

Cabinet

8 September 2022

Tree Nursery Business Case

Recommendations

That Cabinet

1. approves the business case as set out in this report to establish a Council run tree nursery on identified small holding land to produce trees in support of Warwickshire's 2030 Climate Change tree planting pledges
2. approves the use of £140,000 of funding from the Climate Change Action Fund to support the establishment of the tree nursery, and authorises the Strategic Director for Communities to take such other steps as he considers necessary to establish the nursery.

1. Executive Summary

- 1.1 Given Warwickshire County Council's (WCC) commitment to plant a tree for every resident by 2030 there is a need to source over 566,000 trees for planting over the next 8 years. A full plan on how this commitment will be delivered is being developed but it is likely that the trees will be planted by a combination of County Council, Districts and Borough councils, private sector organisation and volunteer groups. The purchase of the trees is likely to be funded from a combination of government grants, County Council, District and Borough, private sector business, volunteer sector and local residents. Regardless of who plants the trees or how they are funded it is clear that the most cost-effective way to acquire these trees is by establishing a tree nursery which would become self-funding from the sale of trees. This proposal sets out the business case for establishing a tree nursery so that the County has a sufficient stock of low cost trees to meet the future commitment.
- 1.2 Additionally, a tree nursery would have added benefits including the ability to grow specific varieties that thrive in Warwickshire and are resistant to pests and disease, have a low carbon footprint from reduced transport and the potential for the development of arboriculturist apprentices. The proposal utilises existing Forestry Team expertise and resource, the repurpose of WCC owned agricultural land and compost generated from the County's waste team.

2. Background

- 2.1 The market for trees is taking off with many local authorities and businesses making commitments to plant trees as part of their climate change response plans and efforts to make their businesses carbon neutral. The government is also considering setting targets for increased green canopy cover for streets on new developments as part of the latest Environmental Bill. As carbon sequestration schemes develop and the carbon market is established there is likely to only be higher demand for trees to be planted.
- 2.2 Most trees are imported from Europe where there are well established nurseries that grow large numbers of trees from seed. Whilst this has previously been a source of low-cost whips and saplings, concerns about reducing carbon footprint from the transport of trees and concerns over the transfer of pests and disease are making the UK tree nursery market more attractive. Currently there are no tree nurseries growing from seed to supply the consumer market in Warwickshire and adjoining counties.
- 2.3 The commercial tree nursery trade is seeing unprecedented times with limitations affecting the industry such as more vigorous import and export controls due to EU regulations, charges and extra costly boarder bio-security measures in place to prevent the travel of pests and disease. Other factors are also pushing up the costs of trees. The government is currently planning to introduce a tax on peat and a complete ban on its use post 2024. Peat is a critical component used to produce large numbers of trees cheaply and compost alternatives are likely to be reflected in higher costs for trees. The movement of trees such as Oak is being restricted in England to prevent the spread of pests and diseases. Ash Die Back and Dutch Elm Disease have ravaged large areas of forest in the South of the Country and the controls being put in place to reduce disease transfer are likely to further drive up the costs associated with growing and transporting trees.
- 2.4 Recent discussion with the nursery trade has confirmed that prices will be increasing over the coming years. The below table (1) identifies that most plants have at least doubled in price over the last 10 years with a sharper increase over the last few years. There is also a shortage of skilled staff available within the UK because a substantial proportion of the nursery industry has been buying in trees from Europe and simply selling them on as a retailer. Furthermore, with a growing emphasis on Health and Safety and shorter teacher hours tree courses unfortunately started to remove tree nursery practice from the syllabus in 1998 leading to a shortage of skilled labour for the commercial nurseries.

Table 1: Showing yearly increase in prices of small whips.

