Approach to Managing Recreational Pressures on the Hatfield Forest Site of Special Scientific Interest and National Nature Reserve

Please note at the outset that this document considers the costings and measures required to deliver Site Access Management and Monitoring Measures (SAMMS). It does not address the strategic requirement or costings to deliver Suitable Alternative Natural Green Space (SANGS) which are also considered to be necessary to effectively avoid and mitigate impacts on Hatfield Forest.

Hatfield Forest

1. Hatfield Forest (the Forest) is the finest surviving example of a small medieval Royal Hunting Forest with all its important features intact. Covering 404 hectares, it is the single largest open space in Uttlesford District and receives nearly half a million visits annually, offering great opportunities for access and recreational activities. It is situated in northwest Essex, lying five kilometres east of Bishop’s Stortford, eight kilometres west of Great Dunmow, and nine kilometres to the north east of Harlow. It is bounded on the northern edge by the Flitch Way, a disused railway line, then beyond that the B1256 and the A120, both running east to west. The M11 from London to Cambridge lies just 1.6km to the west of the Forest. Farmland forms the remaining boundaries. The National Trust owns the Freehold of the site and the land has been declared inalienable in accordance with the National Trust Act of 1907. Edward North Buxton gifted it to the National Trust in May of 1924. Full information about Hatfield Forest can be found here: https://www.nationaltrust.org.uk/hatfield-forest

2. Hatfield Forest is managed by an Operations team consisting of an Operations Manager, Visitor Experience Manager and Lead Ranger. There is a team of Rangers who undertake a mixture of practical conservation, access, visitor experience, and byelaw enforcement related tasks. A Learning Officer is responsible for up to 6000 visits from school children every year and looks after a busy visitor activity programme. The Visitor Experience Manager is supported by a team of Membership and Visitor Welcome Assistants. There is a Business Support Co-Ordinator to take care of administrative duties. Overall management is the responsibility of the General Manager for the Essex and Suffolk Countryside portfolio of properties. All staff are supported by Regional Office Consultancy and Advisory staff.

3. All 392 hectares of Hatfield Forest is a Site of Special Scientific Interest (SSSI) and a National Nature Reserve (NNR). This means that the National Trust is legally obliged to observe the provisions of the Wildlife and Countryside Act, 1981 (as amended). The Forest’s key features are: wood pasture with cattle grazing, unimproved grassland and veteran pollards; ancient coppice woodland with a long
continuity of management; freshwater habitats and very high species richness of invertebrates, fungi, lichens and plants, including many nationally rare or threatened species.

4. Hatfield Forest consists of a mosaic of open wood pasture with old grasslands, marsh, open water and areas of ancient coppiced woodland. In addition, this is one of the few sites where there were eight species of tree pollarded resulting in a very diverse and important veteran tree resource. The Hatfield Forest Veteran Tree Survey\(^1\) identified and mapped over 900 veteran trees across the Plains (850 pollards comprising 42% hawthorn, 23% hornbeam, 18% field maple, 9% (82) oak, 7% (60) ash, plus crab apple, beech, elm). The unimproved and semi-improved grassland of the wood pasture varies from slightly calcareous to neutral, most areas being seasonally wet, and includes a small area of acid grassland. There are locally valuable fen, marsh and reedswamp habitats. There have been 15 different Peterken classification woodlands types identified on Hatfield from alder carr through to hornbeam and hazel coppice. There are areas of coppice in regular rotational management and stands that have not been cut for more than 70 years which contain some veteran coppice stools and have become more like high forest in character. They have been managed with minimum intervention for some years and this has increased the diversity of habitats on site.

Ongoing surveys and data collation reveal the significant diversity of flora and fauna of Hatfield Forest, which is especially important and impressive for a site in the arable claylands of north-west Essex. The species lists include 510 vascular plants 150 bryophytes, 166 lichens, over 640 fungi and over 2300 invertebrate species. These assemblages significantly contribute to the grassland, woodland and freshwater habitats, but some (e.g. fungi, lichens and invertebrates) may also be regarded as outstanding assemblages in their own right by meeting SSSI selection criteria. Of particular note is the richness of the beetle (over 700 species), fly and moth fauna. In addition, surveys since 2001 have produced a list of 17 waxcap fungi species (Hygrocybe) in the grasslands. There is also a great diversity of breeding and wintering birds, with more than 60 species breeding on the site.

‘Hatfield Forest is of supreme interest in that all the elements of a medieval Forest survive: deer, cattle, coppice woods, pollards, scrub, timber trees, grassland and fen, plus a seventeenth-century lodge and rabbit warren. As such it is almost certainly unique in England and possibly in the world…The Forest owes very little to the last 250 years…Hatfield is the only place where one can step back in to the Middle Ages to see, with only a small effort of the imagination, what a Forest looked like in use.’\(^2\) ‘Hatfield is the best-preserved forest landscape in England, boasting a combination of features – lodge, warren, plains and enclosed coppices – without parallel elsewhere in England, and possibly Europe. The continuing survival of the complex mosaic of traditional management regimes (sward, coppice, pollards, scrub),

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and of the associated genetic pool of woody material, depends on the perpetuation of versions of archaic techniques, here practised on a uniquely extensive scale. This is a unique inheritance which deserves particular protection into the future.\(^3\)

There are two Scheduled Monuments; The Warren and Portingbury Hills, afforded protection under the Ancient Monuments and Archaeological Act, 1979. There are four listed buildings; The Shell House; Warren House; Forest Lodge; Wall Wood Cottage, all of which are Grade II except for The Shell House which is Grade II*.

5. Sites of Special Scientific Interest (SSSIs) are bound by a conservation designation denoting a protected area in the United Kingdom. SSSI are the basic building block of site-based nature conservation legislation and most other legal nature/geological conservation designations are based upon them, including National Nature Reserves. The current legal framework for SSSIs is provided in England and Wales by the Wildlife and Countryside Act 1981, amended in 1985 and further substantially amended in 2000 by the Countryside and Rights of Way Act. SSSIs are also covered under the Water Resources Act 1991 and related legislation.

6. Various laws protect the interest features of SSSIs from development, from other damage or neglect. Local Planning Authorities (LPAs) are required to have policies in their development plans which protect SSSIs, as required by the National Planning Policy Framework (NPPF). They are then required to consult the appropriate conservation body over planning applications which might affect the interest of an SSSI (such a development might not be within or even close to the SSSI itself). The purpose of this is to prevent development which harms the interest features of the SSSI. Consistent with this, Natural England screens planning applications that fall within Hatfield Forest’s established 14.6km Zone of Influence (ZOI). This ZOI was established through an independent visitor survey and assessment undertaken by Footprint Ecology during winter 2017 and summer 2018 in accordance with national best practice.

