

Sussex Estates and Facilities

**Grounds Management Plan
2019- 2020**



Introduction

The University of Sussex (UoS) is a leading higher education and research institution near Brighton, in the south of England. Sussex was the first of the new wave of UK universities founded in the 1960s, receiving its Royal Charter in 1961.

To manage and maintain the University and its campus, the University of Sussex and Interserve teamed up to create the Sussex Estates and Facilities partnership, marking an exciting new chapter in the delivery of the University's estates and facilities management (EFM) services. The partnership aims to improve the campus experience for students and all campus users, develop staff and their careers, and make the University of Sussex the shining example of EFM in the university sector.

As part of this partnership a Campus Masterplan was created to help deliver the universities enhancement visions and provide a planning framework for future planning. Creating a high-quality physical environment at UoS means we can help students and staff to enjoy their studies and work.

Major projects include:

- Delivering our vision through a new Campus Masterplan to increase capacity while continuing to enhance the Grounds environment in sympathy with the architectural heritage of the campus.
- Increasing the residential accommodation to provide housing for 40 per cent of our students.
- Continuing to invest in library, IT and other academic support facilities to ensure excellent infrastructure and facilities for our students and staff.
- Developing our sport, leisure and Rural Estate for the campus community.

The Masterplan has now been fully revised and updated to ensure that the campus can accommodate its growing activity as it expands to over 18,000 students.

Furthermore, the plan reinforces Sir Basil Spence's key design principles which make the campus so special and unique. Working in collaboration with English Heritage, Brighton & Hove City Council and other local bodies, the goal is to develop a shared agreement that ensures that its architectural legacy is not compromised.

The Masterplan helps us to develop the best aspects of Sir Basil Spence's original vision for the site, with interlocking courtyards and with trees and landscape still dominant. The approach recognises that our estate requires sensitive regeneration, while implementing a building programme that will continue to modernise and improve the look and feel of campus.

Sussex Estates and Facilities will continue to take great care to protect and support this natural environment. Careful maintenance ensures that the down land environment is reflected across campus and is enhanced year on year.

Purpose and Scope of the Management Report

This Annual Management Report is to run alongside the current Grounds Maintenance Management plan and covers the management of the various landscapes within the University over the past twelve months:

- Identify all the issues that affect the management of the University of Sussex grounds.
- Provide a clear vision for the University and its environmental development
- Ensure staff, stakeholder and community involvement in the Universities development.
- Raise the profile of the University.
- Guide future management and ensure continuity of management plans
- Develop a sense of sustainable and environmental achievements at the University.
- Provide a basis for identifying priorities within the University grounds.
- Assist in Green Flag accreditation and any other relevant awards and accreditations.
- Ensure consistent management across the University and its grounds.

What is the Management Plan?

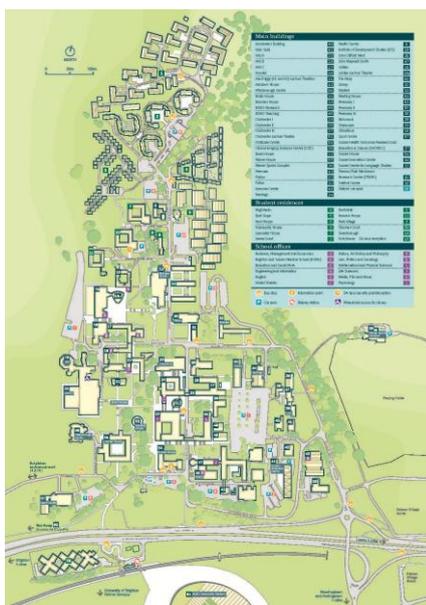
The Management Plan is a working document, which will be updated annually and the detailed management and maintenance activities within the site will be refined as appropriate to ensure that the aims for landscape are delivered. In this way, the precise details of any specific activities identified within this plan may evolve and change over time.

