Northumbria University NEWCASTLE

Biodiversity Action Plan

2018-2023

City Campus and Coach Lane Campus

Introduction

Biodiversity can be understood as the natural systems which support life on our planet, including all living organisms and ecosystems in which they occur.

Our **University Strategy** commits to supporting the UN Sustainable Development Goals. Careful management of biodiversity on our estate can support a number of these Goals including 'Life on Land' and 'Health & Wellbeing'. It can also provide a 'Living Lab' – an opportunity to trial and demonstrate research that supports sustainability and enhances student learning. This **Biodiversity Action Plan** aims to deliver these multiple benefits.

In order to develop this Biodiversity Action Plan, full biodiversity audits of City and Coach Lane campuses were undertaken in May 2018. These assessed the current biodiversity value of our estate and to identified opportunities for improvement.

Biodiversity Value	Current		Potential	
Low	5,0152 m^2	45%	19976 m^2	16%
Medium	6,1324 m^2	55%	72413 m^2	58%
High	0 m^2	0%	33473 m^2	26%
TOTAL	111,476 m^2		125,862	

This Biodiversity Action Plan was produced with input from the Grounds team, external consultants, the Sustainability Adviser and a number of academic researchers.

The Biodiversity Action Plan:

- Identifies simple Grounds Management general principles to be adopted to support biodiversity;
- Suggests student research projects that can support student learning and enhance biodiversity and wellbeing on campus;
- Details potential large scale enhancement projects for consideration in estate planning.

The principles and actions within the Plan could achieve a 13% increase in the volume of high biodiversity space on campus.

Full biodiversity audits will be repeated every two years to monitor progress in enhancing biodiversity at Northumbria University. They will also identify further suggested improvements to ensure continuous improvement.

The Biodiversity Action Plan is monitored by the University Sustainability Management Group and supported by targets within the **Environmental Sustainability Policy.**

Summary

The Biodiversity Action Plan includes guidance to support improvements in the biodiversity and wellbeing value of the estate. It comprises of:

General Principles
Suggestions in relation to planning and management.

- Layering
- Grassland
- Hedgerows
- Trees
- Car park planting
- Shrubs
- Borders and planters
- Vertical planting
- Allotment/ Hedgerow harvest
- Birds and bats
- Hedghehogs
- Supporting wellbeing

Major Projects
Potential changes to land use.

- City Campus
- Coach Lane Campus

Living Lab Projects
Suggested research projects for students to undertake which not only provide leaning opportunities but which in turn would support improvements on campus.

Green Flag
A reminder of the Green Flag requirements for consideration in relation to shaping future activity and establishing future targets.

Action Plan
An initial set of actions to be completed.

5 Golden Rules - To be considered within all estate management activities:

1. Valuable planting options
Choose plants which enhance sustainability (biodiversity and wellbeing) on campus.

2. Good grounds management practices
Ensure our operations reduce damage and maximise benefit to wildlife and species on our campus.

3. Living Lab ethos
Utilise the estate to inform and support research and teaching on biodiversity and wellbeing, as well as to raise awareness of sustainability amongst all who visit our campus.

4. Maximise wellbeing
Develop an estate that supports staff, student and community wellbeing.

5. Contribute towards a sustainable city
Work in partnership with key Newcastle groups to support biodiversity across the city.

General Principles

Layering

Maximise biodiversity by considering all three components within an area:

1) Ground flora:
May be woodland ground flora (in a wood or under a mature hedgerow) or grassland.

2) Shrub layer:
A single trunk that grows upwards and outwards (e.g. Hawthorn) or thicket-formers (e.g. Hazel).

May be evergreen or deciduous – evergreen supports year-round habitats.

Shrub can provide a supporting structure for climbing species e.g. Ivy or White Bryony.

3) Canopy:
May be conifers or broadleaved, and evergreen or deciduous.

Evergreen supports year round habitats. Dense woodland can support woodland ground flora.

Where shade is insufficient a perimeter of shrubs should be used to support species and this may eventually shift conditions to favouring woodland species.

Trees can provide a supporting structure for climbers e.g. Ivy.

The use of **green walls**, **climbers** and **planters** can also be used to introduce layering around campus.

A **pond** can also add an additional layer by being located below ground level.

University of Chicago

University of Leeds

General Principles

Grassland Management

Cut grass less frequently to increase the volume of plant material. In areas of aesthetic importance, grass may be cut more frequently or signage added to explain why grass has not been cut in that area.

- ✓ Increases the biomass for the consumption of carbon dioxide.
- ✓ Provides a food resource for butterfly larvae.
- ✓ Provides refuge for butterflies, moths and invertebrates.

Annually cut grass

Where possible cut once annually in late July-August with cuttings removed.
These areas may be further enhanced with the addition of meadow species e.g. Oxeye Daisy, Orchids and Wood and/ or Meadow Cranesbill. Yellow Rattle can be added to limit grass growth. Continue use of the mulching machines at City and Coach Lane campuses.

Tall grassland

Tall grassland should be cut every 2-3 years and can be enhanced with decorative and functional species such as Oxeye Daisy, Buttercups and Wood Geranium. This will potentially provide a stable habitat for small mammals.

Such enhancement can be done by seed (preferably sourced from a partnership with local wildlife organisations) or bought in plug plants.

Grassland planting:
Cut a maximum of once per year:

- Black Knapweed *Centaurea nigra*
- Buttercups – *Ranunculus* spp
- Cowslips *Primula veris*
- Field Scabious *Knautia arvensis*
- Greater Burnet *Sanguisorba officinalis*
- Meadow Cranesbill *Geranium pratense*
- Meadow Vetchling *Lathyrus pratensis*
- Northern Marsh Orchid *Dactylorhiza purpurella*
- Orchids – Bee Orchid *Ophrys apifera*
- Oxeye Daisy *Leucanthemum vulgare*
- Yellow Rattle *Rhinanthus minor*
- Common Bird's-foot-trefoil *Lotus corniculatus*
- Clover *Trifolium repens*

Black Knapweed

Oxeye Daisy

Yellow Rattle

Meadow Cranesbill

Bee Orchid

General Principles

Hedgerows
New or replaced hedgerows should consist of a mix of native species – planted in equal proportions.

Bramble and blackberry *Rubus fruticosus* are fantastic for supporting pollinators as well as supporting birds with its fruit.

Woodland Ground Flora should be added to the shaded base of native hedgerows.

Trees
Never strim or cut grass to the base of the tree as this can cause damage.

Current planting is predominantly cherry but future planting should favour native species wherever possible e.g. Oak. Planted oaks could be grown with a nurse crop of native cherries that could be removed once the oak begins to dominate.

Introduce Woodland Ground Flora to wooded areas that provide sufficient shade.

Car Parks
Trees can provide helpful shade in car parks, though avoid Limes and Sycamore as these result in sap on vehicles. Instead options include Field Maple, Hornbeam and Beech or small natives such as Grey and Goat Willows.

Woodland Ground Flora
These species can be bought but it would be preferable to enter a partnership with the local wildlife trust to provide a seed source.

Woodland Ground Flora Planting
Requiring good shade:
- Bluebell *Hyacinthoides non-scripta*
- Dog's Mercury *Mercurialis perennis*
- Lord's-and-ladies *Arum maculatum*.

Requiring less shade:
- Red Campion *Silene dioica*
- Hedge Mustard *Alliaria petiolata* (a key larval food plant of the Orange Tip butterfly),
- Greater Stitchwort *Stellaria holostea* and
- Crosswort *Cruciata laevipes*.


