood
- Five Mile Wood
- Brickeen Island woods

The location of woods which have been visited by Groundwork in the period 2013 – 2017 or by Mr Cahalane in the period August 2015 to February 2016 in which "Clear Status" has been lost and which have reverted to un-cleared status as defined in Irish Wildlife Manual No. 33 are shown on Map 1.

c.1000 Rhododendron photographs from the oakwood areas visited by Groundwork between 2013 and 2016 can be viewed in the context of their mapped locations in an online gallery using the link provided here:

<http://groundworkireland.smugmug.com/All-Geotagged-Rhodo-Photos/n-kqNJfv>

An additional c.670 rhododendron photographs of three further locations visited in May 2017 and May 2018 can be viewed using the links provided here (N.B. All of the May 2017 & May 2018 photographs are of plants which have reached flowering/ seed production stage)

<http://groundworkireland.smugmug.com/Looscaunagh-May-2017/n-cKwvLx>

<http://groundworkireland.smugmug.com/Eamonns-May-2017/n-BhxmLb>

<https://groundworkireland.smugmug.com/Gallavally-Wood-May-2018/n-qCqR3G>

To view the locations of all photos in the gallery, scroll down to see the map; thumbnails of photos can be viewed by clicking on the pointers. For best viewing change to satellite view at the top right corner of the map and zoom in to the maximum extent. To view the mapped location of an individual photo, click on the “i” symbol at bottom right, then select the “Map” tab.

It is important to note the following:

1. The areas visited and shown on Map 1 and in the online photo galleries (for which links are provided) constitute a limited sample of the total previously cleared oakwood area. The areas with photographed geotagged Rhododendron closely correspond with the areas actually surveyed by Groundwork. In short we found re-infestation in most places that we went looking. As most of the limited areas visited by Groundwork were found to have lost their Clear Status, it is certain that other re-infested area would be revealed by a more detailed survey.
2. A number of iterations of the NPWS Long Term Strategic Programme authored by O’Toole (2011–2015) are a major source for the present report. The optimal status recognised for “Present Rhododendron Status” in the NPWS Long Term Strategic Programme is “Good”. The author of the Strategic Programme has defined “Good” in this context as follows: *“the definition of Good under the category ‘Present Rhododendron Status’ means that there is no known seed source remaining on site. ...scattered mature (i.e. seed producing) rhododendron plants may be missed on a work site, but will be located and treated in subsequent operations.”* (AHG/AIE/2014/33 See EC Complaint Addendum 12 Section 2.1.1). It should be noted that under this definition if rhododendron seed production commences in a wood and the

seed producing plants are subsequently removed, the wood qualifies as having “Good” status both before and after this event, despite the fact that thousands of seeds, many of which will grow into new plants, are present in the wood after the seed producing plants are removed. Unfortunately removing seed producing plants does not cause the disappearance of the hundreds/ thousands of initially tiny seedlings which they have already spawned. The O’Toole definition allows for Good Status to be retained even when scattered seed producing rhododendron plants have been missed “*but will be located and treated in subsequent operations*”. Locating and treating seed producing plants “*in subsequent operations*” does not deal with the hundreds of additional new plants which will not even be visible for a few years after they have first germinated. Irish Wildlife Manual No.33 classifies the wood prior to seed production as having “Clear Status” and the wood after seed has been released as “un-cleared”. The newly infested or re-infested section of wood must undergo three phases of rigorous systematic clearance over a period of 5 – 7 years before it can again be classified as having “Clear Status”.

2. CLEARANCE & RE-INFESTATION HISTORY IN THE WESTERN WOODS OF KILLARNEY NATIONAL PARK PREVIOUSLY CLEARED AND MAINTAINED BY GROUNDWORK

2.1. CAHNICAUN WOOD

		References	Comments
1982	Phase 1 clearance carried out by Groundwork in western section of wood	1984 Groundwork Report to NPWS (See EC Complaint Addendum 9)	
1984	Large wild fire in western section of National Park burns through large area of woodland floor, Rhododendron seedlings burned down but not killed		
1987	Phase 2 clearance by Groundwork of western section of Cahnicaun Wood (postponed until 1987 because of fire).	1987 Groundwork Annual Report to NPWS (See EC Complaint Addendum 9)	
1987	Phase 1 clearance carried out by Groundwork in eastern section of wood.	ditto	

1990	Phase 2 clearance of eastern section of Cahnicaun Wood	1990 Groundwork Annual Report to NPWS (See EC Complaint Addendum 9)	
1990	NPWS Killarney National Park Management Plan maps all of Cahnicaun as part of the " <i>areas being maintained free of Rhododendron by Groundwork</i> "	Killarney National Park Management Plan 1990 (Office of Public Works 1990)	
1993	Groundwork 1 st Phase 3 maintenance of western section of the wood	1993 Groundwork Annual Report to NPWS (See EC Complaint Addendum 9)	
1997	Groundwork 1 st Phase 3 maintenance of eastern section of the wood	1997 Groundwork Annual Report to NPWS (See EC Complaint Addendum 9)	
2002	Groundwork 2 nd Phase 3 maintenance of entire area of Cahnicaun Wood. Subsequent scheduled Groundwork maintenance visits not permitted by NPWS.	2002 Groundwork Annual Report to NPWS (See EC Complaint Addendum 9)	
2006	AHG/AIE/2014/33 Record No. 216. The Draft Document "A Strategy for Rhododendron Control in Killarney National Park by Dr G. Therese	AHG/AIE/2014/33 Record No. 216	

	Higgins (2006)" Commissioned by NPWS. This document includes the results of a general survey of rhododendron in Killarney National Park at that time (i.e. 2006). The only woodland areas of the National Park that were classified as "Cleared: Phase 3" in this report were western woods of the national park which had been cleared and maintained by Groundwork. Cahnicaun is classified as "Cleared: Phase 3".	(See EC Complaint Addendum 2)	
2007	AHG/AIE/2014/33 Record No. 215. "Site Management: Killarney NP rhododendron control strategy – Comments by Jervis Good Divisional Ecologist NPWS – 26 April 2007 In the map accompanying this document all of Cahnicaun is classified as: " <u>Areas from which rhododendron has been removed and have achieved "final clearance" status and are in an ongoing maintenance programme</u> ".	AHG/AIE/2014/33 Record No. 215 (See EC Complaint Addendum 2)	
2008	NPWS maintenance visit		
2009	Management Plan for Killarney National Park 2005-2009) stated that : Groundwork's " <i>clearly defined strategies and extremely well-co-ordinated work programme has resulted in a significant proportion of the formerly infested oakwoods in the Park being maintained free of rhododendron. Most of this work has been carried out in the more inaccessible woodlands on the western side of the National Park.</i> "	www.npws.ie/publications/archive/KNPMP.pdf	
2010	8 YEARS FROM LAST SYSTEMATIC GROUNDWORK MAINTENANCE		
2011	NPWS classifies Rhododendron status of Cahnicaun Wood as "Good" with <u>NO SEED SOURCE REMAINING ON SITE</u>	O'Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National	

		Park. NPWS Report	
2012	NPWS maintenance visit	O'Toole (November 2012) (See EC Complaint Attachment 6)	
2012 (November)	NPWS classifies Rhododendron status of Cahnicaun Wood as "Good" with "NO SEED SOURCE REMAINING ON SITE"	O'Toole (November 2012) (See EC Complaint Attachment 6)	This classification cannot be reconciled with the GW findings in the following summer of plants that had released seed in the winter of 2012/2013
2013 (June)	Groundwork records SIGNIFICANT SEED PRODUCTION taking place in northern section of Cahnicaun	Groundwork Rhododendron Observations Report 2014 (See EC Complaint Attachment 1)	This seed production established that this area of Cahnicaun wood had by 2013 lost its "clear" status as defined in NPWS Irish Wildlife Manual No. 33
2014 (May)	NPWS map of Rhododendron clearance classifies all of Cahnicaun Wood as having cleared status.	AHG/AIE/2014/33 Record No. 155.	As this map classified all the

			oakwoods in the National Park with the exception of Glena Wood & parts of Tomies Wood as having cleared status, it is evidently not credible
2014 (June)	<p>Groundwork records MAJOR SEED PRODUCTION taking place in northern section of Cahnicaun. The Groundwork findings including photo albums were forwarded to NPWS on 18/6/14. For photos of Rhododendron recorded in 2014 see: http://groundworkireland.smugmug.com/Geotagged-Rhodo-Photos-MayAug/n-V3nPqW For instructions on accessing photo gallery see page 8 above.</p> <p>Video footage of re-infestation at north east section of Cahnicaun in 2014 & 2015) can be accessed at the following link: http://groundworkireland.smugmug.com/Cahnicaun-Rhodo-Videos/n-9PqPXM</p>	Groundwork Rhododendron Observations Report 2014 (See EC Complaint Attachment 1)	Major increase in seed production and extension of area in which “clear” status as defined in NPWS Irish Wildlife Manual No. 33 was lost
2014 (20 Sept)	GROUNDWORK SUBMITS FORMAL COMPLAINT TO THE EUROPEAN COMMISSION		
2014 (October)	NPWS classifies Rhododendron status of Cahnicaun Wood as “Fair” with LOW LEVEL SEED SOURCE remaining on site (O’Toole October 2014)	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron	The seed production recorded by GW in 2014 constitutes major not “low level”

		ponticum in Killarney National Park. NPWS REPORT	seed source. The reclassification of the status of the wood by NPWS is however notable
2014 (October)	DAHG Request for Tenders issued for “ <i>removal of Rhododendron seedlings and saplings and a very small number of mature bushes from approximately 16ha of the park ... the area indicated on the attached maps and photographs to be carefully and systematically searched for rhododendron plants. ... The contract will have a start date of 8 Dec. '14 and a completion date of 27th Feb '15</i> ” <u>The area mapped for clearance included the northern end of Cahnicaun Wood where Groundwork recorded major seed production in June 2014.</u>	Record 4 released by NPWS following DCEI Decision in Case CEI/15/0024	
2014 (21 November)	“ <i>It is worth noting that the latest capital contract for control of Rhododendron in KNP will be awarded in the next few days following a tendering process. That contract – value €100,000 – is largely focused on maintenance of previously cleared areas.</i> ”	Letter from John Fitzgerald (DAHG) to Paul Speight (European Commission) OCEI Record 3 released by NPWS following DCEI Decision in Case CEI/15/0024	This presumably refers to the tender advertised including Cahnicaun (see above). The Information Commissioner was provided with no completion reports on this work ,which it is assumed would have been prepared by NPWS prior to

			<p>issue of payment. This €100,000 contract is apparently different from the €4,400 + additional €4,000 contract in December 2014 (see below) which also included Cahnicaun (as well as all the other woods previously cleared and maintained by Groundwork).</p>
<p>2014 (21 November)</p>	<p><i>“The complainant’s core issue seems to be that there is ‘a re-infestation’ of areas of KNP – previously cleared by them. The reality is very different. These areas are virtually clear.”</i></p> <p><i>“To the Department’s knowledge there is a very small number of Rhododendron plants which are in a state to release seeds in the coming months, in or adjacent to, the areas where Rhododendron removal has been carried out partly by the complainant viz. Eamonn’s Wood, Tomies Wood, Cahnicaun Wood, Looscaunagh (Cahernabane Wood) and Glaisín na Marbh Wood.”</i></p> <p><i>“... there is at this stage in the programme always the possibility of there being a number of Rhododendron plants which could potentially</i></p>	<p>Letter from Mr John Fitzgerald (NPWS) to Mr Paul Speight (European Commission) See EC Complaint Addendum 6</p>	<p>These findings cannot be reconciled with the Groundwork findings in June 2013 & June 2014 (see above) and Groundwork’s findings in July 2015 & June 2016 (see below). At the time this</p>

	<p><i>seed in the areas cited by the complainant. However the Department considers that there are no grounds to suggest that a reasonable ecological assessment of the situation could conclude that there is a re-infestation taking place in the Park or that this poses an ecological risk at this time to the habitats, including oakwoods within the Park.</i></p> <p><i>“Nonetheless, as part of the inspection and maintenance programme, specific inspections of all the areas cited are now being undertaken and all ‘ready to seed’ Rhododendron located within these areas will be removed. This dedicated work commenced recently and it is aimed to have it completed by 15th December 2014 or before that. The Department will forward you a report on this on its completion.” (It is notable that though Mr Fitzgerald promised to forward a report on the “Inspection & Maintenance” on its completion, no such report was released following the investigation by the Information Commissioner.)</i></p>		<p>letter was sent NPWS was fully aware that rhododendron seed production had re-commenced in Cahnicaun Wood. See Groundwork document of 9/1/17: “An appraisal of National Parks & Wildlife Service (DAHG) response to the European Commission in relation to Groundwork’s formal complaint to the European commission.”</p>
<p>2015 (6 February)</p>	<p><i>NPWS AIE/AHG/2015/21 Document No 204 stated that “as part of the inspection and maintenance programme, specific inspections of all the areas cited by Groundwork, works were undertaken late last year (i.e. late 2014) and all “ready to seed” Rhododendron located within these areas has been removed. ... the Department considers that there are no grounds to suggest that a reasonable ecological assessment of the</i></p>	<p>Email from Trevor Donnelly (DAHG) to David Smith (DAHG) AIE/AHG/2015/21 Document No 204</p>	<p>This internal document appears to be a draft of the report promised to the EC by John</p>