7. The National Trust commissioned Footprint Ecology to produce a robust and reliable visitor survey report, recognizing their experience as leaders in the field of designing and implementing visitor usage surveys and their capacity to benchmark data against other sites. This is included in p.78-80 of the ‘Visitor Survey and Impact Management 2018’ report: ‘Footprint Ecology has undertaken similar visitor surveys at a wide range of sites across England, including a wide variety of SSSI sites and sites that are internationally important for nature conservation (such as Special Protection Areas ‘SPAs’ and/or Special Areas of Conservation ‘SACs’). These surveys have often been commissioned to inform impact assessment work relating to housing growth and changes in recreation, for example setting zones of influence around sites within which new housing growth would be expected to generate an increase in the level of recreation….We have selected sites that include woodland, wood pasture or veteran tree interest such as Burnham Beeches, Epping Forest, Trowbridge woods and Farnham Park. Other sites such as Ashdown Forest or the Pebblebed Heaths are relatively discrete sites with a woodland element (although both these sites are largely heathy in character). We have also included Therfield Heath, near Royston as it is relatively close

to Hatfield Forest and also in eastern England we have included data from across Norfolk sites (including Thetford Forest, the Brecks, the Broads, the coast etc.). A selection of metrics are selected to allow a comparison across sites…’ The report both lists the comparison studies and provides the key metrics for each to illustrate where the comparisons are made. ‘It can be seen that the scale of survey results in terms of sample size from Hatfield Forest are equivalent. Hatfield Forest is interesting in that it appears to have a lower proportion of dog walkers compared to some other sites, a smaller proportion of daily visitors and the distances from which visitors are coming are further. This would suggest Hatfield Forest does have a larger draw than some of the other sites in the table….’

8. The full Footprint Ecology Report (2018) which sets out the issues facing Hatfield Forest has been sent to the relevant local authorities; Uttlesford District Council, East Hertfordshire District Council, Epping Forest District Council, Harlow District Council, Chelmsford City Council and Braintree District Council. The aim of this is to ensure that: These local authorities are aware of their responsibilities under planning policy framework and the Wildlife and Countryside Act to protect Hatfield Forest SSSI, NNR from the pressures of increasing housing development within its zone of influence; that planning authorities adequately screen planning applications to ensure that the recreational effects are adequately considered with provision of suitable avoidance mitigation measures where necessary.

9. It is considered that developers proposing new residential sites within the Zone of Influence (14.6km of Hatfield Forest) should be expected to address the impacts of their development on Hatfield Forest and apply the mitigation hierarchy as set out in Para.175 of the National Planning Policy Framework. Criterion (a) of Para.175 states “if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused”. It should be ensured that housing developments avoid impacts on vulnerable sites by including adequate and well-designed on-site Alternative Natural Green Space (ANGS) in conjunction with quality green infrastructure within their design. It is notable that developments within the Thames Basin have been set a precedent of providing 8ha of green space per 1000 houses. These could include, for example, high-quality, informal, semi-natural areas, a circular dog walking route within the site or a dedicated ‘dogs-off-lead’ area. Where there would be adverse residual recreational impacts upon Hatfield Forest, mitigation measures within the Forest’s own boundaries via a Strategic Access Management and Monitoring Strategy (SAMMS) should be proposed. These would effectively alleviate the adverse impacts on Hatfield Forest SSSI, NNR from the development (either allocated within the Local Plan or speculative). They would prevent further deterioration of the SSSI features and ensure the ability to achieve favourable condition status is not constrained. To expand on the concept of residual impact further, Hatfield Forest provides a unique experience for its visitors which cannot be replicated at other locations, and so it would be expected that with a growing population within its zone of influence (ZOI), there would also be a corresponding growth of visits, regardless of alternative green space within the ZOI. This would inevitably result in adverse residual impacts on Hatfield Forest which must be mitigated by additional means. Accordingly, financial contributions from developments would collectively ensure that mitigation measures are compatible with the ongoing SSSI habitat restoration and strategically help to increase the resilience of Hatfield Forest to future visitor pressure. For this reason, the National Trust would welcome
discussions with LPAs and developers about proposed residential developments within the ZOI, with particular regard to avoidance and mitigation measures.

10. **Concerns relating to recreation**

Hatfield Forest is currently experiencing rapid and unsustainable growth in visitor numbers which is putting it under considerable pressure and there are signs that the SSSI, NNR and other designated/protected features are being degraded and damaged. Part of the growth in visitor numbers can be attributed to the increase in housing in the local area. Due to the exponential housing growth in the local area over the last 10 years the number of visits to Hatfield Forest has doubled to 500,000 today.

The Forest’s clay soils are vulnerable to visitor pressure. For example, while such soils can become very hard and resistant to foot traffic in summer, in the wetter winter they are very vulnerable to poaching. Habitat loss is occurring and not recovering.

The whole of the Forest was assessed as ‘Unfavourable Recovering’ condition when formally assessed by Natural England in 2011. The trampling impacts are considered to be causing direct damage to a sizeable area of the Forest's vegetation and therefore a Threat to achieving favourable condition status. Thus, if the recreational impacts are not adequately addressed, with implications for sustained recovery, there is a significant risk that the Forest will be assessed by Natural England to be in ‘Unfavourable’ condition.

The costs of recreational use can be categorised as follows (NB. there is more detail in the ‘Visitor Survey and Impact Management 2018’ report by Footprint Ecology, p10-14):

- Vegetation damage (in grassland, woodland and marshy wetland habitats), affecting height, biomass, cover, root systems and species diversity and plant community composition
- Soil compaction and erosion
- Changes in soil hydrology and chemistry (enrichment)
- Changes in soil invertebrate community
- Changes in soil mycorrhizae and bacterial assemblages
- On forest rides and glades, loss of ecotonal (edge) habitats
- Damage to deadwood habitats and living trees
- Changes in epiphytic and saproxylic flora and fauna
• Contamination, e.g. from litter, nutrient enrichment (dog fouling etc.)
• Disturbance to wildlife (presence, behaviour, breeding success) from human (and dog) presence, noise, physical impact
• Difficulties in continuation of 1000 years of historic grazing management due to interactions between visitors and livestock
• Difficulties in continuation of deer management policy due to daylight hours deer disturbance and increasing nocturnal browsing impact
• Increased fire risk
• Increased vandalism
• Increased harvesting, for example fungi, deadwood
• Reduced biosecurity and potential increase in spread of pests and diseases
• Increasing concentration of effort on reactive visitor impact mitigation diverts National Trust charity resources away from core conservation objectives to maintain Hatfield Forest’s notable features

11. Evidence base
The evidence gathered to highlight both the visitor numbers and habits of those utilising Hatfield Forest and also to measure the attributable impacts can be divided into four main areas: people counters; visitor surveys; vegetation surveys and soil compaction monitoring.