General Information

Location

University of Sussex,
Falmer, Brighton, BN1 9RH
United Kingdom

Figure 1: UoS Campus Map



Transport Links

The University of Sussex campus is well served by public transport with Falmer train station on the south side of campus, and frequent buses on campus to and from Brighton. The adjoining A27 also gives good access by car.

Train

Falmer station is directly opposite the campus. Falmer is on the line between Brighton and Lewes. You can get from Brighton to Falmer in nine minutes by train.

Foot

You can walk to the campus from the station through a subway under the A27 - follow signs for the University of Sussex (the University of Brighton has a campus at Falmer too).

Car

The University is at Falmer on the A27 between Brighton and Lewes, about four miles (six kilometres) from the centre of Brighton. Signage can be seen for the University of Sussex on all major road links – such as the A27

Parking on campus

Parking on campus is limited and there is normally a daily parking charge for visitors.

This does not apply for open and admissions days or any visits arranged through the Student Recruitment Services Office. There is also designated visitor parking which is signposted on campus however the car parks are not attended and valuables should not be left.

Local buses

The 23, 25, 28 and 29 buses run between the centre of Brighton and the University, bringing you directly to campus. Travel time between the campus and Brighton is about 20-30 minutes.

Site History

A rural campus designed in typical 1960s-style by Sir Basil Spence. He was a Scottish architect, who is mostly associated with Coventry Cathedral and the Beehive in New Zealand. His architecture can be distinguished on campus through his Modernist/Brutalist style. Prime examples include Falmer House, the administrative, social, and student recreational block which opened in October 1962 around a central quadrangle, a reminder of more ancient universities. This was followed in 1963 by the Physics, Arts, and Library buildings. In total the campus covers an area of over 91.54 Hectares and on the 13th November 1964 the new campus was visited by Queen Elizabeth II.

Built Environment

General Description

There are 14 Green roofs on the Northfield residential blocks and an additional three at Jubilee building also the Amenity raised lookout, these roofs have been inspected this period and will require rejuvenation works over the next period.

Some of the new accommodation blocks on the new east slope development also incorporate modern green roof installations.



2.1.1 Grasslands

General description

The Campus has a number of grassland parcels that are managed in various ways, including naturalised and wildflower meadows, chalk grassland and tussocky grassland with tall herbs and ruderal vegetation. There are also a number of amenity grasslands and lawns scattered throughout the campus (teaching and residential buildings). The various management regimes for grasslands are shown on the 'Meadow Management' map.

Approximately 80% of the UK's chalk grassland habitat has been lost since the Second World War, making the chalk grasslands of the South Downs some of the rarest habitat in the UK. Examples of this habitat type can be found on the Campus; for example, there are remnants of chalk grassland on the steep slopes opposite Swanborough East and there is an expanse of the habitat to the north-west of the Campus (Jubilee Woodland). Chalk grasslands can support a diversity of rare flora and fauna, including the Adonis blue butterfly and its food plant, Horseshoe vetch. Estimates suggest that 60% of the UK's butterfly species can be found on the chalk grasslands of the South Downs¹. Chalk grasslands cover 4% of the South Downs National Park, but more than a third of the sites are less than a hectare in extent; this makes efforts to restore chalk grassland habitat particularly important.



Student residential buildings are being constructed on the East Slope. Excavated soil and chalk rubble has been spread over land on the West Slope to create a new area of chalk grassland; this phase of the work is scheduled for the summer of 2018, with the first plants expected to flower in the spring and summer of 2019². The area currently consists of species-poor and semi-improved grassland³. The excavated soil will be sown with a mix of wildflower seeds that are

appropriate to the habitat, with some of the seed being sourced from nearby chalk grasslands. The creation of this habitat will bring biodiversity benefits to this part of the Campus; chalk grasslands support intricate plant communities and many of the species found there are specialists that are directly dependent on the habitat.