	<p><i>situation could conclude that there is a re-infestation taking place in the Park or that this poses an ecological risk at this time to the habitats, including oakwoods within the Park.” NPWS AIE/AHG/2015/21 Document No 204 stated that the entire area of Cahnicaun Wood was inspected and maintained by “systematic sweeps” “searching for and removing Rhododendron seedlings and saplings”, “less than ten plants with seed heads were located and treated”.</i></p>	<p>(See EC Complaint Addendum 6 titled “Appraisal of NPWS’ December 2014 “Inspection and Maintenance” of the Annex I Oakwoods Cleared and Formerly Maintained by Groundwork in Killarney National Park)</p>	<p>Fitzgerald in his letter of 21 November 2014. In the light of the Groundwork findings just five months later and in July 2015, and its findings in June 2016 the “findings” of the NPWS Inspection & Maintenance are nonsensical; which may explain why the promised report was never issued to the European Commission. It may also explain why when pursued by the Commission for this report, NPWS did not issue the report but confined itself to generalised positive comments regarding the</p>
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			Rhododendron control programme (see May 2016 item below)
2015 (July)	<p>Groundwork records further major seed production taking place in northern section of Cahnicaun: c.166 plants \geq 1m were photographed in 2015, of which c.68 had flowered; of these 47 were observed to have seed pods from the 2014 flowering season. These plants shed their seed in late 2014/ early 2015. It can therefore be stated with a high degree of certainty that that winter several million rhododendron seeds were released into the surrounding oakwood area from this location alone. 2014/2015 was the third successive winter in which an increasingly serious release of Rhododendron seed was categorically proven in this area of wood.</p> <p>For photos of Rhododendron recorded in 2015 see: http://groundworkireland.smugmug.com/Cahnicaun-Jul-2015/n-8Z4ggC For instructions on accessing photo gallery see page 8 above.</p> <p>Video footage of re-infestation at north east section of Cahnicaun in 2014 & 2015) can be accessed at the following link: http://groundworkireland.smugmug.com/Cahnicaun-Rhodo-Videos/n-9PgPXM</p>	Groundwork Observations Report (July 2015) (See EC Complaint Addendum 7)	This further confirmed the loss of “clear” status (as defined in NPWS Irish Wildlife Manual No. 33) in this area of Cahnicaun
2015* **Updated to account for work in 2015”	<p>NPWS classifies Rhododendron status of Cahnicaun Wood as “Fair” with low level seed source remaining on site (O’Toole November 2015). No NPWS clearance is recorded as having occurred since 2012 (which is perplexing as two contracts in the winter of 2014/15 apparently included Cahnicaun Wood). The next scheduled clearance specified was in 2017. As it is evident that no clearance took place in Cahnicaun between the June 2015 Groundwork survey and the end of the year, it seems certain that the c.68 flowering plants recorded in June 2015 released seed (47 of which had released seed also in the</p>	O’Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October 201	This NPWS document is not compatible with the NPWS claim in December 2014 that all “ready to seed” Rhododendron located within

	previous winter)	updated to account for work in 2015) NPWS REPORT	these areas has been removed.
2016 (May)	<i>“As Mr Fitzgerald outlined, in November 2014 the Department was preparing to award a specific contract to survey previously cleared areas, and where relevant remove any Rhododendron found there . The Department finalised this contract shortly thereafter, and the specific areas referred to in the Formal Complain were surveyed and cleared by the contractors and NPWS staff by early 2015. None of these woodlands could be considered to be subject to significant re-infestation. While a small number of Rhododendron of seed bearing age were found, generally the woodlands were clear of such plants.”</i>	Letter from Mr Trevor Donnelly (NPWS) to Ms Anna Heslop (European Commission)	At the time this letter was sent NPWS was fully aware that rhododendron seed production had re-commenced in Cahnicaun Wood. See Groundwork document of 9/1/17: <i>“An appraisal of National Parks & Wildlife Service (DAHG) response to the European Commission in relation to Groundwork’s formal complaint to the European commission (chap(2014)03205)”</i>
2016 (June)	Significant number of flowering plants and plants which had released seed in the previous winter recorded in the middle section of	Groundwork Observations	

	Cahnicaun (not previously visited as part of the Groundwork Observations programme). For photos of Rhododendron recorded in 2016 see: http://groundworkireland.smugmug.com/Cahnicaun-Eamonn-June-2016/n-zwZvnm For instructions on accessing photo gallery see page 8 above.	Report (June 2016) (See EC Complaint Addendum 14)	
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2016 (December)	“Low level seed source remaining on site”	“Draft <i>Rhododendron ponticum</i> Control and Eradication Management Plan for Killarney National Park” Tim Cahalane	
2018 (January)	“Low level seed source remaining on site”	Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	

CONCLUSION: Cahnicaun Wood achieved Clear Status in 1990 as defined in Irish Wildlife Manual No. 33 (and Maintenance Phase Status as defined by Snowdonia National Park Authority). Cahnicaun lost its Clear Status between 2010 & 2013 and has not regained that status since.

2.2. EAMONN'S WOOD

		References	Comments
1988 - 1994	Phase 1 clearance carried out over a 7 year period by Groundwork progressing from west to east.	Groundwork Annual Reports to NPWS 1988 – 1994 (See EC Complaint Addendum 9)	
1991 - 1998	Phase 2 clearance carried out over an 8 year period by Groundwork progressing from west to east.	Groundwork Annual Reports to NPWS 1991 – 1998 (See EC Complaint Addendum 9)	
1996 - 2002	1 st Phase 3 Maintenance carried out over a 7 year period by Groundwork progressing from west to east	Groundwork Annual Reports to NPWS 1996 – 2002 (See EC Complaint Addendum 9)	
2006	AHG/AIE/2014/33 Record No. 216. The Draft Document “A Strategy for Rhododendron Control in Killarney National Park by Dr G. Therese Higgins (2006)” Commissioned by NPWS. This document includes the results of a general survey of rhododendron in Killarney National Park at that time (i.e. 2006). The only woodland areas of the National Park that were classified as “Cleared: Phase 3” in this report were western woods of the national park which had been cleared and maintained by Groundwork. All of Eamonn’s Wood is classified as “Cleared: Phase 3”.	AHG/AIE/2014/33 Record No. 216 (See EC Complaint Addendum 2)	

2007	2 nd Phase 3 Maintenance Visit of entire wood completed by Groundwork. Subsequent scheduled Groundwork maintenance visits not permitted by NPWS.	2007 Groundwork Annual Report to NPWS (See EC Complaint Addendum 9)	
2007	AHG/AIE/2014/33 Record No. 215. "Site Management: Killarney NP rhododendron control strategy – Comments by Jervis Good Divisional Ecologist NPWS – 26 April 2007 In the map accompanying the document all of Eamonn's Wood is classified as: "Areas from which rhododendron has been removed and have achieved "final clearance" status and are in an ongoing maintenance programme".	AHG/AIE/2014/33 Record No. 215 (See EC Complaint Addendum 2)	
2009	Management Plan for Killarney National Park 2005-2009) stated that : Groundwork's " <i>clearly defined strategies and extremely well-co-ordinated work programme has resulted in a significant proportion of the formerly infested oakwoods in the Park being maintained free of rhododendron. Most of this work has been carried out in the more inaccessible woodlands on the western side of the National Park.</i> "	www.npws.ie/publications/archive/KNPMP.pdf	
2010	NPWS maintenance visit	O'Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	

2011	NPWS classifies Rhododendron status of Eamonn's Wood as "Good" with <u>NO SEED SOURCE REMAINING ON SITE</u> (O'Toole May 2011)	ditto	
2012	NPWS maintenance visit which included "stem treating of large plants".	O'Toole (November 2012) (See EC Complaint Attachment 6)	
2013	On a sweep by two people for c.1 hour on 22/9/13 in the upper part of Eamonn's Wood Groundwork recorded and photographed c.20 plants in the range 0.5 – 1m in height and c.15 plants between 1m and 2m high, of which two plants were recorded which had flowered for the first time in 2013, and one plant was recorded which had flowered in both 2013 and 2012. The area where seed had been released thereby lost is "clear" status. For photos of Rhododendron recorded in 2013 see: http://groundworkireland.smugmug.com/Geotagged-Rhodo-Photos-JunSep-/n-d62R8C For instructions on accessing photo gallery see page 8 above.	Groundwork Rhododendron Observations Report 2014 (See EC Complaint Attachment 1)	
2014 (May)	NPWS map of Rhododendron clearance classifies all of Eamonn's Wood as having cleared status.	AHG/AIE/2014/33 Record No. 155.	As this map classified all the oakwoods in the National Park with the exception of Glena Wood & parts of Tomies Wood as having cleared status, it is evidently not credible

2014	NPWS maintenance visit	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
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<p>2014 (20 Sept)</p>	<p>GROUNDWORK SUBMITS FORMAL COMPLAINT TO THE EUROPEAN COMMISSION</p>		
<p>2014 (October)</p>	<p>NPWS classifies Rhododendron status of Eamonn's Wood as "Fair" with LOW LEVEL SEED SOURCE remaining on site</p>	<p>ditto</p>	
<p>2014 (21 November)</p>	<p><i>"The complainant's core issue seems to be that there is 'a re-infestation' of areas of KNP – previously cleared by them. The reality is very different. These areas are virtually clear."</i></p> <p><i>"To the Department's knowledge there is a very small number of Rhododendron plants which are in a state to release seeds in the coming months, in or adjacent to, the areas where Rhododendron removal has been carried out partly by the complainant viz. Eamonn's Wood, Tomies Wood, Cahnicaun Wood, Looscaunagh (Cahernabane Wood) and Glaisín na Marbh Wood."</i></p> <p><i>"... there is at this stage in the programme always the possibility of there being a number of Rhododendron plants which could potentially seed in the areas cited by the complainant. However the Department considers that there are no grounds to suggest that a reasonable ecological assessment of the situation could conclude that there is a re-infestation taking place in the Park or that this poses an ecological risk at this time to the habitats, including oakwoods within the Park."</i></p> <p><i>"Nonetheless, as part of the inspection and maintenance programme, specific inspections of all the areas cited are now being undertaken and all 'ready to seed' Rhododendron located within these areas will be removed. This dedicated work commenced recently and it is aimed to have it completed by 15th December 2014 or before that. The Department will forward you a report on this on its completion." (It is</i></p>	<p>Letter from Mr John Fitzgerald (NPWS) to Mr Paul Speight (European Commission) See EC Complaint Addendum 6</p>	<p>These findings cannot be reconciled with the Groundwork findings in June 2013 (see above), 2016 & 2017 (see below) & June 2014 (see above) and Groundwork's findings in July 2015 & June 2016 (see below). At the time this letter was sent NPWS was fully aware that rhododendron seed production had recommenced in Eamonn's Wood. See Groundwork</p>

	notable that though Mr Fitzgerald promised to forward a report on the "Inspection & Maintenance" on its completion, no such report was released following the investigation by the Information Commissioner.)		document of 9/1/17: "An appraisal of National Parks & Wildlife Service (DAHG) response to the European Commission in relation to Groundwork's formal complaint to the European commission"
2015	8 YEARS FROM LAST SYSTEMATIC GROUNDWORK MAINTENANCE		
2015 (6 February)	NPWS AIE/AHG/2015/21 Document No 204 stated that " <i>as part of the inspection and maintenance programme, specific inspections of all the areas cited by Groundwork, works were undertaken late last year (i.e. late 2014) and all "ready to seed" Rhododendron located within these areas has been removed. ... the Department considers that there are no grounds to suggest that a reasonable ecological assessment of the situation could conclude that there is a re-infestation taking place in the Park or that this poses an ecological risk at this time to the habitats, including oakwoods within the Park.</i> " NPWS AIE/AHG/2015/21	Email from Trevor Donnelly (DAHG) to David Smith (DAHG) AIE/AHG/2015/21 Document No 204 (See EC Complaint Addendum 6 titled "Appraisal of NPWS' December 2014 "Inspection and Maintenance" of the Annex I	This internal document appears to be a draft of the report promised to the EC by John Fitzgerald in his letter of 21 November 2014. Though the document states that the inspection and

		<i>Oakwoods Cleared and Formerly Maintained by Groundwork in Killarney National Park)</i>	maintenance was carried out in all areas cited by Groundwork no mention is made of Eamonn's Wood in the document.
2015* *"Updated to account for work in 2015"	NPWS classifies Rhododendron status of Eamonn's Wood as "Fair" with low level seed source remaining on site (O'Toole November 2015).	O'Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October 201 updated to account for work in 2015) NPWS Report	
2016 (May)	<i>"As Mr Fitzgerald outlined, in November 2014 the Department was preparing to award a specific contract to survey previously cleared areas, and where relevant remove any Rhododendron found there . The Department finalised this contract shortly thereafter, and the specific areas referred to in the Formal Complain were surveyed and cleared by the contractors and NPWS staff by early 2015. None of these woodlands could be considered to be subject to significant re- infestation. While a small number of Rhododendron of seed bearing age were found, generally the woodlands were clear of such plants."</i>	Letter from Mr Trevor Donnelly (NPWS) to Ms Anna Heslop (European Commission)	At the time this letter was sent NPWS was fully aware that rhododendron seed production had re- commenced in Eamonn's Wood. See Groundwork

			document of 9/1/17: “An appraisal of National Parks & Wildlife Service (DAHG) response to the European Commission in relation to Groundwork’s formal complaint to the European commission (chap(2014)0320 5)”
2016 (June)	A c.6ha area of Eamonn’s Wood was covered by two people for 2.5 hours. 119 plants over 0.5m were recorded and geotagged photos were taken of each plant. Thirty eight of the plants recorded were 0.5-1m high , seventy five were 1 – 2m high and 6 were 2-3m high. Nine plants were flowering in 2016 of which 6 had also released seed in the previous winter. For photos see: http://groundworkireland.smugmug.com/Cahnicaun-Eamonn-June-2016/n-zwZvnm For instructions on accessing photo gallery see page 8 above.	Groundwork Observations Report (June 2016) (See EC Complaint Addendum 14)	
2016 (Sept.)	A c.1ha area of Eamonn’s Wood was covered by 1 person for c.30 minutes. 28 plants over 1m were recorded and geotagged photos were taken of each plant. Twenty one of the plants recorded were 1 – 1.5m high, 6 were 1.5 – 2m high and 1 was 2 - 2.5m high. Nine plants had flowered in 2016 of which 5 had also released seed in the previous winter. As in most of the oakwood areas included in the Groundwork		

