



# The Value of Gardens

**September 2025**

# Foreword

**The value of gardens cannot be underestimated. UK gardens put together cover an area 20% the size of Wales, they play an invaluable role in delivering biodiversity net gain, health and wellbeing, climate change mitigations and the drive to net zero.**

However, as pressure grows on our green spaces and garden sizes, we risk missing this opportunity and this report is timely in reminding everyone not to take our gardens for granted and underlining their role as an incredibly important part of UK green infrastructure.

In this report we highlight for the first time the range of benefits the UK's domestic gardens bring to the health, environment, and economy of the UK. With government plans to build 1.5 million more homes in the next five years it will be vital that we seek to preserve and strengthen the contribution gardens make. Our gardens and green spaces also drive and underpin economic growth in our sector – a sector which provides good 'green' jobs and will be vital to deliver net zero targets. We have a huge opportunity to secure the economic, health and environmental benefits gardens deliver for generations to come and to create a green legacy for future generations.



I'm reminded of Ebenezer Howard, the founder of the garden cities movement over a century ago who had a vision of re-connecting people with nature. His influence on town planning and the lives of millions has been profound and lasting, visible today in so many of the gardens and green spaces in our communities. Now's the time for the UK to renew this vision and ambition, to seize the opportunity to create gardens fit for the 21st century, and to ensure that the UK's gardens continue to be the envy of the world.

**Fran Barnes**  
*Chief Executive Officer  
Horticultural Trades Association*

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# Executive Summary

**In our Value of Gardens report, we bring together evidence for the vital role that the UK's 22million domestic gardens play in underwriting the nation's health, wealth and environmental ambitions.**

As a nation, we find ourselves at a critical juncture: decisions now need to be made to recognise the role of domestic gardens in the delivery of the UK's housing targets of 1.5 million new homes by the end of this Parliament. Ensuring these new gardens have enough space to accommodate the plants, trees and leisure occasions our nation loves is a once-in-a-generation opportunity, fundamentally improving our ability to cope with the effects of climate change, foster a healthy and happy society in the coming decades.

HTA's unique research shows that the UK is a nation of gardeners, with over three-quarters of adults having their own private gardens (77%)<sup>1</sup>, and 30million people regularly enjoying gardening as a pastime or hobby. Indeed, our research shows gardening to be one of the most socially inclusive leisure activities in the UK, with wide participation across all age and income brackets.

The UK's domestic gardens combined cover an area equivalent to one-fifth the size of Wales, and are used for many purposes – from growing vegetables (33%) or supporting wildlife (50%), to entertaining family or friends (40%)<sup>1</sup>.

In environmental terms, domestic gardens in our urban environments provide extensive benefit in the fight against the impacts of climate change. Trees have been found to provide shade significant enough to cool concrete surfaces by 12°C<sup>2</sup>, while trees and lawns considerably slow water runoff, crucial in reducing urban heat island effects and flood risk. Gardens can offer effective protection for households against localised pollution, important given that in the UK, between 28,000 and 36,000 deaths are associated with human-made air pollution every year<sup>3</sup>.

Around eight in ten UK adults agree that gardens and green spaces benefit their physical health (80%) and their state of mind (85%)<sup>1</sup>. Gardens provide a means of exercise on the doorstep, with the act of gardening burning calories over only short stints, reducing the impacts of many lifestyle-related diseases and encouraging physical activity amongst children. The data in this report on the health benefits of plants, gardens and gardening shows the potential for domestic gardens to enable a reduction in the pressures on our NHS as our population grows and ages, for instance through improving mental wellbeing and reducing risks of dementia.

The supply and maintenance of everything in our gardens, from dahlias to decking, from trees to trowels, is all underwritten by the UK's vibrant Environmental Horticulture industry, a sector which supports GVA contributions of £38billion for the UK economy and employs 722,000 people<sup>4</sup>. Our report shows – for the first time – the very considerable extent to which domestic garden area 'pulls through' this economic activity and is essential for the long-term health of this sector of the green economy. After stripping out the effects of gardeners' ages, attitudes to gardening, gender, and income, we identify that that for every square metre more/ less of domestic garden space that there is in the UK, an additional/reduced £2.01 is spent every year on the plants and products that the environmental horticulture industry produces<sup>5</sup>. Indeed, the difference to the economy that will be made by ensuring adequately sized gardens in the planned 1.5m new homes is substantial. Our modelling shows that the difference to the economy from including typical 200 square metre sized gardens in these new homes compared with no gardens at all would be £64billion in consumer spending, along with the associated green job creation and tax revenues for the economy over the next century.

The evidence base in *The Value of Gardens* shows the huge benefits to the UK of safeguarding the UK's domestic gardens for future generations. We urge policymakers to prioritise the provision of substantial domestic garden and green space in new housing developments and urban infrastructure by:

- Creating a **Government Office for Green Spaces** to formally recognise the value of gardens
- Ensuring there is a **minimum of 29.5% garden density in all new housing developments**
- **Unlocking biodiversity net gain and planning barriers** for horticulture businesses to deliver green growth
- **Recognise the role of horticulture in climate change resilience**, through supportive R&D, technology, regulation and policy for the sector
- **Reframe action around reacting to drought as water resilience** with industry grants and public messaging that doesn't penalise gardening.

# 1. The UK's Domestic Gardens

## How people use them

The UK is a nation of gardeners, with some 30million British adults (55%) enjoying gardening in their free time as a hobby or interest<sup>1</sup>. Over three-quarters (77%) of households have their own private garden<sup>1</sup> (see Figure 1) – that’s over 22 million gardens providing enjoyment and environmental and wellbeing benefits.

Residential gardens account for an estimated 29.5% of total urban area in Great Britain<sup>6</sup>. The average private garden (front, back and sides) is around 15m<sup>2</sup> in size (e.g. 216 square metres)<sup>1</sup>, with the UK’s domestic gardens combined covering an area equivalent to one fifth the size of Wales! An estimated 74% of the UK’s total domestic garden area is lawn, soil or planted, whilst 26% is paved or decked<sup>1</sup> (see graphic to the right).

Our gardens come in lots of different shapes and sizes, but majority feature flowers or plants, garden furniture and grass (see Table 1).

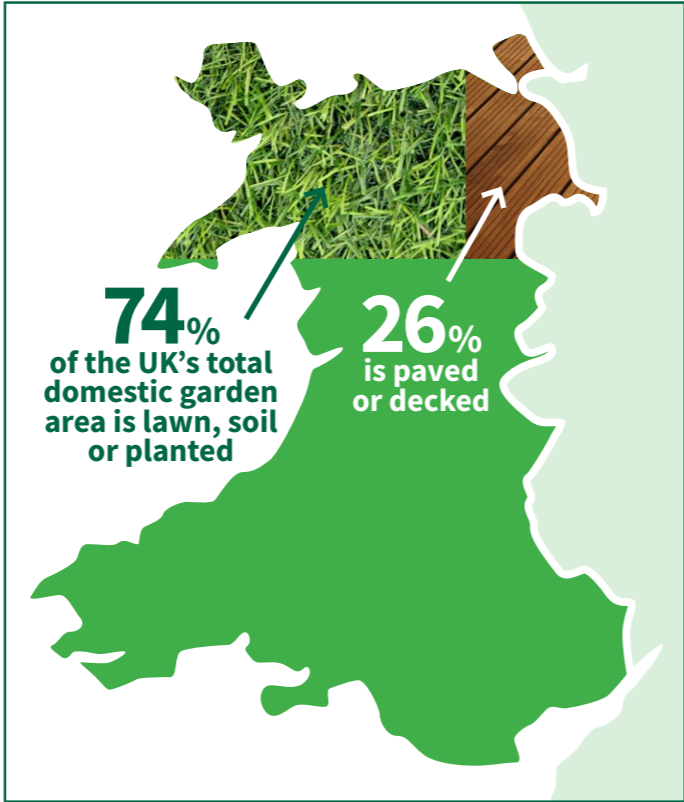


Figure 2. Size of UK private gardens<sup>1</sup>.