Wildflower meadows on the Campus are known to support rare wildflowers. Smaller patches of wildflower meadow (along Sciences Park Road and the eastern edge of car park one) support pyramidal orchid⁴ (*Anacamptis pyramidalis*) and the white helleborine (*Cephalanthera damasonium*). Other areas of wildflower meadow provide a unique mix of species; for example the meadow outside the Attenborough Centre contains annuals such as toadflax (*Linaria* sp.) and cornflower. Up to 40 species of wildflower have been recorded in the meadow areas here; as well as having a strong visual impact, the wildflowers are hugely beneficial to pollinating insects.

Amenity grasslands are those that are regularly mown and intensively managed (e.g. lawns, recreational grounds and playing fields). Because of frequent and intensive management, the biodiversity value of amenity grassland tends to be low; for example these grasslands typically support a low number of wildflower species and lack habitat diversity and structure. However, if managed correctly, amenity grasslands can still provide a number of benefits for biodiversity without losing recreational value. Amenity grassland that borders other habitat types (e.g. woodland or scrub) is of particular value; for example, grass that is short (~5 – 15cm), tussock and damp provides ideal foraging habitat for the song thrush (Red List BoCC) and pied wagtail.

Summary of habitat enhancements for grasslands:

1. Installing interpretation materials across the site has promoted the wildlife value of the grassland areas and explained the reasons behind the various management regimes to staff, students and visitors. For example along the boundary walk and on information lecterns, and highlight species in the planting area, likely to establish within the meadows.
2. This year we are reviewing locations where a less intensive and phased management regime could be incorporated onto amenity Naturalised areas this will reduce our carbon footprint by reducing fuel and labour costs, and improve the biodiversity of the campus environment.
3. Incorporating scattered wildflower seeding into amenity grassland areas has established Sustainable displays of colour and scent within the centre of campus, this has also provided an additional food supply for our social insects.
4. We have Enhanced the annual meadows, near the Life Science facilities and on the bank at the Attenborough Centre.
5. We have Enhanced habitat for bees, with bee hives on the eastern edge of the Campus being reported this period, and we also support solitary bees by installing bee hotels across campus.

6. The disruption to the soil during installation of the new car park this year on the Knights Bank Road has supported an increase of white helleborine Orchids. Also sightings of Bee Orchids have been reported within Arts Compound this season. We also maintain and encourage orchids in other locations across campus.

Woodland Walk

The walk starts at knights Gate Road at the main entrance to the University of Sussex.

You then proceed due west down the wooden steps that take you into the old linear beech woodland and the path runs next to the old ivy clad Pelham flint wall.

The Pelham's were the aristocrats who owned the estate before the University was built, and the wall is likely to be in the order of 300 years old, roughly the age of the beech trees in the Woodland belt.

On Friday 16th October 1987, winds in excess of 100mph swept across Southern England, and many old beeches and elms on campus were damaged or destroyed.

The root plates of these trees were heaved up, forming cavities underneath.

Many of these cavities are now occupied by badgers, and you can see their excavations on your right as you walk west along the path.

As you proceed west, you cross the Southern Ring Road and the entrance to the Innovation Centre, then Southern Ring Road again just after the electricity sub-station.

After crossing the road, you walk between a variety, of trees that were planted by the original groundsman, Mr Don Collier, after the University opened in 1961, So these trees are all less than about 60 years old.

This section of the path takes you to the pedestrian and cycle access to the University, after passing the Tenant Lain cottages on your right.

Further trees were planted along this belt in 2008 and 2010/11 near the A27 underpass

The path then runs through the Sports Centre car park with the Pelham wall now on your left.

Growing along the wall is a good population of English elm trees. Most of these are young, and have grown suckers after the original trees were blown down, In 2014-2017 three elms became infected with Dutch Elm and were felled to reduce further contamination across the campus elm stock.

Three resilient strain elms were planted at Bramber House.

The path then runs behind the Sports Centre through a fine stand of circa 300-year oaks, veers north and emerges at the bottom of Richmond Hill.

As you climb Richmond Hill, you pass Russell's Clump on your right, which is an ancient beech plantation that was also badly damaged by the 1987 winds.

On the Eastern edge of the clump is the University's wildlife dew pond, constructed in spring 2005 from money contributed for environmental improvements after the building of the Medical School.