	<p>Observations Reports 2013 – 2016, the age and size distribution of the plants recorded indicates that no systematic maintenance of this area of wood has been carried out since the last Groundwork maintenance visit which in the case of Eamonn’s Wood was in 2007. For photos see: http://groundworkireland.smugmug.com/Eamonn's-Glaisin-Sept-2016/n-CF8FCn For instructions on accessing photo gallery see page 8 above.</p>		
2016 (December)	<p><i>“Low level seed source remaining on site”</i></p>	<p>“Draft Rhododendron ponticum Control and Eradication Management Plan for Killarney National Park” Tim Cahalane</p>	<p>“Low level seed source” is not compatible with the recording 5 months later in a c.5ha area of 118 flowering plants, 49 of which had released seed in the previous winter. (see May 2017 below)</p>

2017 (May)	<p>A c. 7ha area in and adjacent to Eamonn's Wood was covered by a 2 person transect for c.6½ hours. Much of the transect was through areas previously checked in 2016; however, the long finger of woodland extending in a southerly direction from the centre area of the wood was surveyed for the 1st time since last covered by Groundwork in 2007. Only plants which had produced seed and/or flowered were recorded. <u>169 plants with flowers were recorded, 67 of which had released seed</u> in the previous winter. The age and size distribution of the plants recorded indicates that no systematic maintenance of the areas visited had been carried out since the last Groundwork maintenance visit which in the case of Eamonn's Wood was in 2007. For photos of the May 2017 surveyed area see: http://groundworkireland.smugmug.com/Eamonns-May-2017/n-Bhtmlb</p> <p>(N.B. Only flowering/ seed producing plants are shown for the May 2017 survey)</p> <p>For instructions on accessing photo gallery see page 8 above.</p>		
2017 (Dec)	<p>Cahalane (December 2017) describes a maintenance visit to the wood in December 2017. The map provided in the report indicates that the area covered was c.3ha in the easily accessible middle section of the wood. Work was described as: "Treated saplings and medium sized plants on molinia area adjacent to wood and also some plants growing sporadically through the wood. Further work is required to treat isolated pockets of plants. By and large wood in fairly good condition."</p>	<p>Cahalane December(2017) Rhododendron Eradication Programme Progress Report December 2017. Report to NPWS</p>	<p>On 9th June 2017. Groundwork provided NPWS with full details of the 169 flowering and seed producing Rhododendron present throughout the wood in 2017. It is not clear why</p>

			<p>this information has not been addressed in the Cahalane report. It is evident that most of the flowering rhododendron recorded by Groundwork in May 2017 went on to release seed in the winter of 2017/18</p>
<p>2018 (January)</p>	<p>“Low level seed source remaining on cliffs in woodland”</p>	<p>Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)</p>	<p>Cahalane (2018) indicates that the last clearance work carried out in the wood was in 2014; which is at variance with the information provided in his December 2017 “Progress Report”.</p>

CONCLUSION: Clear Status as defined in Irish Wildlife Manual No. 33 (and Maintenance Phase Status as defined by Snowdonia National Park Authority) was achieved for the entire wood by 1998. Eamonn's Wood lost its Clear Status between 2013 & 2015 and has not regained that status since.

NPWS claims to have carried out an "Inspection and maintenance" in December 2014 of all the oakwood areas previously cleared and maintained by Groundwork. Regarding this "Inspection and maintenance", in May 2016 Trevor Donnelly (Principal Officer NPWS) reported to the European Commission that none of the woods in question "could be considered to be subject to significant re-infestation. While a small number of Rhododendron of seed bearing age were found, generally the woodlands were clear of such plants." One year later, in May 2017, in a c.7ha area in and adjacent to Eamonn's Wood, Groundwork recorded 169 plants with flowers; 67 of these plants had released seed in the previous winter. It is therefore evident that in the area surveyed by Groundwork at least 1 million Rhododendron seeds were released in and adjacent to Eamonn's Wood just five months after Mr Donnelly's letter to the European Commission. The total seed release in the total area of Eamonn's Wood would have been a multiple of this figure. If the 169 flowering plants recorded in c.7ha by Groundwork in May 2017 are allowed to release seed, the total seed release in winter 2017/18 from the plants recorded is likely to be in excess of 15 million wind-blown seeds. Not only is there a greater number of flowering plants in the second year of flowering, but also in the second year of flowering the number of flowers produced by each plant is much greater than in the first year of flowering, increasing further with each subsequent year. That these figures are conservative is illustrated by the fact that Cross recorded more than 1 million seeds produced by a single bush in Killarney that was in the semi-open and 2 metres tall by c.10 metres circumference. (Cross, J.R. (1973) *The ecology and control of Rhododendron ponticum (L.) with special reference to the Killarney National Park*. PhD Thesis, University of Dublin, Trinity College.)

The contrast between the picture painted by Mr Donnelly in his submission to the European Commission of May 2016 and the reality recorded on the ground in May 2017 is stark and telling.

The Groundwork inspection of c.7 ha of Eamonn's Wood in May 2017 indicates a more than doubling of the seed producing plants from 67 flowering in 2016 to 169 flowering in 2017 in the area visited. The pattern of re-infestation observed is as would be expected on cessation of systematic maintenance of the wood in 2007 i.e. :

1. No dense presence of visible small seedlings, as would be the case if seed production had been ongoing within the wood.
2. Seed production commencing in 2014/15, i.e. c.8-10 years after last systematic maintenance coverage by Groundwork (Rhododendron typically takes 8-10 years to grow to flowering stage).
3. Seed production now rapidly accelerating in the wood 10 years after cessation of systematic maintenance.
4. Massive growth of thousands of new seedlings will become visible over the next few years now that major seed production has recommenced in the wood.

This situation would have been avoided if the systematic maintenance visit scheduled by Groundwork for 2014 had been allowed to proceed. Even if all visible Rhododendron were now to be systematically removed, a massive re-infestation will now inevitably occur from the millions of seed already released and germinating in the wood.

2.3. GLAISÍN NA MARBH WOOD

		References	Comments
1984 -1985	Phase 1 clearance carried out by Groundwork of Glaisín na Marbh Wood Western Section	Groundwork Annual Reports to NPWS 1984 & 1985 (See EC Complaint Addendum 9)	
1986 - 1987	Phase 2 clearance carried out by Groundwork of Glaisín na Marbh Wood Western Section	Groundwork Annual Reports to NPWS 1986 & 1987 (See EC Complaint Addendum 9)	
1993	1 st Phase 3 Maintenance carried out of Glaisín na Marbh Wood Western Section	ditto	
1994 –2003	Phase 1 clearance carried out of Glaisín na Marbh Wood Eastern Section over a 5 year period by Groundwork progressing from west to east.	Groundwork Annual Reports to NPWS 1994 – 2003 (See EC Complaint Addendum 9)	
1997 - 2006	Phase 2 clearance carried out of Glaisín na Marbh Wood Eastern Section over a 6 year period by Groundwork	Groundwork Annual Reports to NPWS 1997 – 2006 (See EC Complaint Addendum 9)	

1998 - 2001	2 nd Phase 3 maintenance of Glaisín na Marbh Wood Western Section	Groundwork Annual Reports to NPWS 1998 – 2001 (See EC Complaint Addendum 9)	
2001	<p>AHG/AIE/2014/33 Record No. 236</p> <p>Permanent plots for the monitoring of woodland vegetation and regeneration in Killarney National Park: 1991 – 2001 – A Report (2001) submitted to Dúchas, the Heritage Service, National Parks & Wildlife from the Department of Botany, Trinity College Dublin</p> <p>Two woods cleared and maintained by Groundwork are included in this study: Tomies Wood and Glaisín na Marbh. The description of Rhododendron status of these woods indicates that both Tomies Wood and Glaisín na Marbh had been successfully cleared and were being successfully maintained by Groundwork at that time (i.e. 2001)</p> <p>The Report states: “<i>Control of Rhododendron infestation at Glaisín na Marbh appears to be successful, with re-infestation kept in check by regular systematic sweeping of the woodland for seedlings.</i>”</p>	See EC Complaint Addendum 2	
2003 - 2005	Phase 3 clearance carried out of sections of Glaisín na Marbh Wood Eastern Section. Subsequent scheduled Groundwork maintenance visits not permitted by NPWS.	Groundwork Annual Reports to NPWS 2003 – 2005 (See EC Complaint Addendum 9)	
2006	AHG/AIE/2014/33 Record No. 216. The Draft Document “A Strategy for Rhododendron Control in Killarney National Park by Dr G. Therese Higgins (2006)” Commissioned by NPWS. This document includes the results of a general survey of rhododendron in Killarney National Park at that time (i.e. 2006). The only woodland areas of the National Park	AHG/AIE/2014/33 Record No. 216 (See EC Complaint Addendum 2)	

	that were classified as “Cleared: Phase 3” in this report were western woods of the national park which had been cleared and maintained by Groundwork. All of Glaisín na Marbh is classified as “Cleared: Phase 3”.		
2007	AHG/AIE/2014/33 Record No. 215. “Site Management: Killarney NP rhododendron control strategy – Comments by Jervis Good Divisional Ecologist NPWS – 26 April 2007 In the map accompanying the document all of Glaisín na Marbh Wood is classified as: “Areas from which rhododendron has been removed and have achieved “final clearance” status and are in an ongoing maintenance programme”.	AHG/AIE/2014/33 Record No. 215 (See EC Complaint Addendum 2)	
2009	Management Plan for Killarney National Park 2005-2009) stated that : Groundwork’s “ <i>clearly defined strategies and extremely well-coordinated work programme has resulted in a significant proportion of the formerly infested oakwoods in the Park being maintained free of rhododendron. Most of this work has been carried out in the more inaccessible woodlands on the western side of the National Park.</i> ”	www.npws.ie/publications/archive/KNPMP.pdf	
2010	8 YEARS FROM LAST SYSTEMATIC GROUNDWORK MAINTENANCE OF PARTS OF GLAISÍN NA MARBH WOOD		
2010	Minutes of a meeting on 12th February 2010 between Groundwork and Killarney National Park local management state: “ <i>Groundwork raised the point that parts of Upper Doogary, Kingsboro, Cahnicaun, Eamonn’s Wood and Glaisín na Marbh were overdue for their 8 yearly phase 3 follow-up.</i> ”	See EC Complaint Addendum 12	

2010 - 2011	The first NPWS coverage of Glaisin na Marbh mentioned by O'Toole (2012) was in 2011& 2012 (by contractors). By the time of this coverage substantial re-infestation and seed production had already taken place in the more easterly part of the wood which adjoins un-cleared woodland.	O'Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	EC Complaint Attachment 1 O'Toole (November 2012) (See EC Complaint Attachment 6)
2011	NPWS classifies Rhododendron status of Glaisín na Marbh Wood as Fair, Major seed source on northern side of site. Moderate densities of saplings and seedlings on site nearest seed source." (O'Toole 2011)	ditto	This description does not specifically confirm seed production on site. This is not reconcilable with Groundwork observations of seed production, or the 2012 scientific monitoring of this wood by Professors Daniel Kelly & Fraser Mitchell (See below and EC Complaint Addendum 8)

2011/2012	Contract clearance	O'Toole (November 2012) (See EC Complaint Attachment 6)	
2012 (April)	<p>Letter to NPWS from Professor Daniel Kelly (Woodland Ecologist & Head of Botany at Trinity College Dublin) & Professor Fraser Mitchell (Woodland Ecologist and Professor at Trinity College Dublin) states: <i>"We have for some time been intending to approach you on this burning issue. You will be aware that we in the Botany Department in Trinity College Dublin have a long-standing involvement in Killarney National Park, with research – focussed on the native woodlands – extending over what is now a 43-year period, supported by the National Parks & Wildlife Service and its predecessor organisations. Our most recent involvement has been in the 20-year resurvey of the network of permanent plots set up in the park in 1991. ...The results show major increases in Rhododendron in some woods, notably in the Glaisín na Marbh area and Tomies Wood. Both of these woods have been effectively cleared of Rhododendron, as we have seen personally and as the surveys from prior years confirm. ...However, in both woods Rhododendron has increased steeply in recent years, and new populations are again reaching the stage of flowering and fresh seed production."</i> (See EC Complaint Addendum 8)</p>	See EC Complaint Addendum 8	
2012 (June)	<p>Letter to Dr John Cross (NPWS) from Professor Daniel Kelly (Woodland Ecologist & Head of Botany at Trinity College Dublin) states: <i>"I attach a copy of some initial results from the resurvey of the permanent plots in Killarney National Park. They show huge regeneration of Rhododendron ponticum (i) in Tomies Wood, a wood that has quite recently been virtually clear of Rhodo (and that was almost entirely Rhodo-free when it came into the possession of NPWS) and (ii) a wood that had been successfully and thoroughly cleared of</i></p>	See EC Complaint Addendum 8	