Bluebell


Red Campion


Dog’s Mercury

General Principles

Shrubs

These may be planted as

- Individual bushes:
  Used by birds as song perches and lookout posts.
- Clumps or patches:
  Minimum 3m diameter – provides shelter for butterflies and shrub nesting birds.
- Continuous dense tracts:
  Protects nesting birds and provides overwintering opportunities for invertebrates, newts, frogs and toads.

Can be added to areas of grassland or added to woodland to create layering.

Shrubs Planting

- Hawthorn *Crataegus monogyna*
- Holly *Ilex aquifolium*
- Hazel *Corylus avellana*
- Crab Apple *Malus sylvestris*.
  (Be mindful of falling fruit – of value to birds but not suitable near vehicles or footpaths).
- Purging Buckthorn *Rhamnus cathartica*.
  (Good for the Brimstone butterfly)
- Dogwood *Cornus sanguinea*
- Dog Rose *Rosa canina*
- Guelder-rose *Viburnum opulus*
- Cotoneaster – avoid *C. horizontalis* (invasive species)
  (Good for bees and birds).

Hawthorn

Dog Rose

Purging Buckthorn

Brimstone Butterfly

General Principles

Borders
Simple changes to planting can see significant positive impacts on the bee population around campus through increased planting of pollinators.

Option 1 – A wildflower strip:
Plant as a border or grow as the rough fringe of a lawn.

Wildflower Strip Planting
- Californian poppy (*Eschscholzia californica*)
- Phacelia (*Phacelia tanacetifolia*)
- Cornflower (*Centaurea cyanus*)
- Knapweed (*Centaurea nigra*)
- Corn marigold (*Glebionis segetum*)
- Poppy *(Papaver rhoeas)*

Option 2 – A planted border:

Wildflower Strip Planting
- Dandelions
  (Hugely important for pollinators)
- Coppertips lily (*Crocosmia*)
- Ox-eye daisies (*Leucanthemum vulgare*)
- Globe thistles (*Echinops*)
- Cranesbill (*Geranium*)
- Sunflowers (different sizes) (*Helianthus*)
- Michaelmas daisies (*Aster amellus*)
  (Good for later in the season)
- Calamint, thyme, lavender or Hyssop *Lamiaceae*
- Michaelmas Daisy *(Aster nova-belgil)*
- Lupins *Fabaceae*
- Rosaceae *Pontentilla or Brassicaceaes E.g. Candytufts*
- Geranium Rozanne *(Geranium rozanne)*

Planters
Consider using native heath species in a number of planters.

Heather and Bilberry
Flower in the summer (Bilberry provides fruit).

Require an acidic compost mix with moisture retaining granules. Cover bare surfaces quickly and provide a low maintenance evergreen ground cover.

Daphnes *Daphne Laureola*
Sweetly scented, native, evergreen and provide berries for local birds.

General Principles

Vertical planting

Ivy *Ivy Hedera Helix*
A lower cost option compared to green walls, but which is a very important source of nectar and pollen, especially for honeybees in the late summer and autumn when virtually all other plans have stopped flowering. It also supports nesting opportunities for birds such as wrens.

Ivy can become invasive but can be controlled by planting **Ivy Broomrape *Orobanche Hederae*** to limit any further growth.

Consider planting ivy on:
- Walls – plant in existing soils or remove some paving and add soil.
- Trees –plant at the base of established trees.

You can also establish ivy fences by growing ivy on wire net fences in order to provide a nectar and berry source for animals, especially in the winter and spring.

Ivy

Ivy Broomrape

Green Walls / Vertical garden (Living Wall Systems)
Green walls can provide additional habitats and food sources for insects, as well as helping to insulate buildings, improve air quality and reduce noise pollution.

To be effective, planting should consider the needs of local biodiversity, rather than simply be decorative. Spring is the ideal time for planting as plants are more likely to establish quickly.

Suggested planting might include:
- Thyme
- Mexican fleabane
- Bugle
- Heuchera
- Sedum

Green walls must not be sprayed with pesticides or herbicides under any circumstances.

LG Arena, NEC, Birmingham

General Principles

Allotment / Edible Campus

Grow produce which can be used by staff and students on campus for their enjoyment and/or as part of teaching and research in nutrition.

In addition to growing items in the allotment beds, a ‘hedgerow harvest’ approach can be used:

Hedgerow Harvest

(The below can be made into syrups and cordials)

- Sloes
- Rosehips
- Brambles
- Gooseberry
- Elder *Sambucus nigra*
- Roses

  Avoid non-native roses like *Rosa Rugosa* – the fruits are too big for our birds.

Engagement with relevant academics prior to planting should be undertaken.

Bat, bird and insect boxes

Introduce bird nesting boxes to buildings and trees (many trees are not old enough to have crevices for birds and bats to use). Bat boxes may also be added in some areas, though being mindful of legislation protecting bats found on campus.

Insect hotels and supporting signage may also be added to support insect populations and awareness.

Example bug hotel

General Principles - Hedgehogs

The University is seeking to provide better support for hedgehogs by participating in the **Hedgehog Friendly Campus** scheme.

A '**mosaic habitat**'' should be created, which includes a mix of landscapes e.g. woodland margins, short grass for foraging, long grass for resting, and hedgerows, shrubs and overgrown areas.

Hedgehog-Friendly Planting
To provide insects for hedgehogs:

- Candytuft
- Yarrow
- Wild marjoram
- Hostas
- Fennel
- Ornamental thistles
- Oxeye daisies (in sunny areas)

Candytuft

Wild Marjoramt

Supporting resting and nesting

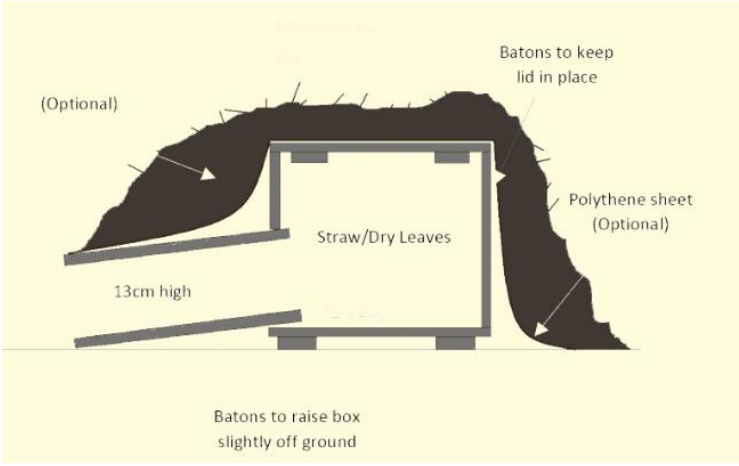
Hedgerows and thorny shrub/scrub patches provide an environment in which hedgehogs can rest and feed.

Log piles can also be left to provide a hedgehog-friendly environment.

Hedgehogs use fallen leaves from **deciduous medium-size-leaf native trees** like oak, hazel or beech for their nests.

Where building work results in the removal of shrubs, these should be replaced by native hedgerow species (e.g. bramble or hawthorn) within 2km of the works. This is to restore the opportunities for nesting.

Hedgehog houses can also be built, covered with sheeting soil and twigs, or left as it is. These must not be treated with any preservatives other than water based options.



General Principles

Spaces for wellbeing

The potential role that the campus can play in supporting the wellbeing of staff, students and visitors should be considered within all estates planning. Areas of the campus might support wellbeing in various ways (one space could fulfil one or more of the below roles).

A calm space
Trees, walls and hedging can be used to create a secluded, peaceful area filled with nature to promote happiness through biophilia.

Attract birds with bird boxes and feeders to add the sounds of nature. Add aromatic herb beds and plants, such as lavender, to stimulate the senses and provide calm.