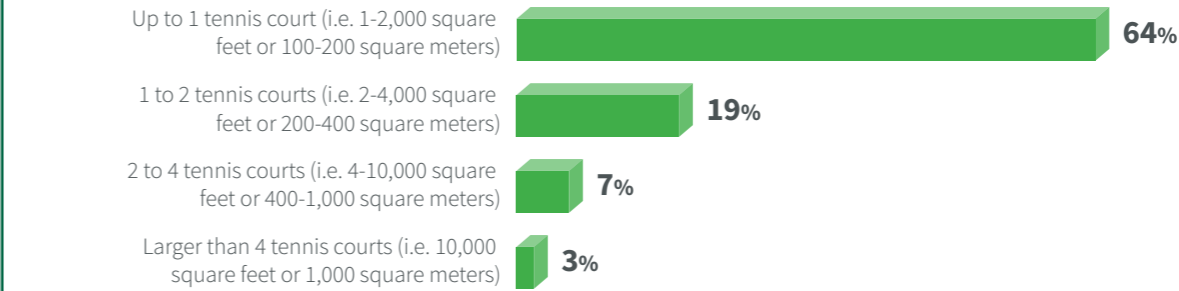
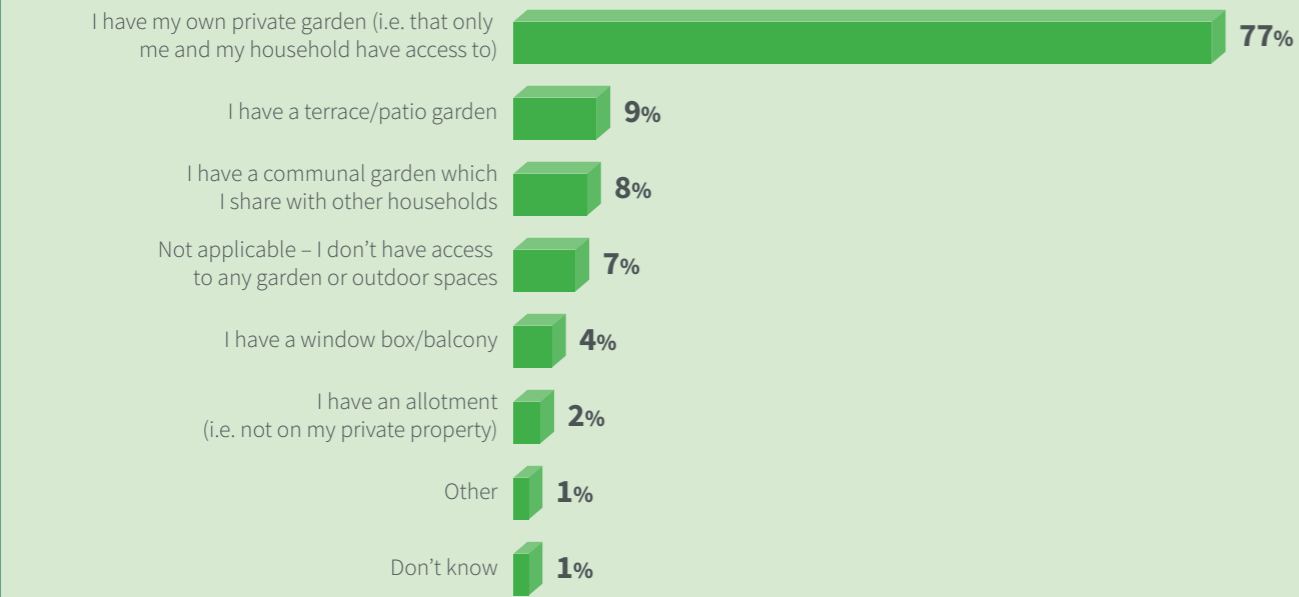


Table 1. Contents of the UK's private gardens<sup>1</sup>.

% of consumers with a private garden who claimed to have a particular feature in them				
 78% Flowers/plants	 70% Garden furniture	 68% Real grass	 59% Shed	 56% Paving
 55% Trees	 55% Patio	 45% Bird table/feeder/bath/box	 32% Water butt	 28% Fruit
 26% Composter (i.e. for garden waste/peelings etc. that gradually turns into compost; not a bin collected by the local authority)	 22% Vegetables	 17% Decking	 15% Greenhouse	 12% Pond
 9% Garden office/outbuilding (i.e. gym, games room, bar etc.)	 7% Fixed children's play equipment (e.g. slide, trampoline; not a football/tennis racket)	 6% Artificial grass	 4% Other	 1% Swimming pool

Residential gardens account for an estimated 29.5% of total urban area in Great Britain

Figure 1. UK adults with access to gardens and outdoor spaces for gardening<sup>1</sup>.



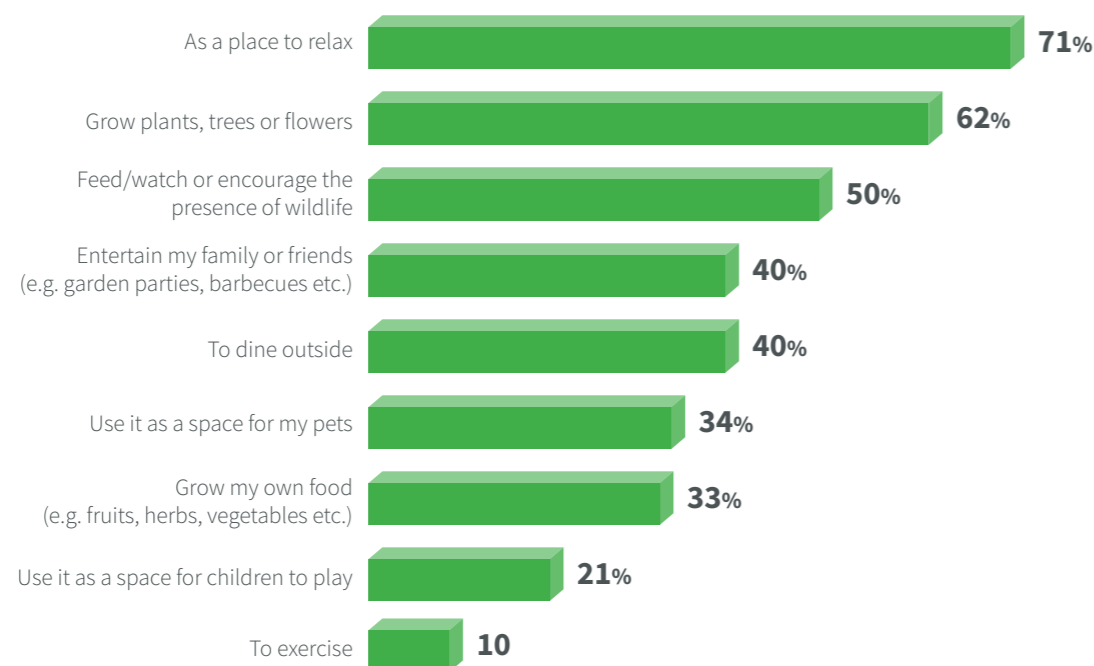
## 2. Gardens – Their environmental impact

Gardens are very much seen and used as an extension of the home and are used for many intents and purposes. For almost three-quarters (71%) the garden is a sanctuary, used as a place to relax and unwind (see Figure 3)<sup>1</sup>. Many gardens are used to grow plants, trees or flowers (62%) and fruits, herbs and vegetables (33%), whilst half of garden owners use them to feed, watch or encourage wildlife<sup>1</sup>. Gardens don't just hold appeal for the keenest of gardeners though, as 40% of the UK's domestic gardens are used as social spaces, to entertain family or friends and to dine outside<sup>1</sup>. Meanwhile, one in ten UK adults use their gardens to exercise<sup>1</sup> – an hour of moderate general gardening can burn around 320 calories<sup>7</sup>, equivalent to about 4 chocolate digestives!