Year	Holly	Oak	Hawthorn	Maple	Hazel	Beech	Cherry
2014	£2.50	£0.40	£0.24				
2015			£0.26	£0.40	£0.55	£0.80	
2016	£2.40			£0.41	£0.55		
2017	£2.80				£0.55		

2019				£0.48	£0.63		
2020	£2.90		£0.38				
2021	£3.10		£0.48	£1.20	£1.30		£1.20
2022	£3.20	£1.80		£1.65	£1.35	£1.80	£1.60

3. Proposal

- 3.1 The proposal is to establish a nursery site to produce whips, and standard trees on a part of one of the Council's existing small holdings. The nursery site would be made up of poly tunnels with plant benches and watering systems. A storage area for tree stock as well as equipment and a large-scale composting area where forestry team maintenance waste would be composted.
- 3.2 Setting up the tree nursery can offer both financial and corporate benefits. The financial assessment demonstrates a business case that creates a self-sustaining service not only providing the trees the Council needs to meet its planting pledge but also to generate an income stream from the sale of trees to other organisations.
- 3.2 As well as sustainable finances the project has many environmental and social value benefits compared to buying in all the trees from commercial suppliers. Opportunities to supply biodiversity rich species to meet the council's commitment to climate change and provide rare and bespoke species such as viable Elm's and Ash trees are an additional benefit for Warwickshire. Growing locally also significantly reduces carbon from transport helping the council achieve a net zero carbon commitment in the future.
- 3.3 Warwickshire County Council's Forestry section is fortunate to have skilled staff with knowledge and experience of tree production. This knowledge needs to be passed onto new generations through peer-to-peer communication to meet the requirements of producing a sustainable resilient tree stock for the future generations and this proposal includes the development of a number of apprenticeship roles.
- 3.4 Looking to the future the trees and woodlands within Warwickshire will always need restocking. Not all trees survive when planted out and trees do eventually die. Both the recent Environmental Bill calling for more street tree planting in new developments and the council's rural tree planting programme will increase the tree stock that WCC manages. Replacement trees will inevitably be required in the future and a WCC tree nursery can provide these. Indeed, the more the nursery does provide the more the financial business case stacks up and the more the other benefits improve.
- 3.5 A total of 5 sites have been considered with the site at Heath End, nr Snitterfield determined as the most suitable given soil, elevation aspects and existing barns and structures. The site has a water supply as well as a stream which can be used for irrigation. The location is ideally placed within

Warwickshire for easy access and delivery of trees to locations around the County. The part of the site proposed for this use comprises a smaller section of the wider existing small holding. Whilst small (c 20 acres) the site is adequate for the needs of the tree nursery. The remainder of the Council's small holding (c 120 acres) will be retained for farming. On this basis the proposal will not be a substantial loss to the Council's leased farmlands.

- 3.6 Overall, the scheme is minimal risk given that it is utilising a small part of an existing WCC small holding site and existing expertise within the Forestry Team. The start-up costs are low as would be the costs to exit the business as there is no long-term leases or agreements required. The nursery would also be easily scalable once set up, so if the commitment to plant trees was to change then the site could be scaled down to supply a smaller number of trees which would still be required to meet our current annual tree placement and maintenance programmes. Likewise, the site could be scaled up if agreements were reached with neighbouring authorities to supply trees.

4. Financial Implications

- 4.1 The following figures are based on the council's plan to plant the 566,000 trees by 2030 for the climate change programme and the usual number of standard trees the council plants to maintain its tree stock. The figures do not include the increase in the retail price index of purchasing the trees.
- 4.2 The current average cost average cost of a whip is £1.73p and the average cost of a standard tree is £108. These figures are calculated from actual costs incurred over the last two years as well as price checks from suppliers. The finances do not consider the future price increase in the cost of buying in trees so this business case demonstrates a worst case scenario; however, even without this increase the figures are still viable for the council to make savings over the term of the planting programme. Recent standard tree purchases have seen a rise to £138 per standard tree and Oak tree costs are now at £315 per standard tree. As current hyper inflation hits the market the anticipation is that these prices will rise further.
- 4.3 The options vary from the nursery running at minimal to maximum and the council just purchasing 350,000 whips at 2020 prices as shown in the climate change forecast at the time and more recent market prices in option 1. The cost of purchasing the trees and the ratio of external to internal whips will be determined by officers in line with the available budget, taking into account the market, external funding and additional income received from tree sales.

