



2021 - 2026

# Landscape Management & Maintenance Plan



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**Facilities**

**Lancaster University**

Updated February 2022

## CONTENTS

		Page No.
1	Introduction	1
2.0	Lancaster University – Historical context	2
2.1.0	Ancient Settlement	2
2.2.0	The Agricultural Revolution	2
2.3.0	The Sporting Estate	2
2.4.0	New Money - New Landscapes	3
2.5.0	The Storey Family and Thomas Mawson	3
	Ordnance survey map Lancashire and Furness 1:2500 1890 (map1)	3
	Ordnance Survey Lancashire and Furness 1:2500 1912 (map 2)	4
2.6.0	The Development of the estate	5
2.7.0	Bailrigg House	5
2.8.0	20 <sup>th</sup> Century	5
2.9.0	Creation of the Campus	6
2.9.1	Alexandra Park	7
3.0	Facility Management	8
3.1	Service Delivery	8
3.1.2	Fault reporting	8
3.1.3	Service Delivery – structure diagram	8
3.1.4	Health & Safety Compliance	9
3.1.5	Role Specific Issues	9
3.1.6	Safety Checks	9
3.1.7	Training	9
3.2	Generic Maintenance techniques	10
3.2.1	Grasslands/ Wildflowers	11
3.2.2	Tree Management	11
3.2.4	Scrubland	11
3.2.5	Environmental Issues	12
3.2.6	Composting & Recycling	12
3.2.7	Carbon Management Plan	12
3.2.8	Energy Management	12
	Wind Turbine	12
	Combine Heat & Power	13
	Biomass Boiler	13
3.2.9	Pesticides	13
3.3.0	Peat Use	13
3.3.1	Building research Establishment Environmental Assessment Method	13
3.3.2	Water Conservation	14
3.3.3	Graffiti	14
3.3.4	Litter Management	14
3.3.5	Vandalism	14
3.3.6	Community Involvement	15
3.3.7	Marketing & Communications	
3.3.8	Other Areas of Responsibility	16

4.0	Maintenance Prescriptions	17
4.1	Meadow Grass	18
4.2	Amenity Grass	19
4.3	Wildflower Areas	20 + 21
4.4	Edge Habitats	22
4.5	Hedgerows	23 + 24
4.6	Shrub/ Planting Bed Maintenance	25
4.7	Wetlands – including ponds, ditches, culverts etc.	26
	<b>Appendices</b>	
	Appendix 1 – Area Sizes	i
	Appendix 2 – Environmental Policy	ii
	Appendix 3 – Lancaster Universities Areas of Responsibility	iii
	Appendix 4 – Current Staffing Structure	iv
	Appendix 5 – Landscape Typology Map of the University Campus Landscape	v
	Appendix 6 - Work Schedule – Campus all Typologies	vi
	Appendix 7- The Environmental Associates for Universities and Colleges 'Code of Practice on Litter and Refuse'	vii
	Appendix 7- Campus Landscape Improvement Plan	viii

## 1.0 Introduction

This plan has been devised to help support the maintenance and development of the campus landscape at Lancaster University and associated off campus facilities. The plan puts into context the historical aspect of the development of the campus pre-university, along with a generic overview of how the existing management and maintenance of the campus is actioned. Particular attention is given within the plan to 'the landscape elements' and how these are currently maintained and developed.

The plan also sets out in more detail the 'day-to-day' management of how each landscape element should be maintained, identifying the overall aim of the typology/landscape element, as well as how through maintenance maximise benefits can be achieved both for biodiversity (BP), and horticultural excellence.

This plan has been developed by Landscape Manager within the Facilities Department of Lancaster University, in consultation with grounds staff, other departments within the University and the student body Lancaster Students Union (LUSU). The plan is reviewed on an annual basis with interested parties to ensure the plan is being actioned as per the detail.

The Management & Maintenance Plan helps to support a number of other strategic documents, these include:

- Lancaster University Masterplan 2012-2022
- Facilities Environmental Sustainability Plan
- Ecology Plan 2019-2024
- Woodland Management Plan 2019-2029
- Tree & Woodland Safety Management Plan
- Environmental Policy for Use of Pesticides (Lancaster City Council – Pest Control)
- Integrated Weed Management - Policy Statement

## 2.0 Lancaster University Estate

The University first established in 1968 is currently a campus estate of 217 hectares in size, with a proportion of this area being utilised by the building footprint and hard surfaces such as car parks. The responsibility for the maintenance of the majority of landscape estate lies with the Universities in-house grounds team, however there are certain areas and tasks that fall under the management responsibility of University Private Partnership (UPP)

In 2016, The University acquired additional land at Forrest Hills east of the M6 motorway. The site at Forrest Hills is an area of 166 acres of predominantly agricultural land. In 2017, the University acquired an additional 28 acres of land to the north of the existing boundary for the development of the Health Innovation Campus (HIC).

***N.B.(UPP landscape features are not evaluated or included in this report)***

The University Grounds & Clean Team is responsible for the majority of the campus landscape, this includes:

- Approximately 160,407 m<sup>2</sup> of grass cut at various frequencies
- 44,446 m<sup>2</sup> of established and new woodland
- 4,000 m<sup>2</sup> of shrub beds
- 10,404 m<sup>2</sup> of both natural and formal hedges
- 108 refuse bins and 40 recycling units emptied on a daily basis
- 84,000 m<sup>2</sup> of hard surfaced areas to sweep on a daily basis

***Full list of area typologies is identified in appendix 5.***

**This plan relates to the areas under the management of Lancaster University. Those under the responsibility of University Private Partnership (UPP) through the 40-year lease agreement are managed under a different schedule. The attached plan appendix 1 identifies individual areas of responsibility.**

**Note - (BP) refers to Biodiversity Action Plan, (HE) refers to horticultural excellence**

## 2.0 Lancaster University – Historical Context

### 2.1.0 Ancient Settlement

The University is located on an area known as Bailrigg, a hamlet within the town of Scotforth, which lies two miles south of Lancaster. The name Bailrigg has two possible meanings; it signifies either a living space or something that is adjacent to a ridge or boundary. “Bal” and “Balla” means an abode and “Bail” signifies a certain limit in a forest. The suffix “rigge” means ridge, or raised ground.

The vast majority of what became the campus was part of “Bailrigg Moor”, a rough grazing land that the farmers in Scotforth had common rights to, until 1809 when the site was improved.

Bigforth farm and the fields to the north-west of the site were already in existence at this time. The name “Bigforth” represents the old Norse “bygg-thveit” which translated into modern English means barley clearing. This would suggest that the farm originated in the period of Scandinavian colonization between the tenth and the twelfth centuries.

### 2.2.0 The Agricultural Revolution

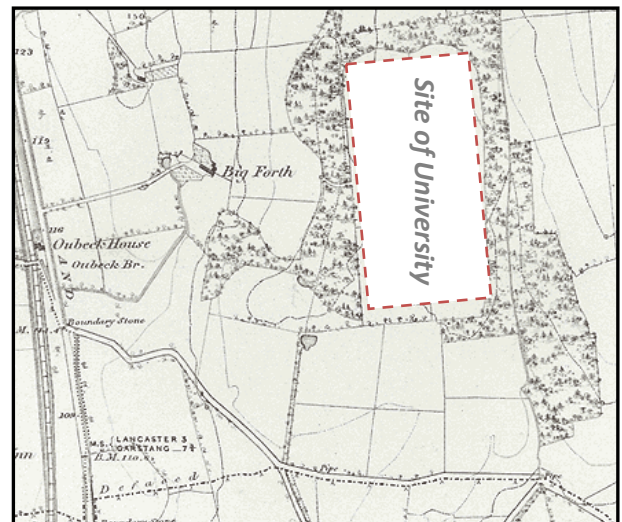
The landscape altered dramatically after 1809 when Joshua Hinde created rectangular fields of pasture on the former moor. (Very little is known about Joshua Hinde, but he was possibly related to the long established local ‘Hinde’ family). It is likely that these fields were subject to paring, burning, re-seeding and field drainage to improve their quality. This was undertaken at the height of the Napoleonic wars so Hinde probably aimed to improve the land in order to increase food production during a time of shortages and high prices.

By 1833, Hinde had developed the land extensively, largely through the plantation of a shelter belt of woodland on top of the hill which would become the west side of the new campus.

### 2.3.0 Sporting Estate

The site of the present campus can be clearly seen on this map, surrounded by the trees. The railway and turnpike are visible on the left, as are Big Forth farm buildings. To the bottom of the map there is Green Lane, which still exists today. The road that was later replaced by the A6 was originally an eighteenth-century toll road

By 1841, the whole of the Bigforth estate had passed to William Treasure Redmayne of Amwell, originally from Bury in Hertfordshire. Leonard Redmayne (William’s father) raised himself from an obscure position to the head of the firm of Gillows. He was also one of the first directors of the Lancaster Banking Company, was Mayor of Lancaster in 1842, and died in 1869. William Treasure Redmayne was Leonard’s only son. William, a deputy Lieutenant of Lancashire, died in London on November 30th, 1849, aged 42 years.

