Report No. 08/21

Audit and Corporate Services Review Committee

REPORT OF THE OPERATIONS MANAGER

SUBJECT: PROGRESS REPORT ON THE MANAGEMENT OF TREES WITH ASH DIEBACK DISEASE.

1. The attached report outlines the progress the Countryside Management Team has made in managing trees suffering from Ash dieback disease, within the Authorities estate.

2. The report includes the following sections:

RECOMMENDATION:

Members are requested to RECEIVE and COMMENT on the Report.

(For further information contact Steven Jones via email stevej@pembrokeshirecoast.org.uk or on 07866 771151)

Progress Report on the Management of Trees with Ash Dieback Disease.

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Countryside Management Team

Pembrokeshire Coast National Park Authority

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1.0 Introduction

Ash dieback is a tree disease caused by the fungus Hymenoscyphus fraxineus, the disease is also known as Chalara. The disease affects the Common Ash and is now endemic within the UK and is widespread in Pembrokeshire.

The disease is airborne, with fungal spores penetrating trees via the leaf surface, eventually inhibiting its water transport systems and causing it to die. Trees show a varying degree of resistance to the disease, with infection in some trees taking hold quickly and causing devastating damage, whilst some trees take longer to succumb. Very few trees remain unaffected or recover.

Infected trees will eventually become unstable, shedding branches and becoming a potential risk to the public. Dead trees also pose an increased risk during felling operations.

Common Ash is a native species, hosting rich communities of invertebrates and particularly mosses and lichens. Ash is also important for some bat species. The loss of Ash has a negative impact on biodiversity, particularly in areas where it is a common species. It is clearly important to balance the risk posed by these diseased trees, with the loss of biodiversity caused by the removal of them. In addition dead wood in itself can be of high value in terms of biodiversity.

Fig 1 Ash with Dieback Disease at Oriel y Parc Car Park, St Davids.

Trees are regularly surveyed as part of the Authorities Tree Safety Policy, usually when conducting the annual site risk assessment and after adverse weather events. A number of staff, including Wardens and Countryside Managers have been trained to survey trees, having undertaken the Arboricultural Association Basic Tree Survey and Inspection course during 2018. An independent tree survey is also carried out by professionals on all sites every three years.

Following a meeting with the authorities Biodiversity Officer and Tree and Landscape Officer during August 2019, the following actions were determined –

- An additional Ash dieback survey should take place on all PCNPA owned sites. This decision was related to the rapid spread and rapid deterioration of some trees – it was thought that an annual visit may be too infrequent in some cases. In addition, some annual site risk assessments are undertaken in winter – Ash dieback and its progression is more visible when trees are in leaf. It was therefore decided to undertake a targeted survey of all Ash trees on the PCNPA estate as an independent piece of work, starting in the summer of 2020, prioritising those trees located on busy sites first.
- Diseased Ash trees would be managed in the same way as diseased trees of all species, within the current guidelines set out in the authorities Tree Safety Policy. A separate Ash dieback Policy was not required.
- The course of action for each tree would be determined in the first instance using criteria set out in 'Ash dieback disease: A decision makers guide for managing risks to public safety', supplied by Paul Cleaver of Tree Consultants Wales.
- Where it was safe to do so, trees would be left in-situ or managed in such a way as to minimise the impact on biodiversity. Options could include the diversion of rights of way, or the management of visitors away from diseased trees, if it was practical to do so. Felling is often unavoidable, but all other options were to be considered first.
- The Biodiversity Officer and Tree and Landscape Officer would be consulted prior to felling, where necessary, as is standard practice.

2.0 Prioritisation /Zoning

Due to the risk posed by Ash trees with dieback, trees located in or near areas of high or moderate use, should be monitored and remedial action taken where appropriate. The zoning of sites according to usage is a fundamental principle of managing visitor safety. The principles of visitor safety as outlined by the Visitor Safety Group have been adopted by the Authority. Zoning is now also embedded within the Authorities Tree Safety Policy. Zoning aids risk management and also helps focus resource and effort where it is most needed.

The following zones are recognised within the Tree Safety Policy –

- Zone 1 – High use (>20,000 users per annum)
- Zone 2 – Frequent use (>5000 users per annum)
- Zone 3 – Infrequent use (<5000 users per annum)

Whilst whole sites can in themselves be allocated a Zone – individual sites can also consist of multiple zones. As an example, Castell Henllys is a Zone 1 site. Castell Henllys covers a large wooded area. Visitors are managed in such a way that parts of the site are less frequently visited than others. Some parts of the site are not visited at all. Prioritising tree management in this respect meant that although we have prioritised Castell Henllys for tree management this year, some trees can be left in situ, if they are deemed to be in areas within the site that are less frequently or rarely visited by the public or staff.