People counters
Research into accurate visitor numbers was first undertaken in 2012 by using gate counters for visits. This was initiated due to the increasingly significant physical signs of visitor impacts that provided evidence that the Forest’s carrying capacity (relative to conserving the natural habitats) was being exceeded. The figures from these early counters provided an initial indication that increasing visitor numbers linked to exponential local housing growth were correlated with increasing impacts particularly to the ride (grassy path) network and subsequently the coppice interiors and wood pasture. By 2016, with the inception of the National Trust funded project ‘Every Step Counts’, (more details here: https://www.nationaltrust.org.uk/hatfield-forest/features/hatfield-forest---every-step-counts), new counters were fundraised for and purchased using superior and more reliable technology, with less margin for error. Monthly data has been collected from these counters ever since and there has been growth in visitor numbers until 2018, when there appeared to be a slight drop in numbers - it is thought due to extreme weather events – snow, gales and then uncomfortably hot conditions resulting in a summer drought. The people counters provide the number of visits made to Hatfield Forest accurately over time and via which entry point. They
count but do not make exception for the ‘one-off’ activities where there are very high numbers of visits, for example during cross country runs or scout night hikes. Gate count data can be obtained from the National Trust, Hatfield Forest Estate Office on request.

**Visitor surveys**

In response to serious concerns which National Trust staff had about Hatfield Forest’s carrying capacity being exceeded, Footprint Ecology were commissioned to undertake a survey of visitors to Hatfield Forest over the winter (2017-18) and summer (2018). Interview data was collated and analysed to provide evidence on visitor origins, attitudes and behaviour. Extrapolations were made, within the limits of the available data, to gauge how overall numbers of visits may compare with numbers of individual visitors. The Zone of Influence from which Hatfield Forest is currently drawing most of its visitors was calculated and compared with future residential housing figures to gauge the likely impact of rising housing levels on visitor numbers. Based on these findings and observations of the Forest, guidance is offered within the final report as submitted to and approved by Natural England (amongst other stakeholders) on how the current significant impact of visitors may be managed in the future. The full Footprint Ecology ‘Visitor Survey and Impact Management 2018’ report\(^4\) can be obtained from the National Trust, Hatfield Forest Estate Office on request.

**Vegetation surveys**

Since 2014, the National Trust has used a Red/Amber/Green (RAG) method\(^5\) to evaluate the condition of the grassy paths (traditionally called rides). There are 19.3 km of paths (rides) within the woodland areas of Hatfield Forest. In order to improve knowledge about the condition of the path network, the paths have been subject to a simple Forest-wide survey by assessing the proportionate cover of vegetation and bare soil as a measure of the impact of human trampling. Paths were assessed over their normal width and categorized as red, amber or green status:

- **Red** - very poor, serious trampling impact, bare soil/mud, evidence of soil compaction, water retention on the surface, less than 25% vegetation cover down to zero vegetation present, serious damage and unlikely to recover.
- **Amber** – bare ground evident, between 25 and 75% of the path surface had no vegetation present.
- **Green** – acceptable to good vegetation cover to the path, with over 75% vegetation cover. Muddy areas limited to a few patches, little evidence of surface compaction, thus likely to recover.


In conjunction with the RAG surveys, seasonal fixed-point photography has been employed at numerous locations around Hatfield Forest as an instantly visual way to gauge decline or recovery of ride condition.

RAG Survey reports can be obtained from the National Trust, Hatfield Forest Estate Office on request.

**Soil compaction monitoring**

Research into potential restoration techniques has been undertaken by Bartlett Tree Research Laboratory⁶. Two decompaction techniques (“air-spading” and auguring) have been used singly and in combination with three soil amendments (biochar, woodchips, mulch) at four sites within the Northern Coppices. Soil bulk density has been measured before the treatments and one year later. There are two more years of surveying to be undertaken under the current Reading University PhD which Bartletts are leading on. Early indications are that air-spading and biochar is the most effective treatment for ameliorating soil compaction, although only small areas have been tested so far. This is an expensive treatment. While on site, Bartletts have been commissioned by the National Trust to measure bulk density at three other locations. Firstly, across a heavily used ride which has since been part-surfaced and we intend to monitor heavily trampled ride-sides for recovery. Secondly, across a desire line amongst some veteran trees which we have since protected using a low sweet chestnut barrier. Lastly, in an unused part of the Forest which we can use as a control to ensure that no other factors (e.g. weather) are positively or negatively affecting the results. Again, because we are only part-way in to this monitoring programme, the signs of recovery due to the slow process of soil amelioration are only very slight. Results of bulk density and decompaction method testing can be obtained from the National Trust, Hatfield Forest Estate Office on request.

**Sustainable mitigation measures**

12. While there is a clear need to continue to monitor visitor usage and impacts on Hatfield Forest (and improve on these methods which have been evolved predominantly through necessity in the last five years), all of the evidence gathered thus far provides the National Trust with the underpinning knowledge required for the preparation of this Mitigation Strategy in order to locally address the impacts created by increased recreational pressure arising from new residential development. This will form the SAMM as described in Paragraph 9. There is not one option which will provide a solution in isolation, but it is feasible that a suite of measures will help to mitigate for the pressure Hatfield Forest will experience under future visitor usage while a more strategic plan is devised for the outlying area within the Local Planning Framework. This will need to allow for provision of SANGS in the outlying area to meet sustainability objectives, rather than relying on Hatfield Forest to continually meet the greenspace requirements of an increasing local population in accordance with Local Plan-led growth. A recommendation of the Footprint Ecology report is that alternative greenspace in the outlying area is provided.

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13. Additional homes built within the ZOI (14.6km) have the potential to increase recreational pressure on Hatfield Forest and have an adverse impact on its site condition and quality. Overall the data provided from the relevant Local Planning Authorities within their local plans suggests that a 29% increase in housing (some 29,345 new dwellings) is likely based on allocations within a 15km radius of Hatfield Forest. Housing development in the current Uttlesford District Plan alone will lead to an 18% increase in total housing within 5km of the Forest, and a 36% increase within 10km.

14. During the 2018 Visitor Survey, Footprint Ecology interviewed 272 visitors who had come from within 15km of the Forest. The analysis of visitor data suggests that if the potential new housing were to be built, an additional 59 interviewees would be expected from within the 15km radius, i.e. an increase in visitor numbers to Hatfield Forest of 22%. This gives a broad and very approximate indication of the likely increase in access to Hatfield Forest from within 15km potentially associated with the new housing. In other words, we would expect visitor numbers to increase by around 22% over the next 15-20 years or so. As Local Plans develop and more allocations are brought forward by the Local Planning Authorities, it would be expected of the respective authorities which fall within 14.6km of Hatfield Forest to collectively deduce the resulting residual impact on Hatfield Forest in terms of the extra visits which each development is likely to yield. It is less easy to predict 'windfall' developments, for example whereby a house may be demolished to provide the space for two new houses or where planning permission is sought for sites not allocated in the Local Plan, although the average rate of these should be added to the increase. Footprint Ecology used the same model to work out the percentage above.