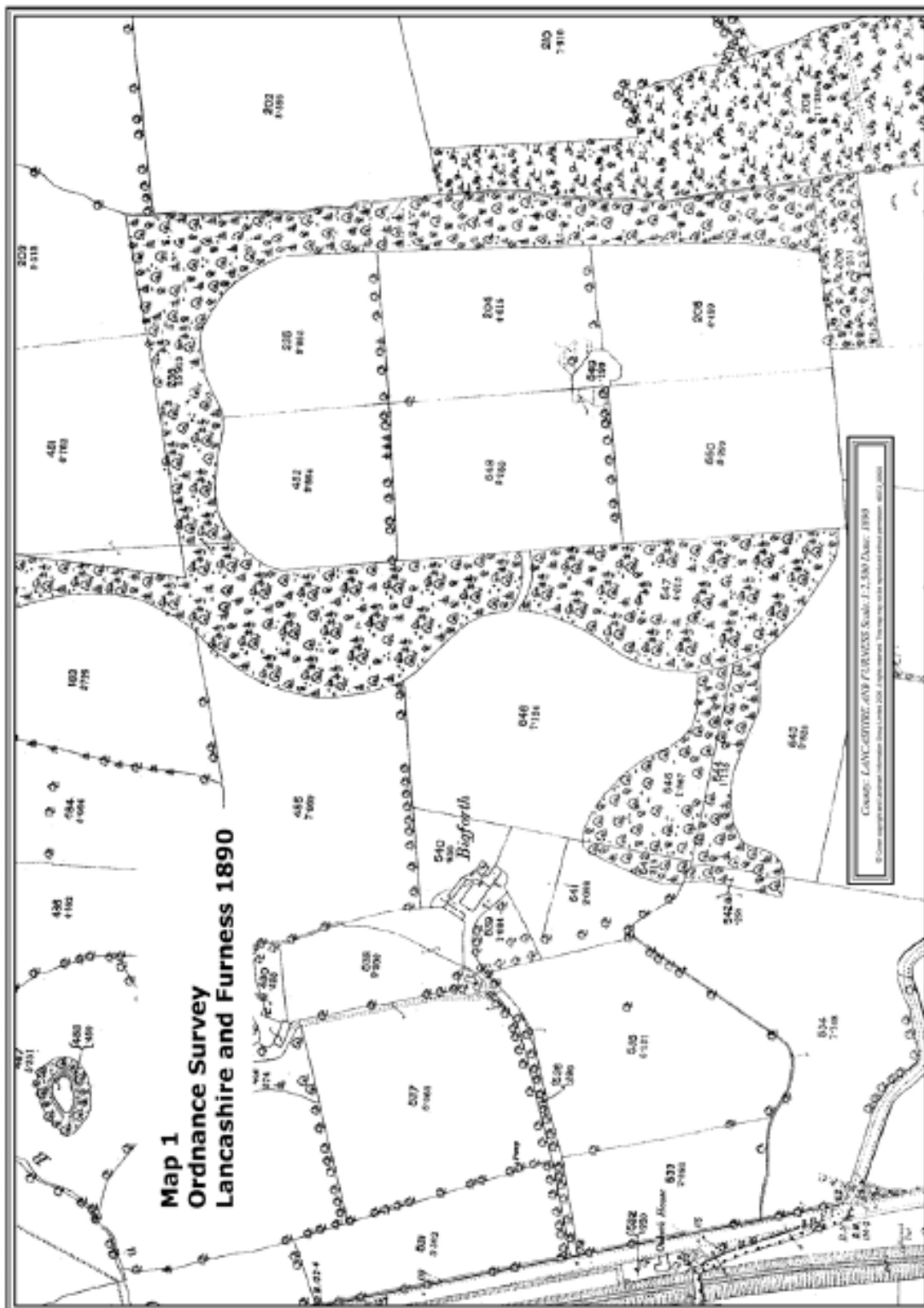


It is likely that William Treasure Redmayne was responsible for the conversion of the site into a sporting estate. The framework of woodland had been planted as cover for game; with parts of this have surviving to the present day.

## 2.4.0 New Money - New Landscapes

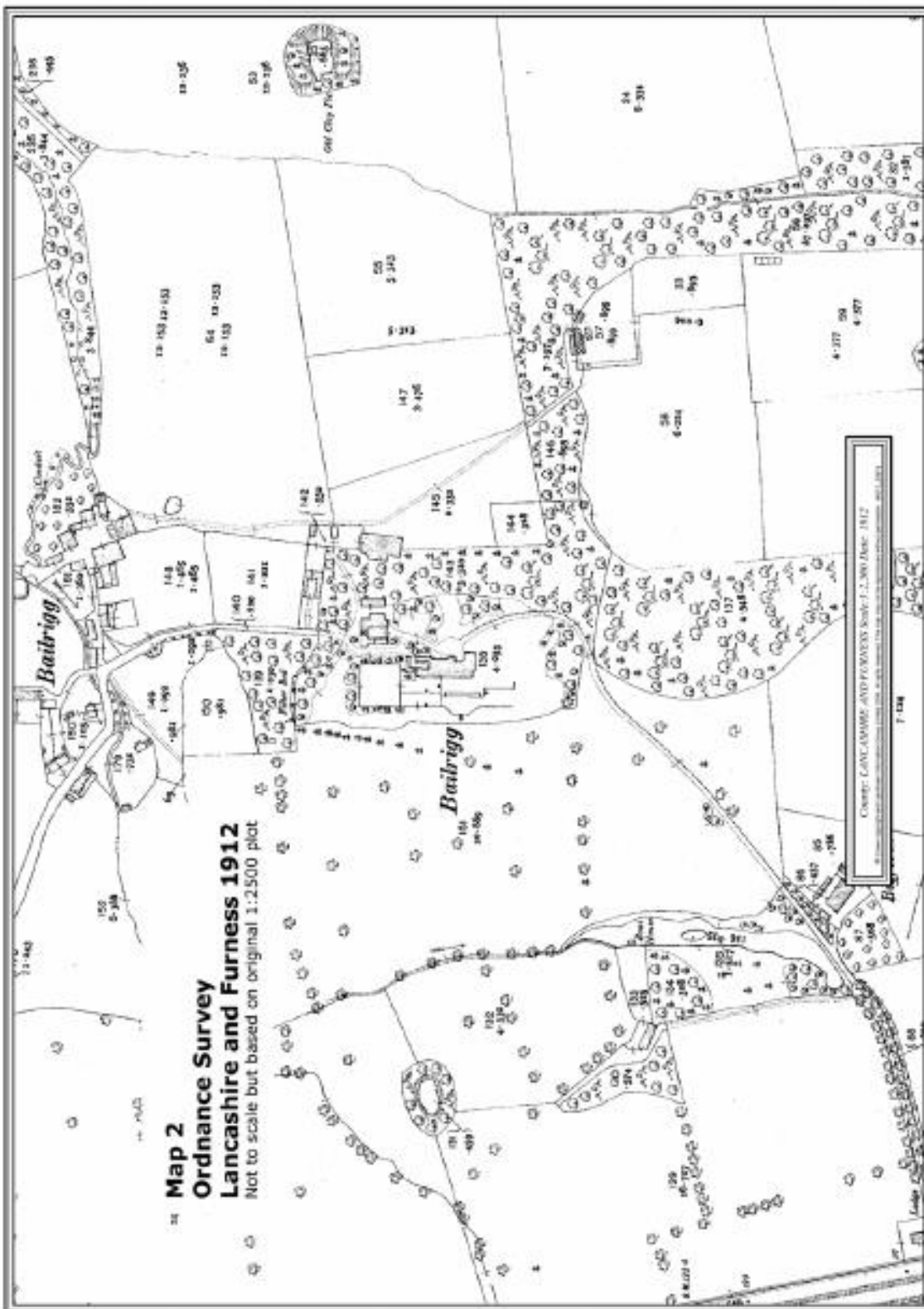
## 2.5.0 The Storey Family and Thomas Mawson

### Ordnance Survey Lancashire and Furness 1:2500 1890 (Map 1)



This shows the form of the estate land amounting to some 523 acres owned by Sir Thomas Storey before Bailrigg House and garden was constructed. It comprised three farms-Bailrigg, Hazelrigg and Bigforth. The land was undulating and consisted of large generally rectilinear fields between 4 and 7 acres in area divided by hedgerows with hedgerow trees and significant belts of mixed woodland.

**Ordnance Survey Lancashire and Furness 1:2500 1912 (Map 2)**



This is the first OS plan that was published after the construction of Bailrigg house and garden and shows the form of the parkland landscape extending as far west as the A6 road including the ornamental lake, the carriage drive, Bailrigg House and garden set against an eastern backdrop of mature woodland.

### 2.6.0 The development of the estate

The history of the development of the parkland and garden commences with purchase of the three farm estates- Bailrigg, Hazelrigg and Bigforth and Burrow House by Sir Thomas Storey in 1887. On his death in 1889, Herbert Lushington Storey inherited the estate and employed architects Woolfall and Eccles of Liverpool to design Bailrigg House and Ernest Milner to lay out the grounds. The house and presumably the garden were constructed between 1899 and 1902.

**Map 1** OS Plan 1890 shows the resources of the estate and the farmland character of the landscape. A gentleman's residence in the revival style needed an appropriate setting and Storey's ideas would have been influenced by similar properties that he would have visited which were owned by wealthy friends and colleagues.

The site selected for the house was elevated and offered panoramic vistas to the south west, west and North West and the setting of the property was enhanced by removing hedgerows and by creating a sinuous lake in the mid ground with an island and boat house.

The OS plan of 1912 (**Map 2**) shows the location of the carriage drive, the house and stables and the dramatic effect of creating a parkland landscape principally on the west side at lower elevations.

### 2.7.0 Bailrigg House

Because of its associations with Herbert Storey, the original owner of the Bailrigg estate and the garden designers Ernest Milner and Thomas H Mawson it is recognised that the gardens are of local and regional historic interest, however these are currently not included within the Register of Parks and Gardens of English Heritage.