*For almost three-quarters (71%) the garden is a sanctuary, used as a place to relax and unwind*

**Figure 3. What UK adults with a private garden say they use them for<sup>1</sup>.**



Gardens provide huge benefits for ecosystem services and climate change mitigation. In 2019, 82.9% of England's population lived in urban areas<sup>8</sup>, and our cities are set to house more people than ever before in the future. Domestic gardens play a vital role in reducing the impacts of climate change, enhancing wildlife and biodiversity, and providing spaces for people to connect with nature for their own health and wellbeing. It is essential that these green spaces are maximised, and that new, functional and considered gardens are created and the complete paving over of gardens (particularly front gardens) presents a key risk to these urban ecosystem services.

### Cooling effect from private gardens & urban heat island effect

There is clear evidence that green infrastructure reduces air temperatures in our urban environments. Urban and residential areas tend to be hotter than rural areas due to the buildings and solid surfaces absorbing and retaining heat – known as the urban heat island effect. But, plants and greenery absorb heat from the sun, and cool the air through evapotranspiration; their shade also reduces the amount of heat absorbed by solid surfaces. In these ways, gardens cool urban areas, protecting people from the effects of heatwaves, whilst reducing emissions associated with air conditioning.

Research by the UK Centre for Ecology & Hydrology, found that on average, domestic gardens specifically in London City region reduce temperatures by  $-0.24^{\circ}\text{C}$ <sup>9</sup>. A further study conducted in Manchester found that in full sun, concrete surface temperatures reached  $40^{\circ}\text{C}$ , whereas the grass in full sun only reached  $23^{\circ}\text{C}$ . In addition, adding an element of tree shade to these surfaces reduced the temperatures drastically, where concrete was  $12^{\circ}\text{C}$  cooler, and grass was  $9^{\circ}\text{C}$  cooler than if they had been in full sun<sup>2</sup>. As such the annual value of the urban cooling services provided by the UK's vegetation was estimated at £430million in 2020<sup>9</sup>, equivalent to £547million per annum in 2025 prices.

### Flood alleviation and reduced surface runoff

As well as extreme temperatures, climate change is also increasing the likelihood of extreme rainfall events. As such, the Environment Agency estimates that one in four properties in England will be in areas at risk of flooding from rivers and sea or surface water by 2050<sup>10</sup>.

*Research has shown that trees can be highly effective in reducing water runoff and preventing flooding, reducing run-off by 80% as compared to an asphalt surface*

Research has shown that trees can be highly effective in reducing water runoff and preventing flooding, reducing run-off by 80% as compared to an asphalt surface<sup>11</sup>. The canopy of a tree intercepts the rainfall, preventing it from reaching the ground, reducing immediate run off with some of the intercepted water evaporating back into the atmosphere. Meanwhile, tree roots absorb large volumes of water from the soil, and create obstacles to water flow, slowing down and reducing the amount of water available to contribute to run off. There is also evidence that lawns are even better than trees at this. On average, mature trees, particularly in urban areas, may intercept over 5700l of storm water each year<sup>12</sup>, with only 26% of water runoff; however a study in Manchester found that grass cover managed to absorb 99% of rainfall with only 1% runoff<sup>13</sup>.

In recognition of the flood prevention properties of trees and plants, 'rain gardens' are increasing in popularity in urban areas to reduce flood risks whilst improving biodiversity. For example, in the London Borough of Redbridge, an area that previously suffered from surface water flooding during periods of heavy rainfall, the council installed 11 rain gardens featuring plants, shrubs and other greenery planted along the roadsides which absorb surface level water, store it and then gradually release it into the sewer system,



helping to stop the sewer systems from becoming overwhelmed. The existing 11 rain gardens have capacity to collectively store around 113,000 litres of rainwater<sup>14</sup>, equivalent to the capacity of around 700 bathtubs! This same thinking is increasingly being incorporated into domestic gardens, for example in Frogheath Landscapes' Association of Professional Landscapers (APL) Sustainability Award winning "A Swale Garden", which redirected and slowed flowing water to reduce the risk of the property flooding<sup>15</sup>.

### Air pollution removal

The World Health Organisation estimates that 91% of people in urban areas breathe polluted air<sup>16</sup>; whilst in the UK, between 28,000 and 36,000 deaths each year are estimated to be attributed to human-made air pollution<sup>3</sup>. However, the UK's urban trees & grasslands provided an estimated £893million in air pollution removal services in 2022 (£1.02billion in 2025 prices) and the removal of harmful pollutants by urban vegetation was worth an estimated £800.5million in avoided negative health impacts in Great Britain in 2021 alone<sup>9</sup>, equivalent to £993.4million today.

*The UK's urban trees & grasslands provided an estimated £893million in air pollution removal services in 2022*

The same benefits can be realised for trees and plants in domestic gardens as pollutants like carbon monoxide and nitrogen oxides are absorbed during the process of photosynthesis. Trees are one of the best natural filters available, but shrubs (especially those with dense, waxy or hairy foliage), can also intercept some of the smallest particulate matter from the atmosphere. Pollution removal of airborne particulate matter has been found to be most effective at ground-level when closest to the source of emissions<sup>17</sup> (i.e. traffic). Therefore, low-level hedging around gardens can offer effective protection for households against localised pollution. Research from the RHS has found that in just seven days, a one-metre dense hedge can absorb the same amount of pollution that a car emits over a 500-mile drive<sup>18</sup>.

### Biodiversity

There is a growing body of evidence that gardens, and the plants within in them, provide valuable habitats for the nation's fauna and flora, particularly within urban areas and cities. A study of 61 urban, domestic gardens in Sheffield found a total of 1,166 plant species across the gardens of which 30% were native species; garden size explained 30% of the variation in species richness within individual gardens and doubling the garden size led to an increase in species richness of 25%<sup>19</sup>, highlighting the importance of the prioritisation and protection of gardens in new housing developments. The varied features of our domestic gardens (as shown in Table 1) from trees, hedges, plants and flowers to walls and ponds, provide diverse conditions for a wide range of creatures. Whilst gardens can act as 'corridors' to allow wildlife to move more easily between our green spaces.

Wildlife gardening, also known as "Wildscaping", is becoming more popular, with wildlife friendly plants and designs found at the likes of RHS Chelsea Flower Show, whilst the Association of Professional Landscapers' annual Awards are seeing more winners incorporating wildlife into their designs and more entries for the Sustainability & Biodiversity category.



*50% of UK consumers claim to use their garden to feed, watch or encourage wildlife, making domestic gardens a vital refuge for our native species*

In fact, 50% of UK consumers claim to use their garden to feed, watch or encourage wildlife<sup>1</sup>, making domestic gardens a vital refuge for our native species. Plants provide essential support for pollinators, whilst many trees offer a continuous supply of food and shelter for insects and mammals throughout the year.