Consider the intended audience i.e. proximity and awareness for staff, students and visitors, and use of the areas by certain groups.

An active space
Spaces can be designed to facilitate and encourage exercise at no cost for staff, students and visitors. Adding outdoor gym equipment ('green gym'), goalposts, basketball/netball hoops and/or running routes, can all encourage use. Sport could use such areas to help promote the space and its potential uses.

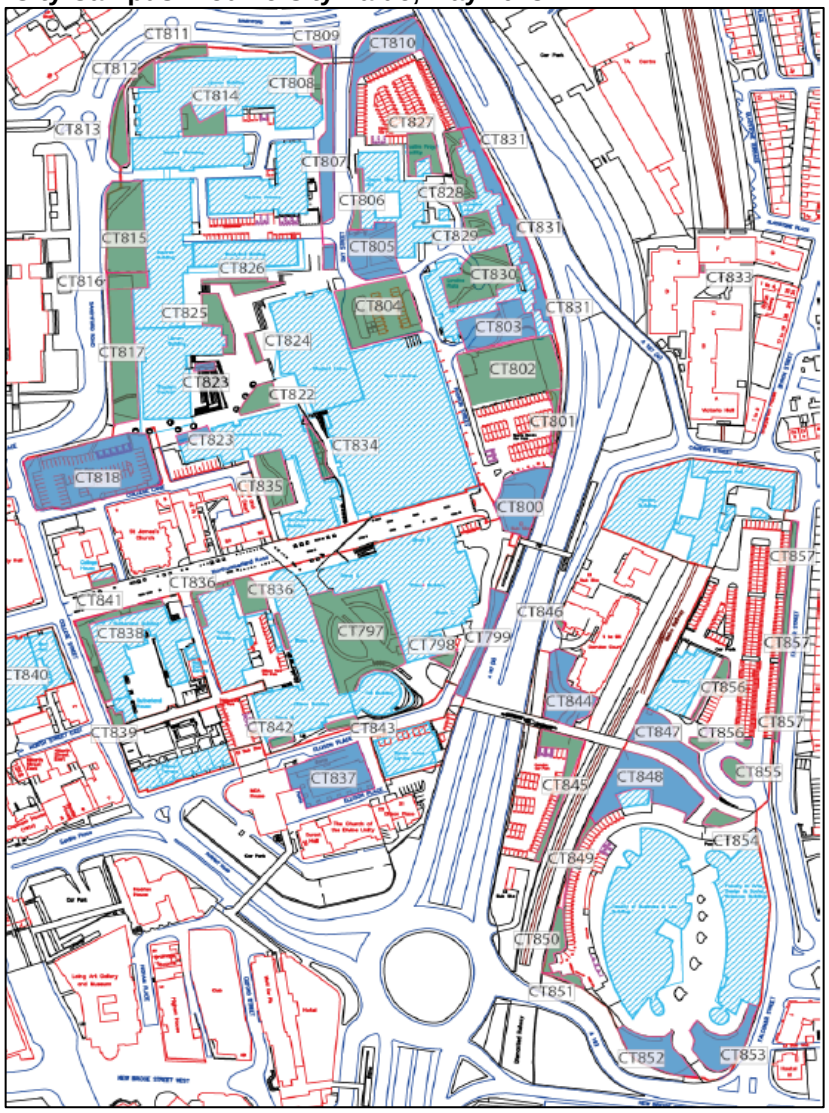
A social space
The simple addition of picnic benches and some shading can result in areas for staff, students and visitors to gather, eat lunch together, have meetings outside of the office walls. Proximity to libraries, Halls and staff offices may help encourage use of such areas – especially for eating lunch outside during revision season.

A reflective space
Spaces can aide reflection by being a 'calm space' but they can also be used to inform users on further steps they can take to support wellbeing. This may be information on healthy eating (with certain healthy foods grown in the area) and showcasing our research on the impacts of certain herbs, evidenced by herbs and information boards. The location could be used for other reflection opportunities e.g. displaying art, photo exhibitions, research posters etc.

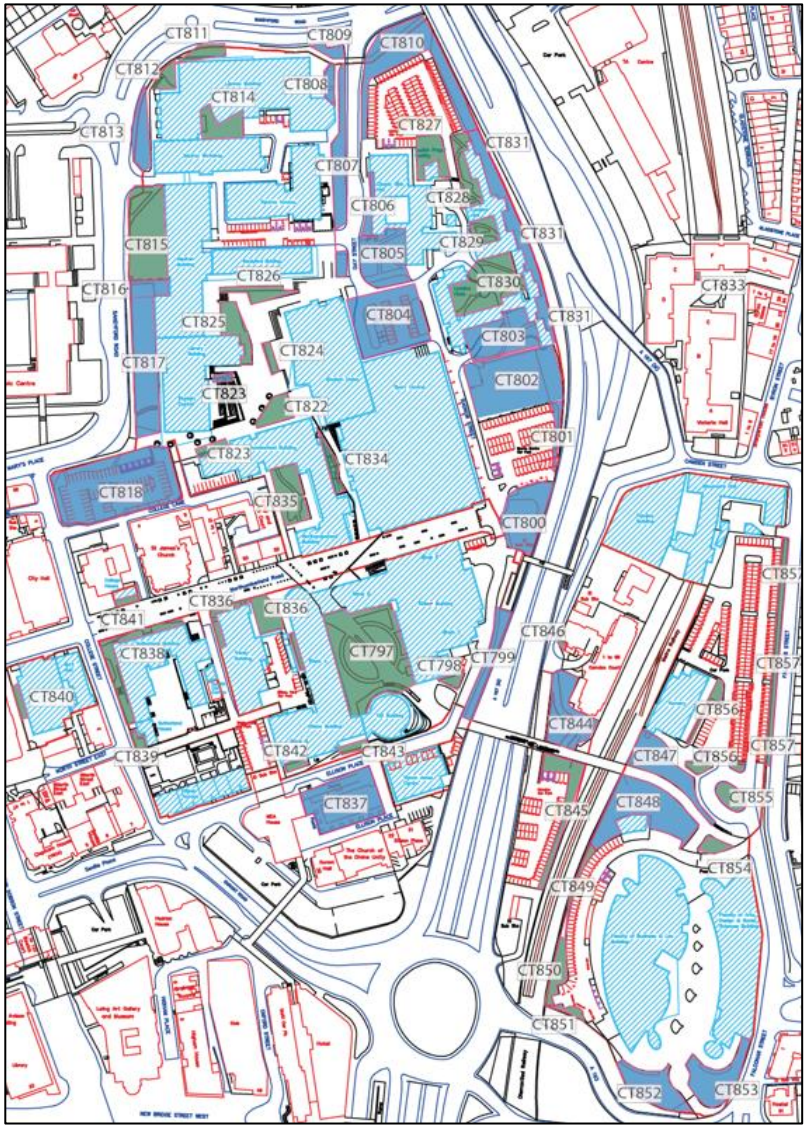
Projects - City Campus

KEY (Current value)
Low biodiversity value
Moderate biodiversity value
High biodiversity value