It is documented that the grounds of Bailrigg House were originally designed by Henry Ernest Milner between 1898 and 1902. Milner died in 1906, and Herbert Storey invited the service of the local Landscape Architect Thomas H Mawson in 1907 to undertake improvements. The house and gardens is an asset of importance to the University as it helps to form an historic link between the modern Bailrigg campus and the former estate. It is hoped that at some point that the gardens could be restored back to their original design.

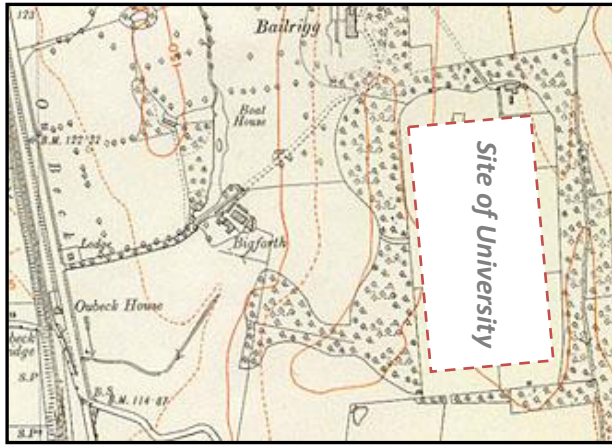


### 2.8.0 20th Century

In 1921, the land and estate were both sold at auction and purchased by Townley Parker. The sale catalogue for the estate and Bailrigg mansion gives a vivid impression of what the house was like, as do the pictures that were taken of the house's interior.



By the time of the 1930s Ordnance Survey map, the estate had all the features of a small landed estate.



The Townleys were approached by Don Wadell, the Town Clerk of Lancaster to see if they would sell the house and its property for the construction of the new university. They were eventually persuaded to sell their mansion and Bigforth farm for £50,000.

Bigforth farm consisted of around 200 acres. Later, 50 acres at Hazelrigg Farm were bought, and then 90 acres at Bakers Farm in 1967. The area of land chosen as the site of the new university was a rich tapestry of copses, small patches of water and grassland with a number of stone farmhouses and buildings typical of North Lancashire and the Lake

District. During the construction process, many of the belts of woodland along the north and east sides of the campus were preserved and can still be seen today.

### 2.9.0 Creation of the Campus

The university was established by Royal Charter in 1964, although teaching and accommodation was first based in Lancaster City for the first four years. The charter stipulated that HRH Princess Alexandra of Kent be the first Chancellor. The university accepted its first students in October 1964, with the motto, "patet omnibus veritas", (Truth lies open to all), being adopted.

#### University Campus Ariel Shot 1961



The purpose-built campus occupies Bailrigg, a 360-acre (0.562 sq mi; 1.457 km<sup>2</sup>) site donated by Lancaster City Council in 1963. The campus buildings are located on a hilltop, the lower slopes of which are landscaped

parkland which includes "Lake Carter" and the university playing fields.

#### University Campus Ariel shot 1971



The site is three miles (5 km) south of the city centre. The campus buildings are arranged around a central walkway known as "The Spine". The walkway runs from north to south and is covered for most of its length. The main architect practice for the development was Gabriel Epstein of Sheppard and Epstein.

On a barren hilltop on a windswept day in 1963 the two architectural partners surveyed the future site of the university, Peter Sheppard recalled that day: 'We went up there on a windy day, and it was freezing cold. Every time we opened a plan it blew away. And we said Christ! What are we going to do with these students, where are they going to sit in the sun and all that? Well, we decided, it's got to be cloisters. All of the buildings have got to touch at the ground. We then devised this system and it had an absolutely firm principle: it had a great spine down the middle where everybody walked. That led everywhere. The cars were on the outside, on both sides. When you came into the spaces things were square, they were rectangular courtyards and they were all slightly different.

There were two or three essentials: one was that the covered way had to be continuous, the buildings had to be three or four storeys high and connecting to the next one. I thought it worked very well.' In contrast to some of the other campus universities, Bailrigg was designed to integrate social, residential and teaching areas. Another major feature of the design was that there would not be a large central Students' Union building, but that the individual colleges would be the centre of social and recreational facilities.

Vehicular and pedestrian traffic is separated: this is achieved by restricting motor vehicles to a peripheral road with a linking underpass running east-west beneath Alexandra Square. The underpass accommodates the Bailrigg bus station and was refurbished in autumn 2010. Car parking is arranged in cul-de-sacs running off the peripheral road.

Construction of the Bailrigg campus began in November 1965, with the first building completed a year later. The first on-campus student residences opened in 1968. Alexandra Square is the University's main plaza.

Named after the first chancellor, HRH Princess Alexandra, it is situated at the centre of the original campus and contains the library in the south-west corner. On the west side of the square is University House as well as various banks and shops. To the south-east of the square is the tallest building on campus: the fourteen-story Bowland Tower, which contains accommodation and disguises the boiler room chimney.

One of the most distinctive of the Bailrigg buildings is the free-standing University Chaplaincy Centre. Opened on 2 May 1969, the architects were the Preston-based firm Cassidy & Ashton. The building has a trefoil plan with a central spire where the three circles meet.

New accommodation blocks for Furness and Fylde colleges, on the east side of campus, were completed in September 2006, while the near complete rebuilding of Grizedale College and construction of further accommodation for The County College at the northern edge of campus was completed in Summer 2008.

Phase 5 of the residence plan began with the refurbishment of the County Main building in early 2008. The Lancaster University Masterplan 2007–2017 created improved access across the estate with enhanced greenery and the construction of 27 new buildings, which are largely for academic use. It will cost an estimated £450 million and construction has already been completed on the Information System Services building as well as social space for Grizedale College. In 2011 a new Management School building was created along with, a £21 million sports centre and a new LICA (Lancaster Institute for Contemporary Arts) building. The sports centre was opened for the academic year 2011–2012. Facilities include state-of-the-art gym equipment and a swimming pool with a moveable floor.

### 2.9.1 Alexandra Park

The university began expansion onto the lower slopes of Bailrigg with the development of new buildings for Graduate College in 1998. This now part of "South-west Campus". Development continued with the construction of "InfoLab 21" and "Alexandra Park" which now houses Lonsdale College, Cartmel College and the en-suite rooms of Pendle College.



### 3.0 Facility Management

Facilities are responsible for all property services on behalf of the University including delivery of the Facilities Strategy; refurbishment, development and construction of new buildings; the upgrade and replacement of the infrastructure, cleaning, grounds maintenance, security and portering and all trading activities.

#### 3.1 Service Delivery

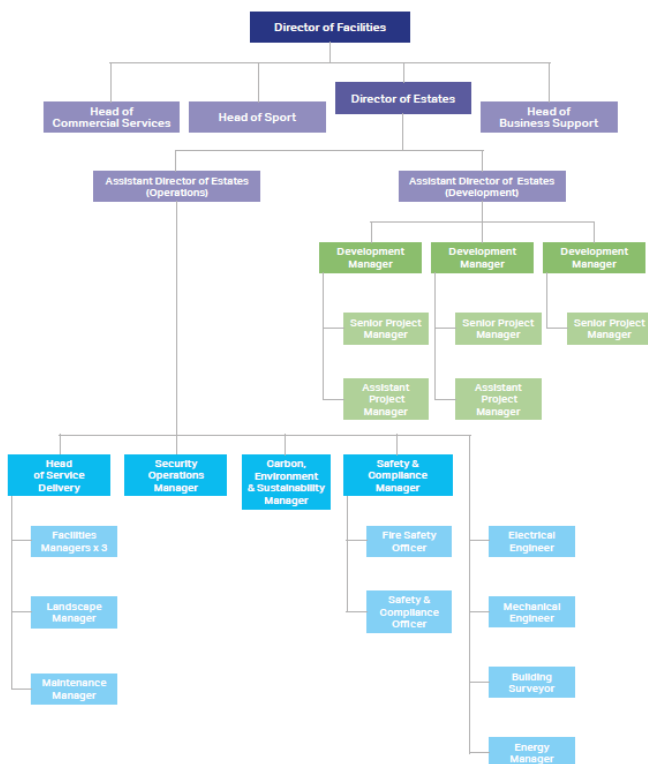
From sports pitches to spot cleaning, tree cutting to telephones, the Service Delivery is responsible for providing a wide range of services across the University campus, focusing on;

- The cleanliness of all University buildings, both academic and student residential accommodation
- Facilities Managers for the Academic and Residential Space
- Grounds maintenance including the landscaping and planted borders and preparation of sports pitches
- Maintenance, both reactive and planned across the estate
- Telecommunications in and out of the University including the Facilities Helpdesk
- Liaison with our residential partnership provider UPP

#### 3.1.2 Fault Reporting

The University operates a University wide fault reporting system ‘Planon’, this is a web based access system that allows both staff and students to report building faults and issues connected to the landscape 24/7 365 a year. These are then assigned an automatic response time and issued to the relevant manager responsible for addressing the issue. A response is sent to the person reporting the issue to state that the work has been issued, and a further e-mail is sent when the work has been completed. Completion items are monitored and completion rates are reviewed as part of Service Level Agreements (SLA’s).

#### 3.1.3 Service Delivery – Structure diagram



### **3.1.4 Health & Safety Compliance**

The Health and Safety Management System has been developed to manage Occupational Health and Safety within Lancaster University's Facilities Division. It demonstrates how in so far as is reasonably practicable risk to employees other University staff, students, contractors and the public can be eliminated or minimised. It demonstrates how Facilities conforms to Health and Safety legislation and enables a program of continual improvement through objectives and targets.