3.0 The Ash dieback Survey

As the situation with Ash dieback within the National Park estate was rapidly evolving, the Countryside Management Team began a targeted survey during the summer of 2020 – focussing on the period when the trees were in leaf and the disease most noticeable. The aim was to provide a baseline for planning purposes, and at the same time to start planning and scheduling any necessary remedial action during winter 2020/21. Up until this point, trees with Ash dieback had been managed using our pre-existing tree management processes.

It was important to ensure that the survey collected the required information in a standardised format – to ensure we were undertaking a consistent approach across all sites.

The decision maker's guide formed the basis of the specification for the survey (see Fig 2 below).

Tree management options are determined by a measure of the following criteria –

- Estimated footfall within the 'drop-zone' of the diseased tree.
- An estimate of the % of the crown affected by the disease – this indicates disease progression.
- Basal symptoms of the infected tree.

In practice, basal symptoms were rarely present or noticeable in the infected trees, so reliance was made on the extent of crown symptoms.

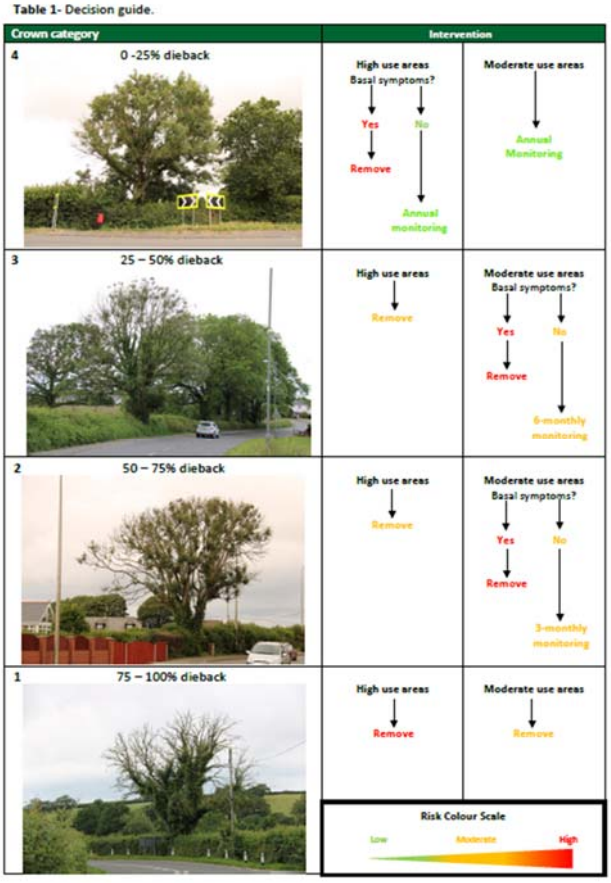


Fig 2 the Ash-dieback decision makers guide. (Paul Cleaver, August 2019).

The survey leads to 4 outcomes, depending on the progress of the disease, and the zone in which the tree was located.

- Annual survey continues.
- Undertake a 6 month survey.
- Undertake 3 month monitoring.
- Removal of the tree.

We also considered a fifth option – that of lopping the tree as and when required.

3.1 Ash dieback Survey Mobile App

The criteria set out in the decision makers guide lent itself to being used as the basis for a mobile application – with both the condition of the tree and the outcome being recorded in line with the guidelines being used. The authorities Arc Online software was utilised and the survey app was quickly designed 'in-house' for use on existing mobile phones. The use of the app ensured that admin and paperwork were minimised, allowing the surveyor to concentrate efforts on the survey itself and negating the need for constant reference to the paper guide.