Table 2: Options appraisal

	Total Cost of 566,000 whips	Unit Cost per Whip (Total Cost divided by 566,000)	Year in which 566,000 whips target achieved	Years to pay back investment
Option 1 Purchase all whips on external market	£967,860	£1.71	Flexible	Nil
Option 2 50,000 In House Whips per Year	£408,585	£0.72	2035	5
Option 3 70,000 In House Whips per Year	£291,847	£0.52	2032	4
Option 4 90,000 In House Whips per Year	£226,992	£0.40	2030	3

Table 3: Start up investment costs

	2022-23	2023-4	Total
Equipment	£25,900		£25,900
Employee and premises costs during initial setting up period	£42,278	£61,775	£104,053
Total	£68,178	£61,775	£129,953
Total including contingency and Inflation (25%)	£85,000	£77,000	£162,000
Less Forestry Commission Grant £22k			£140,000

4.4 Annual running costs are included in the initial start-up cost estimates. Post 2024 annual running costs are estimated to be less than £40,000 per year under a worst-case scenario. Additional income from conservative tree sale estimates should mean the nursery is self-sustaining

Table 4: Annual running costs 2024/25

Expenditure	
Direct Employees	£47,600
Premises	£19,197
Equipment Replacement	£5,180
Management & Overheads	£12,802
Total Annual Expenditure	£84,779
Income from Provision of Standard Trees for BAU	
WCC Standard Trees	-£31,850
Warwick District Standard Trees	-£9,100
Rugby DC Standard Trees	-£5,915
North Warwickshire DC Standard Trees	-£1,820
Total income from Standard Trees	-£48,685
Residual Cost after income from Standard Trees	£36,094

- 4.5 The government is proposing to increase woodland cover and tree canopy cover outside woodlands from 14.5% to 17.5% of total land area in England by the year 2050, equivalent to an increase of at least 415,000 hectares. It is likely then that there will be further opportunities to apply for grant funding. The team have been successful with a Local Area Tree Scape bid (£212k) which has funded the planting of 3,000 trees. The team will also be applying for funding for planting from the Forestry Commission's Woodland Creation Grants and from EA/DEFRA Natural Capital investment Grant.
- 4.6 The team has recently been successful with a Forestry Commission Tree Production Capital Grant bid of £22,000 which will help reduce the start up investment costs. The grant is for match funding to help tree nurseries and suppliers invest in projects which improve, expand, automate or mechanise their operations. The team has also successfully secured £22,000 match funding from Tree Production Capital Grant towards this project.
- 4.7 WCC has also been asked by government to consider producing a Warwickshire Local Authority Natural Capital Investment Strategy. This strategy will be a framework on how all the nature-based solutions compensation payments are dealt with through the Council. The council already have Biodiversity Offsetting contributions being collected from developers but is also working on developing a method for carbon

contributions. The strategy will outline how WCC and its local authority partners will agree as to how these funds are invested and used. It will represent WCC's 'green credentials' as it will demonstrate that buying WCC Biodiversity or Carbon credits is a good because the money is re-invested into Warwickshire's Natural Capital. It could potentially help pay for the tree planting or at least provide a steady source of funding to match fund other government grants for tree planting.

5. Environmental Implications

- 5.1 Local trees would have a minimum carbon footprint and the ethos of the nursery would be to run on as low a carbon footprint as possible. This would complement the council's aims to sell carbon mitigation trees in the proposed carbon code planned and any future carbon zero plans.
- 5.2 There are also rare trees that have survived pest and diseases such as Ash Die Back and Dutch Elm Disease. With our own tree nursery, we could propagate from these trees and start to reintroduce them into the countryside. Firstly, the re-introduction of the Elm formally known as the Warwickshire weed could be added to some of the planting specifications. Thousands of Elm trees were lost in the 1970s and these have now partially been naturally replaced by Ash trees which are under threat from Ash Die Back.
- 5.3 Additionally, compost from Warwickshire Household Waste Recycling Centres will be used to supplement the compost created on site from Forestry Team waste.

6. Timescales associated with the decision and next steps

6.1 Project Delivery Timeline

Project Initiation and approvals	Summer 2022
Seed gathering	Autumn/Winter 2022
Equipment purchases and site set up	Winter/Spring 2022/23
First whips produced	Spring 2024

Appendices

None

Background papers

None

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The report was circulated to the following members prior to publication:

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