The Facilities section is accredited to BS OHSAS ISO 45001. This is an international standard which sets out the requirements for occupational health and safety management.

This occupational health and safety management system promotes a safe and healthy working environment by providing a framework that allows the organisation to identify and control its health and safety risks, reduce the potential for accidents, aid legislative compliance and improve overall performance.

### **3.1.5 Role Specific Issues**

Procedures are in place to help deal with specific issues connected to the grounds team. In particular, rigorous systems have been established to help manage both noise issues and hand arm vibration connected problems. All equipment has been assessed and levels of usage for each piece of equipment have been identified, along with the appropriate level of PPE.

The department employs a 'buy safe' policy and has a replacement programme in place allowing equipment to be updated on a regular basis. New equipment purchased is reviewed to ensure the least impact to the operator.

Annual health surveillance checks for all operational staff are also undertaken to identify any issues connected to the role undertaken.

### **3.1.6 Safety Checks**

Specific regimes have been developed to inspect a range of facilities on site these include the woodland trail, trim trail, play area and water safety devices. These are inspected on a fortnightly basis by the grounds team with any issues recording electronically and actioned as required.

Tree & Woodland areas on campus and at off site facilities are inspected using a risk rating regime (QTRA). Those areas identified as being of high risk, due to their impact and location are inspected on an annual basis whilst those located in areas of less impact are inspected at every two to three-year intervals. Information gained from the inspections helps to identify specific works required; these are either undertaken in-house or issued to an approved contractor.

All work equipment is checked prior to operation on a daily basis and electronic check sheets are completed with any issues identified and rectified within appropriate timescales.

Footpaths, paving and other pedestrianised areas are inspected on a regular basis as part of routine of inspections, any issues are noted and actioned via the Facilities fault reporting system.

### **3.1.7 Training**

The Facilities Division requires all staff to be competent to undertake their work in a safe and secure manner. To enable this a core competencies matrix has been compiled to facilitate, training requirements which is then discussed on an individual basis at the annual Performance Development Review (PDR).

All grounds staff have basic training and core competency in industrial skills including, NPTC level qualifications for tractor driving, RTV use, hand held grounds equipment, ride-on-mowers and wood chipper use. Some staff also hold additional qualifications for chainsaw use and herbicide application.

### 3.2 Generic Maintenance Techniques

All routine grounds maintenance on the University campus is undertaken by in-house grounds staff. These are loosely divided into teams responsible for an area or a specialism such as the sports field's, parkland, shrub beds and woodlands.

Planted areas are kept weed free with a mulch of bark or when available our own produced wood chip mulch or compost. Shrub beds are hand weeded and only treated with herbicide where perennial weeds persist.



### 3.2.1 Grassland/Wildflowers Meadows

Management regimes to areas of grassland have evolved over time to enhance the biodiversity of the campus and allow for improved ecological connectivity.

Areas of the estate are left to grow as meadow and then cut and collected in August. Other areas of grassland are maintained on a hierarchy basis to lessen the impact on the operator and reduce the green waste generated. This works on the basis of Ride-on-mower (cut & drop)-hand mower (cut & collect) and finally strimming if required.

Areas of ornamental wildflower have been created on the inner campus offering interest and benefits to wildlife. A year-on-year review is undertaken to identify additional areas for this approach, and the initiative #NoMow has proved a great success.



### 3.2.2 Tree Management



The University Campus Estate has in excess of 10 acres of woodland of both mature canopy cover as well new plantations. This includes many fine beech, oak trees plus a mixture of hazel, sycamore, birch, hawthorn, alder and blackthorn. In total there are over 40 different tree species represented on The University Campus.

A 2.6-mile woodland trail of chipped paths and boardwalks has been formed through the woodland allowing staff, students and visitors to explore the campus woodlands throughout the changing seasons. In 2015 an initial campus wide tree safety audit was undertaken by Treewise Solutions using the Quantified

Tree Risk Management Assessment. This established a database for all trees as well as identifying a number of works to be initiated. Year-on-year annual inspections are undertaken by an independent surveyor based on the QTRA risk rating and works generated from this are issued to a framework contractor to undertake. Where ever possible large trees are left as monoliths to provide an ongoing habitat for insect and bats. Where possible brush is left to form wildlife piles.

### 3.2.3 Tree Preservation Orders

There is one Tree Preservation Order on The University Campus located with the County Main courtyard, and a number of TPO's exist on adjacent farmland under the ownership of the University. The University is regarded as a conscientious landowner with the expertise and skills to manage its tree stocks in a responsible manner. The University Campus is within the authority of Lancaster City Council and links exist with the Tree Officers in this organisation.

### 3.2.4 Scrubland

Throughout campus, there are many small pockets of scrub and bramble. It is accepted that some such areas may appear neglected but have a rich wildlife value. Such areas will be contained but otherwise given minimal disturbance. This is regarded as positive management to encourage biodiversity.

### 3.2.5 Environmental Issues

The Ecology Action Plan 2019-24 forms part of the University's Environmental Policy, which aims to draw together the very diverse aspects of environmental awareness in this large complex community. There is a Sustainability Management Group (SMG) that meets regularly to discuss all issues connected to the environmental impact of the campus and provide updates on set targets. Cycling, car sharing and the use of public transport are actively encouraged with the University heavily subsidising bus travel for employees.

In 2021 The University declared a Climate Emergency and is working on a number of plans to become carbon neutral by 2035.

### 3.2.6 Composting & Recycling

We are constantly looking at ways to reduce the green waste that we generate.

The majority of green waste is taken off site by a waste contractor who recycles up to 99% to produce compost or mulching materials.



We do have a number of small composting bays and were possible compost small items of green waste and leaf litter which is then used to ameliorate planting areas or as a mulch.

all large wood waste is chipped and used to top up woodland paths, cut grass and leaves are deposited in areas of the campus and allowed to biodegrade.

there are a large number of recycling litter bins for cans, bottles, card and paper in key locations. It is always the intention to install more within any new scheme.

### 3.2.7 Carbon Management Plan

This strategic document sets out Lancaster University's plan to manage and reduce its carbon emissions in future years. The Carbon Management Plan has been developed as part of the Higher Education Carbon Management Programme (HECMP) process in which Lancaster University has participated. The purpose of the HECMP is to assist Lancaster University in understanding and reducing its carbon emissions. A large number of carbon and energy saving projects have been identified and prioritised as part of the HECMP process.

### **3.2.8 Energy Management**

Lancaster University is the only University within the country that produces the majority of its own electricity

#### **Wind Turbine**

Lancaster University's wind turbine has been developed and installed to reduce carbon emissions and reduce energy costs. The turbine demonstrates the Universities commitment to sustainability and carbon reduction.

The turbine has been operational since 2012 and generates between 11-17% of Lancaster University's annual electricity consumption (depending on average wind speeds) and reduces the Universities carbon emissions by 1,800-3,000tCO<sub>2</sub>e per annum.

#### **Combined Heat and Power (CHP)**

The Combined Heat and Power Engine (CHP) is a gas fired engine that produces heat and electricity. These are used to power and heat student residences, lecture theatres and offices across campus.

The CHP has been fully operational since 2012 and generates 2.2MW of heat and 1.9MW of electricity.

In a full year the CHP supplies over 20% of the, University's annual electricity consumption. Carbon emissions from electricity produced by the CHP are approximately half of those from electricity taken from the grid, whilst the cost of electricity from the CHP is significantly lower than that from the grid. The CHP helps to reduce the University's carbon emissions by approximately 2,800tCO<sub>2</sub>e per annum.

#### **Biomass Boiler**

The Biomass Boiler burns organic material, wood chips to generate heat, which is then fed into the University's district heating system. The wood chips are sourced from local commercial forests within 30 miles of the University. These forests are replanted following harvesting and are managed on a long-term sustainable basis. The 0.995MW output boiler reduces carbon emissions by 950tCO<sub>2</sub>e per annum.

The boiler was commissioned in January 2013, and Energy produced annually would be sufficient heat to supply 64 houses for 1 year.

### **3.2.9 Pesticides**

The use of pesticides across the estate is kept to a minimum. Usage is predominantly herbicides for weed control in certain areas where there is no practical alternative, and some turf fungicides for sport pitches. There is some usage of rodenticides and insecticides for the control of vermin and pests and Lancaster City Council within their Environmental Policy for usage manages this on behalf of the University.

All LU staff engaged on pesticide application have been fully trained and are aware of all important safety aspects. Wherever possible, cultural techniques are used. Weed control of all new plantings is by mulching, and a weed burner and weed brush are available.

The grounds section uses a CPA (Nomix) system which offers the safest means of application through a pre-mixed solution, and allows the minimum amount of herbicide to be applied, through targeted use.

### **3.3.0 Peat**

No peat is used for soil amelioration. Where compost is required, a non-peat alternative is sourced.

Plants purchased to improve existing schemes on campus are supplied by a local nursery that use a peat reduced compost supplied by W Sinclair.



### **3.3.1 Building Research Establishment Environmental Assessment Method (BREEAM)**

BREEAM is the world's foremost environmental assessment method and rating system for buildings, BREEAM addresses wide-ranging environmental and sustainability issues and enables developers, designers and building managers to demonstrate the environmental credentials of their buildings to clients, planners and other initial parties.

Since 2004 the University has delivered eleven BREEAM excellent new build developments, including the £20m Sports Centre which opened in August 2012 and UK's first higher education building project LICA which has been rated as 'outstanding' by the environmental performance measure.