15. With twenty-four external entrances to the Forest, there is no immediately effective way of preventing more people who come to live in the ZOI as a result of new residential development from visiting in order to avoid placing further pressures on it. Although there are no Public Rights of Way within Hatfield Forest, evidence has shown that where gates in and around the Forest have been temporarily closed down, locked or removed permanently, that vandalism of surrounding fencing has left the security of the site and particularly its livestock dangerously compromised. Therefore, there is a need to undertake SAMMS measures within Hatfield Forest to mitigate for increase in adverse impacts created by the predicted rise in visitor numbers and for new developments to make a contribution towards their implementation.

16. A number of measures have been trialled within the ‘Every Step Counts’ Feasibility Project at the expense of the National Trust and in partnership with Natural England, Footprint Ecology and the National Trust East of England Consultancy. Throughout their implementation, the people resources needed to support them have also been identified. The measures identified have had the benefit of three years of testing in order to prove their effectiveness and also to test their appropriateness to the site in the light of its SSSI and historic landscape status. This has involved protracted and often unprecedented applications (in terms of Hatfield Forest) for the necessary

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permits, licences and consents required, and the time taken in completing and negotiating these recorded. The associated measures are included within the table below on the basis that they are all tested as feasible and deliverable, subject to funding.

17. The SAMMS mitigation measures within Table 1 below are divided into three main areas: Forest Works and Infrastructure, Human Resources and Monitoring. They are designed to directly protect the designated features of Hatfield Forest from impacts created by a future increase in visitor usage directly linked with exponential development within the 14.6km ZOI. While these might be adequate in protecting the site from further usage, the associated impacts under this scenario are difficult to predict due to the unprecedented volume of visitors using the site. Therefore, it will be required to review the measures on a five-yearly basis, in conjunction with ongoing monitoring of visitor impacts and interim progress reviews of the effectiveness of each of the measures. This Mitigation Strategy (with review) is expected to remain in effect from April 2019 until the anticipated end year of the Local Plans, which is predicted to be 2033.

Authority Roles and Responsibilities

For other comparable strategic planning situations (albeit generally requiring Habitats Regulations compliance), Natural England advises that Mitigation measures, whether voluntarily incorporated or formally imposed must be able to be relied upon to address the scale of effects required (this would be to ensure impacts to SSSI features were adequately mitigated, arguably within a ‘net gain’ context) over the lifetime of the Local Plan. The measures should be effective, reliable, timely, guaranteed and of sufficient duration (to be robust in a planning context it would make sense to have supporting evidence & confidence that measures will be effective & able to be legally enforced to ensure they are strictly implemented by the plan/project proposer.

For each mitigation measure (and for any overall package of measures) the regulating authority (e.g. LPA due to links to Local Plan) should understand and show:

a) What the measure is and how it would avoid or reduce harmful effects on the site (considering likely duration of the effects)

b) How it would be implemented and by whom,

c) The degree of confidence in its likely success over time

d) The timescale of when it would be implemented, maintained and managed

e) How the measures would be secured, monitored and enforced,

f) If the measures failed how the failure would be rectified.

Mitigation measures could include specified limitations to the timing, extent, duration of different elements proposed as part of the plan which would avoid any foreseeable risks.
Through the Every Step Counts feasibility study the National Trust has confidence that each of these caveats a) to f) are met to the point of implementation. However, it would be expected that regular monitoring and review of each measure is maintained to check effectiveness in conjunction with Natural England and the relevant Local Planning Authorities.

Table 1. Mitigation Measures

<table>
<thead>
<tr>
<th>Mitigation Measures – Forest Works and Infrastructure</th>
<th>Description</th>
<th>Feasibility costs</th>
<th>Capital Costs / Years</th>
<th>Annual Maintenance Costs / Years</th>
<th>Total Cost</th>
<th>Permits / Licenses / Consents (PLCs) required</th>
<th>Cost Calculation Notes</th>
<th>Rationale and justification</th>
</tr>
</thead>
</table>
| Veteran Tree Management                            | N/A         | N/A              | £16kpa               | £240k over 15 years             | NE SSSI Consent | • Restorative pruning and stabilisation of veteran trees | Protect SSSI designated features; veteran trees and associated wildlife from negative impacts created by increasing footfall by: | Providing greater resilience amongst veteran tree population to be able to cope better with increasing visitor impacts including those around the root zone  
Reducing risk of catastrophic tree or limb failure in areas of increasing usage |
| Ride-side aerial tree pruning                      | N/A         | N/A              | £20kpa               | £300k over 15 years             | NE SSSI Consent | Prioritised cyclical programme of aerial tree surgery from cherry-picker across whole Forest ride network using qualified contractor | Protect SSSI designated features; ancient coppice woodland and ride-side ground flora and associated wildlife from negative impacts resulting from increasing footfall by: | Providing greater resilience of rides /paths to be able to cope better with increasing visitor impacts and in doing so, minimise the likely impact on ride edges and the notable flora/fauna they support.  
Allowing light and wind in to ride floor to dry it out  
Increasing vegetation cover  
Aerating and conditioning soil  
Reducing soil erosion  
Reducing trampling on ride edge – coppice margins |
<table>
<thead>
<tr>
<th>Project Area</th>
<th>Type</th>
<th>Cost (p)</th>
<th>Total Cost (£)</th>
<th>Duration (years)</th>
<th>Consent</th>
<th>Management Actions</th>
</tr>
</thead>
</table>
| Ride management from ground level | N/A           | £12.5k    | £187.5k        | 15               | NE SSSI Consent | *Cyclical cutting of coppice edge for light management*  
* Mowing and spiking of ride surfaces  

*Protect SSSI designated features; ancient coppice woodland and ride-side ground flora and associated wildlife from negative impacts resulting from increasing footfall by:*  
* Allowing light and wind in to ride floor to dry it out  
* Increasing vegetation cover  
* Improving resilience of ride surface  
* Aerating and conditioning soil  
* Reducing soil erosion*

| Ride-side ditching           | N/A           | £10k      | £150k          | 15               | NE SSSI Consent | *Prioritised cyclical programme of ditch restoration across Forest ride network*  

*Protect SSSI designated features; ancient coppice woodland and ride-side ground flora and associated wildlife from negative impacts resulting from increasing footfall by:*  
* Providing greater resilience of rides /paths to be able to cope better with increasing visitor impacts and in doing so, minimise the likely impact on ride edges and the notable flora/fauna they support.  
* Improving drainage of rides  
* Reducing waterlogged conditions to allow improved vegetation establishment  
* Reducing soil erosion  
* Channelling walkers to stay within central zone of the ride - protecting ride-sides and coppice interior from trampling*

| Soil decompaction            | N/A           | £18k      | £270k          | 15               | NE SSSI Consent | *Prioritised programme of augering and mulching of badly compacted ride surfaces*  