The pond is now supporting breeding frogs, newts, dragonflies and much other wildlife, and providing drinking and bathing water for birds and other animals in dry summers.

The boundary walk, proceeds north past the trees on your right, then up Richmond Hill to some more trees where you bear right.

You then bear left and follow the tree line north, eventually passing through a kiss gate into the Jubilee woodland plantation and further up Richmond Hill.

The top of the hill has the ancient name of Grubbing's, and it is here that you will see the remains of the University observatory.

This is a superb place to get your bearings and view the whole of the Campus.

It is also possible to see Falmer Church tower emerging from the trees in the distance to the South East, and Stanmer Park due West.

The footpath then turns East past the old observatory and down the hill past a field recently named the 'Field of Uncertainty' because it could not be established whether it was on University ground or not for some time. It is not.

At the bottom of the hill you meet the Euro Constituency County Constituency and Church Parish

boundary, marked by a linear tract of woodland.

Fallow deer can sometimes be seen emerging from these trees.

Roe deer can be seen in other locations.

You pass on to a farm track at the bottom of the hill, and then enter the woodland on your right.

This was called Sunny Bank Wood by one of the oldest residents of Falmer, MRS Doris Williams, who wrote an informative book about the village, and worked at the University for many years.

On entering the wood, you can turn right and walk on the level back to centre of campus.

Alternatively, you can continue with the boundary walk by going straight ahead up a winding and sometimes muddy track that climbs quite steeply through the wood.

You can see the chalk and flints exposed through the path and many species of tree and ground flora in this rich little woodland including wild alpine strawberry.

On reaching the top of the hill you come to a 'T junction', the boundary walk proceeds left for a few meters and then right.

The route then passes through Tenant Lain Belt, which is a wind break of mainly wind-damaged beech trees.

About half way along, you will pass the Biology Field Trials Plot: this is an open air laboratory where ecological research is done for the School of Life Sciences.

You also cross the road that leads to the Falmer Sports Complex.

At the Southern end of the tree belt, you emerge into Falmer Village, but before you do, there is a notable tree on your right: this is a Ginkgo biloba or a maidenhair tree.

Believed to originate from China, this tree is supposed to have medicinal properties.

This specimen is clearly very old, probably in excess of 200 years.

At the road, turn right and you will find yourself back at the beginning of the walk

Jubilee Woodland:

Jubilee Woodland, on the north-western edge of the Campus, was planted by staff and students of the University in 2012 to commemorate the Queens Jubilee. The plot was grassland and although it is within the Campus boundary, it is also part of the South Downs National Park. Whips of eleven native species were planted within a 2 Hectare plot, totalling 2500 trees. The whips are protected by tree guards. The following species were planted:

- Beech
- Dog wood
- Downy birch
- Elder
- Field maple
- Hawthorn
- Hornbeam
- Oak
- Small-leaved lime
- Spindle
- Wild cherry

An oak tree sapling, which was cultivated from an acorn collected from the royal estate at Sandringham, was also planted on campus outside the Jubilee Building.

Management of Jubilee Wood:

This planted woodland has been inspected regularly for any insect infestations/ diseases or damage. The area has been surveyed and has now been transfer back to University Management and outside of the Sussex Estates Facilities service line as of 2019

Tree planting on campus:

Tree planting is carried out during the winter operation period (September to March). A number of stages are involved in planning tree planting work before the approval of the University is granted and the work is undertaken.