	<i>Rhodo by Groundwork volunteers (Glaisín na Marbh). These results are so dramatic that they were sent to the Park Manager with an accompanying letter from Prof. Fraser Mitchell and myself, that was copied to Dr Ciaran O’Keeffe. Two months have passes and we have received no reply as yet. In the meantime, the level and quantity of volunteer activity involved in Rhodo clearance in Killarney National Park has been sharply reduced. It also appears that reliance is being placed on methods of Rhodo control which have not been scientifically tested or monitoring and are not recognised as good practice. This is an issue of nation-wide significance, with implications for other National Parks and nature reserves under National Parks & Wildlife Management .”</i>		
2012 (November)	NPWS classifies Rhododendron status of Glaisín na Marbh Wood as Fair no seed source remaining on control site. (O’Toole November 2012)	O’Toole (November 2012) (See EC Complaint Attachment 6)	This classification is not reconcilable with monitoring results of Kelly & Mitchell in 2012 (see 2012 (April) and 2012 (June) above)
2014 (May)	NPWS map of Rhododendron clearance classifies Glaisín na Marbh Wood as having cleared status.	AHG/AIE/2014/33 Record No. 155.	As this map classified all the oakwoods in the National Park with the exception of Glena Wood & parts of Tomies Wood as having

			cleared status, it is evidently not credible
2014 (June)	<p>Groundwork assessment consisted of a transect walk by two people for c. 2¼ hours in the main area of Glaisín na Marbh on 1/6/14. Groundwork transect assessment concluded: "The picture that emerges from the brief visit to the main body of Glaisín na Marbh Wood in 2014 is that, following the cessation of systematic Groundwork maintenance in 2000, the more recently cleared eastern areas of the wood which are most prone to re-infestation (being closer to un-cleared areas) had deteriorated significantly by 2011/2012 and significant seed production had re-commenced. In 2011/2012 a rhododendron clearance contract was carried out which appears to have successfully covered the central area of the wood. However the higher more inaccessible areas at the north east of the wood were not successfully covered, and significant flower production has now commenced there. Likewise the south and south eastern section of the wood, and adjacent areas immediately to the south of the woodland edge, were not successfully covered, and major flower production in this area now threatens to spread rhododendron seed not alone in Glaisín na Marbh Wood, but also into Eamonn's Wood, the margins of which are only a few hundred metres south of the area of major rhododendron flower production."</p> <p>A brief transect walk of the eastern perimeter of Glasha Wood (wood south west of Glaisín na Marbh Wood) was carried out by four people on 20/8/14 for c. 1hour. Geotagged photographs were taken of Rhododendron plants over 0.5m high. Due to daylight constraints only the eastern section of the wood was visited. It is evident that this wood, previously regarded as the only wood in the National Park which had never been infested by Rhododendron, is now on the cusp of major infestation. Numerous plants over 0.5m high were observed further into</p>	Groundwork Rhododendron Observations Report 2014 (See EC Complaint Attachment 1)	Groundwork Rhododendron Observations Report 2014 (See EC Complaint Attachment 1)

	<p>the wood which were not photographed. A relatively small number of plants were observed that had flowered and set seed in 2013, but very much larger numbers were found to have flowered for the first time in 2014 and will release seed during the coming winter of 2014/2015. The findings of this visit indicate that the colonisation of this wood took place c.1994. This initial colonising plant reached flowering stage c. 2004. The oldest seedlings from this flowering reached flowering stage in 2013 and substantial numbers reached first flowering stage in 2014. The first 2nd generation Rhododendron seed production is therefore set to take place in this wood in c.4 months' time. (see EC Complaint Attachment 1) See EC Complaint Attachment 1 - For photos of Rhododendron recorded in 2014 see: http://groundworkireland.smugmug.com/Geotagged-Rhodo-Photos-MayAug-1n-V3nPqW For instructions on accessing photo gallery see page 8 above.</p>		
<p>2014 (20 Sept)</p>	<p>GROUNDWORK SUBMITS FORMAL COMPLAINT TO THE EUROPEAN COMMISSION</p>		
<p>2014 (October)</p>	<p>NPWS classifies Rhododendron status of Glaisín na Marbh Wood as "Fair" with low level seed source remaining on site (O'Toole October 2014).</p>	<p>O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS</p>	

		REPORT	
2014 (21 November)	<p><i>"The complainant's core issue seems to be that there is 'a re-infestation' of areas of KNP – previously cleared by them. The reality is very different. These areas are virtually clear."</i></p> <p><i>"To the Department's knowledge there is a very small number of Rhododendron plants which are in a state to release seeds in the coming months, in or adjacent to, the areas where Rhododendron removal has been carried out partly by the complainant viz. Eamonn's Wood, Tomies Wood, Cahnicaun Wood, Looscaunagh (Cahernabane Wood) and Glaisín na Marbh Wood."</i></p> <p><i>"... there is at this stage in the programme always the possibility of there being a number of Rhododendron plants which could potentially seed in the areas cited by the complainant. However the Department considers that there are no grounds to suggest that a reasonable ecological assessment of the situation could conclude that there is a re-infestation taking place in the Park or that this poses an ecological risk at this time to the habitats, including oakwoods within the Park."</i></p> <p><i>"Nonetheless, as part of the inspection and maintenance programme, specific inspections of all the areas cited are now being undertaken and all 'ready to seed' Rhododendron located within these areas will be removed. This dedicated work commenced recently and it is aimed to have it completed by 15th December 2014 or before that. The Department will forward you a report on this on its completion." (It is notable that though Mr Fitzgerald promised to forward a report on the "Inspection & Maintenance" on its completion, no such report was released following the investigation by the Information Commissioner.)</i></p>	<p>Letter from Mr John Fitzgerald (NPWS) to Mr Paul Speight (European Commission) See EC Complaint Addendum 6</p>	<p>These findings cannot be reconciled with the Groundwork findings in June 2014 (see above)</p>
2015	<p>NPWS AIE/AHG/2015/21 Document No 204 stated that <i>"as part of the inspection and maintenance programme, specific inspections of all the</i></p>	<p>See EC Complaint</p>	<p>These findings</p>

<p>(6 February)</p>	<p><i>areas cited by Groundwork, works were undertaken late last year (i.e. late 2014) and all “ready to seed” Rhododendron located within these areas has been removed. ... the Department considers that there are no grounds to suggest that a reasonable ecological assessment of the situation could conclude that there is a re-infestation taking place in the Park or that this poses an ecological risk at this time to the habitats, including oakwoods within the Park.”</i> The NPWS document stated that the entire area of Glaisín na Marbh Wood was inspected and maintained by “systematic sweeps” “searching for and removing Rhododendron seedlings and saplings”, “less than ten plants with seed heads were located and treated”.</p>	<p>Addendum 6</p>	<p>cannot be reconciled with the 52 rhododendron plants 0.5-1m high & 30 plants 1-2m, including 54 flowering plants which were observed and photographed by Groundwork c.6 months earlier in the southern section of the wood and the area immediately adjacent to the wood to the south. Nor can they be reconciled with the “low level” seed sources stated by NPWS to be present in 2015</p>
<p>2015* "Updated to account for work in 2015"</p>	<p>NPWS classifies Rhododendron status of Glaisin na Marbh Wood as “Fair” with low level seed source remaining on site (O’Toole October 2015).</p>	<p>O’Toole, P. (2015) Long Term Strategic Programme for the Control of</p>	

		Rhododendron ponticum in Killarney National Park. (Programme October 201 updated to account for work in 2015) NPWS REPORT	
2016 (May)	<p><i>“As Mr Fitzgerald outlined, in November 2014 the Department was preparing to award a specific contract to survey previously cleared areas, and where relevant remove any Rhododendron found there . The Department finalised this contract shortly thereafter, and the specific areas referred to in the Formal Complain were surveyed and cleared by the contractors and NPWS staff by early 2015. None of these woodlands could be considered to be subject to significant re-infestation. While a small number of Rhododendron of seed bearing age were found, generally the woodlands were clear of such plants.”</i></p>	Letter from Mr Trevor Donnelly (NPWS) to Ms Anna Heslop (European Commission)	At the time this letter was sent NPWS was fully aware that rhododendron seed production had re-commenced in Glaisín na Marbh Wood. See Groundwork document of 9/1/17: <i>“An appraisal of National Parks & Wildlife Service (DAHG) response to the European Commission in relation to Groundwork’s formal complaint to the European</i>

			<i>commission (chap(2014)0320 5)</i>
2016 (December)	<i>"Low level seed source remaining on site"</i>	"Draft Rhododendron ponticum Control and Eradication Management Plan for Killarney National Park" Tim Cahalane	
2018 (Jan)	<i>"Low level seed source remaining on site"</i>	Rhododendron ponticum Control and Eradication Management Plan for Killarney National Park 2018 - 2023" Tim Cahalane	

CONCLUSION: Glaisín na Marbh Wood lost its Clear Status as defined in Irish Wildlife Manual No. 33 (and Maintenance Phase Status as defined by Snowdonia National Park Authority) between 2010 & 2012 and has not regained that status since.

2.4. LOOSCAUNAGH WOOD (TOWNLANDS OF CAHERNADUV & PART OF CAHERNABANE)

		References	Comments
1983	Phase 1 clearance carried by Groundwork	Groundwork Report to NPWS 1981 – 1984 (See EC Complaint Addendum 9)	
1986	Phase 2 clearance carried by Groundwork	1986 Groundwork Annual Report to NPWS (See EC Complaint Addendum 9)	
1992	1 st Phase 3 maintenance carried out by Groundwork	1992 Groundwork Annual Report to NPWS (See EC Complaint Addendum 9)	
1999	2 nd Phase 3 maintenance carried out by Groundwork	1999 Groundwork Annual Report to NPWS (See EC Complaint Addendum 9)	

2006	3 rd Phase 3 maintenance carried out by Groundwork. Subsequent scheduled Groundwork maintenance visits not permitted by NPWS.	2006 Groundwork Annual Report to NPWS (See EC Complaint Addendum 9)	
2006	AHG/AIE/2014/33 Record No. 216. The Draft Document “A Strategy for Rhododendron Control in Killarney National Park by Dr G. Therese Higgins (2006)” Commissioned by NPWS. This document includes the results of a general survey of rhododendron in Killarney National Park at that time (i.e. 2006). The only woodland areas of the National Park that were classified as “Cleared: Phase 3” in this report were western woods of the national park which had been cleared and maintained by Groundwork. All of Looscaunagh (Cahernabane & Cahernaduv) Wood is classified as “Cleared: Phase 3”.	AHG/AIE/2014/33 Record No. 216 (See EC Complaint Addendum 2)	
2007	AHG/AIE/2014/33 Record No. 215. “Site Management: Killarney NP rhododendron control strategy – Comments by Jervis Good Divisional Ecologist NPWS – 26 April 2007 In the map accompanying the document all of Looscaunagh (Cahernabane & Cahernaduv) Wood is classified as: “Areas from which rhododendron has been removed and have achieved “final clearance” status and are in an ongoing maintenance programme”.	AHG/AIE/2014/33 Record No. 215 (See EC Complaint Addendum 2)	
2009	Management Plan for Killarney National Park 2005-2009) stated that : Groundwork’s “ <i>clearly defined strategies and extremely well-co-ordinated work programme has resulted in a significant proportion of the formerly infested oakwoods in the Park being maintained free of rhododendron. Most of this work has been carried out in the more inaccessible woodlands on the western side of the National Park.</i> ”	www.npws.ie/publications/archive/KNPMP.pdf	

2010/2011	NPWS maintenance visit (O'Toole 2011)	O'Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2011	NPWS classifies Rhododendron status of Looscaunagh (Cahernabane & Cahernaduv) Wood as Good no seed source remaining on site (O'Toole 2011)	ditto	
2012	NPWS maintenance visit (O'Toole 2012)	O'Toole (November 2012) (See EC Complaint Attachment 6)	
2012	NPWS classifies Rhododendron status of Looscaunagh (Cahernabane & Cahernaduv) Wood as Good no seed source remaining on site (O'Toole 2012)	ditto	
2013	Groundwork assessment consisting of a sweep by three people for c. 4.5 hours on 6/7/13. Geotagged photographs were taken of Rhododendron plants over 0.5m high. One clump of c.20 flowering but non seeding plants which had regrown from cut stumps in a pocket of wood above the upper edge of the wood was recorded. Apart from this, c.80 plants in the range 0.5 – 1m in height and c.50 plants in the range 1m- 2m in height were recorded, of which three plants were recorded which had flowered for the first time in 2013 these plants are likely to have released seed in early 2014. For photos of Rhododendron recorded in 2013 see:	Groundwork Rhododendron Observations Report 2014 (See EC Complaint Attachment 1)	The results of this survey indicated that the wood was on the brink of significant seed production

	http://groundworkireland.smugmug.com/Geotagged-Rhodo-Photos-JunSep-/n-d62R8C For instructions on accessing photo gallery see page 8 above.		
2014	8 YEARS FROM LAST SYSTEMATIC GROUNDWORK MAINTENANCE		
2014	Groundwork assessment at north eastern end of wood consisting of a one person 1 hour transect on 20/5/14. On the 2014 transect twenty one rhododendron >0.5m high were recorded, nine of which were flowering for the first time. http://groundworkireland.smugmug.com/Geotagged-Rhodo-Photos-MayAug-/n-V3nPgw For instructions on accessing photo gallery see page 8 above.	Groundwork Rhododendron Observations Report 2014 (See EC Complaint Attachment 1)	
2014 (May)	NPWS map of Rhododendron clearance classifies all of Looscaunagh Wood as having cleared status.	AHG/AIE/2014/33 Record No. 155.	As this map classified all the oakwoods in the National Park with the exception of Glena Wood & parts of Tomies Wood as having cleared status, it is evidently not credible
2014	NPWS maintenance visit (O'Toole 2014)	O'Toole, P. (October 2014) Long Term	

		Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2014 (20 Sept)	GROUNDWORK SUBMITS FORMAL COMPLAINT TO THE EUROPEAN COMMISSION		
2014 (October)	NPWS classifies Rhododendron status of Looscaunagh (Cahernabane & Cahernaduv) Wood as Fair low level seed source on site (O'Toole 2014)	Ditto	
2014 (21 November)	<p><i>"The complainant's core issue seems to be that there is 'a re-infestation' of areas of KNP – previously cleared by them. The reality is very different. These areas are virtually clear."</i></p> <p><i>"To the Department's knowledge there is a very small number of Rhododendron plants which are in a state to release seeds in the coming months, in or adjacent to, the areas where Rhododendron removal has been carried out partly by the complainant viz. Eamonn's Wood, Tomies Wood, Cahnicaun Wood, Looscaunagh (Cahernabane Wood) and Glaisín na Marbh Wood."</i></p> <p><i>"... there is at this stage in the programme always the possibility of there being a number of Rhododendron plants which could potentially seed in the areas cited by the complainant. However the Department considers that there are no grounds to suggest that a reasonable ecological assessment of the situation could conclude that there is a re-infestation taking place in the Park or that this poses an ecological risk at this time to the habitats, including oakwoods within the Park."</i></p>	Letter from Mr John Fitzgerald (NPWS) to Mr Paul Speight (European Commission) See EC Complaint Addendum 6	These findings cannot be reconciled with the Groundwork findings in June 2013 & June 2014 (see above) and Groundwork's findings in July 2015 & June 2016 (see below). At the time this letter was sent NPWS was fully aware that rhododendron seed production

	<p><i>“Nonetheless, as part of the inspection and maintenance programme, specific inspections of all the areas cited are now being undertaken and all ‘ready to seed’ Rhododendron located within these areas will be removed. This dedicated work commenced recently and it is aimed to have it completed by 15th December 2014 or before that. The Department will forward you a report on this on its completion.”</i> (It is notable that though Mr Fitzgerald promised to forward a report on the “Inspection & Maintenance” on its completion, no such report was released following the investigation by the Information Commissioner.)</p>		<p>had re-commenced in Looscaunagh Wood. See Groundwork document of 9/1/17: <i>“An appraisal of National Parks & Wildlife Service (DAHG) response to the European Commission in relation to Groundwork’s formal complaint to the European commission</i></p>
2015 (6 February)	<p>NPWS AIE/AHG/2015/21 Document No 204 stated that <i>“as part of the inspection and maintenance programme, specific inspections of all the areas cited by Groundwork, works were undertaken late last year (i.e. late 2014) and all “ready to seed” Rhododendron located within these areas has been removed. ... the Department considers that there are no grounds to suggest that a reasonable ecological assessment of the situation could conclude that there is a re-infestation taking place in the Park or that this poses an ecological risk at this time to the habitats, including oakwoods within the Park.”</i> The NPWS document stated that the entire area of Looscaunagh Wood was inspected and maintained by “systematic sweeps” “searching for and removing Rhododendron</p>	See EC Complaint Addendum 6	<p>The finding of 15 plants with seed heads found by 10 people in three days is difficult to reconcile with nine flowering plants found by one person in one hour six</p>

	<i>seedlings and saplings”, “less than 15 plants with seed heads were located and treated”.</i>		months earlier. Nor can they be reconciled with the “low level” seed sources stated by NPWS to be present in 2015
2015	<i>“Maintenance sweeps carried out by contractors in 2015” (Cahalane 2016)</i>	<i>Draft Rhododendron ponticum Control and Eradication Management Plan for Killarney National Park” Tim Cahalane Report December 2016 to NPWS</i>	
2015* "Updated to account for work in 2015"	NPWS classifies Rhododendron status of Looscaunagh (Cahernabane & Cahernaduv) Wood as Fair low level seed source on site (O'Toole 2015)	O'Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October 2014 updated to account for work in 2015) NPWS REPORT	
2016 (May)	<i>“As Mr Fitzgerald outlined, in November 2014 the Department was preparing to award a specific contract to survey previously cleared</i>	Letter from Mr Trevor Donnelly (NPWS) to	At the time this letter was sent

	<p><i>areas, and where relevant remove any Rhododendron found there . The Department finalised this contract shortly thereafter, and the specific areas referred to in the Formal Complain were surveyed and cleared by the contractors and NPWS staff by early 2015. None of these woodlands could be considered to be subject to significant re-infestation. While a small number of Rhododendron of seed bearing age were found, generally the woodlands were clear of such plants.”</i></p>	<p>Ms Anna Heslop D.G. Environment European Commission</p>	<p>NPWS was fully aware that rhododendron seed production had re-commenced in Looscaunagh Wood. See Groundwork document of 9/1/17: “An appraisal of National Parks & Wildlife Service (DAHG) response to the European Commission in relation to Groundwork’s formal complaint to the European commission (chap(2014)032 05)”</p>
<p>2016 (December)</p>	<p><i>“Low level seed source remaining on site”</i></p>	<p><i>“Draft Rhododendron ponticum Control and Eradication Management Plan for Killarney National Park”</i> Tim Cahalane Report December</p>	<p>A few months after this draft report Groundwork recorded 249 rhodo plants with flowers of</p>

		2016 to NPWS	which 120 had released seed in the previous winter, in an area of c.8ha. (see below). This cannot be accurately described as "low level seed source remaining on site".
2017 (May)	<p>A c.15ha area in Looscaunagh (Cahernabane & Cahernaduv) Wood was covered by 2 or 3 person transects for a total of c.18 person hours. Only plants which had produced seed and/or flowered were recorded. <u>249 plants with flowers were recorded, 120 of which had released seed in the previous winter.</u> Hundreds more rhodo plants were observed in the size range 1.5 – 3+ metres height, which had not produced flower but were likely to do so in 2018. The age and size distribution of the plants recorded indicates that no systematic maintenance of the area visited had been carried out since the last Groundwork maintenance visit, which in the case of Looscaunagh Wood was in 2006. For photos see: http://groundworkireland.smugmug.com/Looscaunagh-May-2017/n-cKwvLx</p> <p>(N.B. Only flowering/ seed producing plants are shown)</p> <p>For instructions on accessing photo gallery see page 8 above.</p>		
2018 (January)	"Low level seed source remaining"	Rhododendron ponticum Control & Eradication	Cahalane (2018) states that the last

		Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	clearance work carried out in the wood was in 2014. On 9th June 2017, Groundwork provided NPWS with full details of the the 249 flowering and seed producing Rhododendron present throughout the wood in 2017. It is not clear why this information has not been addressed in the Cahalane report
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CONCLUSION: Looscaunagh (Cahernabane & Cahernaduv) Wood lost its Clear Status as defined in Irish Wildlife Manual No. 33 (and Maintenance Phase Status as defined by Snowdonia National Park Authority) between 2013 & 2014 and has not regained that status since.

NPWS claims to have carried out an “Inspection and maintenance” in December 2014 of all the oakwood areas previously cleared and maintained by Groundwork. Regarding this “Inspection and maintenance”, in May 2016 Trevor Donnelly (Principal Officer NPWS) reported to the European Commission that none of the woods in question “could be considered to be subject to significant

re-infestation. While a small number of Rhododendron of seed bearing age were found, generally the woodlands were clear of such plants.” One year later in May 2017, in a c.15ha area in Looscaunagh (Cahernabane & Cahernaduv) Wood, Groundwork recorded 249 plants with flowers; 120 of these plants had released seed in the previous winter. It is therefore evident that in the area surveyed by Groundwork at least 2 million Rhododendron seeds were released in Looscaunagh (Cahernabane & Cahernaduv) Wood just five months after Mr Donnelly’s letter to the European Commission. If the 249 flowering plants recorded in c.15ha by Groundwork in May 2017 are allowed to release seed, the total seed release in winter 2017/2018 from the plants recorded is likely to be in excess of 22 million wind-blown seeds. Not only is there a greater number of flowering plants than the previous year, but also the number of flowers produced by each plant is much greater in the second year of flowering than in the first year of flowering, increasing further with each subsequent year. That these figures are conservative is illustrated by the fact that Cross (1973) recorded more than 1 million seeds produced by a single bush in Killarney that was in the semi-open and 2 metres tall by c.10 metres circumference. (Cross, J.R. (1973) *The ecology and control of Rhododendron ponticum (L.) with special reference to the Killarney National Park*. PhD Thesis, University of Dublin, Trinity College.)

The contrast between the picture painted by Mr Donnelly in his submission to the European Commission of May 2016 and the reality recorded on the ground in May 2017 is stark and telling.

The Goundwork inspection of c.15 ha of Looscaunagh (Cahernabane & Cahernaduv) Wood in May 2017 indicates a doubling of the seed producing plants from 120 flowering in 2016 to 249 flowering in 2017 in the area visited. The pattern of re-infestation observed is as would be expected on cessation of systematic maintenance of a wood with adjacent seed sources in upwind areas outside the national park boundary and from rhododendron infested conifer plantations within the national park, i.e. :

1. No dense presence of visible small seedlings, as would be the case if seed production had been ongoing within the wood.

2. Seed production commencing in 2014/15, i.e. c.8-10 years after last systematic maintenance coverage by Groundwork (Rhododendron typically takes 8-10 years to grow to flowering stage).
3. Seed production now rapidly accelerating in the wood 11 years after cessation of systematic maintenance.
4. Massive growth of thousands of new seedlings will become visible over the next few years now that major seed production has recommenced in the wood.

This situation would have been avoided if the systematic maintenance visit scheduled by Groundwork for 2013 (See Groundwork 2006 Workcamps report to NPWS in EC Formal Complaint Addendum 9) had been allowed to proceed. Even if all visible Rhododendron were now to be systematically removed, a massive re-infestation will now inevitably occur from the millions of seed already released and germinating in the wood.

2.5. TOMIES WOOD SOUTH OF O’SULLIVAN’S CASCADE

		References	Comments
1981	Phase 1 clearance carried out by Groundwork of Tomies Wood	1981 Groundwork Report to NPWS (See EC Complaint Addendum 9)	
1985	Phase 2 clearance carried out by Groundwork of Tomies Wood	1985 Groundwork Report to NPWS (See EC Complaint Addendum 9)	
1991	1 st Phase 3 Maintenance carried out by Groundwork of Tomies Wood	1991 Groundwork Report to NPWS (See EC Complaint Addendum 9)	
1996	2 nd Phase 3 Maintenance carried out by Groundwork of Tomies Wood South of O’Sullivan’s Cascade	1996 Groundwork Report to NPWS (See EC Complaint Addendum 9)	
1999	2 nd Phase 3 Maintenance carried out by Groundwork of Tomies Wood North of O’Sullivan’s Cascade	1999 Groundwork Report to NPWS (See EC Complaint Addendum 9)	

2000	3rd Phase 3 Maintenance carried out by Groundwork of Tomies Wood South of O’Sullivan’s Cascade	2000 Groundwork Report to NPWS (See EC Complaint Addendum 9)	
2001	<p>AHG/AIE/2014/33 Record No. 236</p> <p>Permanent plots for the monitoring of woodland vegetation and regeneration in Killarney National Park: 1991 – 2001 – A Report submitted to Dúchas, the Heritage Service, National Parks & Wildlife from the Department of Botany, Trinity College Dublin</p> <p>Two woods cleared and maintained by Groundwork are included in this study: Tomies Wood and Glaisín na Marbh. The description of Rhododendron status of these woods indicates that both Tomies Wood and Glaisín na Marbh had been successfully cleared and were being successfully maintained by Groundwork at that time (i.e. 2001)</p> <p>The Report states: “<i>in 1981 Rhododendron management in Tomies was taken over by Groundwork, who, over successive summers cut all mature bushes removing any seed source from within the wood, and the wood is maintained free of re-infestation by systematic removal of seedlings at regular intervals.</i>”</p>	See EC Complaint Addendum 2	
2004	4th Phase 3 Maintenance carried out by Groundwork of Tomies Wood South of O’Sullivan’s Cascade. Subsequent scheduled Groundwork maintenance visits not permitted by NPWS.	2004 Groundwork Report to NPWS (See EC Complaint Addendum 9)	
2006	AHG/AIE/2014/33 Record No. 216. The Draft Document “A Strategy for Rhododendron Control in Killarney National Park by Dr G. Therese Higgins (2006)” Commissioned by NPWS. This document includes the results of a general survey of rhododendron in Killarney National Park at that time (i.e. 2006). The only woodland areas of the National Park that	AHG/AIE/2014/33 Record No. 216 (See EC Complaint Addendum 2)	

	were classified as “Cleared: Phase 3” in this report were western woods of the national park which had been cleared and maintained by Groundwork. Tomies Oakwood is classified as “Cleared: Phase 3”.		
2007	AHG/AIE/2014/33 Record No. 215. “Site Management: Killarney NP rhododendron control strategy – Comments by Jervis Good Divisional Ecologist NPWS – 26 April 2007 In the map accompanying the document all of Tomies Oakwood is classified as: “Areas from which rhododendron has been removed and have achieved “final clearance” status and are in an ongoing maintenance programme”.	AHG/AIE/2014/33 Record No. 215 (See EC Complaint Addendum 2)	
2009	Management Plan for Killarney National Park 2005-2009) stated that : Groundwork’s “ <i>clearly defined strategies and extremely well-co-ordinated work programme has resulted in a significant proportion of the formerly infested oakwoods in the Park being maintained free of rhododendron. Most of this work has been carried out in the more inaccessible woodlands on the western side of the National Park.</i> ”	www.npws.ie/publications/archive/KNPMP.pdf	
2011	NPWS classifies Rhododendron status of this section of Tomies as Poor slight, moderate to severe infestation but with no seed sources on site(O’Toole 2011)	O’Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	Major and rapid infestation with seedlings is expected as the southern part of the woodland area adjoins un-cleared woodland which acts as an ongoing seed source Meticulous

			adherence to 6/7 yearly maintenance visits are therefore essential to prevent seedlings reaching seed production stage in the cleared wood.
2012	8 YEARS FROM LAST SYSTEMATIC GROUNDWORK MAINTENANCE		
2012	NPWS classifies Rhododendron status of this section of Tomies as Poor slight, moderate to severe infestation. (O'Toole 2012)	O'Toole (November 2012) (See EC Complaint Attachment 6)	
2013	O'Toole (2012) makes no mention of NPWS maintenance in the ten years from 2003 to 2012. Observations along the Lough Leane shoreline of the wood in July 2013 revealed that re-infestation had reached an advanced stage in this area. In autumn 2013 it was observed that this area had received herbicide treatment, apparently in mid to late summer. The herbicide treatment had evidently not been carried out in a systematic fashion, as there were untreated plants still standing within feet of treated plants. Many of the treated rhododendron had flowered and set seed in the woodland last year and possibly in 2011, as there were numerous seed pods to be seen on the dead and dying plants.	ditto	
2014 (May)	Findings of Groundwork 2014 Visit (See EC Complaint Attachment 1): The assessment consisted of a c.40 minute transect walk on 4/5/14.	Groundwork Rhododendron	