### 3. Gardens – Good for Health & Wellbeing

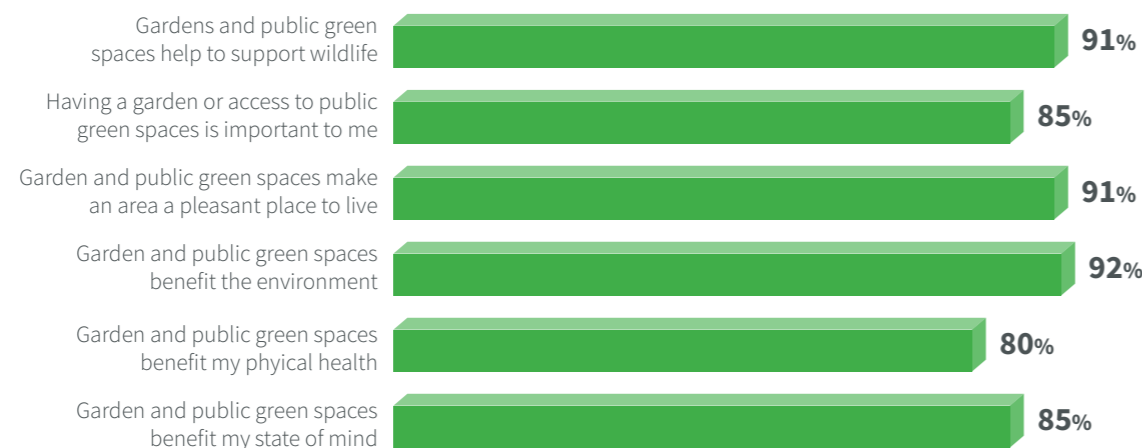
Aside from building climate resilience and supporting a thriving natural environment, gardens also deliver extensive value for improving the physical and mental health of UK citizens.

In addition to reducing negative health impacts through air pollution removal, an estimated 20 million people gained health benefits from recreation in nature in 2022<sup>20</sup>, with domestic gardens and urban greening projects crucial in providing easy access to the natural world.

*20 million people gained health benefits from recreation in nature in 2022*

Over nine in ten (91%) UK adults agree that gardens and public green spaces make an area pleasant to live, whilst 85% believe that having a garden or access to public green spaces is important to them (see Figure 4)<sup>1</sup>. This figure rises to 88% amongst people with a private garden of their own.

**Figure 4. Perceived benefits of gardens and green spaces**  
(% of UK adults who agree with each statement)<sup>1</sup>.



#### Physical health

Eight in ten (80%) UK adults agree that gardens and public green spaces benefit their physical health<sup>1</sup> (see Figure 4), with access to and engagement with gardens linked to increased physical activity, reduced risk of chronic diseases and enhanced overall wellbeing. The physical tasks involved with gardening and garden maintenance (e.g. digging, raking, mowing) are effective ways to burn calories in only short stints, providing access to exercise 'on the doorstep'. An hour of moderate general gardening can burn around 320 calories<sup>7</sup>, which is equivalent to around one-seventh of the recommended daily intake, or about 4 chocolate digestives! Increased physical activity reduces

effects of major health threats like obesity, type 2 diabetes or heart disease. Meanwhile, the gentler garden activities like planting or pruning, develop fine motor skills and help to maintain dexterity, particularly in later life.

The presence of the garden is crucial in instigating this physical activity, especially amongst lower income households for whom other means of being physically active (e.g. gym or sports club memberships) could be unfeasible. Even simple exposure to sunlight has been found to lower blood pressure and increase Vitamin D levels<sup>21</sup>, something which is far easier to get a dose of with a garden or pleasant outdoor space to accompany our urban dwellings.

These benefits are increasingly being recognised by health professionals, leading to an increase in 'social prescribing' of a dose of gardening, to decrease medicating pharmaceutically and reduce pressures on the NHS<sup>22</sup>.

*Over 60s who gardened on a daily basis had a 36% lower risk of developing dementia than those who didn't*

#### Mental wellbeing

The total cost of mental ill health was £300 billion in England in 2022 alone (from business costs of absenteeism, staff turnover and unemployment to reduced quality of life, mortality and healthcare costs)<sup>23</sup>; equivalent to double the NHS England's entire budget for the year, and around 12% of UK total GDP. Meanwhile, one in six people are reported to have experienced a common mental health problem (such as anxiety, stress or depression) in the last week at any given time<sup>24</sup>.

But critically, research has found that people living near to green space report less mental distress, even after adjusting for income, education and employment; and the further we are from green spaces, the higher the chance of anxiety and depression<sup>25</sup>. In support of this, 85% of UK adults

agree gardens and public green spaces benefit their state of mind (see Figure 4), rising to 87% of people with a private garden of their own<sup>1</sup>.

Even just looking out of a window onto green space, as opposed to bricked buildings, has been shown to speed up recovery amongst hospital inpatients, and reduce negative mindsets<sup>26</sup>. Meanwhile, time in nature can reduce mental fatigue and encourage serotonin and cortisol release, helping to boost mood<sup>27</sup>. Gardens also offer often peaceful moments to reflect and observe what's grown or changed, and provide a platform for continual learning (e.g. about nature/wildlife, successful maintenance strategies) leading to a sense of personal growth.

#### Supporting an aging population

In mid-2022, there were 1.7 million people aged 85 years and over living in the UK, representing 2.5% of the population. By mid-2047 this is projected to have almost doubled to 3.3 million and 4.3%<sup>28</sup>. Gardens should be prioritised and protected, to avoid the enormous pressure and costs of healthcare with an aging population further down the line. Despite significant growth in the older age groups, the number of people receiving state-funded care dropped by 10% between 2014 and 2024<sup>29</sup>, due to rising costs, workforce shortages and tightening eligibility criteria. The Alzheimer's Society estimates that approximately 60% of individuals receiving home care<sup>30</sup> and 70% of care home residents<sup>31</sup> have dementia or severe memory problems. This highlights the significant load that dementia places on the care system.

Notably, research has shown that higher gardening frequency is associated with greater lifetime gain in cognitive function<sup>32</sup> and brain health<sup>33</sup> in later life. One longitudinal study found that over 60s who gardened on a daily basis had a 36% lower risk of developing dementia than those who didn't<sup>34</sup>. And for those already living with dementia, gardens are widely recognised for improving mood, reducing aggression and improving ability to communicate more than other activities<sup>35</sup>.



Horticulture therapy<sup>36</sup>, nature therapy and ‘care farms’ are increasingly being utilised as alternatives to medicating that improve the quality of life of the worldwide aging population. For example, Social Farms & Gardens are a UK charity<sup>37</sup>, supporting 1,000 community gardens and over 200 city and school care farms, each showing how contact with nature can have a significant role to play in helping those with mental ill-health, autism, communication difficulties and disabilities. Key benefits for older users of therapeutic gardens include reduced pain, improved attention, lower stress, lesser reliance on medications and fewer falls<sup>38</sup>; highlighting the power of gardens for future-proofing our society.

### Children’s development

At the other end of the age spectrum, gardens provide an important space to play for young children. They encourage physical activity and provide a safe space to let off energy whilst learning boundaries of where they can’t go beyond. Private gardens also provide important connections to nature within a safe environment, and many childhood health disorders such as attention-deficit hyperactivity disorder, obesity and depression are linked to a lack of interaction with nature<sup>39</sup>. Research has found that children living the furthest distance (more than a 20-minute walk away) from green or open outdoor spaces exhibited over 2 hours more screen time and



*Horticulture therapy, nature therapy and ‘care farms’ are increasingly being utilised as alternatives to medicating that improve the quality of life of the worldwide aging population*

had poorer mental health than children living in close proximity (less than a 5-minute walk away)<sup>40</sup>. Meanwhile, residential green space has been found to be beneficial for the intellectual and behavioural development of children living in urban areas<sup>41</sup>. These findings are critical for the planning of new housing developments, to create optimal environments for children to develop to their full potential.



## 4. Gardens – Their economic impact

In 2024, UK households spent an estimated £9billion on products for their gardens, with the average household spending around £300 per year; and it’s estimated around a further £6billion was spent on the services of professional gardeners and landscapers to maintain or re-landscape them<sup>1</sup>.