A BREEAM assessment uses recognised measures of performance, which are set against established benchmarks, to evaluate a building's specification, design, construction and use. The measures used represent a broad range of categories and criteria from energy to ecology. They include aspects related to energy and water use, the internal environment (health and well-being), pollution, transport, materials, waste, ecology and management processes.

### **3.3.2 Water Conservation**

All new build projects and landscape refurbishments have an application of mulch to help with water conservation. New trees are all fitted with water tubes to direct water to the essential root-zone. Containers used throughout the campus have water reserves and, in the summer, months contain water-retaining granules to reduce the amount of watering required.

### **3.3.3 Graffiti**

Graffiti occurs occasionally and is not a major problem. On occasions, fly tipping occurs or cars are abandoned to the outer boundary of the campus. In all of these situations, the University Facilities Department responds fast to reports to remove or repair. A sporadic problem is the nuisance of fly-posting. Posters are not allowed on the campus on any surface except formal notice boards and brick pillars on the canopies, which are primarily located within the inner campus of the University.

However, the University population is a very attractive one, particularly to promoters of local events, bar owners and nightclub promoters. This situation is constantly monitored and action taken when necessary to remove.

### **3.3.4 Litter**

There are Three staff dedicated to litter control, bin emptying and road sweeping on University inner campus. A Johnson road-sweeping machine on a daily basis sweeps the campus roads. The inner campus is also swept daily using a smaller IPC Gannow battery sweeper.

The University aims for a high standard of litter management and we would expect most areas to achieve Grade A under The Environmental Associates for Universities and Colleges 'Code of Practice on Litter and Refuse' (see appendix 6). In the summer months litter on the parkland and other areas of the campus is a particular problem taking a lot of time and resources.

Bins are provided throughout campus at strategic locations, and along with other street furniture are of the same type and design. These are lined with galvanised liners and emptied on a daily basis. In addition, grounds staff collect litter as part of routine grounds maintenance duties.

Staff dealing with litter and waste are trained to handle waste safely and have training on 'Infectious Risks'. They are trained to know how to deal with potentially risky items such as used syringes for which sharps boxes are provided.

### 3.3.5 Vandalism

The level of vandalism on the University campus is relatively low. Most damage is thought not to be deliberate but student 'high spiritedness' usually stimulated by alcohol. Incidents of damage, when plotted, often occurs on routes between bars and Halls of Residence. Any issues are reported via the Planon system with issues dealt with in-line with their SLA.

### 3.3.6 Community Involvement

The University has approximately 15,000 students and 3,025 staff with approximately 7,000 students living on campus. The University is located 3 miles outside of the City of Lancaster meaning that the campus is the actual town/village for those that are resident.

The University has an open-door policy and members of the local community and surrounding areas are free to enter and walk the campus grounds. The University actively promotes the use of the campus by members of the public through its various events and activities held throughout the year these are promoted both locally and to a wider audience these include, fire work display's Christmas markets and other activities, along with holding a farmers market every Thursday during term time.

There are also a number of regional theatre events through Lancaster Institute for the Contemporary Arts. These events attract members of the public both regionally and nationally. The Sports Centre based on campus not only offers facilities for students but also currently has 350 members of the public, along with offering 600 school swimming lessons a week. The use of the parkland and sport fields is promoted through the Sports Centre both through the woodland walk leaflet, and external bookings and usage of the sport pitches.

The Facilities Department financially supports the Green Lancaster initiative which is a staffed pro-active programme of projects to both improve and lessen the environmental impact of the University, along with providing activates where students can undertake volunteering activities. Students are actively involved in woodland management and biodiversity activities

through  
EcoHub,  
EcoWoods and  
EcoWild.



There are opportunities for food growing on campus to the south of a dedicated site the 'Eco-Hub' has been created giving students the opportunity to both grow and learn through practical sessions skill connected to growing fruits and vegetables. The site contains, storage sheds, raised beds, polytunnel, chicken enclosure, orchard and a pizza oven. These improvements undertaken during 2013 were part funded through external funding from Higher Education Funding Council (HEFC). The additional produce produced by the student volunteer initiative is sold at the onsite Farmers market.

### 3.3.7 Marketing & Communications

Communications and Marketing Department offer an integrated service including internal and external communications, marketing and digital Content.

The team is responsible for:

- Student recruitment marketing: the development of the student recruitment brand, the production of marketing materials, and market research to aid programme and brand development
- Internal communications to staff and students: LUtext, the staff intranet and student communications
- Media relations and social media: research communication, blogging, Twitter, Facebook and other social media platforms
- The provision and development of digital content.

[www.lancaster.ac.uk/current-staff/communications-and-marketing/communications/social-media/](http://www.lancaster.ac.uk/current-staff/communications-and-marketing/communications/social-media/)

### 3.3.8 Other Areas of the Estate

The Grounds Team also have responsibility for maintenance for the residential site Chancellors Wharf which is just outside Lancaster City Centre. This site contains a number of small shrub beds and trees, as well as the Boat House by the river Lune which requires hedge cutting and other minor maintenance works.

During the winter months an important aspect of Grounds Section work is that of winter snow clearing and gritting. During the winter months, the staff of the section are formed into teams on a rota basis that attend early in the morning to spread rock salt when snow or frost is forecast.

#### The Boat House



#### Chancellors Wharf Residencies



## **4.0 Maintenance Prescriptions**

The aim of the Maintenance Prescriptions are to identify the types of maintenance that will be undertaken to maintain each typology (landscape type) within the Campus grounds as well as other off site facilities under the management of the University. These are seen as live and working documents used by the ground's maintenance section on a daily basis.

The objective of the Maintenance Prescriptions is to provide a consistent approach to how the green infrastructure of the campus is maintained whilst also identifying how to improve the horticultural excellence of the site and manage and improve the biodiversity of this green infrastructure. Allowing these areas to add to the built environment of the university campus.

The schedules have been developed using best practice and guidance contained within both the Universities Biodiversity Action Plan (Cameron Crook & Associates 2008 & Ian White Associates), and Landscape Management Plan (Ian White Associates 2005).

The aim of the schedules is to outline how each area will be maintained to produce the most appropriate habitats and environments for fauna and flora, as well as producing areas that are aesthetically pleasing.

The objectives are set to identify what needs to be achieved to meet the aim for a particular area by setting tasks, frequencies and allocating resources.

The schedules also give individual reference to all the areas under maintenance linking these to a zonal map. This can be cross referenced to the schedule and identifies location for individual typologies, area size and approximate time needed to maintain that particular typology.

This is not an exhaustive list and some tasks will be undertaken to all sites whilst others may be prioritised to particular sites given their location and usage.

## EP – Ecology Plan

### HE – Horticultural Excellence

#### 4.1 Meadow Grass Areas

##### Aim

EP - To replace large areas of amenity grassland with a more diverse neutral-acid grassland which in turn will develop a more diverse neutral grassland habitat This development of greater diversity in grassland type through modification of mowing regime will benefit many plant and animal groups.

HE – To produce areas that provide good horticultural interest through colour, structure and improvements to the parkland setting.



##### Objective

Meadow grassland will be managed in a way that retains a cared-for appearance and maintains the parkland feel. Path verges and grass paths will be mown through meadow areas to signal that management is ongoing and to give strong form to the difference in vegetation height. Arising's must be collected and removed.

##### Delivery

A tractor drawn flail mower with collector or traditional hay cutter with a separate lifting operation

Tasks	Area Size
Litter pick daily during summer months & at least twice a week at other times	24.38 acres
Undertake first cut around the end of August. Arising's must be collected and removed. A further mow prior to winter may be required, to leave tidy cover through the winter months	24.38 acres
1 spot weed treatment to remove pernicious weeds during the summer months	24.38 acres

## 4.2 Amenity Grass

### Aim

EP – Some areas not to be cut until they have seeded in July

HE – To produce a well maintained area containing a high quality grass sward which has even grass growth and uniform close strands of grass which are free of weeds and bare spots.

### Objective

- Employ good horticultural practice to maintain amenity grass areas
- Undertake cutting regime as per delivery requirements
- Carry out thatch removal, tining, feeding and over seeding as appropriate to maintain a good and consistent sward

### Delivery

- All amenity turf areas to be mown once every 10 days from April through to October. The rest of the year mowing will be undertaken as needed so that not more than 1/3 of the leaf blades are removed per mowing. Mowing shall be with a (reel/rotary/mulching) mower.
- Mower blades will be sharp at all times to provide a high quality cut and minimize disease. Where appropriate clippings will be collected and removed.
- All paths, fences, driveways, parking areas, and other surfaced areas bordered by grass, buildings adjacent to turf, and tree and plant rings and beds will be edged. Strimmer's will not be used around trees and shrubs where injury to the bark of plants could occur.
- All clippings will be removed from paths, curbs, and roadways immediately after mowing and/or edging.
- Thatch will be removed in March through to August by either verti-cutting using a vertical mower or power-raked. Resulting debris will be removed. Fertilisation with soluble nitrogen will be applied one week after dethatching as necessary.
- Turf areas will be fertilized as necessary using a granular fertilizers in composition and contain 30% - 50% of the nitrogen in slow, or controlled release form. The ratio of nitrogen to potash will be 1:1 or 2:1 for complete fertilizer formulations. They shall also contain magnesium and micro nutrients (i.e. manganese, iron, zinc, copper, etc.).