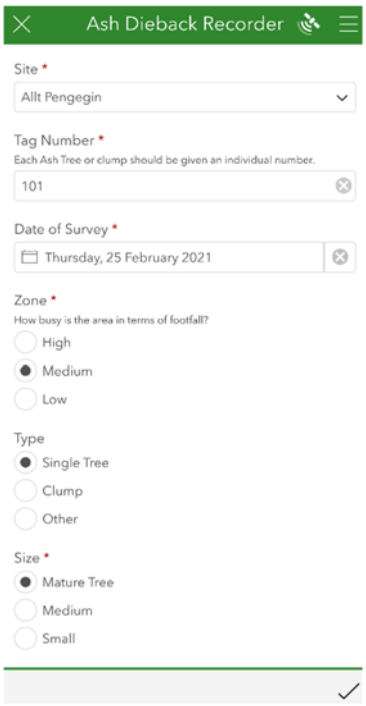


Fig 3 – Ash Dieback Recorder App

It was decided that each tree be tagged with a unique reference, so the tree could be re-identified during subsequent visits, negating the risk of re-surveying or felling the wrong tree. The nature of the app also meant that we could record the rough spatial location of

each tree, as well photograph the condition of the tree at each visit. This will allow us to track the progression of the disease at individual tree level more effectively.

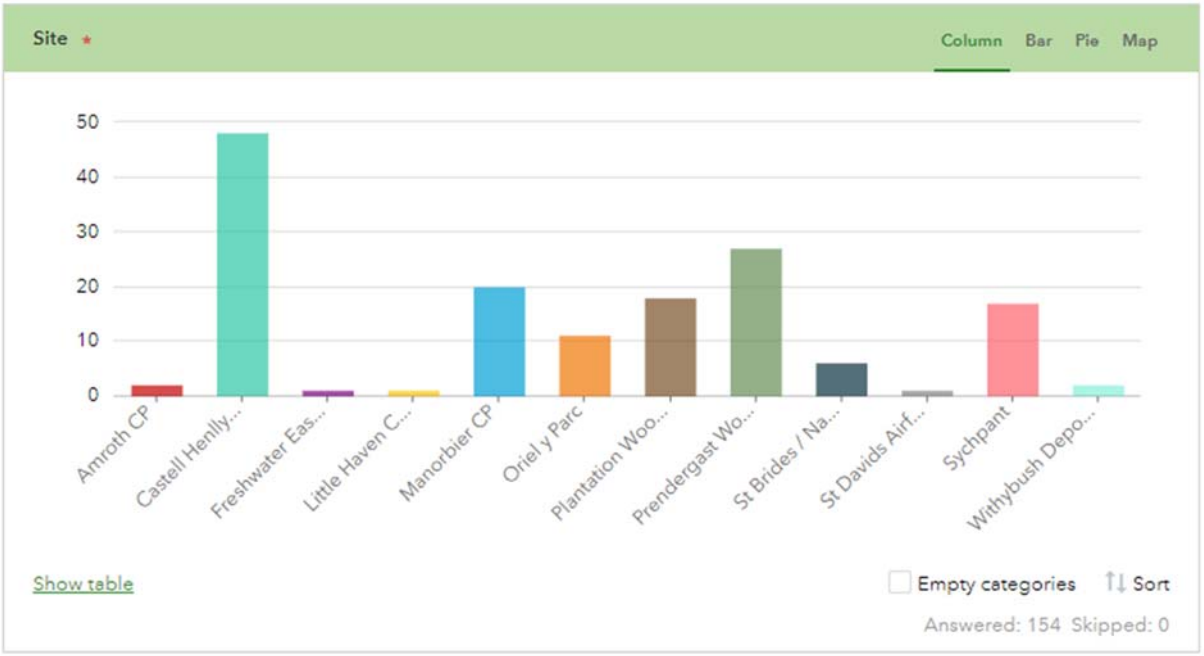
As data collected by the app is stored in the cloud, a simple web-based monitor was also created, to allow managers to track and monitor progress and plan for the ongoing management of the disease at individual 'tree-level'. (Fig 4 below). Digitising this process ensured automation took the complexity out of the administrative task related to surveying and collecting what quickly became a wealth of data. Due to the nature of Ash dieback, trees within one site can be in different states of health, even those in close proximity to each other. At Oriel y Parc car park for instance there were trees that required felling as well as trees that had very little if any signs of disease. To manage trees at individual tree level requires an effort, good data and a simple view of that data.

As part of the risk assessment process, it is good practice to keep a record of the activity that has taken place, including a record of results and relevant dates. The digital processes have ensured we have an easily accessible archive of all necessary records should they be required in the future.

Fig 4 The Ash dieback web monitor – showing results of the survey at Oriel y Parc, St Davids.