City Campus Biodiversity Value, May 2018

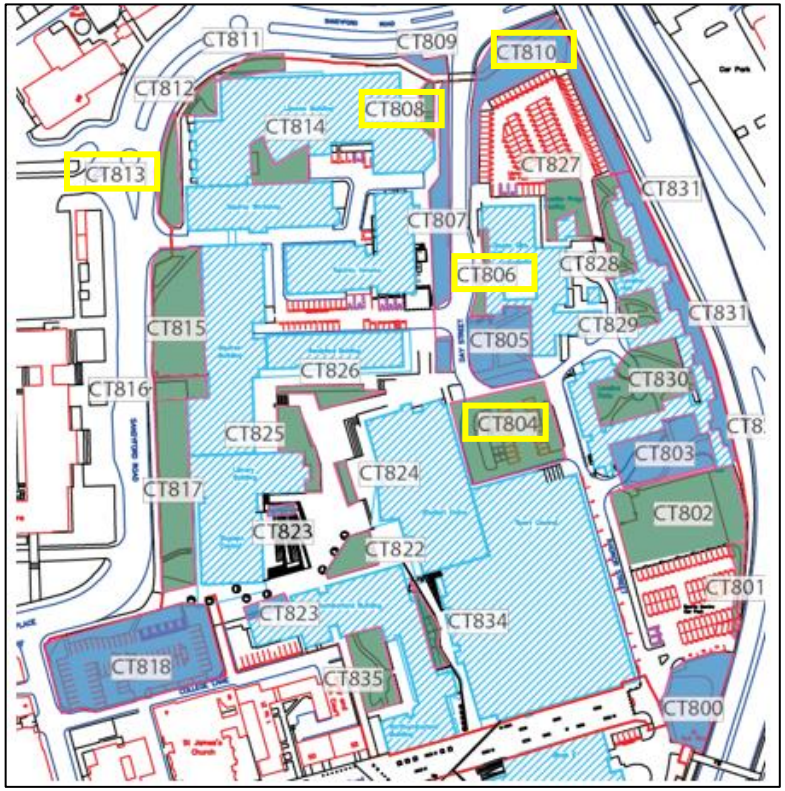


City Campus Biodiversity Potential Value post-projects



City Campus West

KEY (Current value)
Low biodiversity value
Moderate biodiversity value
High biodiversity value



AREA	IMPROVEMENT			ACTIONS
CT804	-808	+888	0	Add hedges, trees and shrubs.
CT806	-120	+144	0	Add ivy to the wall on the northern side – add ivy broomrape if growing quickly. Reduce mowing frequency of grass.
CT808	-128	+253	0	Grow grass to be cut annually or every 2-3 years and add meadow species.
CT810	0	+1700	0	Add woodland ground flora to the banked area e.g. bluebells. Add shrubs such as Hawthorn and Hazel.

AREA	IMPROVEMENT			ACTIONS
CT813	-330	+330	0	Reduce the mowing frequency and add signage to explain this – add meadow species. (A public location suitable for publicising efforts).

Changes in this area may also help in identifying the ‘entrances’ to the University, as required by Green Flag.

City Campus West - CT802

KEY (Current value)	
	Low biodiversity value
	Moderate biodiversity value
	High biodiversity value

AREA	IMPROVEMENT			ACTIONS
CT802	-1919	+2489	0	Reduce mowing frequency and add shrubs and potentially trees.

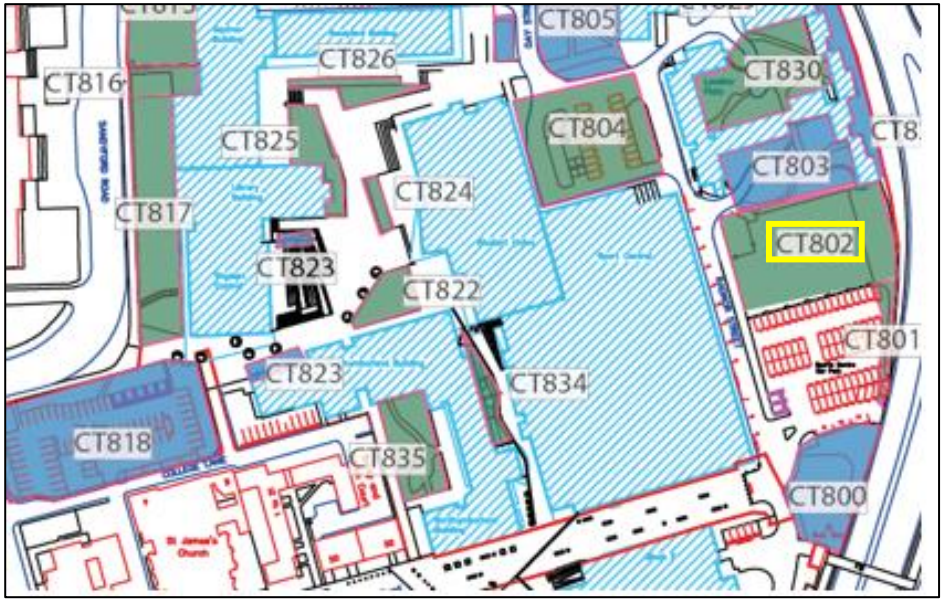
Create a wellbeing garden
Develop space into a wellbeing garden for use by students (note proximity to Claude Gibb and Library), as well as students and visitors.

Add trees and shrubs to create sections and add privacy.

Add bird boxes and feeders to attract birds (and bird song).

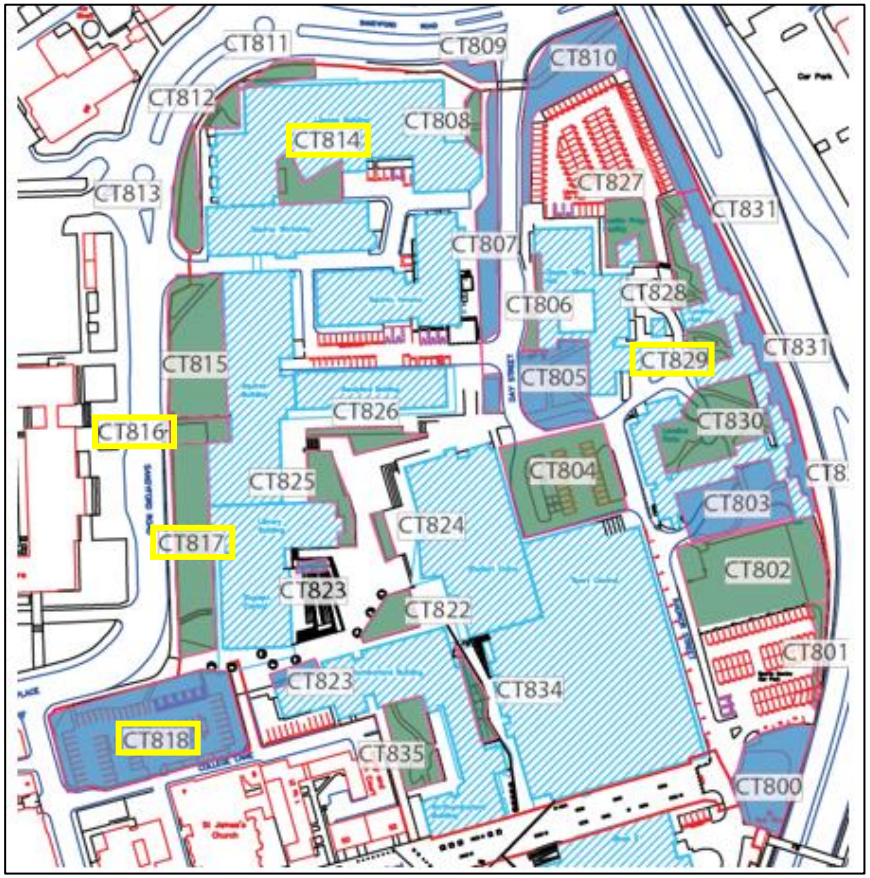
Add pods and tables to open areas to encourage communal use i.e. lunch breaks, meetings, revision areas.

Add solitary areas with individual/ double seating with privacy for reflexion/ calm space.