*Protect SSSI designated features; ancient coppice woodland and ride-side ground flora and associated wildlife from negative impacts resulting from increasing footfall by:*  
* Increasing resilience of soil on rides and near veteran trees to trampling  
* Decompacting soil within veteran tree crown drip lines and rides  
* Improving drainage  
* Improving soil nutrient levels  
* Encouraging vegetation recovery and vitality  
* Making central zone of ride more attractive to walk on – reducing impact on ride margins*
<table>
<thead>
<tr>
<th>Project</th>
<th>N/A</th>
<th>N/A</th>
<th>£2kpa</th>
<th>£14k over 15 years</th>
<th>NE SSSI Consent</th>
<th>Protectorised cyclical programme of closing and resting damaged rides and opening others up using sweet chestnut hurdles and signage. To be reviewed at 7-year mid-point and decision made whether need to continue at that point.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary ride closures</td>
<td>N/A</td>
<td>N/A</td>
<td>£2.5kpa</td>
<td>£37.5k over 15 years</td>
<td>NE SSSI Consent</td>
<td>Cyclical replacement of 44 external / internal gates and safe disposal of old ones.</td>
</tr>
<tr>
<td>Protection barriers and protective mulching</td>
<td>N/A</td>
<td>£18k (6 barriers) / Year 1</td>
<td>£5kpa replacement of 1 barrier pa / Placement of mulch / decomp -action</td>
<td>£93k over 15 years</td>
<td>NE SSSI Consent</td>
<td>Installation of protective barrier around key vulnerable veteran tree crown drip lines in very high and high visitor usage zones.</td>
</tr>
</tbody>
</table>

**Protect SSSI designated features; ancient coppice woodland and ride-side ground flora and associated wildlife from negative impacts resulting from increasing footfall by enabling ride recovery through:**
- Removing footfall
- Promoting soil amelioration
- Increasing vegetation cover
- Improving resilience of ride surface
- Decompacting, aerating and conditioning soil
- Reducing soil erosion

**Other justifications:**
- Gates are receiving greater wear and tear and vandalism under current unsustainable scenario of visitor usage
- Allows secure visitor access
- Retains cattle preventing break-outs

**Veteran tree root Protection barriers and protective mulching**

**Protect SSSI designated features; ancient wood pasture and ancient coppice woodland from negative impacts resulting from increasing footfall and improving access management to enable SSSI restoration management measures to continue by:**
- Enabling continuity of 100yr grazing management of wood pasture and browsed coppice resulting in specific assemblage of rare associated wildlife
- Channels visitors along desirable more robust routes

**Other justifications:**
- Gates are receiving greater wear and tear and vandalism under current unsustainable scenario of visitor usage
- Allows secure visitor access
- Retains cattle preventing break-outs

**Protect SSSI designated features; veteran trees and associated wildlife from negative impacts created by increasing footfall by:**
- Increasing resilience of soil near key vulnerable veteran trees to trampling.
- Protection of tree roots from increasing visitor footfall and damage
<table>
<thead>
<tr>
<th>Project</th>
<th>Cost</th>
<th>Description</th>
</tr>
</thead>
</table>
| Ride & gateway surfacing         | £60k / Years 2 & 3 | • Prioritised programme of surfacing of pinch points and eroding ride surfaces using tested no-dig, chemically inert methods appropriate to site and location within it  
  • 1km required year 2 / 1km required year 3, 100m average required thereafter  
  • Protect SSSI designated features ancient wood pasture, woodland and associated wildlife from negative impacts resulting from increasing footfall by:  
    • Channelling footfall down comfortable access routes within the ride zone 1, preventing current scenario of widespread damaging ‘creep’ away from damaged sections across entire width of ride zones 2 & 3 and in to coppice interior  
    • To be used strategically – only where rides are permanent bare ground, compacted and degraded as depicted in site RAG surveys 2016-present |
| Fencing                          | £49k / Years 2, 3&4 | • Prioritised programme of securing Lake Area with adequate oak post and rail replacement fencing  
  • Safe removal and disposal of old fencing  
  • Ongoing repair and maintenance of Forest-wide stock fencing and cattle handling facilities for purposes of secure quarantine / lie-back and separation from visitors when required  
  • Protect SSSI designated features; ancient wood pasture and ancient coppice woodland from negative impacts resulting from increasing footfall and recreational pressures by:  
    • Enabling continuity of 1000yr grazing management of wood pasture and browsed coppice resulting in specific assemblage of rare associated wildlife  
    • Channels visitors along desirable more robust routes  
  • Other benefits:  
    • Protects visitors from cattle trampling  
    • Protects livestock from dog attack, chasing and escape on to local roads / neighbouring properties  
    • Best quality inhibits vandalism / provides best value for money long-term |
<table>
<thead>
<tr>
<th>Description</th>
<th>Cost (Yrs.3 &amp; 4 combined)</th>
<th>Planning Consents</th>
<th>Benefits</th>
</tr>
</thead>
</table>
| New boardwalk construction to create loop path to lake area, allowing removal of current dilapidated boardwalk | £5k                      | N/A                                                                              | Supply and fitting of new 80m section of recycled plastic boardwalk Removal and safe disposal of 800m old softwood boardwalk Protect SSSI designated features ancient wood pasture, woodland and associated wildlife from negative impacts created by increasing footfall and recreational pressures by:  
  - Channelling of footfall down boardwalk to prevent spread of footfall through sensitive wooded area / soil erosion / compaction and sustainably cope with rising visitor numbers  
  - Upgrading of this key link, which is an essential component of an integrated access management route between ‘honeypot’ areas – Lake Area and Entrance Car Park which will become increasingly unfit for purpose under predicted elevated visitor usage  
  - Provision of all-weather circular access route through much less sensitive site than current main boardwalk to sustainably cope with rising visitor numbers  
  - Removal of current main boardwalk will allow 800m X 2.4m of ancient wood pasture / old growth coppice woodland to recover |
| Dualization of current Exit Road, build no-dig ‘raft’ construction around 1 no. veteran oak tree and downgrade of Entrance Road to all weather access path | £15k                     | N/A                                                                              | Consultancy fees to check 2014 feasibility work and arrange PLCs Yr.3 – widen exit road / upgrade exit / construct no-dig raft around 1 no veteran oak Yr.4 – remove tarmac / concrete pad and stud posts from Entrance road, reduce width and subbase with gravel fines / relocate entrance kiosk to central Elgins Coppice location at current road junction. Protect SSSI designated features ancient wood pasture, veteran trees, ancient woodland and associated wildlife from negative impacts created by increasing footfall and visitor pressures by:  
  - Providing a ‘step-change’ to increase SSSI resilience and site carrying capacity under predicted increases in visitor usage  
  - Excluding cars from Bush End Plain – less damaging / polluting / visually intrusive to key wood pasture landscape & ecology  
  - Removing tarmacked road from around veteran trees on Bush End South and North, allowing better surface water penetration / decompaction  
  - Channel increasing levels of footfall along new footpath (old road) and away from around tree roots / wood pasture especially during wet conditions  
  - Ability to remove main boardwalk through Gravelpit Coppice (which has created issues of trampling / compaction / ancient woodland soil erosion / loss of ground flora) will assist in recovery and resilience of this very sensitive woodland |
### Access Interpretation and Signage