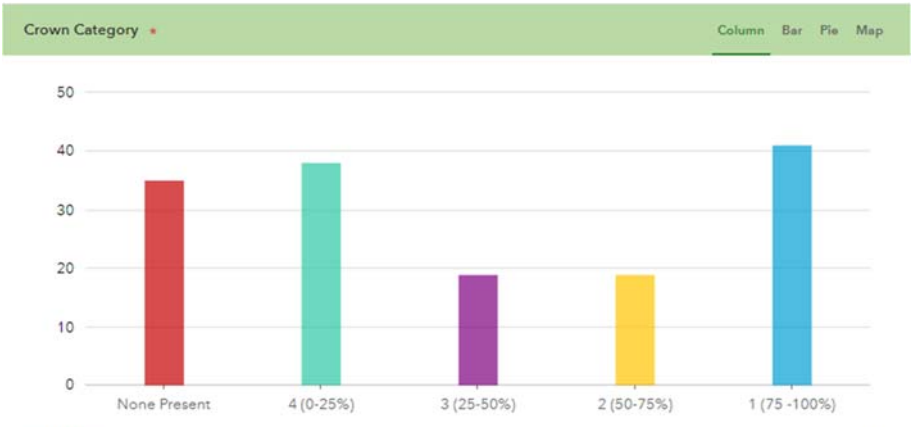
4.0 Results of the survey.

Over the course of the survey, 154 individual trees were inspected, mainly at Zone 1 sites, including Amroth Car Park, Castell Henllys, Oriel y Parc, Sychpant Woods, Plantation Woods (Saundersfoot) and Manorbier Car Park. At some sites such as at Carew Castle, Ash dieback management was already well underway, so a separate survey was not required.



Graph 1 Showing the sites surveyed and tree numbers during 2020/21

In terms of the progress of the disease on the trees surveyed so far, Graph 2 below shows the percentage of trees that fall into each crown category. The figures will be influenced by the choice of sites that were prioritised. Whilst we prioritised sites in Zone 1 (highest footfall), we also naturally tended towards sites that we knew had an existing Ash dieback problem.



Answers	Count	Percentage
None Present	35	22.73%
4 (0-25%)	38	24.68%
3 (25-50%)	19	12.34%
2 (50-75%)	19	12.34%
1 (75 -100%)	41	26.62%

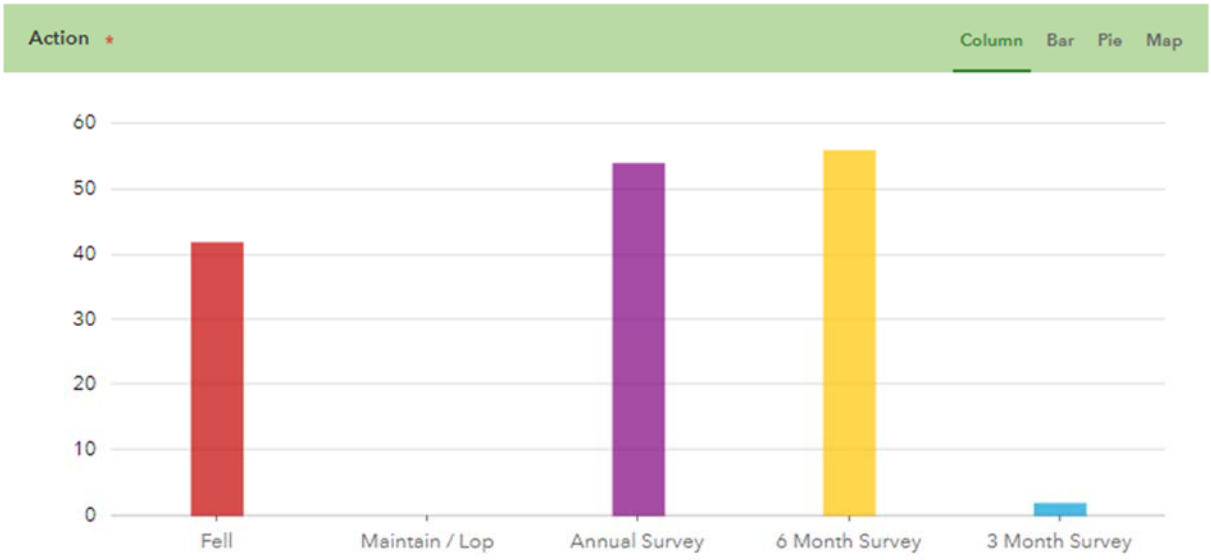
Graph 2 showing the percentage of trees found in each crown category.