City Campus West

KEY (Current value)
Low biodiversity value
Moderate biodiversity value
High biodiversity value



AREA	IMPROVEMENT			ACTIONS
CT814	+27	0	0	Add ivy to the walls – add ivy broomrape if growth is quick.
CT816	-168	+168	0	Add shrubs and consider replacing hard standing with additional grassed space.
CT817	-1736	+1736	0	Reduce the mowing frequency and add signage to explain this – add meadow species
CT818	0	+880	0	Add bird and bat boxes to the trees. Add native shrubs and woodland ground flora around the trees.
CT829	+66	0	0	Add shrubs and reduce mowing frequency of some grassed areas. Add bird and bat boxes to trees.


CT814

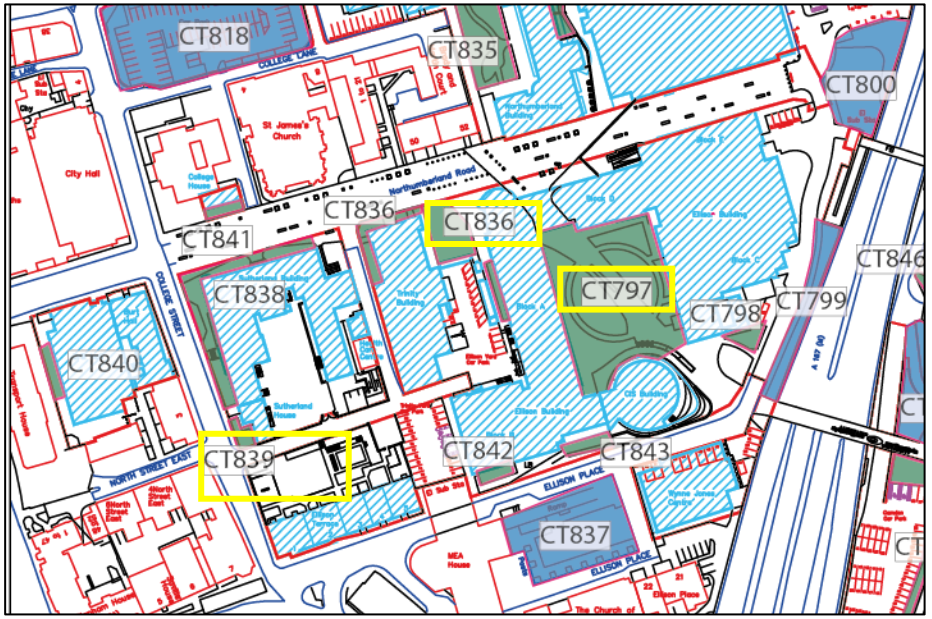

CT816


CT817


CT818


CT829

City Campus West



CT836
Research in this area has shown success with pollinators with particularly high numbers of bees recorded.

CT797
Amend planting in a corner of the Quad to try and replicate the success in CT836. Monitor whether this results in a higher presence of pollinators. (Research to be conducted by E&E in relation to research on bees and pollinators).

CT839 Ellison Terrace Allotment

Create a hedgerow harvest, teaching space and wellbeing garden.

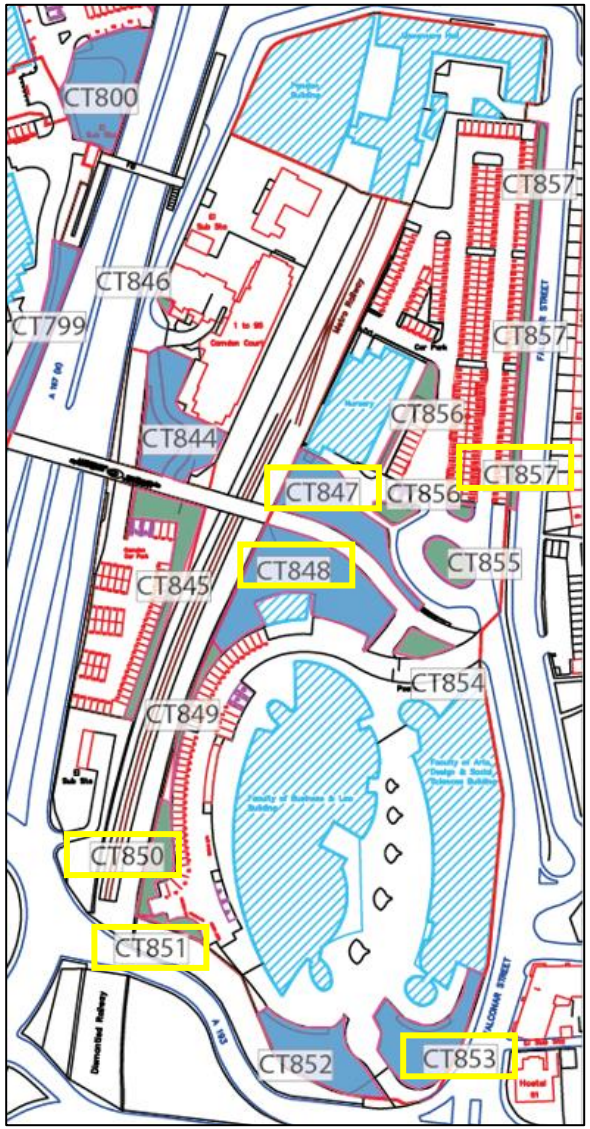
Further develop the allotment with extra growing areas, fruit trees as well as hedgerow harvest species (liaise with catering provider, lecturers, Food Newcastle and Students' Union regarding species which may be useful in student and community teaching and engagement projects).

Add information boards relating to species which are included within our research i.e. to showcase research undertaken at the University.

Add pods and tables to open areas to encourage communal use i.e. lunch breaks, meeting areas.

City Campus East

KEY (Current value)	
	Low biodiversity value
	Moderate biodiversity value
	High biodiversity value