Consultation is carried out with members of University staff that are specialists in ecology and conservation. The planting schedule for 2019 is:

| | |
|------------------------------|----|
| • Beech | 10 |
| • Mountain ash (Rowan) | 10 |
| • Whitebeam (native variety) | 10 |
| • Pendunculate oak | 10 |
| • Holly | 15 |
| • Field maple | 20 |
| • Common alder | 15 |
| • Apple | 15 |
| • Pear | 15 |
| • Cherry | 25 |
| • Box | 15 |
| • Juniper | 15 |
| • Hornbeam | 15 |
| • Plum | 10 |
| • Resilient Elm | 8 |

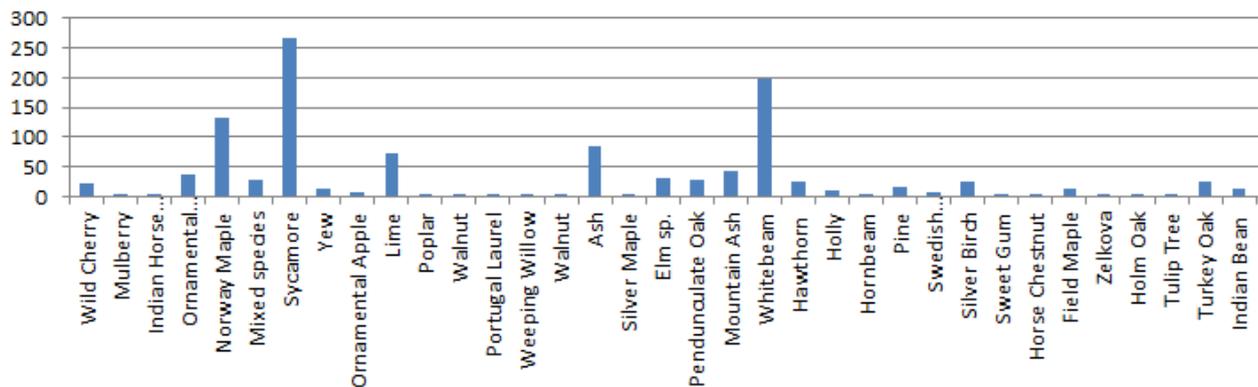
The tree planting plan takes account of the potential size and ecological requirements of the trees. Any potential future hazards are also considered, including light shadowing, new building works, underground utilities, moisture uptake and long term amenity value.

The overall aim is to support the University by ensuring that there is a balanced approach to tree planting, ensuring that we replace any trees affected by building works and enhance the ecology of the site by utilising wild grass areas, orchid areas, meadows and wild flower beds.

Tree Survey Data

Using the approved tree records dating back to the year 2000, we have created a tree population graph (See Figure 002). This provides us with a detailed overview of species on site and identifies areas that may benefit the campus ecology by supplementing species that historically have a poor uptake, and also provides other core information relating to the biodiversity and habitats within our site.

Figure 002- Tree Survey Data



Dead wood:

There are a couple of notable examples of standing dead wood on the Campus – by Bramber House, and on the lawn to the south of Falmer House. Habitat piles are present in some of the wooded areas.

Management of disease:

The University of Sussex campus has a rare population of the English Elm (*Ulmus procera*); 31 of the trees are present on the Campus, 22 of which are classified as mature⁵. An epidemic of Dutch elm disease in the late 1960s led to the death of most mature English elms by the 1980s⁶. Between 1970 and 1987, 195 English elm trees on campus were lost to Dutch elm disease and the Great Storm. English elms are known to be particularly susceptible to the fungus that causes Dutch elm disease.

We have planted 5 resilient Ems this period to replace trees that have succumbed to the disease.

Ash dieback (*Chalara*) is an emerging threat to the woodlands on site and has the potential to cause significant damage.

Symptoms include leaf loss and dieback in the crown and *Chalara* is usually fatal to the tree.

This period has seen a substantial increase within the boundary walk of this disease.

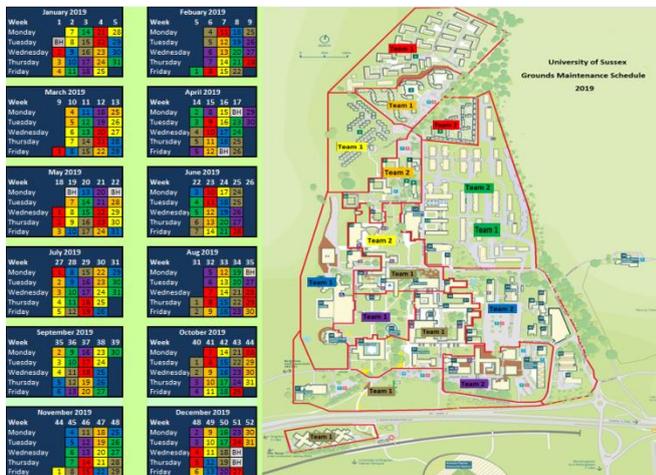
In quieter areas and where health and safety considerations allow, dead trees are retained to

Provide dead wood habitat and snags.