23% of the 154 trees checked were judged to have no Ash dieback present at the time of the visit and were thus a low priority for onward action. This leaves 77% or 117 trees that became candidates for felling or would require closer monitoring in the future.

As it was pre-determined that felling would be a last resort, given the impact on biodiversity in particular, efforts were made to ensure trees at the lower end of the spectrum remained in situ, but were monitored more closely. Our digital systems underpinned this and have helped the Countryside Management Team to make more complex decisions on tree management.

5.0 Decisions following the survey

Graph 3 below indicates the decisions made for each tree.



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Empty categories

Sort

Answers	Count	Percentage
Fell	42	27.27%
Maintain / Lop	0	0%
Annual Survey	54	35.06%
6 Month Survey	56	36.36%
3 Month Survey	2	1.3%

Graph 3 showing the decisions made for each tree surveyed.

42 trees became candidates for felling (27%). The decision to mark up the tree as a candidate for felling is the first stage in the felling process. Some trees were felled quickly, whilst some candidate trees required further consultation, either with the Biodiversity Officer or Tree and Landscape Officer. This was the case with a mature tree within the SSSI at Sychpant in the Gwaun Valley for instance.

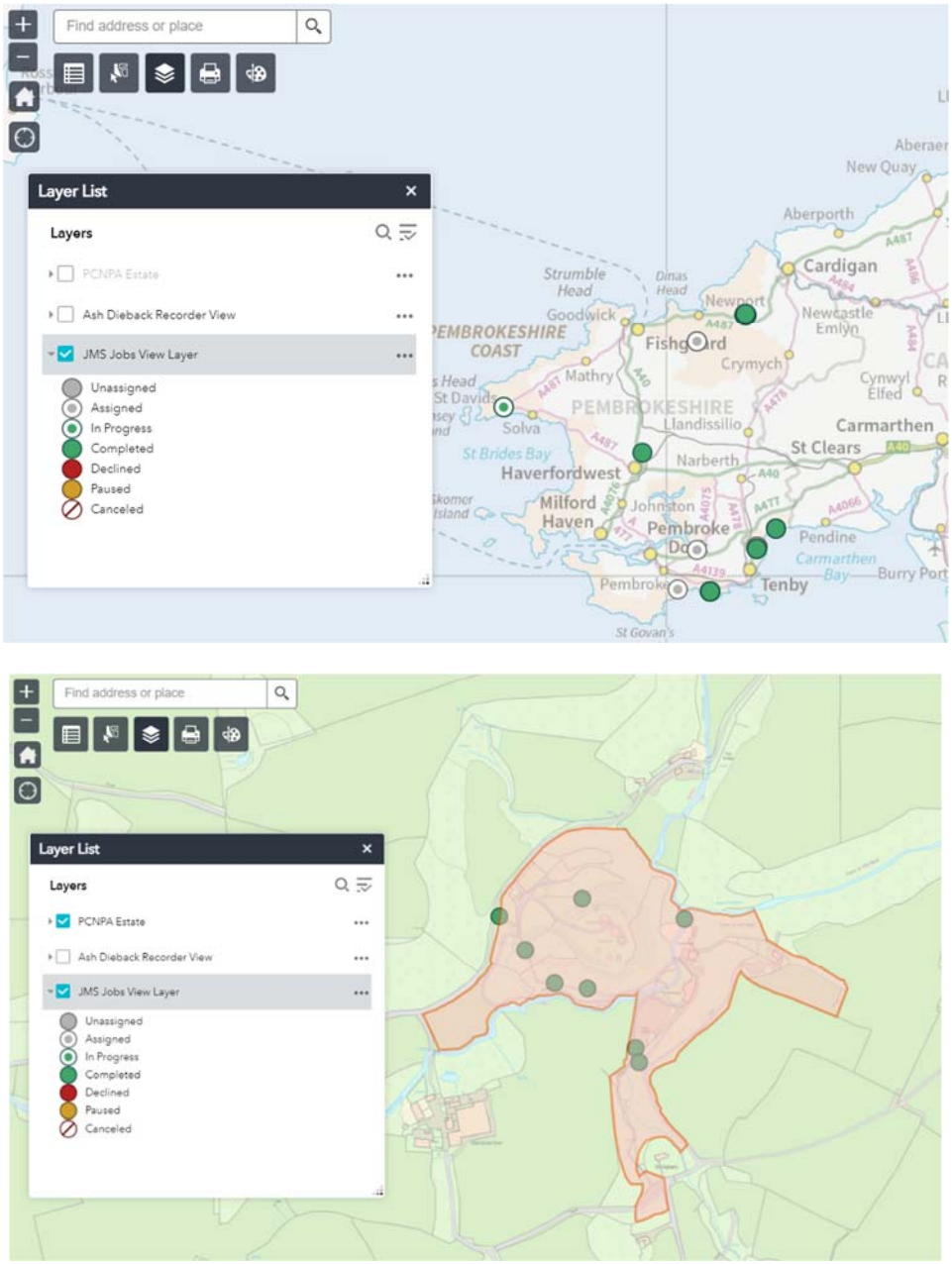
112 trees (73%) will require management through inspection over the coming years. These trees were left in situ. Of these 112, around half could remain under the current annual inspection policy,

