Nuneaton and Bedworth Borough Council

Open Space and Green Infrastructure Supplementary Planning Document (SPD)

Part D – Commercial and industrial developments

2021

Nuneaton & Bedworth

United to Achieve

Contents

1. Introduction

This SPD provides detailed guidance on how commercial and industrial developments should meet the requirements set out by the Council's Borough Plan Policies NE1 – Green infrastructure, NE2 - Open Space and NE3 - Biodiversity and geodiversity and their interrelated policies and strategies.
This document defines the publicly accessible elements of green infrastructure/open space and facility requirements to be delivered by developments (accessible green infrastructure is called publicly accessible greenspace PAG within this document), determines how biodiversity should be dealt with and explains the related s106/CIL contributions that you may be required to pay.

This document does not determine requirements regarding private/inaccessible green infrastructure. Private greenspace may however be needed on your development site, in addition to publicly accessible greenspace, to help satisfy biodiversity considerations and other site-specific requirements.

This document is intended to be read by those conceiving the general layout of the development, by those locating, designing and laying out the open space and flood relief provisions and by those who will be responsible for protecting the existing and delivering the future ecological value of the site.
This document should be read in conjunction with Appendix 1- Detailed Design Standards for PAG compliant Parks, Allotments, Green Network Corridors and ASUDS where applicable.

2. Land requirement for accessible open space and green infrastructure

2.1 Introduction

Commercial and industrial developments create a need for open space via their staff. Employees will use open space on break times, and many will use it on their daily commute to work.

The space they will use will therefore mainly be onsite open space provision, nearby open space areas and green network corridors.

Attractive and well managed green space can attract staff, improve staff retention and benefit staff by improving wellbeing, reducing stress and improving health.

The positive effect of access to open space during your working day was recently examined by The Centre For Sustainable Healthcare in relation to NHS staff but the results of this study could easily apply to different work places and professions.

Commercial and developments are required to cater for the need they create by providing sufficient publicly accessible greenspace PAG on their development site to accommodate for the needs of the proposed number of staff. The more staff, the more space that will be required. How this requirement should be delivered is outlined in this SPD and in more detail in the following chapters.

2.2 How much accessible green infrastructure/open space is required?

Commercial developments are required to provide at least 3.2 hectares of accessible green infrastructure/open space land per 1000 full time or equivalent employees.

The quantity of space required is broadly based on guidelines set out by Fields in Trust (FiT) also previously known as the National Playing Fields Association. Many local planning authorities reference Fields in Trust's recommended standards for the quantity of open space required for sustainable development when setting their own local open space requirements. The standards set by Fields in Trust were reviewed against the Council's open space audit and found to be broadly comparable and appropriate.

The Council has subsequently tailored FiT's standards to fit with the different demands different developments create and have adopted these as its own standards.

The requirement for 3.2 hectares of accessible greenspace per 1000 employees is compiled from the following elements of FIT's open space requirements

Type of open space	**Description of space type**	**Hectare requirement per 1000 people**	**Justification for inclusion**
Parks and Gardens	Formal green spaces including urban parks, country parks, forest parks and formal gardens	0.8	To allow employees and visitors to relax and have lunch/breaks/fresh air/exercise etc in a formally landscaped and appropriately facilitated area of open space/park
Natural and semi-natural green space	Woodland, scrub, grassland, wetlands, open and running water and open access land	1.8	This creates the setting for an enjoyable and attractive environment. This space is often added along green network corridors which staff may use to travel to work and in and around SUDs provisions. It is also a requirement of all developments to provide space for wildlife on their development site and to allow for a net gain in biodiversity. This type of space is therefore often multipurpose in this setting.
Amenity Greenspace	Informal recreation spaces and communal green spaces in and around the built development	0.6	This space is key to delivering communal break out areas and other areas of accessible greenspace that are suitable for informal recreation in and around the commercial development
Total		3.2	

2.3 What can and can't this accessible greenspace be made up from?

Publicly accessible green space for the purpose of this SPD and specifically for commercial developments is taken to mean accessible green network corridors (AGNC), accessible sustainable drainage systems (ASUDS)

and communal or publicly accessible soft landscaped staff break out and visitor areas which meet the Council's required standards.

Each of these open space elements are explained in more detail within their own chapters.