Grounds Maintenance

The Grounds Maintenance Services include:

- grass cutting and seeding;
- maintenance of shrub beds, containers and hedgerows;
- litter picking and clearance of leaves;
- Woodland paths and boundary.
- maintenance of ponds, moats and water features;
- Amenity Tree Maintenance.
- Arboricultural Survey.
- Meadow management.
- Snow and ice clearance.
- Pest Control



Grounds Maintenance is delivered using a planned yearly schedule ensuring a consistent standard of service.

The schedule is revised yearly by management and staff to support University core service requirements such as Exams, Events, Open days and VIP Visits.

Grass Cutting and Seeding

SEF are responsible for cutting all areas of lawn to a height of not more than 50mm, with clippings left on the grass to replace nutrients and to ensure areas of wild species (such as orchids) are allowed to grow.

Plants and Shrub Maintenance

All plants are pruned to a height and form which is aesthetically pleasing, safe and promotes the health and re-growth of the plant. Areas are also kept largely weed free.

Hedgerows are cut back in March and October and any overhanging trees and bushes are cut to ensure pathways are kept clear.

Annual Planting

This years planting has been focused on Biodiversity and social insect support, we have introduced pollen rich species.

- Knapweed
- Red Clover
- Self-heal
- Devils bit scabious
- Field scabious
- Small scabious
- Hawkbit
- Bird foot trefoil
- Ladies bedstraw
- Common fleabane
- Agrimony
- Burnet saxifrage
- Yarrow

Trees

A detailed tree condition survey is undertaken every five years on a rolling basis. The first was submitted in 2015 with each tree tagged, numbered, and its GPS location recorded. The next independent survey report is scheduled for 2020.

In addition, the report also includes details on individual tree height, spread, age, diameter, whether they have any signs of disease and also the amenity value of the tree.

The tree hazard rating, commentary, and recommendations, are used to plan Arboricultural works over the next five years 2025

Weeding

In order to keep hard surfaces free of weeds, moss and lichen and general organic growth, we apply the most environmentally practical approach, and this can be pulling out weeds by hand or with tools to burning off, or as a last resort application of chemicals in accordance with legislative requirements.

Watering

All newly planted trees and shrubs are regularly watered during the summer. However all established plants and lawns are not watered unless required in the event of exceptionally hot dry weather and with the prior agreement of the University.

Woodland paths and boundary footpaths

All paths are maintained to ensure they are kept clear and safe to a width of 3 metres and are free of litter.

Snow and Ice Clearance

The security office monitors prevailing weather conditions and activate the call out service as needed. SEF's Ground Maintenance Team is responsible for the safe treatment of ice and snow and provides a full emergency call out service.

The Grounds Maintenance Team will spread salt by means of a tractor with spreader attachment as follows (Priority Areas):

- Boiler House, Eastern Ring Road to Knights Gate Road to completion.
- Southern Ring Road to underpass entrance to completion.
- Stony-Mere Way (ie entrance via Stanmer Park).
- North-South Road via Refectory Road to bus turnaround at Brighthelm to completion.
- Lancaster House Road and Norwich House Road to completion.
- Arts Road and Library Road to completion.
- Gardner Arts Centre Road and Biology Road to completion.