	<p>Geotagged photographs were taken of rhododendron plants over 0.5m high. The area along the transect was characterised by numerous standing rhododendron plants which had been herbicide treated in 2013. Whereas a large proportion of the treated plants were successfully killed, a significant number of treated plants had survived and were again producing flowers, having previously produced seed in 2013. c.19 rhododendron of 0.5-1m in height, c.14 plants of 1-2m height and c.3 plants of >2m were recorded, of which c. 9 had flowers developing, some of which had seeded in 2013.</p> <p>For photos of Rhododendron recorded in 2014 see: http://groundworkireland.smugmug.com/Geotagged-Rhodo-Photos-MayAug-14-V3nRw For instructions on accessing photo gallery see page 8 above.</p>	Observations Report 2014 (See EC Complaint Attachment 1)	
2014	NPWS clearance work	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2014 (20 Sept)	GROUNDWORK SUBMITS FORMAL COMPLAINT TO THE EUROPEAN COMMISSION		
2014 (October)	NPWS classifies Rhododendron status of this section of Tomies as low levels of seed producing plants remaining in oak woodland (O'Toole 2014)	ditto	

<p>2014 (December)</p>	<p>NPWS AIE/AHG/2015/21 Document No 204 stated that <i>“as part of the inspection and maintenance programme, specific inspections of all the areas cited by Groundwork, works were undertaken late last year (i.e. late 2014) and all “ready to seed” Rhododendron located within these areas has been removed. ... the Department considers that there are no grounds to suggest that a reasonable ecological assessment of the situation could conclude that there is a re-infestation taking place in the Park or that this poses an ecological risk at this time to the habitats, including oakwoods within the Park.”</i> The NPWS document stated that the entire area of Tomies Wood was inspected and maintained by <i>“systematic sweeps” “searching for and removing Rhododendron seedlings and saplings”, “less than 15 plants with seed heads were located and treated”</i>.</p>	<p>See EC Complaint Addendum 6</p>	<p>The results of this inspection and maintenance is not reconcilable with the Groundwork findings in 2015. This December 2014 NPWS “inspection and maintenance” involved 36 person days (i.e. c.216 person hours) carrying out “in the entire 25ha of Tomies Wood and recorded and removed “less than 15 plants with seed heads” in the entire Tomies oakwood area. On 30 August 2015 Groundwork spent 3¾ person hours inspecting c.3ha</p>
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			<p>of the wood, and found 28 plants with flower heads, 15 of which had also flowered in 2014 and shed seed in the winter of 2014/15. All of the 28 Rhododendron plants with flower heads, and a further 74 large plants which are likely to have flowered in 2016, which were recorded by Groundwork in a 3 hectare area were missed by the NPWS "inspection and maintenance", which took place just 8 months prior to the Groundwork visit.</p>
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<p>2015 (August)</p>	<p>On 30 August 2015 a four person (1¼ hour) systematic line was run by Groundwork through a c. 3 hectare section of Tomies Wood south of O’Sullivan’s Cascade. As in 2013 and 2014 there was evidence of widespread but unsystematic herbicide treatment of Rhododendron in recent years but no cessation of significant ongoing seed production. 109 Rhododendron ≥ 1m high were recorded; 15 plants had empty seed pods which has shed seed in the winter of 2014/15 (several plants observed had numerous flower heads that had produced seed). 28 plants had developing seed pods from the 2015 flowering, which presumably released seed 4/5 months later. For photos of Rhododendron recorded on 30/8/15 see: http://groundworkireland.smugmug.com/Tomies-Aug-2015/n-rDC5mJ For instructions on accessing photo gallery see page 8 above.</p>	<p>Groundwork Observations Report 2015 (see EC Complaint Addendum 11)</p>	<p>See above</p>
<p>2015* "Updated account to for work in 2015"</p>	<p>NPWS classifies Rhododendron status of this section of Tomies as low levels of seed producing plants remaining in oak woodland (O’Toole 2015)</p>	<p>O’Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October 201 updated to account for work in 2015) NPWS REPORT</p>	

2016 (December)	<i>"Low level seed source remaining on site"</i>	"Draft Rhododendron ponticum Control and Eradication Management Plan for Killarney National Park" Tim Cahalane	
2018 (January)	<i>"Low levels of seed producing plants remaining in oak woodland"</i>	Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	

CONCLUSION: Tomies Wood achieved its Clear Status as defined in Irish Wildlife Manual No. 33 (and Maintenance Phase Status as defined by Snowdonia National Park Authority) in 1985. Tomies lost its Clear Status between 2012 & 2013 and has not regained that status since.

3. CLEARANCE & RE-INFESTATION HISTORY IN THE WESTERN WOODS OF KILLARNEY NATIONAL PARK PREVIOUSLY CLEARED BY NPWS AND SURVEYED BY GROUNDWORK IN PERIOD 2014 - 2018

See Map 1 above.

3.1. EAGLE'S NEST WOOD

		References	Comments
2007	Contract clearance	O'Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2011	NPWS classifies Rhododendron status Eagle's Nest Wood as Good no seed source remaining on site (O'Toole 2011)	ditto	
2012	NPWS classifies Rhododendron status Eagle's Nest Wood as Good no seed source remaining on site (O'Toole 2012)	O'Toole (November 2012) (See EC Complaint Attachment 6)	This classification is not reconcilable with the large

			number of flowering rhododendron recorded in this wood less than 1½ years later (see below)
2013	Removal of “high densities of rhododendron seedlings and saplings throughout the site by non-herbicidal snipping method and pulling. A number of larger plants were also stem treated”.	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2014 (May)	NPWS map of Rhododendron clearance classifies all of Eagle’s Nest Wood as having cleared status.	AHG/AIE/2014/33 Record No. 155.	
2014 (May)	Groundwork 3 person hours transect visit recorded 92 plants 0.5 – 1m high, 89 plants 1 – 2m high and 54 plants over 2m high. 84 flowering plants were recorded of which a small proportion had already released seed. For photos of Rhododendron recorded in 2014 see: http://groundworkireland.smugmug.com/Geotagged-Rhodo-Photos-MayAug-/n-V3nPgw For instructions on accessing photo gallery see page 8 above.	Groundwork Rhododendron Observations Report 2014 (See EC Complaint Attachment 1)	

2014 (October)	NPWS classifies Rhododendron status of Eagle's Nest Wood as Fair low level seed source remaining on site. (O'Toole 2014)	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2015	"Saplings and larger plants were stem treated and seedlings pulled by contractors"	O'Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October 2014 updated to account for work in 2015) NPWS REPORT	As no clearance work was carried out between May 2014 and work carried out in 2015, it is probable that the 84 flowering plants recorded in 2014 released seed in the winter of 2014/15.
2015* "Updated account to for work in 2015"	NPWS classifies Rhododendron status of Eagle's Nest Wood as Fair low level seed source remaining on site. (O'Toole 2015)	ditto	

2016 (December)	<i>"Low level seed source remaining on site"</i>	"Draft Rhododendron ponticum Control and Eradication Management Plan for Killarney National Park" Tim Cahalane	
2018 (January)	<i>"Low level seed source remaining on site"</i>	Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	

CONCLUSION: Preliminary Clearance (Phase 1) as defined by Irish Wildlife Manual No. 33 may have been achieved in 2007; however seed production resumed in 2014 and continued in 2018 returning the wood to un-cleared status as defined in Irish Wildlife Manual No. 33.

3.2. GALLAVALLY WOOD

		References	Comments
2008	Contract clearance. "Stems treated" (O'Toole 2011)	O'Toole, P. (May 2011) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2011	NPWS classifies Rhododendron status Gallavally Wood as Good no seed source remaining on site (O'Toole 2011)	ditto	
2012	NPWS classifies Rhododendron status Gallavally Wood as "Good - No seed source remaining on site" (O'Toole 2012)	O'Toole, P. (November 2012) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2014 (May)	NPWS map of Rhododendron clearance classifies all of Gallavally Wood as having cleared status.	AHG/AIE/2014/33 Record No. 155.	

2014 (October)	NPWS classifies Rhododendron status of Gallavally Wood as “Fair - Low level seed source remaining on site.”	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2015	“Contractors carried out maintenance sweeps” (Cahalane 2018)	Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	The severe re-infestation and massive seed production recorded throughout Gallavally Wood in 2018 (see below) indicates that the maintenance sweeps which supposedly took place in 2015 were at best token and entirely ineffectual.
2018	<i>“Low level seed source remaining on site”</i>	Rhododendron ponticum	At the precise time this plan

(January)		Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	was issued hundreds of Rhododendron plants were in the process of releasing 10s of millions of Rhododendron seeds throughout Gallavally wood
2018 (May)	Groundwork worked a 2 person 4 hours c.1.5 km long transect through most of the length of the wood. Recorded 276 flowering plants of which 178 had already released seed in the winter of 2017/18. For photos of Rhododendron recorded in 2018 see: https://groundworkireland.smugmug.com/Gallavally-Wood-May-2018/n-gCgR3G For instructions on accessing photo gallery see page 8 above. Along the first c.150m of the transect some but not all of the plants encountered had some branches recently broken and had some wilted leaves due perhaps to herbicide treatment. The development of flower buds appeared to be progressing as normal and c. half the plants recorded had released seed in the previous winter i.e. 2017/18		

CONCLUSION: Preliminary Clearance (Phase 1) as defined by Irish Wildlife Manual No. 33 may have been achieved in 2008 but no Phase 2 clearance was carried out, resulting in massive regrowth from seedlings throughout the wood which are now 10+ years old. A significant number of the plants had 5 – 15 seed heads from last winter, indicating that seed may also have been produced in the previous winter of 2016/17, making this the third year of flowering. The wood returned to un-cleared status (as defined in Irish Wildlife Manual No. 33) when widespread seed production occurred in the winter of 2017/18.

4. CLEARANCE & RE-INFESTATION HISTORY OF THE EASTERN WOODS OF KILLARNEY NATIONAL PARK PREVIOUSLY CLEARED BY NPWS

Over a period of decades prior to 2017, accurate mapping on a year by year basis of clearance work carried out, methods applied and level of rhododendron infestation, and in particular location of seed producing Rhododendron encountered, has not formed part of the NPWS Rhododendron management program. Since c.2011 description of work carried out in specific management zones has been recorded, but the exact boundaries of each management zone has never been mapped, and it has rarely been made clear in reports the extent of work carried out in the management zones specified. For instance “maintenance sweeps “ may be reported to have been carried out in a management zone, but the exact location of the sweep, whether the area covered was 1% of the zone, 5% of the zone or 100% of the zone, and even the definition of what is meant by a maintenance sweep, is not made clear. It is therefore very difficult and frequently impossible to construct a coherent picture of what has actually taken place in the NPWS managed zones.

In all or part of each the following eight management zones sufficient information was garnered to construct a reasonably coherent account (see Map 2 for locations):

1. Gortderraree (Part of NPWS Strategic Programme Area 2)
2. Woodland Clump Above Gortderraree (Part of NPWS Strategic Programme Area 2)
3. Woodland Area Between Tunnel and Bula (Part of NPWS Strategic Programme Area 6)

4. Upper Tower Wood (Part of NPWS Strategic Programme Area 21)
5. Five Mile Wood (Part of NPWS Strategic Programme Area 25)
6. Wooded Clumps On Roadside On Killarney Side Of Five Mile Bridge (Part of NPWS Strategic Programme Area 40)
7. Brickeen Island (Part of NPWS Strategic Programme Area 43)
8. Ullauns Wood (Strategic NPWS Programme Area 17)

4.1. GORTDERRAREE (PART OF STRATEGIC PROGRAMME AREA 2)

		References	Comments
2002 - 2006	<i>"In 2002 – 2006 Conservation Ranger carried out direct stump treating and stem treating trials ...non-herbicide trials were also carried out here."</i> (O'Toole 2014)	O'Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2006	The Draft Document "A Strategy for Rhododendron Control in Killarney National Park by Dr G. Therese Higgins (2006)" Commissioned by NPWS. This document includes the results of a general survey of rhododendron in Killarney National Park at that time (i.e. 2006). Gortderraree is classified as having undergone "partial Phase 2 clearance".	AHG/AIE/2014/33 Record No. 216." (See EC Complaint Addendum 2)	
2011	NPWS maintenance visit	O'Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	

2011 (May)	NPWS classifies Rhododendron status as: Good – No seed source remaining on site. (O’Toole 2011)	ditto	Difficult to reconcile with the findings of seed producing plants and high density of seedlings in 2016
2012 (November)	NPWS classifies Rhododendron status as: Rhododendron Status Good – No seed source remaining on site. (O’Toole 2012)	O’Toole (November 2012) (See EC Complaint Attachment 6)	ditto
2013	NPWS maintenance visit (O’Toole 2014)	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2014 (May)	NPWS map of Rhododendron clearance classifies all of Gortderaree Wood as having cleared status.	AHG/AIE/2014/33 Record No. 155.	
2014	NPWS maintenance visit (O’Toole 2014)	ditto	

2014 (October)	NPWS classifies Rhododendron status Rhododendron Status Fair - Little or no seed source remaining on site (O'Toole 2014)	ditto	
2015 "Updated to account for work in 2015"	NPWS classifies Rhododendron status Rhododendron Status Fair - Little or no seed source remaining on site (O'Toole 2015)	O'Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October 2014 updated to account for work in 2015) NPWS REPORT	
2016 (February)	<u>Seed producing plants</u> encountered (numbers not stated). High density of seedlings.	Cahalane, T. (February 2016) Rhododendron Eradication Programme Progress Report December 2015 – February 2016. Report to NPWS	The fact that "high density of seedlings" were recorded in 2016 indicates that seed production must have recurred on the site after the end of phase 1 clearance ten years previously. The situation recorded in 2016

			cannot be reconciled with is the classification of the wood as having “Good Rhododendron Status” in 2011& 2012 and “Fair – little or no seed source remaining on site” in 2014
2018 (January)	Low level seed source on site	Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	

CONCLUSION: The Higgins report establishes that Clear Status had not been achieved prior to 2007. Preliminary Clearance (Phase 1) as defined by Irish Wildlife Manual No. 33. may have been achieved in 2011; however as “seed producing plants” and “high density of seedlings” were recorded in 2016 it is evident that the wood had returned to un-cleared status as defined in Irish Wildlife Manual No. 33 by 2016.