*UK adults made an estimated 203million visits to garden centres in 2024*

The Garden Retail sector supported contributions of £5.7billion to UK GDP in 2023, along with 112,000 jobs and £1.3billion in tax revenues to the exchequer<sup>4</sup>. And of course, gardens themselves spur economic activity beyond just garden goods for instance spend on paddling pools, outdoor games or play equipment, and outdoor lighting is all instigated by the existence of the garden.

Garden centres are the leading sales channel for the purchase of plants and core gardening products, accounting for 55% of spend on outdoor plants for example, and 34% of total garden retail spend<sup>1</sup>. UK adults made an estimated 203million visits to garden centres in 2024<sup>1</sup>, 13 times the total attendance at the UK’s Premier League football matches for the 2024/25 season which stood at around 15million. 61% of British adults with a private garden also visited a garden centre café/restaurant at least once in 2024<sup>1</sup>, with a trip to purchase goods for the garden also leading to spend in the hospitality sector. Meanwhile, the internet is the largest channel for the purchase of garden leisure and maintenance products<sup>1</sup>, driving economic activity and jobs in the eCommerce and digital infrastructure sectors.

### The Future Value of Gardens

On top of the current economic contribution of the garden retail sector, there is significant additional value that could yet be realised. The Government’s commitment to delivering 1.5 million homes by 2030 presents an opportunity to unlock substantial economic growth alongside environmental and

*We’re at a moment of truth where the decisions made now in the planning of our new residential areas will have consequences that last as long as the houses and the communities they’ll make up*

social benefits through the provision of sufficient garden space alongside them. Gardens and green spaces will be critical to the future health outcomes of the UK’s aging population and the associated burdens on our healthcare system; as well as in the fight against climate change. We’re at a moment of truth where the decisions made now in the planning of our new residential areas will have consequences that last as long as the houses and the communities they’ll make up.

Should gardens be prioritised and an average of 200 square metres of garden per new home be allocated, HTA modelling shows that this could generate £65billion in additional spend on garden retail over a 100-year lifetime of the gardens<sup>5</sup> (see Table 3); whilst delivering the climate resilience and health benefits outlined in sections 2 and 3. However, current trends towards building homes with smaller gardens, alongside the paving over of existing green space within private gardens, pose a significant threat to these potential benefits.



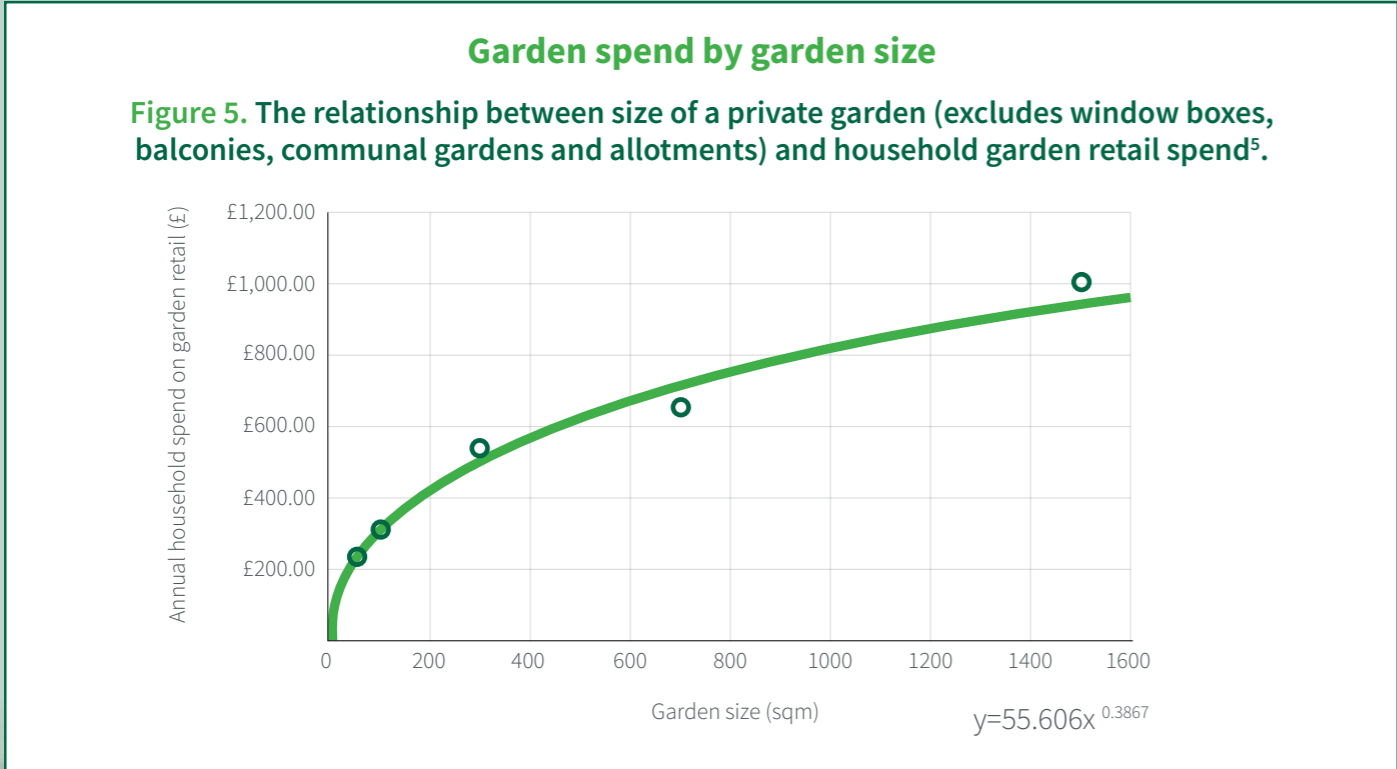
To illustrate the potential future value of our new homes, HTA has conducted a comprehensive analysis of the relationship between garden size and household spend on garden products. The findings reveal a strong economic case for ensuring new homes are built with adequate garden space.

Research approach and methodology

HTA performed statistical analysis on data from 9,390 survey responses collected in 2022 and 2023, controlling for other factors that could influence garden spend including age, sex, homeownership status, household income, and keenness on gardening (see Appendix 1 for further detail on

the analysis). This means that the underlying relationship between garden area and consumer spend can be assessed, where spend in the analysis focused on garden/gardening goods (excluding buildings and greenhouses).

Of all factors considered, garden size emerged as the strongest predictor of spend. The analysis confirmed a clear positive link: larger gardens are perhaps unsurprisingly associated with higher annual spending on garden products, even after accounting for income, home ownership versus renting, age, and gardening interest.



The relationship between garden size and spend

Figure 5 shows the output of the HTA’s regression model, and illustrates that as garden size increases, so does the spend on garden retail. The bigger the garden, the more space available to fill with plants, garden features and leisure items. In fact, for every square metre of garden space, on average £2.01 (in 2025 prices) is spent on garden retail per annum<sup>1</sup>. Spend per square metre of private garden space is highest for smaller gardens, due to a higher concentration of garden products and plants. This is shown by the gradient of the regression curve in Figure 5.

For every square metre of garden space, on average £2.01 (in 2024 prices) is spent on garden retail per annum.

Table 2. Predicted annual garden retail spend per household with a private garden based on the regression model in Figure 5<sup>5</sup>.

Private garden size (sqm)	Predicted annual garden retail spend
0	£4.29
50	£252.41
100	£330.01
150	£386.03
200	£431.45
250	£470.33
300	£504.69
350	£535.69
400	£564.08

Table 2 shows the predicted annual garden retail spend by garden size amongst households with their own private garden, or no private outdoor space (not accounting for window boxes/balcony or communal gardens). The scaling effect here means that a household with a 200sqm private garden generates 70% more garden retail spend per year than one with a 50sqm garden.