<table>
<thead>
<tr>
<th>Cost</th>
<th>Interpretation and Signage</th>
<th>£54k / Yrs. 3 / 8 / 13 (funding dependent)</th>
<th>£4kpa</th>
<th>£222k over 15 years (5 y design-life for signage)</th>
<th>UDC Planning Permission / NE SSSI Consent / Highways Consent?</th>
<th>Design / manufacture &amp; install of temporary project interpretation / signage</th>
<th>Remove of existing permanent signage</th>
<th>Design of new permanent signage and possibly phone app based on existing PDA content</th>
<th>Production of new signage</th>
<th>Installation of new signage</th>
<th>Annual maintenance of signage</th>
</tr>
</thead>
</table>

**Other benefits:**
- Create safer non-vehicular access on footprint of old Entrance Road to create loop path around Lake Area away from traffic
- Ability to safely link new path with less sensitive sandy-gravel section of loop path to cope with increased visitor pressure
- Reduced pressure / congestion/ risk of accidents on main highway (Bush End Road) especially at peak periods by re-location of Entrance Kiosk approx. 1km inside Forest
- Reduced pressure / congestion/ risk of accidents on main highway (Bush End Road) especially at peak periods by re-location of Entrance Kiosk approx. 1km inside Forest
- Allows easier seasonal car parks access

### New boardwalk construction to bridge access over Scheduled Monuments at Portingbury Earthworks and The Warren pillow mounds

<table>
<thead>
<tr>
<th>Cost</th>
<th>New boardwalk construction to bridge access over Scheduled Monuments at Portingbury Earthworks and The Warren pillow mounds</th>
<th>£2k</th>
<th>£12k Yr 4</th>
<th>N/A</th>
<th>£14k</th>
<th>UDC Planning Permission / NE SSSI Consent / HE Consent</th>
<th>Supply and fitting of new 14m section of recycled plastic boardwalk</th>
</tr>
</thead>
</table>

**Other benefits:**
- Protect SSSI designated features ancient wood pasture, woodland and associated wildlife from negative impacts created by increasing footfall and recreational pressure by:
  - Channelling of footfall down desired all-weather / robust routes to prevent spread of footfall through sensitive wooded area / soil erosion/ compaction and sustainably cope with current visitor numbers
  - Effective zoning of site to prevent damage to SSSI features especially during winter / wet weather events

**Other benefits:**
- Temporary signage and interpretation vital for visitor understanding and support of the project
- Permanent signage has 5 year life expectancy so will be due replacement at this point
- Enables de-cluttering mediaeval landscape of signage and provides creative ways of interpreting site and orientating visitors around it

**Other benefits:**
- Protection of historic features from excessive footfall where diversions or closure of access routes are not feasible options
### Replacement of sensory boardwalk Elgins Coppice to Elgins Car Park

<table>
<thead>
<tr>
<th>Cost Code</th>
<th>Description</th>
<th>Funding Period</th>
<th>Cost</th>
<th>UDC Planning Permission</th>
<th>NE SSSI Consent</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>£155k / Yr 5 (funding dependent)</td>
<td>N/A</td>
<td>£155k</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- **Removal and correct disposal of existing softwood boardwalk**
- **Supply and fitting of new 160m section of recycled plastic boardwalk**

- **Protect SSSI designated features ancient wood pasture, woodland and associated wildlife from negative impacts created by increasing footfall by:**
  - Providing a key link between two robust sections of a part-existing integrated access management route, especially in conjunction with downgrading of current Entrance Road detailed above
  - Routed through less sensitive ‘in-rotation’ compartment within Elgins Coppice, avoiding ancient / notable coppice stools.
  - Avoids current route through ancient wood pasture and hornbeam coppice which can be removed as a result

**Other benefits:**
- Provides safe pedestrian access through Elgins Coppice to avoid walking on road
- Links up newly created surfaced path with less sensitive sandy-gravel area to provide substantial all-weather access route
- Extra expenditure on recycled plastic worthwhile due to X 5 – X 10 more service life than softwood

### b. Mitigation Measures – Human Resources

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
<th>Cost</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ranger</td>
<td>£19,928 pa min, plus oncosts and inflation over 15 years</td>
<td>£298,920 min plus oncosts over 15 years</td>
<td>Permanent Gr.9 37.5 hr/wk contract</td>
</tr>
</tbody>
</table>

- **Protect SSSI designated features through effective practical implementation of necessary SAMMS under increasing visitor usage by:**
  - Providing support for SAMMS Consultant
  - Delivering effective mitigation measures
  - Assisting with co-production through Stakeholder Working Group and Forest Users’ Forum
  - SAMMS-related visitor engagement
  - Photographic monitoring

---

**DRAFT**
<table>
<thead>
<tr>
<th>Membership and Visitor Welcome Hours</th>
<th>N/A</th>
<th>N/A</th>
<th>£16,991 pa min, plus oncosts and inflation over 15 years</th>
<th>N/A</th>
<th>Permanent Gr.10 hrly paid contract using existing team but funding for more hours</th>
<th>Protect SSSI designated features through effective communication and engagement with increasing numbers of visitors relating to necessary SAMMS by:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td>• Providing visitor engagement with Mitigation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>£254,865 min plus oncosts over 15 years</td>
<td></td>
<td>• Strategy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Gaining support and behaviour change</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Informing and educating</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Gathering visitor feedback to gauge effectiveness of SAMMS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Photographic monitoring</td>
<td></td>
</tr>
<tr>
<td>Stakeholder Working Group and Forest Users' Forum</td>
<td>N/A</td>
<td>N/A</td>
<td>£4.5kpa over 15 years</td>
<td>N/A</td>
<td>Ongoing work with community and external org stakeholders</td>
<td>Enable co-production approach through stakeholder dialogue to protect SSSI designated features by:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Gaining information on opinion</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Gaining critical community support for the measures proposed and thus ensure their future success throughout the plan period</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Consolidating Forest Users under one umbrella as opposed to fragmented specific interest groups and therefore allowing better co-creation of sustainable outcomes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Gaining support for altering visiting habits by reducing winter visits / finding alternatives</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Reduce incidents of irresponsible dog ownership vs. wildlife / livestock</td>
<td></td>
</tr>
<tr>
<td>SAMMS Consultant</td>
<td>N/A</td>
<td>N/A</td>
<td>£32.3kpa over 5 years</td>
<td>N/A</td>
<td>Part time external consultant</td>
<td>Protect SSSI designated features through effective implementation of necessary SAMMS under increasing visitor usage by:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Hourly rate</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Providing interface between NT and statutory authorities / advisory bodies</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Gaining all necessary PLCs</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Delivering project measures years 1-5 either through direct management or delegated elements – details tbc</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Working closely with SED project consultant</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Following NT Project Framework protocols throughout</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Interrogating, understand and report on statistical data – visitor and ecological</td>
<td></td>
</tr>
<tr>
<td>Visitor Surveys</td>
<td>N/A</td>
<td>£30.9k c. years 3/8/13</td>
<td>N/A</td>
<td>£92.7k over 15 years (X 3 summer/winter surveys)</td>
<td>N/A</td>
<td><strong>NB 2017/18 prices and scope</strong></td>
</tr>
<tr>
<td>-----------------</td>
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<td>----------------------</td>
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<td>-----------------------------------------------</td>
<td>-----</td>
<td>----------------------------------</td>
</tr>
</tbody>
</table>
|                 |     |                      |     | • Undertake staggered winter and summer visitor surveys across Forest to ascertain visitor usage trends, Zone of Influence from where people are travelling from and by what mode.  
• Understand what they do when they are at the Forest – where they go & why they want to go there. |     | Protect SSSI designated features through effective monitoring of visitor usage and review of ZOI by: |
|                 |     |                      |     | • Reviewing ZOI to understand where 75% of our visitors are coming from.  
• Enables targeted messaging and response to planning matters.  
• Providing a good idea of hotspots of high impact where focussed attention can be made with mitigation measures allowing understanding of changes in usage over time.  
• Providing necessary evidence to correlate visitor numbers with negative impacts to the SSSI.  
• Aligning with survey strategies consistent with other sites to provide benchmarking / maximum credibility of Hatfield Forest survey. |     |