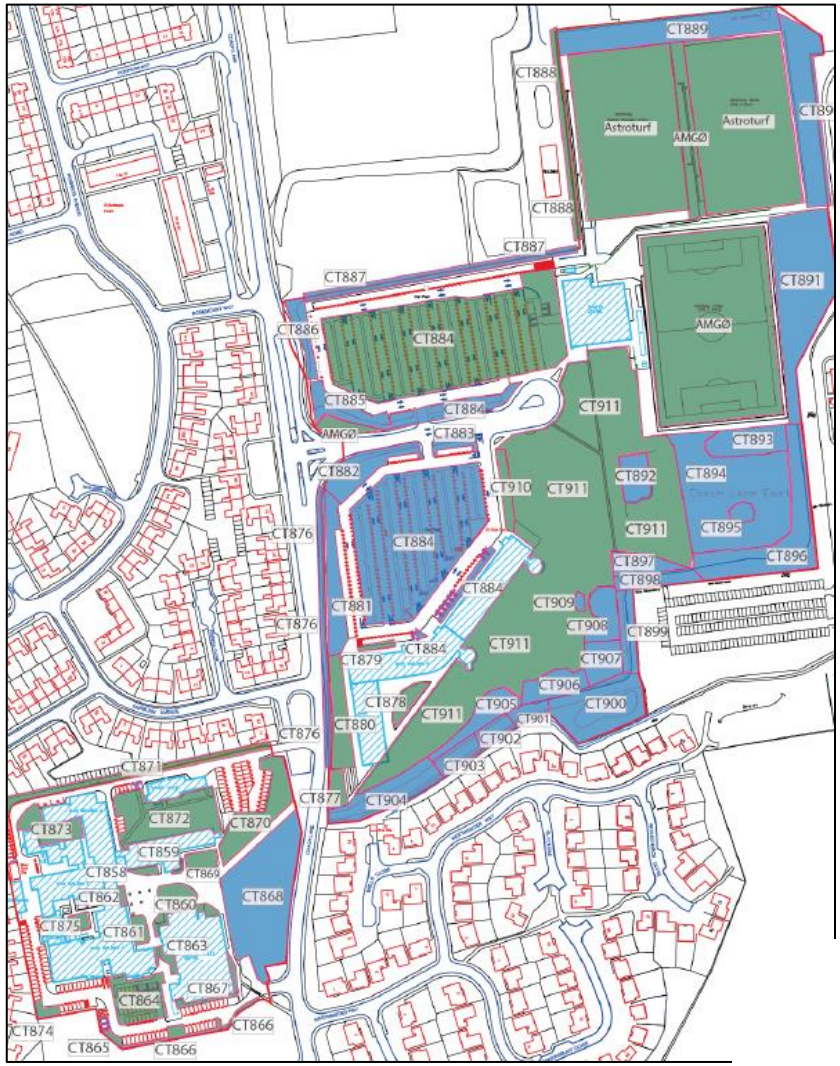


AREA	IMPROVEMENT			ACTIONS
CT847	0	+253	0	Add trees and shrubs reduce mowing frequency to annually.
CT848	0	+540	0	Add shrubs and reduce mowing frequency of some areas to annually. Add picnic tables with mown paths. Consider changing to full woodland with Woodland Ground Flora.
CT850	+92	0	0	Add some more native shrubs.
CT851	+140	0	0	Add woodland ground flora.
CT853	0	+185	0	Add shrubs (replace non-native shrubs if needed) and add Woodland Ground Flora. Consider changing area to full woodland.
CT857	+200	0	0	Add ivy to the walls of the car park – use ivy broomrape to control spread if needed. Consider whether any shrubs might also be added.

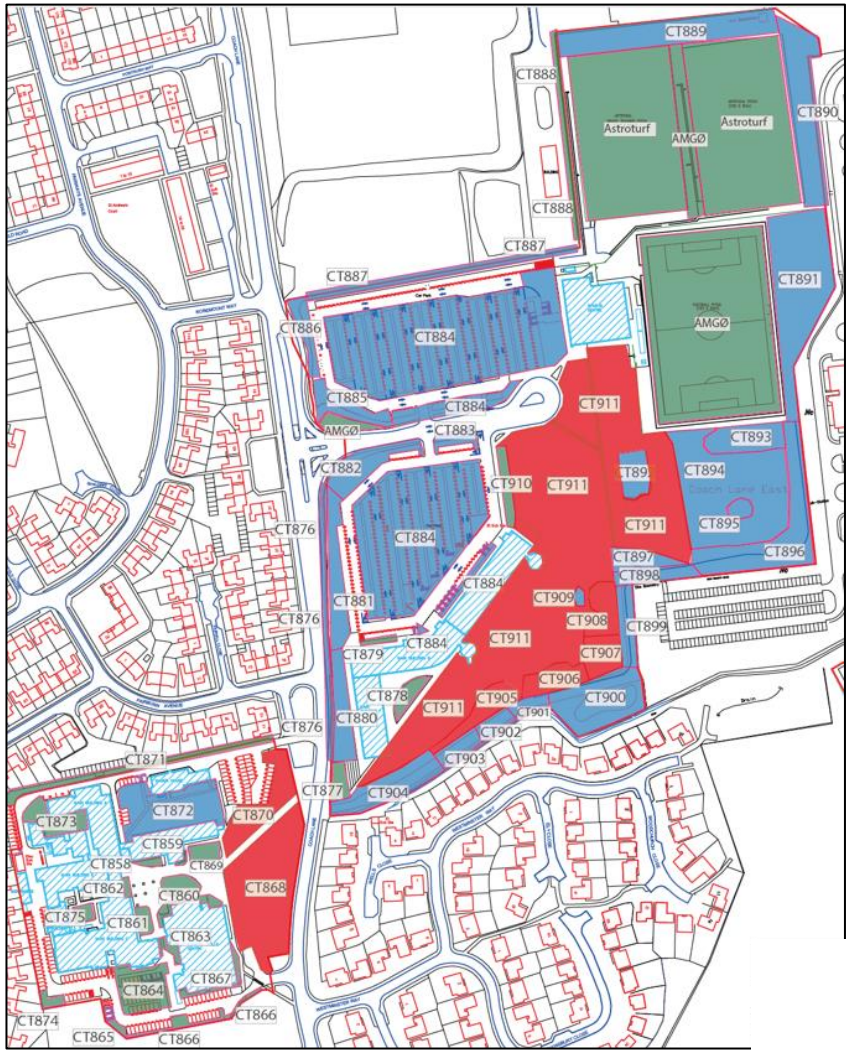
Projects - Coach Lane Campus

KEY (Current value)
Low biodiversity value
Moderate biodiversity value
High biodiversity value

Coach Lane Campus Biodiversity Value, May 2018



Coach Lane Campus Biodiversity Potential Value post-projects



Coach Lane West

KEY (Current value)	
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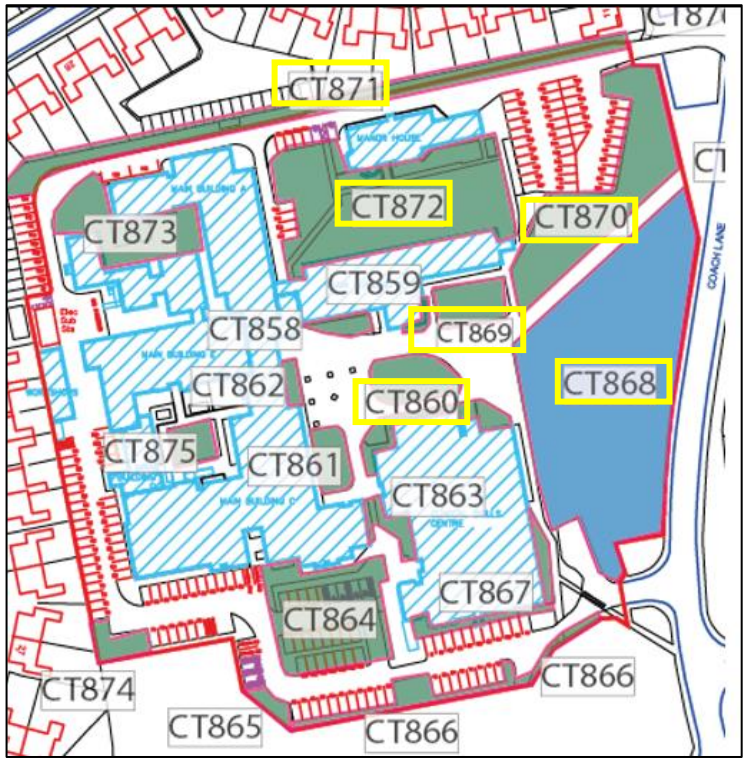

AREA	IMPROVEMENT			ACTIONS
CT860	-803	+947	0	Add bluebells underneath the trees (to support a woodland enclave in conjunction with CT868 and CT870). Add shrubs and reduce mowing frequency of some areas.
CT868	0	-5999	+5999	One of the most wooded areas of campus. Convert to a bluebell wood adding woodland ground flora e.g. dogs mercury (flowers throughout the year) and bluebell. Add bark paths to support access. Add Red Campion to the perimeter of the wood and consider adding some shrubs such as Holly. Add bird boxes and bat boxes. Zero management of the area will then be required.
CT869	-524	+524	0	Add shrub and woodland ground flora in place of mown grass.
CT870	-1997	0	+1997	Develop as CT868 and consider adding more shrubs near the cars e.g. Holly and Hazel. Note – area includes a coppiced tree.
CT871	+89	0	0	Add to the shrub to create a more continuous hedge-like biodiversity feature. Add bat boxes to the trees.
CT872	-1607	+1928	0	Add shrub and reduce mowing frequency to annually. Add bird and bat boxes. Note – area includes a mature cedar.