Economic opportunity from gardens in new housing

The UK Government has pledged to build 1.5 million new homes before the end of 2030. This provides a significant economic opportunity for the garden retail sector and the supply chains which produce the plants and goods retailed. Our modelling demonstrates how different approaches to garden provision in new builds could affect consumer spending on their gardens, and therefore support jobs, GDP contributions and tax revenues to the exchequer.

Table 3. The modelled garden retail spend potential of new housing should domestic gardens be prioritised in development space<sup>5</sup>.

Average size of garden of the new houses	Estimated uplift in annual garden spending (per 1.5m homes)	Flow of future consumer spending on garden plants and products (modelled on 100 years)
0sqm (No Private Garden)	£6.4 million	£640 million
100sqm	£302 million	£30.2 billion
200sqm	£647 million	£64.7 billion



*The difference between a 100sqm garden and a 200sqm garden sounds like a lot, but in reality is just an extra 2 metres front, back and side of a house, with a potential gain of £34.5 billion in garden retail spend!*

The average UK garden is 216 square metres in size. Table 3 shows that the difference between providing 200sqm gardens (i.e. gardens around average size) and no gardens is equivalent to around £64billion across a modelled 100-year period. The difference between a 100sqm garden and a 200sqm garden sounds like a lot, but in reality is just an extra 2 metres front, back and side of a house, with a potential gain of £34.5 billion in garden retail spend! Taking the £2.01 per square metre per annum figure, even a modest 10 square metre average increase in the gardens of the 1.5 million planned homes could deliver an additional £30.2million in garden retail spending annually (in 2025 prices), or £3billion over the 100 years.

### Green garden space at risk

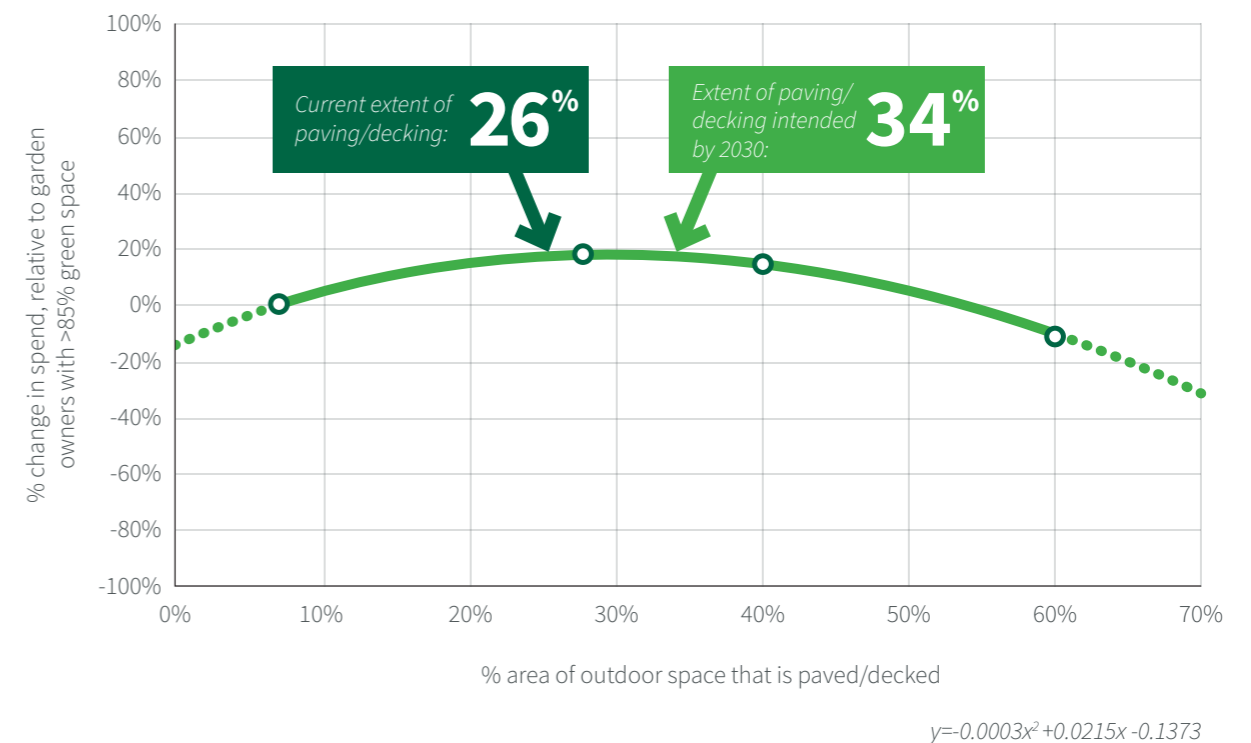
Whilst new housing developments present an opportunity for economic growth, existing trends for paving over gardens pose a significant threat to the UK garden economy and the environmental benefits that gardens can provide.

According to HTA research, in 2024 23% of all UK adults said that they intended to pave or deck over at least some of their outdoor space in the next

5 years<sup>1</sup>. Of those, around 30% intend to pave or deck over more than half of their existing garden. Taking garden area into account, this equates to around 8% of the UK's total private green space that is at risk of being lost in the next 5 years – an area equivalent to 409 square kilometres, roughly the same as one quarter the size of the whole of London.

The addition of paving and decking to existing outdoor space has some real positives. HTA analysis indicates that household spend on the outdoor space is higher when there is some paved or decked area, as opposed to when there is none. For example, the presence of a patio or decking is likely to pull through spending on garden furniture and pots. However, once the paved area of the garden passes a tipping point of around 40%, overall garden spend starts to diminish (see Figure 6), it is likely that with reduction in vegetated area, the environmental and health benefits of the garden will also diminish. Figure 6 also highlights that in the next 5 years, we are edging closer to this 'tipping point', and as such garden retail spend and environmental benefits are increasingly at threat of being constrained.

**Figure 6. The relationship between the proportion of the private garden that is paved or decked and the spend on garden retail<sup>1</sup>.**



Increasing the paved and decked area of private outdoor space across the UK without replenishing the lost green space could undermine the many economic, environmental, and health benefits that gardens provide. As demonstrated in previous sections of this report, green space is crucial for urban cooling, flood prevention, air quality improvement, and supporting biodiversity.

The loss of this green infrastructure is likely to increase urban heat island effects, flood risks, and reduce the natural capital that supports both human wellbeing and economic activity. Therefore, new developments are required to not only provide gardens for new residents but also to help offset the loss of existing green infrastructure. It is imperative that new housing developments include garden provisions with a generous amount of green space.



## 5. Our Asks

Well-planned and maintained gardens and green spaces can provide huge health, wealth, environmental and social benefits to individuals, communities and the nation. By prioritising gardens and green spaces in the delivery of new and existing housing and communities, the UK will achieve green growth. Only with the support of policymakers in UK and devolved parliaments, can the Environmental Horticulture sector ensure that the true value of gardens is realised.