4.2. WOODLAND CLUMP ABOVE GORTDERRAREE (PART OF STRATEGIC PROGRAMME AREA 2)

		References	Comments
2002 - 2006	<i>"In 2002 – 2006 Conservation Ranger carried out direct stump treating and stem treating trials ...non-herbicide trials were also carried out here."</i> (O'Toole 2011)	O'Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2011	NPWS maintenance visit (O'Toole 2011)	ditto	
2011 (May)	NPWS classifies Rhododendron status as: Rhododendron Status Good – No seed source remaining on site. (O'Toole 2012)	ditto	Difficult to reconcile with the findings of seed producing plants and high density of seedlings in 2016
2012 (November)	NPWS classifies Rhododendron status as: Rhododendron Status Good – No seed source remaining on site. (O'Toole 2012)	O'Toole (November 2012) (See EC Complaint Attachment 6)	ditto

2013	NPWS maintenance visit (O'Toole 2014)	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2014 (May)	NPWS map of Rhododendron clearance classifies all of this wood as having cleared status.	AHG/AIE/2014/33 Record No. 155.	
2014	NPWS maintenance visit (O'Toole 2014)	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2014 (October)	Rhododendron Status Fair - Little or no seed source remaining on site	ditto	
2015 "Updated to account for work in 2015"	Rhododendron Status Fair - Little or no seed source remaining on site	O'Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October	

		2014 updated to account for work in 2015) NPWS REPORT	
2016 (February)	Large numbers of <u>seed producing plants</u> . Large number of seedlings (Cahalane 2016)	Cahalane, T. (February 2016) Rhododendron Eradication Programme Progress Report December 2015 – February 2016. Report to NPWS	<p>The fact that “high density of seedlings” were recorded in 2016 indicates that seed production must have recurred on the site after the end of phase 1 clearance ten years previously.</p> <p>The situation recorded in 2016 cannot be reconciled with is the classification of the wood as having “Good Rhododendron Status” in 2011& 2012 and “Fair – little or no seed source</p>

			remaining on site" in 2014
2018 (January)	Low level of seed source remaining on site	Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	

CONCLUSION: Preliminary Clearance (Phase 1) as defined by Irish Wildlife Manual No. 33 may have been achieved prior to 2006, however as “high density of seedlings” were encountered in 2016 seed production must have occurred post 2000 and “large numbers of seed producing plants” were recorded in 2016. It is therefore evident that the wood has returned to un-cleared status as defined in Irish Wildlife Manual No. 33.

4.3. WOODLAND AREA BETWEEN TUNNEL AND BULA (PART OF STRATEGIC PROGRAMME AREA 6)

		References	Comments
Early 1990s – early 2000s	“In early 1990s contractors cut plants , burned brash and foliar sprayed stump regrowth. In early 2000s contractors foliar sprayed cut stump regrowth, saplings & seedlings..” (O’Toole 2014)	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	Apparent c.10 year gap between initial phase 1 clearance in early 1990s and next clearance in early 2000s when stump regrowth was sprayed. Stumps regrown over such a time period would have produced seed before the spraying took place, which seed grew into the “high volume of saplings and large plants” recorded in 2016.

2006	The Draft Document “A Strategy for Rhododendron Control in Killarney National Park by Dr G. Therese Higgins (2006)” Commissioned by NPWS. This document includes the results of a general survey of rhododendron in Killarney National Park at that time (i.e. 2006). This area is classified as having undergone Phase 1 clearance	AHG/AIE/2014/33 Record No. 216.” (See EC Complaint Addendum 2)	
2011	NPWS maintenance visit (O’Toole 2014)	O’Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2011 (May)	NPWS classifies Rhododendron status as: Rhododendron Status Good – No seed source remaining on site. (O’Toole 2012)	ditto	Difficult to reconcile with large number of seedlings, saplings & large plants encountered in 2016
2012	NPWS classifies Rhododendron status as: Rhododendron Status Good – No seed source remaining on site.	O’Toole (November 2012) (See EC Complaint Attachment 6)	ditto
2014 (May)	NPWS map of Rhododendron clearance classifies all of this wood as having cleared status.	AHG/AIE/2014/33 Record No. 155.	

2014 (October)	NPWS classifies Rhododendron status as Rhododendron Status Fair – little or no seed source remaining on site (O’Toole 2014)	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2015	NPWS maintenance visit	O’Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October 2014 updated to account for work in 2015) NPWS REPORT	
2015 "Updated to account for work in 2015"	NPWS classifies Rhododendron status as Rhododendron Status Fair – little or no seed source remaining on site	ditto	

2016	High volume of saplings and large plants throughout wood. High volume of seedlings	Cahalane, T. (February 2016) Rhododendron Eradication Programme Progress Report December 2015 – February 2016. Report to NPWS	The high volume of seedlings observed in 2016 indicate that seed production continued after the early 2000s clearance and the 2011 clearance.
2018 (January)	“Little-no seed sources remaining on site”	Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	

CONCLUSION: Preliminary Clearance (Phase 1) Status as defined by Irish Wildlife Manual No. 33 was achieved by 2006, according to Higgins (2006). However high volume of seedlings, saplings and large plants encountered in 2016 indicate that seed production resumed before and continued after the NPWS 2011 clearance visit. The site has therefore reverted to un-cleared status as defined in Irish Wildlife Manual No. 33.

4.4. UPPER TOWER WOOD (PART OF STRATEGIC PROGRAMME AREA 21)

		References	Comments
2007	"In 2007 contractors cut plants and applied direct stump treatment" (O'Toole 2014)	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2011 (May) (NPWS Strategic Programme)	NPWS classifies Rhododendron status as: Rhododendron Status Good – No seed source remaining on site. (O'Toole 2011)	O'Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	The fact that "Large numbers of small seedlings" were encountered in 2014 indicates that seed production continued after the 2007 clearance work. This is irreconcilable with no seed source in 2011 & 2012 as no further work was carried out between 2007 and those years.

<p>2012 (November) (NPWS Strategic Programme)</p>	<p>NPWS classifies Rhododendron status Rhododendron Status Fair – No seed source remaining on site, moderate to severe densities of seedlings and saplings. (O’Toole 2012)</p>	<p>O’Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT</p>	<p>ditto</p>
<p>2012 - 2014</p>	<p>“In 2012/13 Conservation Ranger and volunteers cut high densities of saplings (no herbicide used) and pulled seedlings. In 2014 Conservation Ranger and volunteers... stem treated large plants, cut and treated large numbers of saplings using non herbicidal and herbicidal (2% solution) methods. Large numbers of small seedlings were also pulled.”</p>	<p>O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT</p>	
<p>2014 (May)</p>	<p>NPWS map of Rhododendron clearance classifies all of this wood as having cleared status.</p>	<p>AHG/AIE/2014/33 Record No. 155.</p>	
<p>2014 (October)</p>	<p>NPWS classifies Rhododendron status Rhododendron Status Fair – low level of <u>seed source remaining on site</u> (O’Toole 2014)</p>	<p>O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT</p>	

<p>2015</p> <p>"Updated to account for work in 2015"</p>	<p>NPWS classifies Rhododendron status Rhododendron Status Fair – low level of <u>seed source remaining on site (O'Toole 2015)</u></p>	<p>O'Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October 2014 updated to account for work in 2015) NPWS REPORT</p>	
<p>2015 (October)</p>	<p>Numerous large plants coming to seed</p>	<p>Cahalane, T. (October 2015) Rhododendron Eradication Programme Progress Report August to December 2015 Report to NPWS</p>	<p>The saplings and large plants coming to seed recorded in 2015 are likely to be the progeny of plants cut down in 2007. Saplings which were cut and not herbicide treated in 2012 could also have reached sapling size in 2014</p> <p>"Numerous large plants coming to seed" and "high volumes of</p>

			saplings and seedlings” recorded in 2015 indicate that the maintenance work carried out in 2012, 2013 & 2014 both non-herbicide and herbicide failed.
2015 (December)	High volumes of saplings and seedlings	Cahalane, T. (December 2015) Rhododendron Eradication Programme Progress Report October to December 2015. Report to NPWS	Ditto
2016	“Large volumes of seed capsules were broken from plants and removed from site to minimise dispersal	Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	
2018	“Moderate-high densities in areas (currently being eradicated by contractors)	Ditto	

	Moderate level of seed sources starting to emerge in areas(currently being eradicated by contractors)		
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CONCLUSION: The evidence indicates that Preliminary Clearance (Phase 1) Status as defined by Irish Wildlife Manual No. 33 has never been achieved in this area of woodland. The fact that “Large numbers of small seedlings” were encountered in 2014 indicates that seed production continued after 2007. Seed production in 2014 & 2015 is confirmed by NPWS (O’Toole 2014 & 2015).

4.5. FIVE MILE WOOD (PART OF NPWS STRATEGIC PROGRAMME AREA 25)

		References	Comments
1990s - 2010	“In the 1990s contractor foliar sprayed cut stump regrowth. In 2008 contractor stem treated all plants on site. In 2010 Conservation Ranger and volunteers stem treated remaining infested woodland clump”	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2011 (May)	NPWS classifies Rhododendron status as: Good – No seed source remaining on site.	O’Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	The classification of “Good Rhododendron Status” in 2011 & 2012 and “Fair – little or no seed source remaining on site” in 2014 is highly questionable given the high densities of seedlings in 2015/16.

2012	"In 2012 Conservation Ranger and volunteers cut saplings (no herbicide used) and pulled seedlings." (O'Toole 2014)	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2012 (November)	NPWS classifies Rhododendron status as: Rhododendron Status Good – No seed source remaining on site. (O'Toole 2012)	O'Toole (November 2012) (See EC Complaint Attachment 6)	ditto
2014 (May)	NPWS map of Rhododendron clearance classifies all of Tower Wood as having cleared status.	AHG/AIE/2014/33 Record No. 215.	ditto
2014 (October)	NPWS classifies Rhododendron status as Rhododendron Status Fair – little or no seed source on site (O'Toole 2014)	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	ditto
2015 "Updated to account for work in 2015"	NPWS classifies Rhododendron status as Rhododendron Status Fair – little or no seed source on site (O'Toole 2015)	O'Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney	

		National Park. (Programme October 2014 updated to account for work in 2015) NPWS REPORT	
2015 (December)	High densities of seedlings and saplings regenerating	Cahalane, T. (December 2015) Rhododendron Eradication Programme Progress Report October to December 2015 Report to NPWS	
2016 (February)	Large numbers of plants coming to seed – high volume of saplings and <u>seed producing plants</u>	Cahalane, T. (February 2016) Rhododendron Eradication Programme Progress Report December 2015 – February 2016. Report to NPWS	The fact that seed producing plants and numerous seedlings were present in 2015/16 indicates that the maintenance carried out in 2012 “ <i>using non herbicidal snipping and treating method to control</i> ”

			<i>seedlings and saplings</i> ” failed. (This method was applied generally in KNP for several years after c.2011)
2016 - 2017	NPWS maintenance	Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)	
2018 (January)	Little-no seed sources remaining on site	Ditto	As seed production took place in 2016, phase 2 clearance is required for clear status to be achieved

CONCLUSION: Preliminary Clearance (Phase 1) Status as defined by Irish Wildlife Manual No. 33. may have been achieved between 1990 and 2010; however seed production in the period 2014 – 2016 confirms the wood as now having un-cleared status as defined by Irish Wildlife Manual No. 33.