Tasks	Area Size
cut and trim to edges of grass areas every 10 days	62 acres
2 slow release fertiliser applications (where applicable)	
1 organic fertiliser application (where applicable)	
1 spike aeration to 150mm depth at 150mm centres (where applicable)	
1 vertidrain to 150mm depth at 150mm centres (where applicable)	
2 scarification's – spring/autumn (where applicable)	

## 4.3 Wildflower Areas

### Aim

EP- To increase the extent and value of wildlife habitats by creating areas that greater support a number of native plant and animal species. Wild flowers will add to the biodiversity and attract different kinds of insect and these, together with plant seeds, will be food for birds and small mammals such as voles, shrews and hedgehogs.

HE - To produce areas that will be more visually attractive with increased diversity, colour and texture.



### Objective

- Through appropriate maintenance regimes develop attractive, permanent planting that will provide flowers year after year with self-seeding annuals and perennials

### Delivery

If areas are newly seeded then the following maintenance needs to be undertaken:

#### **First year**

The year after the first sowing, the area shall be mown every time the vegetation height reaches 10 to 15 cm. This is likely to mean cutting three to four times between spring and autumn depending on the fertility of the soil. Do not cut the vegetation shorter than 5 cm. Remove cuttings and compost.

#### **Second year**

From the second year onwards, cut the area to a height of around 5 cm after flowering (between late June and the end of August).

Once established wildflower areas are cut regularly in the early months of the year. These areas are then left until all the summer flowers are over (normally in the early autumn.) Some species will flower twice and you may need to give it a second cut in the late autumn.

They should never be cut too short (the blades should be set at about 4" if possible.) This level will prevent the broad-leaved plants from being destroyed whilst allowing light and air to them. Grass cuttings to be removed but should be left for a few days to wilt, and drop their seed

Established spring-flowering meadows are cut in July and for the remainder of the summer to reduce the vigour of coarse grasses and to allow flowers such as cowslips, fritillary, lady's smock, self-heal and bugle to prosper. Leave unmown from February to July.

Established summer-flowering meadows are not mown until late August or September, after wildflowers such as knapweed, devil's bit scabious and lady's bedstraw have set seed. Use this summer-flowering meadow regime for meadows with plants flowering at various times.

Tasks	Area Size
Undertake first cut around the end of August. Arising's must be collected and removed. A further cut can be undertaken prior to winter, to leave tidy cover through the winter months	4 acres
1 spot weed treatment during the summer months to remove pernicious weeds	4 acres



## 4.4 Edge Habitats

### Aim

EP - To allow a more complex ecotones to develop along margins between grassland and woodland or hedgerows. In quiet and less visible parts of the site scrub will also be allowed to naturally develop. These transitions have structural diversity which is especially important for invertebrates and birds, due to the presence of nectar-bearing flowers, seed-heads and insects upon which to feed. They in turn attract mammals and raptors.

HE - To produce areas that add to the structural diversity of the landscape, helping to create more interest through shape, height and form.



### Objective

Where identified edges to areas will be left uncut or only cut periodically, so that seed heads are retained through winter and where appropriate early stages of scrub can develop. There shall be no close mowing beneath parkland trees. Width of edge to be determined by type:

- For hedges this should be 2.0m from base of hedge to either side as a minimum
- For woodland 4.0m
- For wetland 2.0m from top of bank.

### Delivery

Margins require cutting every 3rd year, in late winter. An open mosaic of grassland, young scrub and mature scrub is the aim.

### Resources

A tractor drawn flail mower with collector or strimming to smaller areas will be required

Tasks
Litter picking on a monthly basis
Areas will require cutting every 3rd year, in late winter, to prevent tree and shrub species encroaching. Where scrub is appropriate, some form of grazing or periodic clearance is required to maintain an open mosaic structure

## 4.5 Hedgerows

### Aim

EP - To maintain hedgerows so that they function like a linear woodland edge, helping to provide a rich transition habitat which is much more attractive to invertebrate, bird and mammal species.

HE – Maintain hedges within the internal core of the campus to produce structure and form as well as horticultural interest particularly within hard landscaped areas. This linear detail will also help to define and soften car park boundaries.



### Objective

- Undertake infrequent cutting to allow blossom and fruit/seed production to thrive, providing greater physical volume available for nesting. This approach is not suitable however there are areas on the estate where this can be undertaken
- Plant/recruit hedgerow trees
- Allow tall herb and grass vegetation to develop along the base of hedges
- Progressively commence a cycle of hedge laying to native mixed hedges
- Plant new native broadleaved trees in hedgerows

### Delivery

- Side-trim to a triangular shape, sloping sides from a wide base. This prevents self-shading, allowing light to the base. Light encourages growth. This is important, particularly on north facing sides.
- Allow the peak as high as practical. The taller and bulkier the better for wildlife.
- Uneven, bushy topped hedgerows break up the wind and provide shelter.
- When cutting near the bank or base of hedgerows, avoid exposing bare soil.
- A clean cut is required. Shattered or frayed branches can lead to decay and disease and reduce the vigour of the hedgerow.
- Sharp edges on cutting equipment are essential to give a clean cut.

Tasks
Litter picking on a weekly basis
<b>Formal Hedges cutting is divided into three pruning groups:</b>
<p><b>Group 1</b></p> <p><b>Initial pruning</b></p> <p>a) On planting (October-March) cut back plants to 15cm (6in). In summer trim laterals lightly. In the second year (February-March) cut back growth by half. Throughout summer trim laterals to maintain tapered sides, and in autumn cut leading shoots to the desired height.</p> <p>b) On planting (March-April) cut back all stems by one-third. Repeat this at the same time next year.</p> <p><b>Subsequent pruning</b></p> <p>Annually, during May-September, trim back top growth and laterals every four to six weeks to maintain the desired shape. Use a template if required.</p>
<p><b>Group 2</b></p> <p>Deciduous stocky shrubs, naturally bushy at the base, e.g. beech, hornbeam, hazel and flowering shrubs such as Forsythia and Ribes sanguineum.</p> <p><b>Initial pruning</b></p> <p>On planting (October-March) cut back leading shoots and side-shoots by one-third, cutting to a well-placed bud. Repeat this in the second winter to prevent straggly growth and thicken up the hedge base.</p> <p><b>Subsequent pruning</b></p> <p><i>Annually in June (or after flowering) and again in August, clip to a tapered shape</i></p>
<p><b>Group 3</b></p> <p>Conifers and most evergreens, e.g. Lawson cypress, leylandii, yew, cotoneaster and pyracantha.</p> <p><b>Initial pruning</b></p> <p>On planting (October or March) leave the leader unpruned, lightly cutting back any straggly side-shoots. In summer trim laterals and tie-in, the leader to a supporting cane as it grows. Use secateurs for broad-leaved evergreens (e.g. laurel, bay).</p> <p><b>Subsequent pruning</b></p> <p>Clip to the desired shape one to three times during summer (until late August). Stop the leader at the desired height.</p> <p><b>Pruning flowering and fruiting hedges</b></p> <p>Most formal hedges require regular pruning, and so flowers and fruits don't develop. However, informal hedges can be pruned selectively to allow a flowering and fruiting display. Those plants that flower on the current season's growth (e.g. fuchsia) can be pruned once in spring. Plants that flower on one-year-old growth (e.g. pyracantha) can have the current season's growth reduced by half in summer</p>
<b>Informal boundary hedgerows:</b>
<ul style="list-style-type: none"> <li>• Cut hedgerows between 1st September and end February</li> <li>• Side-trim to a triangular shape, leaving the peak as high as possible.</li> <li>• Cut stems a little above the last cut, leaving up to 12mm of new growth.</li> <li>• Leave mature trees and saplings, including thorns at irregular intervals</li> </ul>
<p><b>Hedges and nesting birds</b></p> <p>When undertaking work on garden hedges check that there are no birds nesting as it is an offence under the Wildlife &amp; Countryside Act 1981 to damage or destroy the nest of any wild bird while it is in use or being built.</p>

## 4.6 Shrub/Planting Bed Maintenance

### Aim

- EP - To provide cover and habitat value for nesting birds during March to July and increase through perennial herbaceous planting both cover and food for birds and invertebrates during the winter months.
- HE - To add, enhance and break up the built form of the campus by providing planted areas that offer structural and seasonal interest through foliage, flowers and fruits etc.



### Objective

- Employ good horticultural practice to maintain planted areas
- Undertake adequate pruning regimes appropriate for plant type and species
- Undertake good cultural control methods to remove competitive weeds, through weeding and application of mulch
- Replacement and additional planting where species are lost
- Supporting staking and tying of plants where appropriate
- Feeding and watering of plants where necessary
- Develop structural diversity in planting, with all canopy layers represented wherever possible
- Use a diversity of species, deciduous, evergreen and herbaceous, to broaden the habitat value whilst meeting design objectives
- Include diversity of food sources for invertebrates and birds (i.e. blossoms for nectar, berries, seed-heads)
- Avoid bare soil/mulch by using prostrate groundcover plants wherever possible
- Use climbing plants on walls
- Where practically possible introduce edible fruiting species, such as apples, currants etc

### Delivery

- Shrubs will be pruned by hand as needed to ensure proper informal shape, fullness, and bloom. If needed powered shears will be used in pruning operations. All arising's will be removed from site to be chipped or mulched.
- Sharp, clean tools will be used to ensure clean cuts without leaving snags. Pruning will cut close to buds, but not into them, and always above the bud. Pruning times will be appropriate to plant species
- All mulched areas shall be replenished with an appropriate bark or composted material once a year during the winter months (Nov. - Feb.) to maintain a depth of three (3) inches. All kerbs, roadways and bed line edges will be trenched to help contain the applied mulch. Mulch should not be placed against the trunks of plants.
- Plants that require staking and tying should be checked during the growing season, and appropriate work undertaken.