and half would need more closely monitoring with more regular 6 month inspections. When the survey was being designed, one option under consideration was to lop and maintain trees rather than fell completely. In practice, in areas of high footfall (Zone 1 sites), the preference became to either fell badly affected trees, or monitor trees until felling completely was required.

Fig 5 Ash Tree earmarked and subsequently felled at Amroth Car Park.

6.0 Felling Progress

The candidates for felling were input into the Countryside Management Teams Job Management System (Fig 5 below) and allocated to the appropriate Warden Team for action, this integrates the dieback work with other workflows. Whilst Ash dieback work is sometimes managed as a stand-alone task, we also have the option of integrating the work with other tasks on the same site – this one visit approach is a more efficient way of managing our work, and reduces the cost of hiring specialist machinery. At Oriel y Parc, Ash dieback work was undertaken at the same time as other tree management work requested by the site manager for example.



Figs 6 Showing the Job Management System in relation to Ash Dieback felling work across the Park and within Castell Henllys.

The Countryside Management Team has in-house expertise in tree felling, including a specialist woodland team based in the north. Most of the felling work was undertaken in-house, with the exception of a few trees which were felled by contractors. Due to the nature of the disease and how its progress weakens the tree, the two woodland wardens were trained in the use of a Mobile Elevated Work Platform (MEWP), the use of which is standard practice for such felling operations.

Felling work is ongoing and as at February 25th, over 26 infected trees have been removed, with the remainder marked up for felling over the coming months. Progress has been somewhat slower than was anticipated, with the warden team having been stood down for 9 weeks during the felling period, in reaction to national COVID lock-down measures.

Fig 7 Removal of diseased tree by National Park Warden at Oriel y Parc, St Davids, February 2021.

6.1 Estimate of Costs / Effort.

The nature of the Authorities estate means that the impact of Ash dieback is less than has been the case with other land owners. The management of trees with the disease falls within current tree policy and no major changes have been made to accommodate the additional workload created. With some additional training and the use of existing software and expertise, the additional cost to the authority has been minimised. During 2020/21 the additional cost of managing trees with Ash dieback was accommodated within the Countryside Management Teams annual budget. An estimate of the additional cost for 2020/21 is as follows -

Contractor Costs 2020/21 - £3220

Equipment Hire - £1000 (MEWP / Chipper).

In terms of team time – an additional 34 days of effort was made by the Countryside Management Team in total to manage trees with the disease. This includes time spent surveying and felling.

7.0 Future Plans

If weather permits, and without any further interruptions to the operation, the majority of trees earmarked for felling in this first phase will have been dealt with by March 31st 2021 – in readiness for the expected influx of visitors post lockdown.

During the summer of 2021 the team plans to re-commence the survey of the rest of the authority estate (Zone 2 and 3 sites), whilst the trees are in leaf and the disease more visible. Due to the nature of these sites, it is anticipated that the proportion of trees to be felled will be smaller, with a greater proportion entering the system for onward monitoring.

Any trees found to require felling during the next phase of the survey, will be earmarked for action as required. It is anticipated that the ongoing management of Ash dieback will lead to an increase in tree management work for the team over the coming few years, but not beyond the scale of the work carried out in 2020/21. Spreading the management of trees over a longer period, through increased monitoring will remain the adopted tactic.

Given that removing trees in certain locations is unavoidable, the Conservation Team have budgeted for replacement trees, of a different native species to be planted. This work will commence as and when the opportunity arises.