Coach Lane East

KEY (Current value)	
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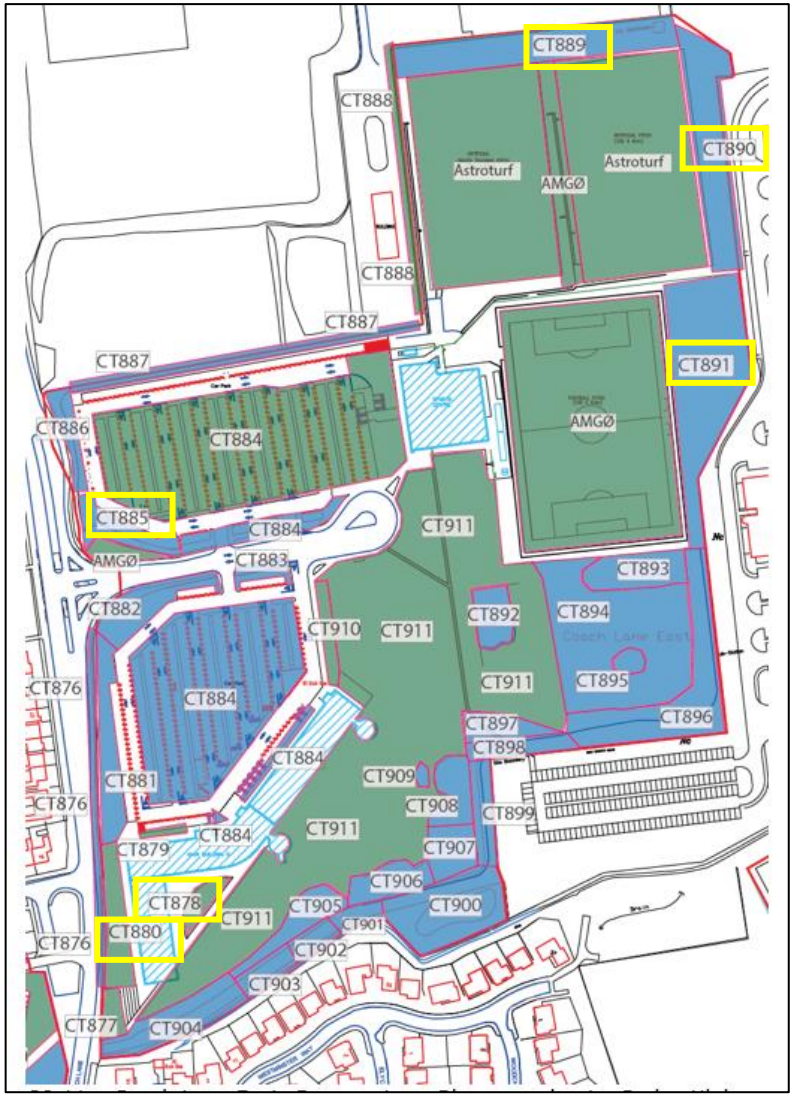
	High biodiversity value



AREA	IMPROVEMENT			ACTIONS
CT878	+95	0	0	Add more trees and introduce additional layers i.e. shrub and areas of grass mown annually or less.
CT880	0	+53	0	Add shrub to the bare ground.
CT885	0	+167	0	Add Woodland Ground Flora especially on the woodland edges e.g. red campion.
CT889	-2231	+2231	0	CT889, CT890 & CT891: Develop into tall grass with additional meadow species e.g. Oxeye Daisy. Add shrubs and potential native trees e.g. oak.
CT890	-1938	+1938	0	
CT891	-4247	+4247	0	

Coach Lane East

KEY (Current value)
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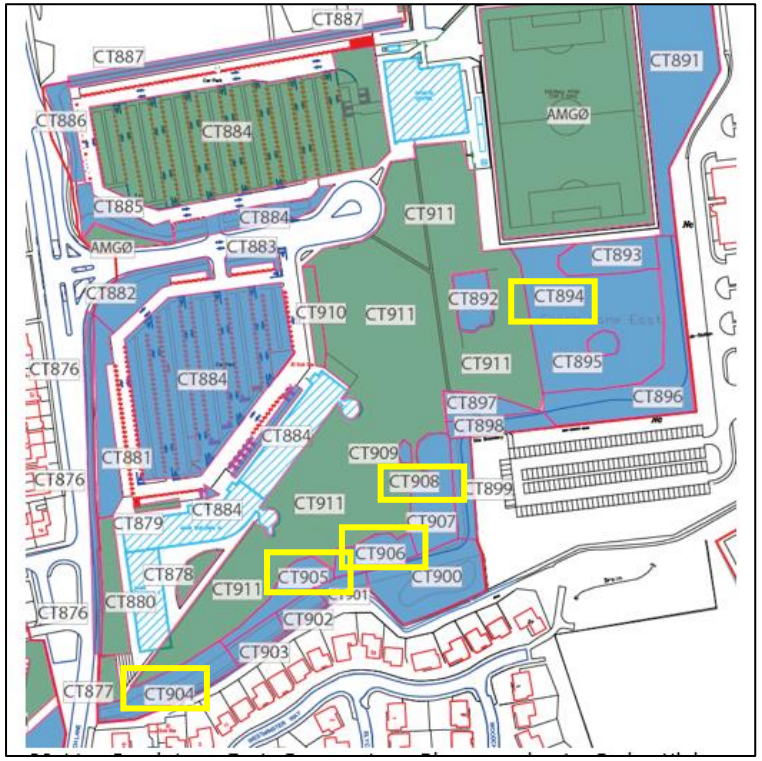


AREA	IMPROVEMENT			ACTIONS
CT894	0	+59	0	Do not mow the area (to enable return of orchids to this area). Ensure shrubs do not encroach. Consider adding willows (these thrive in damper soils).
CT904	0	+262	0	Add Woodland Ground Flora and shrub. Add bird boxes and bat boxes and reduce mowing frequency. Consider leaving a small sunny part of the bank as short grass as a bee habitat (for mason/ mining bees). Add fine sand.
CT905	0	-1852	+2293	Reduce to annual cutting and cover bank in Oxeye Daisy and buttercups (good for butterflies). (Reduces maintenance requirements on an area that is difficult to mow).
CT906	0	-1134	+1276	Change grassland to meadow grassland.
CT908	0	-1255	+1464	Change grassland to meadow grassland.

Coach Lane East

KEY (Current value)	
	Low biodiversity value
	Moderate biodiversity value
	High biodiversity value

AREA	IMPROVEMENT		
CT911	-12338	0	+19741

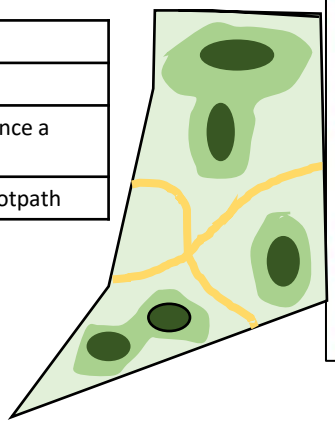
Add patches of shrub to the grassed area. Surround shrubbed sections with areas of wildflower meadow and some tall grass. Mow footpaths through the area to provide a means to explore. (see Fig 1).

Support wellbeing by adding private benches and or picnic tables to encourage use by staff, students and visitors e.g. lunch break.

Consider also adding some specimen oak trees.

Fig 1. Suggested planting for Coach Lane area 1.