The next priority is car parks in order of condition priority:

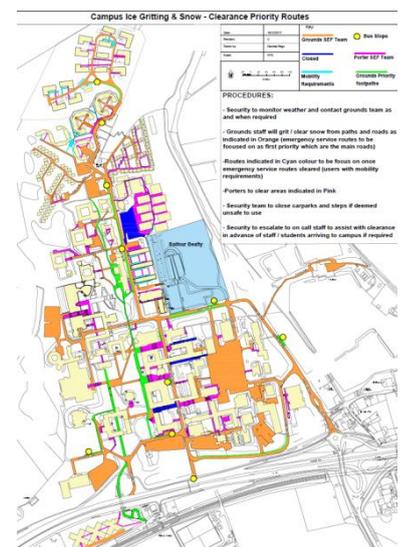
- Sports Centre Road car park
- IDS Car Park
- Eastern Ring Road
- Sussex House car park
- Sussex House visitors car park
- Science (500) car park
- Biology Road car park
- Lewes Court car park
- Jubilee Car Parks
- Pavilion Road car park

Pathways

Clearance of main walkways and paths across campus to allow safe access is priority. To allow these routes to be cleared some areas of the campus will be off limits after periods of heavy snowfall or very low temperatures. Closed paths, steps and car parks will be marked by tape and signs.

Snow clearing teams start work as soon as they themselves can get to campus and therefore not all routes may have been cleared by the time staff arrives on site.

A campus Ice and Gritting plan is reviewed by the management team and



Grounds Staff each year to ensure the plan is fit for purpose and reflects the needs of the University staff, students and public.

This plan is published on the University web site.

Cleansing and Waste Management

Site Cleansing

The appearance of the Campus is a priority for the University and we recognised it as a basic requirement for attracting new students.

Our Grounds Services Team is responsible for emptying amenity litter and recycling bins on a daily basis, and at the same time conducting litter picks and leaf sweeping. All zones are manually cleaned, picked on a daily basis.

The Grounds Services team operates weekdays only (except when there are special events such as University Open Days, and priority is given to weekend high-use areas on Monday mornings for example around the SU.

Leaf Clearance

All leaves that fall are cleared by the end of December. Any accumulation of leaves on the edge of woods and copses are removed so as not to spread to areas already cleared.

Waste Management

To encourage site users to keep the Campus litter-free, litter and recycling bins have been provided extensively throughout the Campus. Many of the litter bins have been replaced with Recycling bins that segregate paper/card, plastic bottles/cans and general waste.

In addition, 6 Big belly bins, also known as Smart Bin are now located across the campus, they have been referred to as the 'world's most hi-tech bin', as they contain inbuilt solar powered compaction technology that increases the unit's capacity from 606 litres to 800 litres when full. They also communicate with our collection operatives when they require emptying, therefore helping us save time and cost by not having to collect waste, when it is not necessary.

No general waste goes to landfill. Instead, all waste is taken off site for incineration. Green waste is stored on site and then taken away for mulching and composting. This is used on site and/or used on other local sites as a recycled material.

When it comes to large items that are left by student residence at the end of the academic year, SEF will remove non-University issued items from the residences and arrange for its dispersal to the University approved charities.

Dog fouling

Dogs are not encouraged on the Campus however members of the public are known to use the boundary woodland walk for walking their dogs. Currently, there are no dog waste bins as there is not a dog fouling problem. However this is being monitored on a regular basis during litter picking and grounds maintenance works.

Monitoring and Review

The Grounds Maintenance plan is to be monitored and organised in house against the objectives and work programme set for the site on an annual basis. The outcome of this process will feed into the future work plans for this management plan.

Reviewing the Management Plan

Although the plan is going to be continually reviewed, it also must take into account the time for the management plan to achieve its goals, some of which will take a few years to accomplish in full. These are all identified and planned; any variations to the plan will be outlined and planned.

The review will consult staff and students. However there may be changes in demands for some of the facilities within the campus, changes in resources available, in management structures and in the operations and nature of the organisation using or influencing the management of the site which necessitate a change in certain aspects of the plan. Similarly to the production of the plan, the review will be based on good, current baseline information, objectives analysis of that information, and on consultation with a wide cross section of the people working in and using the site.