<table>
<thead>
<tr>
<th>Impact surveys</th>
<th>N/A</th>
<th>£14.4 alternate years</th>
<th>N/A</th>
<th>£122 over 15 years (assuming 3% pa inflation)</th>
<th>N/A</th>
<th><strong>Costs provided by Footprint Ecology include:</strong></th>
</tr>
</thead>
</table>
|                 |     |                      |     | • Survey design and preparation  
• Liaison with NT staff re management changes.  
• Autumn and Summer RAG surveys & fixed-point photography.  
• Soil sample collection for 20 samples @ 10 locations / analysis (Bartletts Tree Services Ltd). |     | Protect SSSI designated features through effective objective and evidence-based monitoring of visitor impacts on soils, vegetation, and wildlife by: |
|                 |     |                      |     | • Providing localised evidence of visitor impacts to soils and vegetation.  
• Providing a good idea of impact hotspots where focussed attention can be made with mitigation measures. |     |
- Data handling & report writing
  - Total costs assume 3% inflation over the ten-year period
- Enabling understanding of changes in +/- impacts over time
- Providing necessary evidence to correlate increasing visitor numbers resulting in cumulative negative impacts with high visitor numbers on the NNR

| Gate Counters | N/A | £24.5k yrs. 6 & 13 | N/A | £49k over 15 years | No | Ongoing 7-yearly replacement of 22 electronic gate counters on all perimeter gates and some at strategic locations within Forest |

Protect SSSI designated features through effective monitoring of visitor use of the site by:
- Providing accurate and localised data of visitor usage over time
- Enabling substantive correlation of visitor impacts with peak visitor numbers / poor weather events
- Enabling prioritised messaging / deployment of staff effort at specific locations throughout Forest

| Total Costs | £22k Feasibility | £1,331,900 One-off Capital Costs | £176,719 Annual Costs | £3,416,985 Total Costs over 15 years |

18. Review of Costs

The above costings are correct as per the current 2019-20 Financial Year (March 1 – Feb 28). At annual review the individual costings will be reviewed for their accuracy and adjusted for pre-existing overestimations / underestimations, inflation and pay increments as guided by the National Trust. Changes to on-costs as a result of changes in nationally set levels of employer contributions for National Insurance purposes will be taken in to account. Build costs will be based on the Construction Output Price Indices published by the Office for National Statistics. The sums of monies secured by way of a Section 106 legal obligation will be subject to an inflation related clause.
19. **How the costs of mitigation will be secured**

Financial contributions towards mitigation for Hatfield Forest can be secured through planning obligations or developer contributions. Planning obligations are legal obligations entered into to mitigate the impacts of an unacceptable development proposal to make it acceptable in planning terms. They are used where it is not possible to address unacceptable impacts through a condition. Developer contributions are used to fund infrastructure (including SANGs) through the Community Infrastructure Levy (CIL) which is a fixed charge levied on new development. The route for securing the contributions will ultimately be for the individual local planning authorities to determine, including the specific approach as to which forms, types and sizes of new residential developments will contribute. This will normally be through a section 106 agreement (entered into under section 106 of the Town and Country Planning Act) or via a Unilateral Undertaking (entered into by a person with an interest in the land without the local planning authority) or from Community Infrastructure Levy (CIL) monies where a local authority has a CIL in place. Where a local authority has a CIL in place, the infrastructure projects must be included on its Regulation 123 List which identifies those projects that the levy will be spent on. Contributions are not precluded from being spent in another local planning authority area. A key consideration with regard to securing any contributions is that they comply with the three ‘tests’ set out as statutory tests in the Community Infrastructure Regulations 2010 (Regulation 122) and as policy tests in the National Planning Policy Framework. These state:

‘A planning obligation may only constitute a reason for granting planning permission for the development if the obligation is:

(a) necessary to make the development acceptable in planning terms;
(b) directly related to the development; and
(c) fairly and reasonably related in scale and kind to the development.’

20. In order to ensure compliance with Regulation 122 an assessment has been undertaken with the regard to the proportion of visitors likely to arise from additional residential developments within the ZOI by local authority area. This has then been used to ‘divide’ the overall mitigation costs to provide an overall level of contributions that would need to be secured within each local authority area over the period to 2033. The survey information provides a robust indication of the proportion of visitors originating from each local authority area within the ZOI. Appendix 2 of the visitor survey report summarises the number and percentage of interviewees that originated from each local authority. That data is repeated below and we also give the relevant figures for the zone of influence, i.e. within 14.6km.
Table 2. Summary of interviewees from different local authorities\(^8\).

The Zone of Influence (ZOI) is drawn at 14.6km from the SSSI.