	Shrub
	Meadow grass
	Grass (mown once a year)
	Mown grass footpath



Ensure the area connects to the pond through networks of tall grass to enable wildlife corridors. Wild meadow will provide a feeding area for dragonflies using the pond.

Lay a hedge along the current straight line paths that runs N-S and forks left to the bus turning circle. This could follow the principle of historic replica hedging to be used as a teaching tool.

Install bat and bird boxes.

Living Lab

The below is an initial set of suggested topics for research by staff or students. This activity not only supports student learning and research output, but also supports the biodiversity and wellbeing value of the estate.

Those completing research into biodiversity and wellbeing on the Northumbria University campus are encouraged to contact the University's Sustainability Adviser.

PROJECT	DETAIL	RESEARCHER	FACULTY
Impact of pollinators	Monitor bee numbers before and after changing planting in a small section of the campus. Share any positive results with local partners.	Undergraduate	Engineering & Environment
Impact of grass length	Monitor species within grasses of various lengths and types on campus to inform grass management practices on campus.	Undergraduate, Masters	Engineering & Environment
Regular monitoring	Develop and publicise campus surveys by staff and students to develop a multi-year data set of biodiversity, monitor improvements and identify any rare species on campus.	All staff and students	Engineering & Environment
Bat survey	Identify where the most suitable location would be for the addition of extra bat boxes.	Undergraduate	Engineering & Environment
Campus tour	Develop a self-guided trail for staff, students and the public to explore biodiversity on campus and to become familiar with different plant species.	Undergraduate	Engineering & Environment
Movement in nature	Run a variety of workshops to explore movement in 'nature'.	Staff	Art, Design & Social Sciences
Nature-inspired art	Develop art projects for display on the campus estate which reflect on sustainability and/or biodiversity on campus.	All	Art, Design & Social Sciences
Biodiversity and wellbeing	Explore biophilia / the impact of nature on wellbeing and apply findings to campus design and sustainable construction guidance.	PhD	Health & life Sciences, Business & Law
Hedgerow harvest and health	Undertake analysis of nutrients and wellbeing benefits within hedgerow harvest.	Undergraduate	Health & Life Sciences
Hedgehog monitoring	Conduct surveys and monitoring for hedgehogs at both campuses using trap cameras and footprint traps. If hedgehogs are present, consider inserting hedgehog holes within site boundaries.	Undergraduate, Masters	Engineering & Environment

Green Flag Requirements

The Green Flag Award scheme recognises and rewards well managed parks and green spaces, setting the benchmark standard for the management of recreational outdoor spaces across the United Kingdom and around the world.

Purpose & aims

- To ensure that everybody has access to quality green and other open spaces, irrespective of where they live.
- To ensure that these spaces are appropriately managed and meet the needs of the communities that they serve.
- To establish standards of good management.
- To promote and share good practice amongst the green space sector.
- To recognise and reward the hard work of managers, staff and volunteers.

Although the University is not currently targeting a Green Flag Award, an overview of the Green Flag Award requirements are below for reference. They may be used to inform considerations as to whether a Green Flag Award is an appropriate target for the University or may provide information on best practice for campus operations and development.

Green Impact Criteria:

Section 1: A Welcoming Place

- The public are encouraged to enter and to stay.
- Careful management of pedestrian, cyclists and vehicles.
- Good disabled access.
- Clear and useful signage with contact details.
- Good management of visitor needs. Identify who doesn't use the space and why?
- Public accessibility statement.

Section 2: Healthy, Safe & Secure

- Heathy options in the café with regular inspections.
- Sports facilities.
- Seats for rest/ contemplation.
- First aid facilities with procedures and inspection regimes.
- Good toilet provision.
- Policies and procedures in support of personal safety.
- Strong links with Community Support Officers.
- Incident reporting in place.
- Careful management and impact monitoring of dogs.

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Green Flag Requirements

Section 3: Well Maintained & Clean

- Policy for managing litter, waste, chewing gum and dog fouling.
- Litter monitoring and a positive culture regarding litter.
- Composting of horticultural waste.
- Provision of recycling and general waste bins, with waste compounds hidden from sight.
- Good standard of horticultural maintenance and tree monitoring.
- Free of graffiti, weeds and potholes.
- Annual equipment maintenance and checks.

Section 4: Environmental Management

- Environmental Policy, objectives, action plans and monitoring.
- Measures taken for water efficiency, renewable energy, energy saving, air quality, noise pollution and water pollution.
- Waste reduction and mulching and use of green waste.
- Minimal use of pesticides and fertilisers (use biological control methods).
- No use of peat (or plants grown in peat).
- Climate change adaptation strategy e.g. citing of trees (strong winds), Sustainable Urban Drainage, vegetation tolerant to heat etc.

Section 5: Biodiversity Landscape & Heritage

- Links to wider local and national strategies e.g. Local Nature Partnerships, National Pollinator Strategy, forest schools, 'grow your own', green infrastructure and climate change adaptation.
- Good management of any conservation requirements.
- Connections between landscape and local culture.
- Involve stakeholders in landscape decisions.
- Conserve and maintain buildings.

Section 6: Community Involvement

- Identify who is and who could be involved with the space.
- Undertake outreach work, especially with schools.
- Use the space to support community events and social get-togethers.

Section 7: Marketing & Communication

- Consider potential space use and partnerships.
- Develop plans for current use and future aspirations.
- Use of multiple marketing methods e.g. annual report, management plan, social media, onsite visitor information, local press, trained staff.
- Develop nature walks and information boards.
- Host an active allotment.
- Establish programmes with local groups for people with disabilities.

Section 8: Management

Implement a Management Plan. This should include:

- Where are we now (site description)?
- Where do we want to go (SWAT, aims and targets)?
- How will we get there (SMART plan, finance allocations, relevant policies)?
- How do we know we have done it (monitoring)?

Action Plan 2018-2023

	PROJECT	DETAIL	RESPONSIBILITY
B1	**Estate Masterplan**	Include the 5 Golden Rules and suggested major projects within the Estate Masterplan.	Director Campus Services
B2	**Newcastle engagement**	Develop a cross-Newcastle group to support biodiversity across the city.	Sustainability Adviser
B3	**Training**	Undertake regular training of Grounds Teams via toolbox talks to ensure best practice in grounds management.	Grounds Supervisor
B4	**Living Lab – Ellison Quad Pollinators**	Change small areas of planting in Ellison Quad with new pollinators. Undertake monitoring to identify impact on bee population.	Grounds Supervisor & E&E
B5	**Community engagement**	Support those in the local community in enhancing biodiversity around the city e.g. litter picks, gardening projects, information sessions.	Students' Union & Sustainability Adviser
B6	**Green Flag**	Determine aspirations for Green Flag award(s) at Coach Lane and/or City Campus.	USMG
B7	**Beneficial Planting**	Develop a list of plants that will meet aesthetic requirements whilst supporting biodiversity. Plant only those that are on the list.	Grounds Supervisor
B8	**Artificial grass**	End any new installations of artificial grass on campus.	Head of Campus Planning & Development
B9	**Audit**	Undertake a full campus audit every 2 years to review biodiversity (and social) value of areas on campus.	Sustainability Adviser
B10	**Regular Monitoring**	Develop and publicise campus surveys by staff and students to develop a multi-year data set of biodiversity, monitor improvements and identify any rare species on campus.	Engineering & Environment
B11	**Sustainable City Project**	Use student research to identify improvements to be made by partners across the city to support and monitor biodiversity on a city-scale.	Engineering & Environment
B12	**Replace artificial grass**	Remove artificial grass on campus and replace with natural planting and/or alternative landscaping.	Head of Campus Planning & Development