4.6. WOODED CLUMPS ON ROADSIDE ON KILLARNEY SIDE OF FIVE MILE BRIDGE (PART OF STRATEGIC PROGRAMME AREA 40)

		References	Comments
Previous Rhododendron Management	Not possible to determine from “Strategic Programme” exact years in which Phase 1 clearance and maintenance visits occurred in this specific section of Area 40		
2011(May)	NPWS classifies Rhododendron status as Good (From Five Mile Bridge to Old Weir Bridge) (O’Toole 2011)	O’Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2012 (November)	NPWS classifies Rhododendron status as Rhododendron Status Good (From Five Mile Bridge to Old Weir Bridge) (O’Toole 2012)	O’Toole (November 2012) (See EC Complaint Attachment 6)	
2014 (May)	NPWS map of Rhododendron clearance classifies all of this wood as having cleared status.	AHG/AIE/2014/33 Record No. 155.	
2014 (October)	NPWS classifies Rhododendron status as Good (From Five Mile Bridge to Old Weir Bridge) (O’Toole 2014)	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney	

		National Park. NPWS REPORT	
2015 "Updated to account for work in 2015"	NPWS classifies Rhododendron status as Rhododendron Status Good (From Five Mile Bridge to Old Weir Bridge) (O'Toole 2015)	O'Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October 2014 updated to account for work in 2015) NPWS REPORT	
2016 (February)	A 'quantity' of <u>Seed producing Rhododendron</u> and also a large number of medium sized plants recorded on roadside on Killarney side of five mile bridge	Cahalane, T. (February 2016) Rhododendron Eradication Programme Progress Report December 2015 – February 2016. Report to NPWS	These findings are not reconcilable with the classification of Good Status given by NPWS in the period 2011 – 2015
2018	"Very low infestation from Five Mile Bridge to Old Weir Bridge"	Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park	As seed was produced in 2016 Phase 2 clearance required before clear status can

		2018-2023 Tim Cahalane (January 2018)	be achieved
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CONCLUSION: Status pre 2016 unclear. Seed producing Rhododendron and also a large number of medium sized plants recorded in 2016 confirms the wood as having un-cleared status as defined by Irish Wildlife Manual No. 33.

4.7. BRICKEEN ISLAND (PART OF STRATEGIC PROGRAMME AREA 43)

		References	Comments
1990s – 2000s	“Contractors 1990s cut plants, burned brash, foliar sprayed cut stump regrowth. Conservation Ranger and student volunteers 2000s removed cut stump regrowth and treated stumps, stem treated larger plants, broke and treated saplings, pulled seedlings. (O’Toole 2014)	O’Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2006	The Draft Document “A Strategy for Rhododendron Control in Killarney National Park by Dr G. Therese Higgins (2006)” Commissioned by NPWS. This document includes the results of a general survey of rhododendron in Killarney National Park at that time (i.e. 2006). This area is classified as “largely cleared	AHG/AIE/2014/33 Record No. 216.” (See EC Complaint Addendum 2)	
2007	AHG/AIE/2014/33 Record No. 215. “Site Management: Killarney NP rhododendron control strategy – Comments by Jervis Good Divisional Ecologist NPWS – 26 April 2007 In the map accompanying the document Brickeen Island is classified as: “ <u>Areas from which rhododendron has been removed and have achieved “final clearance” status and are in an ongoing maintenance programme</u> ”.	AHG/AIE/2014/33 Record No. 215 (See EC Complaint Addendum 2)	
2011	NPWS classifies Rhododendron status as Good – No seed source remaining on site (O’Toole 2011)	O’Toole, P. (2011) The Past, Present and Future Management of Rhododendron	

		ponticum in Killarney National Park. NPWS REPORT	
2012	NPWS maintenance visit (O'Toole 2014)	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2012 (November) (NPWS classifies Rhododendron status as Good– No seed source remaining on site (O'Toole 2012)	O'Toole (November 2012) (See EC Complaint Attachment 6)	
2014	NPWS maintenance visit (O'Toole 2014)	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2014 (October)	NPWS classifies Rhododendron status as Fair – little or no seed source remaining on site (O'Toole 2014)	ditto	
2015 (October)	Some large <u>seed producing</u> Rhododendron	Cahalane, T. (October 2015) Rhododendron	Brickeen Island is connected by a short bridge to

		<p>Eradication Programme Progress Report August to October 2015. Report to NPWS</p>	<p>Muckross Peninsula and is easily accessible in motor vehicles. The presence in 2015 of large <u>seed producing</u> Rhododendron on the 10ha island after maintenance visits in 2011 and 2014 indicates that the area was not systematically covered in either visit. (The use of the systematic line system as required by Irish Wildlife Manual No.33 has been consistently ruled out as unnecessary by KNP managers since c.2005)</p>
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<p>2015</p> <p>"Updated to account for work in 2015"</p>	<p>NPWS classifies Rhododendron status as Fair little or no seed source remaining on site (O'Toole 2015)</p>	<p>O'Toole, P. (2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. (Programme October 2014 updated to account for work in 2015) NPWS REPORT</p>	
<p>2018 (January)</p>	<p>"Low level of seed source remaining on site"</p>	<p>Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park</p> <p>2018-2023 Tim Cahalane (January 2018)</p>	

CONCLUSION: Probably achieved Clear Status as defined by Irish Wildlife Manual No. 33 in 2006 & 2007. Seed producing Rhododendron recorded in 2015 confirms the wood as having un-cleared status as defined by Irish Wildlife Manual No. 33.

4.8. ULLAUNS WOOD (STRATEGIC PROGRAMME AREA 17)

		References	Comments
1990s	“Contractors cut plants, burned brash, and foliar sprayed cut stump regrowth, saplings and seedlings”	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2000/2001/2003	“Contractor foliar sprayed cut stump regrowth, saplings and seedlings”	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2006	The Draft Document “A Strategy for Rhododendron Control in Killarney National Park by Dr G. Therese Higgins (2006)” Commissioned by NPWS. This document includes the results of a general survey of rhododendron in Killarney National Park at that time (i.e. 2006). This area is classified as <u>“Phase 1 Clearance Recently Completed”</u>	AHG/AIE/2014/33 Record No. 216.” (See EC Complaint Addendum 2)	
2007	AHG/AIE/2014/33 Record No. 215. “Site Management: Killarney NP rhododendron control strategy – Comments by Jervis Good Divisional Ecologist NPWS – 26 April 2007	AHG/AIE/2014/33 Record No. 215 (See EC Complaint	

	In the map accompanying the document Ullauns Wood is classified as: “Areas from which rhododendron has been removed recently, so that <u>‘advanced clearance has been achieved or is in progress’</u> ”	Addendum 2)	
2007/8	“Contract 2007 cut plants/direct stump treatment, snipped and treated saplings and pulled seedlings”	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2011	“Conservation Ranger and volunteers removed and cut stump regrowth and treated stumps, snipped and treated saplings and pulled seedlings”	ditto	
2011	NPWS classifies Rhododendron status as Good – No seed source remaining on site (O’Toole 2011)	O’Toole, P. (2011) The Past, Present and Future Management of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2013	“Conservation Ranger and volunteers removed and cut stump regrowth and treated stumps, snipped and treated saplings and pulled seedlings”	O’Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS	

		REPORT	
2014	NPWS maintenance visit (O'Toole 2014)	ditto	
2015	NPWS classifies Rhododendron status as Good – No seed source remaining (O'Toole 2015)	O'Toole, P. (October 2014 updated to account for work in 2015) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2014	NPWS maintenance visit (O'Toole 2014)	O'Toole, P. (October 2014) Long Term Strategic Programme for the Control of Rhododendron ponticum in Killarney National Park. NPWS REPORT	
2017 (November)	In 2006 much of Ullauns wood and adjacent woodland areas to the north were fenced into 11 exclosures which were intended to exclude grazers, particularly deer and goats, and thereby promote regeneration of oak trees. The budget for the projects was €696,000. The "Native Woodland Scheme Ecological Survey and Management Plan" for this scheme specified that the following measures should be carried out over the 15 – 20 yrs of the project: 1. Remove any remaining mature Rhododendron bushes; 2. Remove seedlings and small bushes in a methodical manner	Heardman, C. (2006) Native Woodland Scheme Ecological Survey and Management Plan. For National Parks & Wildlife Service &	

	<p>(longterm, ongoing); 3. Remove major seed sources adjacent to the NWS plot. In late 2017 a series of transects through the most southerly 6 exclosures were carried out for NPWS by Ciarán McKenna B.Sc. (Hons) for the purpose of determining the level of rhododendron infestation within the exclosures and identifying areas of significant holly regeneration. The preliminary report stated that <i>“R. ponticum was found in every exclosure surveyed to date, and some exclosures had extensive areas of infestation. Seed producing plants were found in exclosures 01, 02 and 05. ...Also in the grazed areas there were Rhododendron ponticum plants that had evidence of damage, mostly breakage, this is likely due to trampling damage from the deer and goats where were making their way through the exclosure. In exclosure number 04 there was evidence of extensive burning.”</i> The report states; <i>“The exclosures require management to control the invasive species. Seed producers and the larger/older plants should be dealt with as soon as possible in order to slow the spread of the species within the exclosures. The area around the exclosures was not surveyed, however a casual walkthrough reveals that there is Rhododendron in the surrounding area, including seed producing plants which if left there will only cause further infestation of the nearby exclosures.”</i></p>	<p>McKenna, C. (2017) Assessment of the Rhododendron ponticum infestation in eleven exclosures within Killarney National Park – Interim Report for NPWS</p>	
<p>2018 (Jan)</p>	<p>“Present Rhododendron Status 2018: Very low density in woodland”</p>	<p>Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023 Tim Cahalane (January 2018)</p>	<p>It would appear that Mr Cahalane was not aware of the findings of McKenna (2017)</p>

CONCLUSION: May have achieved Clear Status as defined by Irish Wildlife Manual No. 33 in 2006 & 2007. Seed producing Rhododendron recorded in 2017 confirms the wood as having un-cleared status as defined by Irish Wildlife Manual No. 33.

5. RHODODENDRON SEED PRODUCTION STATUS OF EASTERN OAKWOODS OF KILLARNEY NATIONAL PARK 2018

“Rhododendron ponticum Control & Eradication Management Plan For Killarney National Park 2018-2023” (Cahalane January 2018) classifies the Rhododendron Seed Production in most of the Management Zones/ Strategic Programme Areas into the following categories:

1. Little or no seed sources
2. Low level seed source
3. Moderate level of seed source

In the 2018 NPWS Rhododendron Management Plan, of the total area of the NPWS management zones which consist entirely or partly of native oakwood, the relative area of the three Rhododendron Seed Production categories is as follows:

Little or no seed sources remaining on site	c.14%
Low level of seed source	c.73%
Moderate level of seed source	c.5%
Seed source status not classified	8%

As most of the oakwood area in the management zones is classified as having “low level of seed source”, it is important to determine what levels of rhododendron infestation are included in this category. An opportunity for calibration is provided by the surveys carried out in the western woods by Groundwork in the period 2014 – 2018 in areas classified by NPWS in recent years as having “low level of seed source”.

EAMONN'S WOOD

NPWS Rhododendron Seed Production Classification

NPWS classified Eamonn's Wood as having "low level seed source" in 2015, 2016 & 2018.

Findings of Groundwork Survey

In May 2017 a c. 7ha area in and adjacent to Eamonn's Wood was covered by a 2 person transect for c.6½ hours. 169 plants with flowers were recorded, 67 of which had released seed in the previous winter. For photos of the May 2017 surveyed area see: <http://groundworkireland.smugmug.com/Eamonns-May-2017/n-BhxmLb>

LOOSCAUNAGH WOOD (TOWNLANDS OF CAHERNADUV & PART OF CAHERNABANE)

NPWS Rhododendron Seed Production Classification

NPWS classified Looscaunagh Wood as having "low level seed source" 2015, 2016 & 2018.

Findings of Groundwork Survey

In May 2017 a c.15ha area in Looscaunagh (Cahernabane & Cahernaduv) Wood was covered by 2 or 3 person transects for a total of c.18 person hours. 249 plants with flowers were recorded, 120 of which had released seed in the previous winter. Hundreds more Rhododendron plants were observed in the size range 1.5 – 3+ metres height, which had not produced flower but were likely to do so in 2018. For photos see: <http://groundworkireland.smugmug.com/Looscaunagh-May-2017/n-cKwvLx>

GALLAVALLY WOOD

NPWS Rhododendron Seed Production Classification

NPWS classified Gallavally Wood as having “low level seed source” in January 2018.

Findings of Groundwork Survey

In May 2018 Groundwork worked a 2 person 4 hours c.1.5 km long transect through most of the length of the wood. Recorded 276 flowering plants of which 178 had already released seed in the winter of 2017/18. Thousands more Rhododendron plants were observed in the size range 1.5 – 3+ metres height, which had not produced flower but are likely to do so in 2019/20. For photos of Rhododendron recorded in 2018 see: <https://groundworkireland.smugmug.com/Gallavally-Wood-May-2018/n-qCqR3G>

It is evident from the above that the NPWS category “*low level seed source*” includes areas of oakwood where massive and accelerating rhododendron seed production is in progress.

The areas of the eastern oakwoods of Killarney Nation Park which have been classified as having “low level seed source” are shown on Map 3 below. Also shown are locations where seed producing Rhododendron were recorded by McKenna, C. (November 2017) “Assessment of the Rhododendron ponticum infestation in elven enclosures within Killarney National Park – Interim Report for NPWS.”

6. GENERAL CONCLUSIONS

1. Widespread resumption of Rhododendron seed production in the Killarney Oakwoods is established beyond doubt. This constitutes a serious and significant deterioration of a Qualifying Interest Annex I habitat in the SAC and is therefore in contravention of the Habitats Directive.
2. With regard to this deterioration, the National Parks & Wildlife Services has either been seriously misled by its own operatives, or it has deliberately ignored the evidence of the deterioration which has been communicated to it by Groundwork, and independently of Groundwork by Professors Daniel Kelly and Fraser Mitchell of Trinity College Dublin.
3. With regard to this deterioration which has been on-going for several years, the NPWS has either unwittingly or knowingly comprehensively misled its Ministers Heather Humphreys and Jimmy Deenihan, the Dáil, the media, the public, the European Commission and UNESCO.