*Currently, 29.5% of urban area in Great Britain is comprised of residential gardens<sup>6</sup>. 23% of MPs agree that policy should introduce a minimum of 29.5% of new housing development area for residential gardens, with a further 26% of MPs believing policy should actively seek to increase this proportion<sup>42</sup>.*

*Eight in ten (80%) UK adults agree that gardens and public green spaces benefit their physical health<sup>2</sup>.*

*UK households spend £9billion on products for their gardens annually<sup>2</sup>, 112,000 jobs are supported by garden retail alone<sup>5</sup>.*

### Our asks:

- 1. Recognition and improved policymaking and delivery:** We ask the government to formally recognise the value of gardens and the Environmental Horticulture Sector by creating a Government Office for Green Spaces. A cross-government group tasked to maximise the value of Green Spaces in all aspects of policymaking and regulatory impact assessments. All regulation must be proportionate with a full environmental and economic impact assessment to accompany it. The EU-UK reset is a great opportunity to boost UK supply-chains, UK gardens and implementation of easements of border barriers cannot come soon enough. We want to work with UK horticultural experts to deliver a world-class plant health regime to safeguard a thriving UK horticultural sector and the UK's green spaces for future generations.
- 2. Give individuals and communities the green space, skills and access to grow and support beyond planting:** To ensure that garden space remains intact while constructing 1.5 million new homes, there needs to be a minimum of 29.5% garden density in all new developments, and we believe all individuals and communities should have space to grow. This is essential for preserving green spaces, especially in urban areas and boosting communities where urban heat regulation services, provided by vegetation, was valued at £824 million in 2022<sup>20</sup>. Embedding sustained high quality tree care and green space maintenance and management in all new developments is vital. Green communities are healthier, and environmental horticulture is an essential component of delivering the Neighbourhood Health Service

and UK healthcare strategy. However, industry can only play its part if there is proper engagement and collaboration with the sector to embed nature-based approaches and provide preventative healthcare. Policymakers must also recognise environmental horticulture, landscaping and arboriculture jobs and roles in government green jobs and skills definitions, and national careers promotion. Inspiring and educating young people by ensuring plants are grown and studied throughout all stages of and across the curriculum will ensure every child in the UK has the skills to grow plants, boosting the amount of green spaces, and overall health and wellbeing of the nation.

- 3. Unlock Biodiversity Net Gain and planning barriers for horticulture businesses:** Planning policies need to work with and for horticulture, for example, so-called BNG should include cultivated plant diversity and landscapes in its metrics, and exempt protected cropping structures (e.g., protected/glasshouse growing). We need consistency in UK planning applications and a National Planning Policy Framework (NPPF) and Land-Use Framework (LUF) that supports environmental horticulture and landscape businesses who deliver gardens, green spaces and green growth.
- 4. Gardens are green infrastructure boosting resilience, UK innovation and delivering net zero:** Policymakers should recognise environmental horticulture's vital role in green infrastructure for delivering net zero and nature-based solutions which enhance the UK's climate resilience. Growers and gardeners need time and support to continue their transition

to peat-free growing, and the R&D required to make it a successful, viable alternative, without putting businesses at risk or reducing UK flora production. A level playing field with European growers, who can still use peat, is essential for competitiveness.

- 5. Reframe the conversation and action on water, which is critical to thriving gardens – from crisis response to long-term resilience planning:** The UK needs a long-term UK water resilience strategy, the National Drought Group should become a National Water Resilience Group that can plan for future need, whatever the weather. We must ensure new homes have rainwater storage built in at the time of construction. For growers we need to incentivise and lift barriers to onsite water storage by removing unnecessary planning red tape that blocks businesses from investing in reservoirs and rainwater harvesting systems. For too long, accessing grants that help businesses improve their water resilience has been a complex, time consuming, and often costly venture which has too often resulted in businesses having to withdraw applications and foot the costs themselves. This simply isn't a viable option for many SMEs. Ensuring our grants system works properly and fairly, helping those who are genuinely trying to make more sustainable choices, should be a priority. In addition, public messaging could be improved by enhancing water literacy and reducing misleading messaging – for example, using terminology like 'water restriction' rather than 'hosepipe ban', and providing practical guidance on how to reduce water usage and support sustainable gardening.

# Appendix 1

- technical notes to garden size and spend analysis<sup>5</sup>

The amount a UK adult spends on their outdoor space varies according to many factors: age, household income, home ownership, and enthusiasm for gardening all play a role. Older adults, for example, are more likely to visit garden centres regularly and spend more than younger adults.

To isolate the effect of garden size from these other influences, HTA applied a log-transformed linear regression model to data from 9,390 survey responses collected in 2022–2023. The model controlled for age, sex, homeownership status, household income, and keenness on gardening. Garden spend was transformed using  $\ln(y+1)$  to account for the large number of zero-spend cases, and the analysis focused on spend on garden/gardening goods (excluding buildings and greenhouses).

The model explained around 40% of the variation in household spend – a good level of explanatory power for consumer behaviour data, whilst showing no evidence of systematic bias. Of all factors considered, garden size emerged as the **strongest predictor** of spend. The analysis confirmed a clear positive link: larger gardens are associated with higher annual spending on garden products, even after accounting for income, age, and gardening interest.

### Dataset overview and manipulation:

- HTA's annual independent consumer surveys with a nationally representative sample of UK adults aged 16+ (2022-2024) were used as the data input.
- All variables in the survey are categorical and needed to be transformed into dummy variables. Ordinal categorical variables were distributed at uneven intervals, so were also turned into dummy variables.

### Independent variable

- Garden size was treated as categorical, but midpoints could be calculated to give a numeric value. Both the continuous midpoints and

categorical sizing were tested as the dependent variable, with the categorical bins more closely meeting model assumptions and providing a better overall fit.

### Control variables

- The initial control variables are (**reference variables in bold**):
  - Age (ordinal categorical – 10 year bands up to 75+)
    - 16-24, 25-34, **35-44**, 45-54, 55-64, 65-74
  - Sex (categorical):
    - Male, **female**
  - Ethnicity (categorical):
    - White British**, other white ethnicity, non-white ethnicity, unknown
  - Homeownership (categorical):
    - Owner**, renter, other
  - Household income (ordinal categorical):
    - Below £5,000 - Over £150,000
    - £20,000-£25,000**
  - Employment status (categorical):
    - Employed**, unemployed, student, retired, other
  - Keenness on gardening (categorical):
    - Regular, occasional, **unkeen**
  - Region
    - South**, North, Midlands, East, London, Wales, Scotland, NI

When using dummy variables in linear regression, one must be removed as the **reference variable** to prevent multicollinearity. Typically, this is the most frequently occurring type (i.e., **white British** was the most common ethnicity), although for the independent variable (garden size), **‘no garden’** was selected as it was the most intuitive reference for modelling the increase in garden spend by garden size.

### Dependent variable

- “Garden product spend” – total spend excluding buildings, greenhouses, etc.

## Results

### Garden spend (excl. buildings) Model performance

Garden spend (excl buildings) model metrics	
R^2	0.381
Mean absolute error	1.465
Adjusted R^2	0.379



### Estimated spend (garden spend excluding buildings)

Garden size	Estimated spend
No garden	£5.06
Patio or terrace garden (50sqm)	£302.54
Garden area below 200sqm	£410.62
Garden area = 200-400sqm	£669.81
Garden area = 400-1000sqm	£827.16
Garden area above 1000sqm	£1,167.36
All garden sizes returned coefficients which satisfied significance test of $p < 0.0005$	

### Limitations

There are some limitations to these projections. Garden spending patterns may vary across household lifecycles, and we know that households that own their homes (either outright or with a mortgage) typically spend more on their gardens than renters. Should the proportion of home ownership decline and/or renting increase, then the forecasts for spending are likely to be affected. Although the regression model explains approximately 40% of spending variation and shows no systematic bias, the mean absolute error of 1.42 in log terms indicates substantial uncertainty in individual household predictions, meaning these economic projections should be interpreted as indicative of scale and direction rather than precise forecasts.