Publicly accessible greenspace of all types must:

1. Be safe and suitable for unsupervised and unrestricted public or staff access
2. Be overlooked by the development so that passive surveillance is encouraged
3. Be safe and economical to maintain
4. Have recreational value
5. Be suitable for the intended use and anticipated level of use
6. Be appropriately hard and soft landscaped
7. Be appropriately facilitated
8. Be aesthetically attractive and add tangible value to the development
9. Meet the required standard for, staff and visitor break out areas, accessible green network corridors (AGNC) and/or accessible sustainable drainage systems (ASUDS) as set out in this SPD

Land which falls into the below categories will not be counted within your publicly accessible greenspace requirement, but some elements may still exist within the development depending on site conditions:

1. Contaminated land
2. Space underneath electricity pylons
3. Land that is not suitable or safe to maintain using commercially suitable equipment
4. Areas unsuitable for unsupervised unrestricted public or staff access
5. Road verges
6. Incidental landscaping which does not have recognised recreational value
7. Capped mine shafts
8. Roundabouts
9. Private land which is not available on a communal basis to staff and visitors
10. Land that fails to meet the required standard for parks, staff and visitor break out areas, green network corridors, and/or accessible sustainable drainage systems as set out in this SPD

When deciding what type of publicly accessible greenspace PAG should be delivered on a commercial or industrial development site, please consider the following;

- If developing in a Borough Plan strategic site allocation, what does the NBBC concept plan and associated Borough Plan policies say you need to provide?
- Can the existing biodiversity and landscape features on site be incorporated into the developments accessible open space?
- Can the development add space to existing features, areas, or corridors adjacent to the development site?
- What flood attenuation facilities are needed on your site and could this area be made attractive, biodiversity rich and accessible to staff?
- How will the design encourage staff to use this space?

The minimum required PAG may not be all of the green space that your development needs to provide. Private/inaccessible green space may also be required to cater for the site's individual constraints, to further accommodate biodiversity, to provide required buffer and screening areas and to accommodate the requirements as

set out in the strategic development parcel's concept plan and associated policies. The amount of additional green space needed, on top of your required accessible space, will therefore be dependent on your development's location and particular site conditions.

Any publicly accessible greenspace which is provided as part of this development must comply with the relevant standards as described in this document and the accompanying Appendix 1- Detailed Design Standards for PAG compliant Parks, Allotments, Green Network Corridors and ASUDS where applicable.

3 Section 106 payments

3.1 Maintenance contributions

Where land is to be adopted by the Council for example in the cases where the development it is contributing open space to a park or strategic green network then a maintenance contribution will be required.

Please note that non-strategic green network corridors will not normally be adopted by the Borough Council and communal spaces and sustainable drainage systems (SUDS) will never be adopted by the Borough Council.

3.2 Biodiversity offsetting payments

Biodiversity offsetting payments may be required if the development is unable to deliver gains for biodiversity on the development site. Payments are normally either made to the Borough Council or another agent capable of delivering biodiversity units offsite and legally committing to maintain them for 30 plus years. It may also be possible to deliver these units of biodiversity on land the developer owns elsewhere providing it is in or directly adjacent to the Borough. The location and proposal will need to be discussed and agreed with the Council prior to securing planning permission. Where offsetting costs are provided the costs are based on the cost to deliver the enhancements or habitat creation necessary to deliver the biodiversity units identified and for the cost of maintaining this land for 30 years.

4. Biodiversity

Introduction

International, national, and local polices and legislation require planning authorities to put protecting, enhancing, connecting and increasing biodiversity at the heart of all planning decisions. Biodiversity therefore forms a significant material consideration of development.

Biodiversity should be dealt with in line with the standards detailed in this SPD, as outlined in BS 42020 Biodiversity and Planning and in line with the principles as laid out by the document – Biodiversity Net Gain Good practice principles for development

Please be aware that if habitat is destroyed or detrimentally changed prior to a planning application being submitted, and this change is clearly for the purposes of an application i.e., it was not completed for any other meaningful purpose then we will use the latest known data - often the Habitat Biodiversity Audit, Potential and Local Wildlife Site surveys, protected species records and site photographs - to determine the content and condition of the

habitat prior to the changes. This data will then be used to determine the suitability of your application, if compensation measures are necessary and any biodiversity impact calculations.