Tasks
8 weeding visits during the growing season
Pruning of shrubs as appropriate
Tying training shrubs climbers etc
Mulching top up in Autumn

## 4.7 Wetlands – including ponds, ditches, culverts etc

### Aim

EP - The key aspect is linkage between wetlands, to facilitate spread of species. Extending ditches, hedgerows and rough grassland in order to connect the existing and proposed wetlands to each other and to woodland edges etc will improve viability for wetland species such as newts.



HE – To provide a diverse mixture of planting and structural form both within the parkland setting and the inner Campus

### Objective

- Promote habitat linkage between wet areas, using ditches, long grass etc.
- Where possible create new wetlands as part of developments, to SUDS best practice
- Control of waterfowl numbers to reduce their impact on water quality around Lake Carter

### Delivery

- Un-mown margins to wetland areas in grass to be retained; these margins require cutting every 2nd year, in late winter.
- Remove litter and other debris from water body on a regular basis
- Maintain vegetation so as individual species do not out compete each other
- Maintenance practices to edges of ditch line to maintain open water course
- Where possible each autumn, floating leaves will be raked off, and removed including some of those that have settled on the bottom.
- Where necessary apply barley straw between February and April as a preventative measure against excessive algal blooms. Even if the weather conditions for an algal bloom do not then materialise, the rotting barley straw will prove a magnet to invertebrate larvae and tadpoles.
- Check for leaks and repair as necessary, or increase the supply of water to the pond if needed.
- As necessary, remove some of the free-floating and floating-leaved rooted plants covering the pond during the middle of the summer growth as it begins to die down to prevent it rotting down and enriching the pond.

### Resources

A tractor drawn flail mower with collector or strimming to smaller areas will be required

Tasks
Litter picking on a weekly basis
Areas will require cutting every 2 <sup>nd</sup> year, in late winter, to prevent tree and shrub species encroaching. Arising need to be removed.
Annual strimming to ditches and culverts
Rake and remove floating leaves
Where necessary apply barley
As necessary, remove some of the free-floating and floating-leaved rooted plants

## Appendix 1 – Landscape Area Sizes

Typology Statistics - Green Infrastructure					
				1.32 acres = 1 Football pitch	
No	Type	m2	acres	Pitches Equivalent	% of estate
1	Woodland Cover	44,446	10.9828458	8.3	19.5
2	Grassland Types	160,407	39.6374329	30	7
3	Biodiverse Grassland Management	20,853	5.15288852	3.9	13% of item 2
4	Hedgerows In meters	10,404	6.5 miles		Lancaster Castle & Return
5	Hedgerows m2	20,808	5.14176878	3.89	
6	Shrub Planting	4,000	0.98842153	1.33	
	<b>All green infrastructure across the University Estate</b>	<b>256,918</b>	<b>6,190,335,753</b>	<b>47.42</b>	

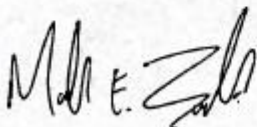
# ENVIRONMENTAL POLICY

Lancaster University understands its responsibility to protect the environment from the impact of its operations and activities and to influence its staff and students and the wider community to minimise their impact through its actions, teaching and research. The University is committed to fulfilling its compliance obligations, including the requirements of all relevant environmental legislation and guidance and to continually improving its environmental performance through the establishment of environmental objectives.

- Improve the environmental awareness of staff, students and residents and support them in reducing their environmental impact, both at the University and beyond, through the implementation of sustainable environmental practices.
- Use our research, where appropriate, in developing environmentally beneficial projects and products and improve the sustainability of our research activities.
- Implement a Sustainable Procurement Policy which reduces the carbon and environmental impacts of our procurement activities.
- Reduce carbon emissions from energy and utility consumption.
- Provide students with the opportunity for involvement in sustainability related curricular and extra-curricular opportunities and activities.
- Develop and implement a strategy to manage and reduce waste according to the waste hierarchy.
- Continue to support its Travel Plan and enhance travel options, decreasing carbon and other emissions from staff and student commuting and University fleet vehicles.
- Optimise its impacts from business and other travel, providing information to enable users to minimise their travel related emissions.
- Prevent pollution and manage emissions and discharges.
- Aim to use resources sustainably and target appropriate reductions in consumption.
- Achieve high environmental (BREEAM) standards for new build and redeveloped buildings.
- Enhance the biodiversity and sustainability of the University's landscape and grounds.
- Monitor measure and report on the environmental impacts of University's activities, operations, research and teaching.

In order to support the implementation of Lancaster University's Environmental Policy, time bound objectives and targets have been set. The policy will be reviewed by the University Management Advisory Group (UMAG).

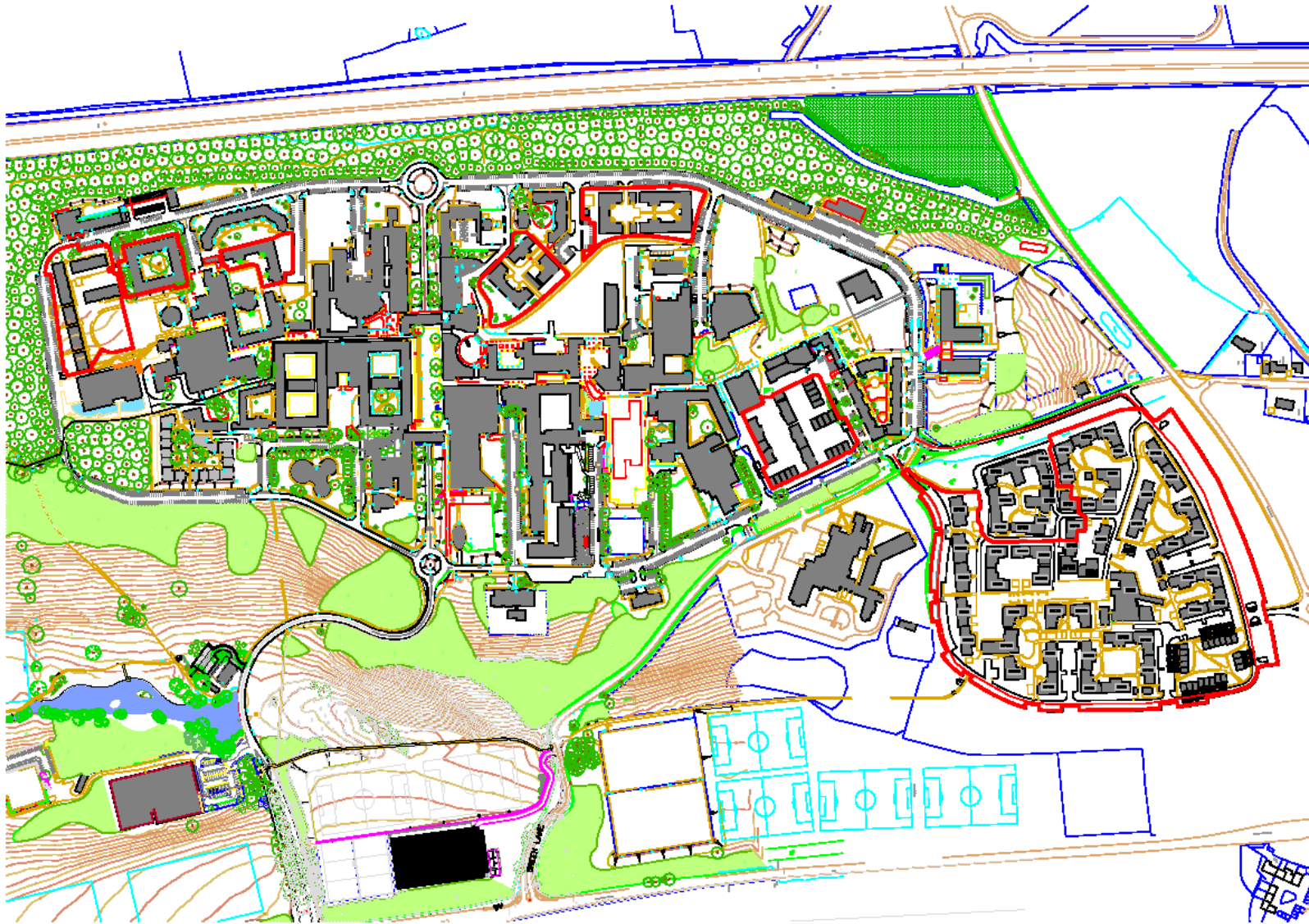
Signed:



Date: August 2017

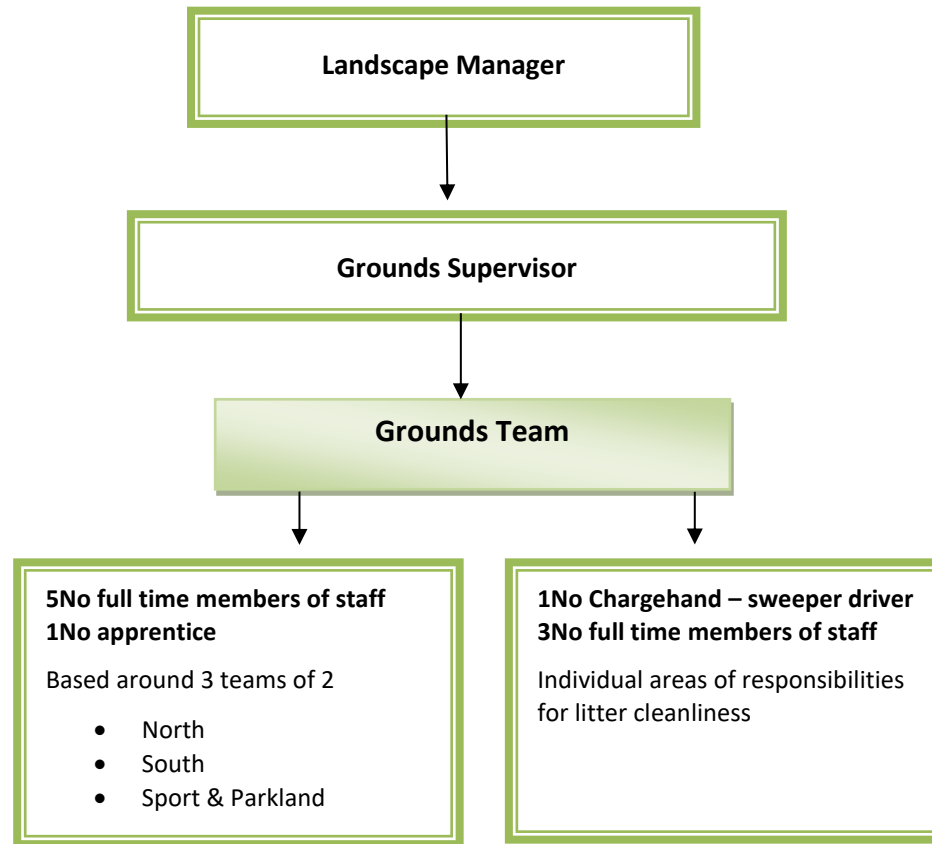
Professor Mark E Smith, Vice-Chancellor

Appendix 3 – UPP's Area of Responsibility (inside redline boundary)

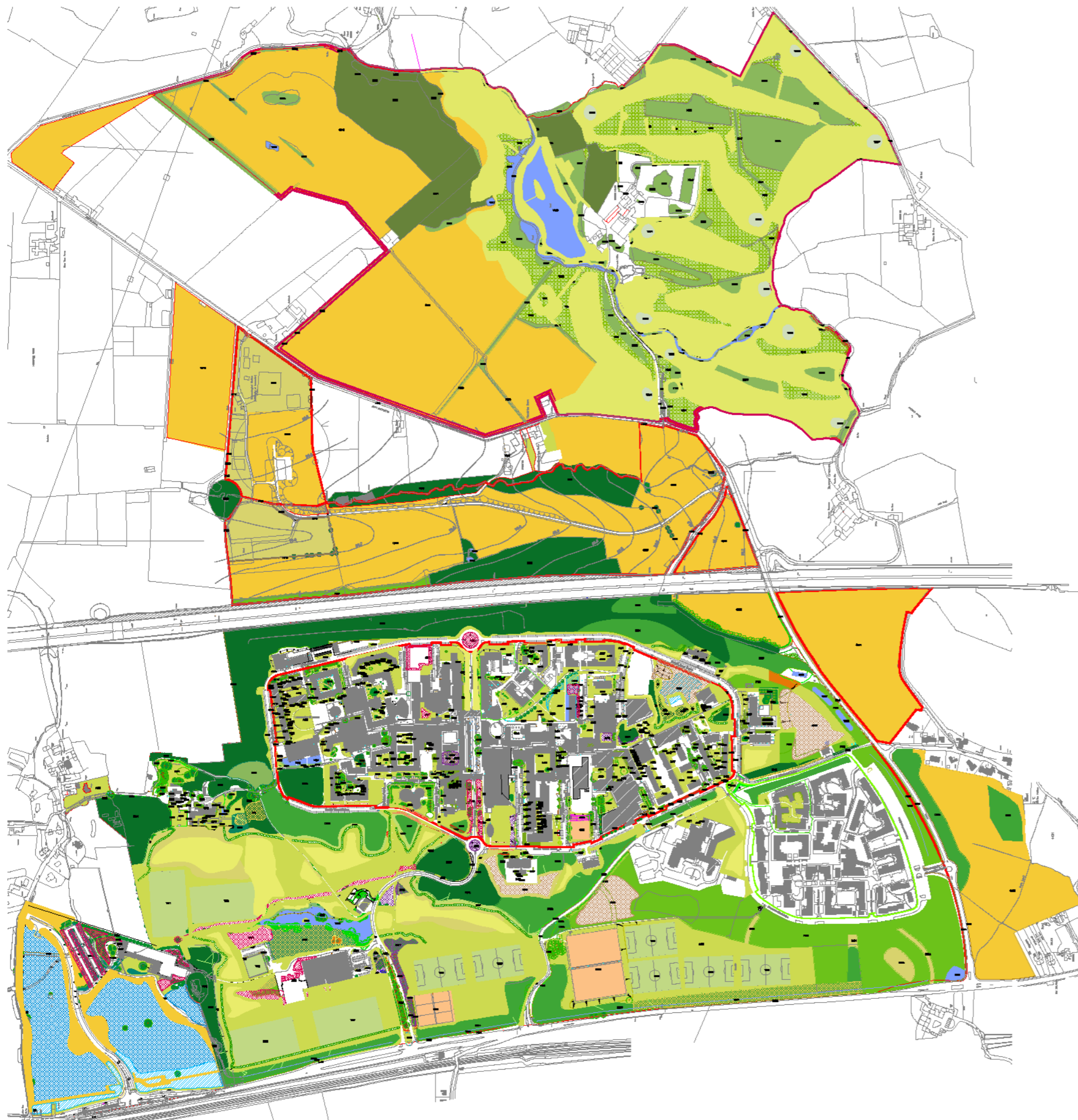






































**Appendix 4 – Current LU Grounds & Clean Team Staffing Structure**



Appendix 5 – Landscape Typology Map of the University Campus



**KEY**

	Broadleaved woodland (Semi Natural)		Aquatic planting
	Broadleaved woodland (Plantation)		Himalayan balsam
	Coniferous woodland		Japanese knotweed
	New woodland		Hedge
	Mixed woodland		Golf course green
	Individual trees		Golf course fairway
	Sports pitch		Golf course rough/ semi-rough
	Artificial sports pitch		Grassland - Type 1
	Amenity grassland		Grassland - Type 2
	Semi improved natural grassland		Grassland - Type 3
	Unknown margin to woodland edge		Grassland - Type 4
	Pasture		Grassland - Type 5
	Shrubs/ herbaceous plants		Grassland - Type 6
	Bulb planting		Grassland - Type 7
	Native wildflower grassland		Forest of the Future
	Locally important species		University land boundaries
	Water body		UPP boundary line

**Planon Reference Prefix Key**

EXWW—	Larger Woodland
EXWO—	Small Woodland or Woodland Group
EXWS—	Speciman Tree or Trees
EXHR—	Hedgerow
EXGR—	Grassland
EXSP—	Sportspitch
EKWP—	Pond or Lake
EKWS—	Stream or Watercourse
EKWW—	Wetland
EKWD—	Ditch (Dry Part Of Year)
EXP—	Agricultural Grassland or Crops



## Appendix 7 – The Environmental Associates for Universities and Colleges ‘Code of Practice on Litter and Refuse’

The following standards are recommended for educational institutions:

	Type of land	Clearance standard			
		A	B	C	D
During term time, other than holidays, weekends or half term	Hard surfaced areas	Achieved after cleaning		Restored to Grade A within 24 hours	Restored to Grade A within 24 hours
	Grassed areas		Achieved after cleaning	Restored to Grade B within 24 hours	Restored to Grade B within 24 hours
When used for a purpose authorised by governing body or managers during holidays	Hard surfaced areas	Achieved after cleaning		Restored to Grade A within 1 week	Restored to Grade A within 1 week
	Grassed areas		Achieved after cleaning	Restored to Grade B within 1 week	Restored to Grade B within 1 week

**Grade A** No litter or refuse **Grade B** Predominantly free from litter and refuse, apart from small items **Grade C** Widespread distribution of litter and refuse, with minor accumulation **Grade D** Heavily litter with significant accumulations

## Appendix 8 - Campus Landscape Annual Improvement Plan

Year	Improvements	Location	Quantity	Management Plan Link
	<b>Ongoing Revenue Works</b>			
<b>Woodland Work</b>				
2022-2023	Tree Safety Work	All Woodland Parcels as required	tbc	EP, TWP, LMP
2022-203	Woodland Management – mixed understorey planting	Parcel 14 500 trees		EP, TWP, LMP Biodiversity Net Gain Engineering 2
2022-203	Queens Canopy – Wellbeing Trail	Woodland Trail	70No specimen trees	
2021-2022	Forest of the Future - Woodland Creation	Forrest Hills	5,000 trees	EP, TWP, LMP
<b>Horticultural Improvements</b>				
2021-2023	Shrub bed improvements	Pendle College phase 2	tbc	EP, LMP
2022	Bulb planting works	Perimeter Rd & woodland copses	20,000 per annum	EP, LMP
<b>Grassland Management</b>				
2021	Identification of additional #NoMow areas with appropriate signage and management	Various locations across campus	tbc	EP, TWP, LMP
<b>Major Capital Projects/Items</b>				
2022	Management School	Planting and wildflower meadow to building surround	N/A	EP, TWP, LMP
2022	Main drive – new lime avenue	Bigforth Drive	N/A	EP, TWP
2022	Health Innovation Campus	Planting and wildflower meadow to surrounding landscape	N/A	EP, TWP
2020 - 21	Engineering 2 – landscape improvements & wildflower lawn		N/A	EP

EP – Ecology Plan, LMP – Landscape Masterplan, TWP – Tree & Woodland Management Plan