<table>
<thead>
<tr>
<th>Local Authority</th>
<th>Number of interviewees (%) within ZOI</th>
<th>Number of interviewees (%) from whole survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uttlesford District</td>
<td>169 (64)</td>
<td>173 (52)</td>
</tr>
<tr>
<td>East Hertfordshire District</td>
<td>72 (27)</td>
<td>74 (22)</td>
</tr>
<tr>
<td>Harlow District</td>
<td>15 (6)</td>
<td>16 (5)</td>
</tr>
<tr>
<td>Epping Forest District</td>
<td>9 (3)</td>
<td>10 (3)</td>
</tr>
<tr>
<td>Braintree District</td>
<td></td>
<td>26 (8)</td>
</tr>
<tr>
<td>South Cambridgeshire</td>
<td></td>
<td>6 (2)</td>
</tr>
<tr>
<td>Chelmsford District</td>
<td></td>
<td>6 (2)</td>
</tr>
<tr>
<td>North Hertfordshire District</td>
<td>3 (1)</td>
<td>2 (1)</td>
</tr>
<tr>
<td>Broxbourne District</td>
<td>2 (1)</td>
<td></td>
</tr>
<tr>
<td>Waltham Forest London Borough</td>
<td>2 (1)</td>
<td></td>
</tr>
<tr>
<td>All other local authorities</td>
<td>16 (5)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>265 (100)</strong></td>
<td><strong>334 (100)</strong></td>
</tr>
</tbody>
</table>

21. Table 2 demonstrates that the majority of visitors arise from Uttlesford District and East Hertfordshire District. Looking just within the zone of influence drawn at 14.6km around the SSSI boundary, interviewees originated from four local authorities with 64% from Uttlesford, 27% from East Herts, 6% from Harlow and 3% from Epping Forest. Visitors arising from the other local authority areas are significantly less and, for the main part, visit on a less frequent basis. Consequently, when applying the CIL Regulation 122 ‘tests’ set out above, it is considered that, on the basis of the current evidence, and having also considered the costs and potential complexity of administration, that a proportionate and pragmatic approach would be to collect contributions to cover the costs of implementing the Strategy only from the competent authority areas of Uttlesford, East Herts, Harlow and Epping Forest Districts. This reflects the scale, distribution and frequency of future visitors likely to visit Hatfield Forest, although this apportionment will be reviewed on a regular basis to reflect visits from postcodes within the ZOI which lie within the other administrative areas listed.

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22. Based on the costs within Table 1, 2 and the conclusions above, the % costs to be apportioned to the Competent Authorities are as follows (Nb. The suggested 22% contribution to mitigate for the predicted 22% rise in visits to Hatfield Forest over the next 15 years is applied to the figures in brackets):

**Table 3. Financial Apportionment by District**

<table>
<thead>
<tr>
<th>Local Authority</th>
<th>Apportionment (Percentage)</th>
<th>Apportionment (Financial) to 2033 – % of total feasibility costs @ £22k</th>
<th>Apportionment (Financial) to 2033 – % of total capital costs @ £1,331,900</th>
<th>Apportionment (Financial) to 2033 – % of total annual costs @ £176,719</th>
<th>Apportionment (Financial) to 2033 – % of total costs @ £3,416,885</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uttlesford District</td>
<td>64</td>
<td>£14,080 (£3098)</td>
<td>£852,416 (£187,532)</td>
<td>£113,100 (£24,882)</td>
<td>£2,186,806 (£481,097)</td>
</tr>
<tr>
<td>East Hertfordshire District</td>
<td>27</td>
<td>£5940 (£1307)</td>
<td>£359,613 (£79,115)</td>
<td>£47,714 (£10,497)</td>
<td>£922,559 (£202,963)</td>
</tr>
<tr>
<td>Harlow District</td>
<td>6</td>
<td>£1320 (£290)</td>
<td>£79,914 (£17,581)</td>
<td>£10,603 (£2333)</td>
<td>£205,013 (£45,103)</td>
</tr>
<tr>
<td>Epping Forest District</td>
<td>3</td>
<td>£660 (£145)</td>
<td>£39,957 (£8791)</td>
<td>£5,302 (£1166)</td>
<td>£102,507 (£22,552)</td>
</tr>
</tbody>
</table>

23. **Tariffs**

Ultimately the responsibility for calculating the tariff applicable to Section 106 monies payable to the National Trust Hatfield Forest will fall to the Local Planning Authorities listed above. There are various ways in which they could be calculated. One such way could be to divide the apportionments above in to the number of houses proposed within the Local Plan for each authority area. The final method by which tariffs are to be calculated is under review.

---

25. **Futureproofing through the provision of Strategic Alternative Natural Green Space:**

The Footprint Ecology Visitor Surveys have clearly shown that alternative greenspace available to actual and potential visitors to Hatfield is very limited, with Hatfield Forest providing the best and most favoured option for people seeking natural greenspace within a radius of more than 10km. It is therefore essential that local authorities provide suitable alternative natural greenspace (SANGS) for all larger new developments, rather than implicitly or explicitly allowing any further reliance on the presence of Hatfield Forest as default greenspace. Proposals for major new housing developments (of 10 dwellings or more) should provide appropriate on-site public open space and green infrastructure.

It is important to recognise that there are several significant strategic sites that have been proposed for allocation within the 14.6km ZOI of Hatfield Forest. ‘Garden Town Communities’ are proposed near Easton in Uttlesford District and at Rayne in Braintree District. All of these sites are located in places known to yield significant numbers of visitors to Hatfield Forest, despite there being alternative greenspace near to each site – themselves known to be currently running at or over capacity at peak periods. These new communities will result in a significant increase in residents. Without any on-site provision of strategic levels of Natural Green Space of an appropriate form these new communities are likely to add further to recreational pressures on Hatfield Forest. Consequently, as part of the Masterplanning of these sites there will be an expectation that Strategic Alternative Natural Greenspace will be an integral part of their design. Dependent on the scale and form of such Green Space there may be a need to secure some financial contribution towards the implementation of the above projects and associated activities. This is because the greenspace will not provide all of the attributes necessary to attract all users away from Hatfield Forest. It should be noted that the provision of good quality multi-purpose recreational greenspace at these Garden Town Communities would also help to mitigate for visitor impacts on numerous SSSIs in their hinterlands. It is very clear from community engagement work undertaken by Dialogue Matters and our Community Involvement Team with young people within the ZOI that this is something which is highly valued and needed.

26. **Monitoring and Review:**

Monitoring of both the impacts, the projects themselves, and further visitor surveys have been identified within the costings set out in the table above. This includes undertaking further summer and winter Visitor Surveys every three years, at which point the Mitigation Strategy and ZOI will be reviewed. Additional and/or alternative projects may arise in the future, or income generation created by other means such as fundraising and campaigns, car parking and National Trust membership revenue which may off-set some of the costs identified. It is also recognised that during the lifespan of the indicated measures, there may be changes in terms of Local Plan Housing Requirements or adequate greenspace provision across the Zone of Influence. Any of these may result in a need to review and amend the identified measures, their costings and the contributions expected to be sourced by the local authorities.

This Mitigation Strategy covers the next ten years at which point it must be more rigorously reviewed for its effectiveness as a valid tool to adequately protect Hatfield Forest from unsustainable visitor impacts. The years leading up to this will each be subject to an annual
review and results fed back to the necessary authorities. The protection of Hatfield Forest and continued use as a viable greenspace will depend on successfully managing the numbers currently visiting by means of the measures listed above. However, it must be understood that should numbers continue to rise, as evidenced by gate counts, visitor surveys, and escalating impacts, then the strategy will be failing in its purpose and by collaboratively working with the local authorities it should be possible to remedy such a scenario by the more rigorous implementation of solutions outside of the site.

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