At the outline application stage

To process your application, we need to be able to assess whether it can achieve a net gain for biodiversity. We therefore need to understand what is on the site already and how it will be impacted by your proposed development. To enable us to do this we need you to submit the following documents and calculations or submit this content in one or more combined documents. A suitably qualified ecologist (i.e. typically a CIEEM member) / professional ecological consultancy will need to be engaged to prepare the documentation and undertake necessary surveys etc.

Required Documents:

Desk Study investigation

Research the site's wildlife status and find out if there are any protected species or biodiversity action plan species or habitat records for the site. The Magic website and Warwickshire Biological Records Centre and Warwickshire Wildlife Trust are useful points of contact for this research stage.

Extended Phase One Habitat Survey

Survey the site and draw up plans clearly showing the site's existing different habitats and explore how it is currently being used by wildlife.

Produce an Extended Phase one habitat plan which complies with The Joint Nature Conservation Committee (JNCC) guidance

This will map the habitats on your site and identify if protected species could be using your site. This plan should also identify which of these habitats are Local or UK Biodiversity Action Plan species or habitats.

Always ensure you include the area surrounding your site so that any potential impact on surrounding features is considered by your development. Showing land immediately adjacent to the development site also allows for onward wildlife connections to be identified.

Protected species surveys

Complete protected species surveys as necessary in the light of the desk study and habitat survey. Protected Species Surveys must comply with Natural England protected species guidance.
These surveys need to be completed by competent individuals that are suitably qualified and experienced.

These surveys are time of year dependent and so sufficient time should be allowed for this process. Collecting all the information can take several seasons or even multiple years to compile.

These surveys must include species specific recommendations for the development

Survey data submitted with planning applications must also be provided to the Warwickshire Biological Records Centre. To submit your information please email wbrc@warwickshire.gov.uk.

A pre-development habitat and habitat condition plan

This plan, which will be required in pdf **and** shape format file, will show the habitats as identified in the extended phase one habitat survey **and** their current condition.

Each individual habitat area that gets added together to form the total area for any one habitat type in the Biodiversity Impact Calculation must be identified on the plan with a unique number or code as well as its current condition and its exact measured hectarage - so that it can be easily be referenced / checked and considered in relation to the biodiversity impact assessment calculation**.**

When assessing the type of habitat and the condition of the habitat we strongly advise that you look at the detail included in the Biodiversity Impact Assessment calculator on a tab at the bottom of the calculator which says **Habitat details**. This tab lists all habitats in the calculator and in many cases describes the attributes – or means of assessing the habitat attributes - that appropriately inform habitat condition.

A pre-development key habitats plan:

This plan should set out to help aid spatial planning of the development by informing designers which areas need to be protected and how far back the built environment needs to sit from sensitive features. Habitat features recommended for retention should be shown and minimum buffer areas as below then also shown around them to ensure the ecological work feeds directly into the subsequently proposed planning layout for the development site. Remaining areas suitable for built development should then be shown.

This plan should aid spatial planning of the development and let designers know which areas need to be protected and how far back the built environment needs to sit back from sensitive features.

To aid clarity of our expectations and to help standardise as much as possible the space required to protect existing habitats and ecological features we have determined a set of standard minimum buffers for habitats that may be found on or adjacent to your development site. These buffers have been determined using guidance provided by DEFRA, NPPF, The Woodland Trust, The British Association of Insurers, Natural England, The Wildlife Trusts, Warwickshire County Councils Ecology team and other relevant authorities.

These buffer sizes and requirements are outlined in the table below:

Existing Habitat Required Minimum Buffer Table

Existing ecological feature or habitat (to be retained and enhanced)	**Minimum buffer width**	**Suitable buffer can contain**	**Suitable buffer cannot contain**
Woodland - classed as areas/blocks of trees over 0.5 hectares (as per National Forest Inventory). This includes linear woodland.	Buffer applied from edge of nearest trunk 1.5x height of tallest tree at maturity, the largest root protection area, the widest canopy or the largest safe zone boundary as per The British Association of Insurers - whichever is greatest	Native soft landscaping, grassland or understorey species. Paths but only outside of root protection zones	Construction activities, storage of materials or site offices Services, roads, structures
Single veteran, near veteran or ancient trees	Buffer applied from edge of trunk 1.5x height of tree, root protection area or width of canopy (drip line) whichever is greater plus 10m	Grass or understory species	Construction activities, storage of materials or site offices Services, roads, structures or footpaths
Other individual class a and b trees and groups of trees containing class a and b trees	Buffer applied from edge of trunk Height of tallest tree at maturity, width of widest canopy or largest root protection area whichever is greatest. This applies all around the tree or trees	Native soft landscaping, grass or understory species. Footpaths outside of root protection zones	Construction activities, storage of materials or site offices Services, roads, structures
Other individual or small groups of trees to be retained	Buffer applied from edge of trunk Width of largest canopy at full maturity or full root protection area at maturity whichever is larger	Grass or understory species	Construction activities, storage of materials or site offices Services, roads, footpaths or structures
River, stream, pond or lake	12m from top of bank	Soft landscaping - native species Footpaths set back at least 5m from top of bank	Construction activities, storage of materials or site offices. Non- native species, services, structures or hardstanding

Existing ecological feature or habitat (to be retained and enhanced)	Minimum buffer width	Suitable buffer can contain	Suitable buffer cannot contain
Existing ecologically valuable grasslands or marshland	5m from edge of meadow area	Soft landscaping - native species and/or grass species Footpaths set at least 2m back from meadow edge	Construction activities, storage of materials or site offices. Services, roads, structures
Native hedge or native scrub area	Unmaintained max width of hedge (normally around 4m) or scrub plus 6m Defra buffer area either side (hedge trees to be buffered as per individual trees requirements)	Grassland species Footpaths set at least 2m back from max unmaintained edge	Construction activities, storage of materials or site offices Services, structures, or roads

A pre-development calculation of the value of the habitats on site prior to development

A Biodiversity Impact Assessment calculator in excel format has been produced by Warwickshire County Council to help measure habitat value. This must be used to undertake the calculation as per the Borough Plan policy.

For guidance on using the biodiversity impact assessment calculator please see Warwickshire County Council's guidance document for further information.

The submission must include the full calculation in an editable excel format as well as any other summaries of outcomes presented as text / images etc.

A post-development habitat proposals plan

This plan should show the habitats that are proposed to be retained on-site and all additional areas of habitat that it is proposed to create.

Each individual habitat area that gets added together to form the total area for any one habitat type in the post development section of the Biodiversity Impact Calculation must be identified on the plan with a unique number or

code as well as its current condition and its exact measured hectarage - so that it can be easily be referenced / checked and considered in relation to the biodiversity impact assessment calculation**.**

We strongly encourage significant corridors and areas for wildlife focused on key retained habitat features rather than retention of multiple small poor-quality corridors and areas. For example, a much larger informal habitat corridor around a species rich hedge is preferable to multiple species poor hedgerows retained in narrow more formally landscaped corridors due to their proximity to houses. This approach results in more sustainable larger areas of habitat, with reduced disturbance by people and in more ecologically productive areas.

A calculation of the post-development value of the habitats on site

This calculation must again be completed using Warwickshire County Council's Biodiversity Impact calculator and will show, when compared to the initial calculation of habitat value, whether net gains can be achieved as a result of your development on site.

When entering the habitat target condition and time to target condition we strongly advise that you look at the detail included in the Biodiversity Impact Assessment calculator on a tab at the bottom of the calculator which says **Habitat details**. This tab lists all habitats and in many cases describes the attributes – or means of assessing the habitat attributes - that inform target conditions and time to target condition. In some cases, it also sets absolute minimum realistic times to reach target condition.

The submission must include the full calculation in an editable excel format as well as any other summaries of outcomes presented as text / images etc.

The Biodiversity Impact Calculation will allow us to examine whether a net gain for biodiversity can be achieved, whether the mitigation hierarchy has been properly applied to maximise on-site habitat retention and creation and whether a biodiversity offsetting payment is genuinely unavoidable. Please note the purpose of the Impact Calculation is to encourage maximisation of on-site habitat creation and retention – not to secure off-site sums.

Full explanation must be provided as to how new habitats will be established, how existing habitat will be enhanced and how the proposed habitats will be sustained for the minimum 30 year period.