# References

1. Independent survey of 4,031 UK adults aged 16+ (HTA, 2024)
2. The effect of tree shade and grass on surface and globe temperatures in an urban area (Armson et al., Urban Forestry & Urban Greening, 2012) <http://dx.doi.org/10.1016/j.ufug.2012.05.002>
3. Review of interventions to improve air quality (Public Health England, 2019) [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/938623/Review\\_of\\_interventions\\_to\\_improve\\_air\\_quality\\_March-2019-2018572.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938623/Review_of_interventions_to_improve_air_quality_March-2019-2018572.pdf)
4. The economic impact of environmental horticulture and landscaping in the UK (Oxford Economics for the Environmental Horticulture Group, 2024) <https://hta.org.uk/media/f2nnpnf/oxford-economics-ehg-report-november-2024-final.pdf>
5. Analysis of independent survey data from 9,390 UK adults aged 16+ collected in 2022 and 2023 (HTA)
6. UK natural capital: urban accounts <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/uknaturalcapitalaccounts/2019> (Office for National Statistics, 2019)
7. Calories burned in 30 minutes for people of three different weights (Harvard Health Publishing, Harvard Medical School, 2021) <https://www.health.harvard.edu/diet-and-weight-loss/calories-burned-in-30-minutes-for-people-of-three-different-weights>
8. Trend Deck 2021: Urbanisation (Government Office for Science, 2021) <https://www.gov.uk/government/publications/trend-deck-2021-urbanisation/trend-deck-2021-urbanisation#:~:text=In%20England%2C%20both%20rural%20and,the%20population%20grew%20by%2025%25>
9. Urban Natural Capital accounts 2023 (Office for National Statistics, 2023) <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/urbannaturalcapitalaccountsuk/2023>
10. National assessment of flood and coastal erosion risk in England 2024 (Environment Agency, 2025) <https://www.gov.uk/government/publications/national-assessment-of-flood-and-coastal-erosion-risk-in-england-2024/national-assessment-of-flood-and-coastal-erosion-risk-in-england-2024>
11. Can woods and trees reduce flooding? (Woodland Trust) <https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/british-trees/flooding/>
12. Economic benefits and costs of green streets (Nature Based Strategies for Urban Building Sustainability, pages 319–331; Kotzen, 2018). doi:10.1016/B978-0-12-812150-4.00029-X
13. The effect of street trees and amenity grass on urban surface water runoff in Manchester, UK. (Urban Forestry & Urban Greening, 12(3), pages 282–286; Armson et al 2013). <https://www.sciencedirect.com/science/article/abs/pii/S1618866713000460>
14. Redbridge rain gardens are helping reduce flood risks in the borough while boosting biodiversity <https://www.redbridge.gov.uk/news/may-2024/redbridge-rain-gardens-are-helping-reduce-flood-risks-in-the-borough-while-boosting-biodiversity/> (London Borough of Redbridge, 2024)
15. Frogheath Landscapes (2025) <https://frogheath.co.uk/about-awards/association-of-professional-landscapers/>
16. Urban health (World Health Organization, 2025) <https://www.who.int/news-room/fact-sheets/detail/urban-health>
17. Chapter 9: Assessing the potential of regulating ecosystem services as nature-based solutions in urban areas, Nature-based solutions to climate change adaptation in urban areas (Baro & Gomez-Baggethun, 2017) <https://library.oapen.org/bitstream/handle/20.500.12657/27761/1002244.pdf>
18. Hedge your bets with ‘super plant’ to fight air pollution (Royal Horticultural Society) <https://www.rhs.org.uk/science/articles/super-cotoneaster>
19. Urban domestic gardens (IX): composition and richness of the vascular plant flora, and implications for native biodiversity (Smith et al, 2005) [https://www.sciencedirect.com/science/article/abs/pii/S0006320705004751#:~:text=The%20present%20study%20showed%20that,km%20\(Shaw%2C%201988\)](https://www.sciencedirect.com/science/article/abs/pii/S0006320705004751#:~:text=The%20present%20study%20showed%20that,km%20(Shaw%2C%201988))
20. UK natural capital accounts: 2024 (Office for National Statistics, 2024) <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/uknaturalcapitalaccounts/2024#regulating-services>
21. Vitamin D levels and deficiency with different occupations: a systematic review. (Sowah et al, 2017) doi: 10.1186/s12889-017-4436-z

22. Gardening for health: a regular dose of gardening (Thompson, 2018) <https://pmc.ncbi.nlm.nih.gov/articles/PMC6334070/>
23. The economic and social costs of mental ill health (Centre for Mental Health, 2024) <https://www.centreformentalhealth.org.uk/publications/the-economic-and-social-costs-of-mental-ill-health/>
24. The cost of diagnosed mental health conditions: statistics (Mental Health Foundation) <https://www.mentalhealth.org.uk/explore-mental-health/mental-health-statistics/cost-diagnosed-mental-health-conditions-statistics>
25. The further we are from green spaces the higher the chance of anxiety and depression (University of Exeter, 2023) <https://news.exeter.ac.uk/faculty-of-health-and-life-sciences/the-further-we-are-from-green-spaces-the-higher-the-chance-of-anxiety-and-depression/>
26. View through a window may influence recovery from surgery (Ulrich, 1984) <https://www.science.org/doi/10.1126/science.6143402>
27. Why gardening is good for your health (Thrive) <https://www.thrive.org.uk/get-gardening/why-gardening-is-good-for-your-health>
28. National population projections: 2022-based (Office for National Statistics, 2025) <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2022based>
29. Adult social care in England: what next? IFS Green Budget 2024 (Bancalari & Zaranko, 2024) <https://ifs.org.uk/publications/adult-social-care-england-what-next#:~:text=In%20fact%2C%20despite%20significant%20growth,demographic%20pressures%20between%202009%E2%80%9310>
30. Quality social care (Alzheimer’s Society) <https://www.alzheimers.org.uk/get-involved/our-campaigns/quality-social-care#:~:text=People%20with%20dementia%20make%20up,more%20support%20for%20unpaid%20carers>
31. Care home facts & stats / Settings, population & workforce (Carehome.co.uk, 2025) <https://www.carehome.co.uk/advice/care-home-stats-number-of-settings-population-workforce#:~:text=Around%2070%20per%20cent%20of%20all%20care,memory%20problems%2C%20according%20to%20the%20Alzheimer's%20Society>
32. Gardening and cognitive ageing: longitudinal findings from the Lothian Birth Cohort of 1921 (Corley et al, 2024) <https://www.sciencedirect.com/science/article/pii/S0272494424001348>
33. Effect of gardening physical activity on neuroplasticity and cognitive function (Lentoer, 2024) <https://www.explorationpub.com/Journals/ent/Article/100481>
34. Lifestyle factors and risk of dementia: Dubbo Study of the elderly (Simons et al, 2006) <https://pubmed.ncbi.nlm.nih.gov/16411871/>
35. Horticultural therapy impact on people with dementia (Vitman-Schorr et al, 2024) <https://bmccgeriatr.biomedcentral.com/articles/10.1186/s12877-024-05489-x>
36. Social and Therapeutic Horticulture information centre (Thrive) <https://www.thrive.org.uk/how-we-help/social-therapeutic-horticulture-resource-centre>
37. Social Farms & Gardens <https://www.farmgarden.org.uk/>
38. What is the evidence to support the use of Therapeutic Gardens for the Elderly? (Detweiler et al, 2012) <https://pmc.ncbi.nlm.nih.gov/articles/PMC3372556/>
39. The importance of urban gardens in supporting children’s biophilia (Hand et al, 2016) <https://www.pnas.org/doi/full/10.1073/pnas.1609588114>
40. Mothers’ perceived proximity to green space is associated with TV viewing time in children: the Growing Up in Scotland study (Aggio et al, 2014) <https://www.sciencedirect.com/science/article/pii/S0091743514004617>
41. Residential green space and child intelligence and behaviour across urban, suburban, and rural areas in Belgium: A longitudinal birth cohort study of twins (Bijnens et al, 2020) <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1003213>
42. Independent survey of 100 MPs representative of the House (HTA, December 2024)



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