When predicting the habitat type, habitat condition and deciding how long it will take to reach this standard, we strongly advise that you look at the accompanying detail included in the calculator on a tab at the bottom of the calculator which says **Habitat details**. This tab lists all habitats and describes them and their different conditions and gives more detail of the time needed to reach certain conditions.

We will look very carefully at the practicalities and risk in delivering your proposed biodiversity habitat, the anticipated condition in the location and in the time you have proposed. As an authority managing a great number of accessible Local Wildlife Sites and other ecologically valuable habitat we are well placed to anticipate and understand the pressures suitable habitat management faces from public access and expectation.

In addition, some habitats are just impractical to successfully deliver to a favourable condition within an urban setting or in small areas so utmost care should be taken to select the most realistic habitat type and quality post development.

Please be realistic with your anticipated habitats and conditions and speak to the Parks and Greenspaces team if you require further assistance or advice.

The detail provided in your Surveys, the Construction Ecological Management Plan (CEMP - see below), the Biodiversity Ecological Management Plan (BEMP -see below), adoption proposals and accompanying legal documentation will provide the evidence to support your ecological impact assessment and so it is important that these documents are completed accurately.

Biodiversity Offsetting Payments

Once the biodiversity calculation has been completed satisfactorily, NBBC can offer costings to act as the offset provider.

NBBC does not have to act as the offsetting provider and WCC and third party brokers can act as the provider but please note the Borough Plan requires all offsetting provision to be made within the Borough so as not to allow the Borough to be built over and wildlife habitat value to be exported to other districts.

If offset provision is not to be made by NBBC or WCC then a full 30 year minimum delivery and management plan setting out how the habitat will be created, established and delivered must be provided as well as full proof of binding legal arrangements to ensure delivery.

Full/detailed/reserved matters application stage

If a full application, we will need all the documents and calculations for the outline stage above. For a reserved matters application, an update of all the information from the outline stage may be required. For example, if significant time has passed (e.g. a year or more) and so habitat conditions may have changed affecting the biodiversity impact calculations. Subsequently, an update of the biodiversity impact calculations would need to be undertaken to account for the updated / more detailed proposals.

At this stage, fully detailed information on exactly how you will safeguard protected and notable species using your development site will be required. This will need to include methodologies, planting and maintenance proposals that will deliver and sustain the post-development habitats that are claimed in the biodiversity impact calculation.

A Construction Ecological Management Plan (CEMP) and Biodiversity Ecological Management Plan (BEMP) must both be submitted.

The joint aim of the two documents is to protect, enhance and increase the biodiversity value of the site post development and to provide us with the evidence to support your Biodiversity Impact Assessment and associated calculations.

Construction Ecological Management Plan (CEMP)

The CEMP must detail all precautionary working practices and methods required to protect retained habitats and to prevent harm to wildlife (and particularly protected species) during the construction period.

It must include - and fully detail and explain - the following:

- Details of secured protected species licences where these are required as a result of the ecological survey findings or full detail of discussions to date with the licensing body and the full proposed content for any outstanding applications. We can only consent applications where we believe the required protected species licences will be secured before work commences. Licences must be secured before any development work

commences on site. Copies of necessary licences must be submitted to NBBC at least 14 working days ahead of work commencing on the site.

- A series of plans to legibly show all new habitat areas and the retained habitat areas superimposed with:
    - The position of temporary roads, access points, storage areas, compounds and site offices etc that will not remain after the development but will be put in place at times during its construction
    - The pre-development levels and the post development proposed levels
    - The development's drainage proposals (including any temporary drainage as well as the final drainage layout)
    - Any other new utility alignments that cross the habitat areas and buffers

- Details of what species and habitat safeguards are to be employed at each development stage including:

    - A description and specifications as necessary of what physical protective measures will be employed on site (fencing / signage etc) to protect habitats, features and their buffer areas.
    - How development processes will be adapted to limit or remove impacts on these habitats. Impacts such as disturbance, compaction, accidental and intentional damage, water saturation changes, erosion and pollution.
    - A timetable setting out all key operations and identifying those operations where an ecologist will be present
    - What management, if any, of the retained features or habitats is necessary during each development stage. This can be particularly important pre-commencement and during construction for habitats like species rich grasslands that require regular management.
    - Monitoring, checks and supervision to be implemented

- Details of what species safeguards are to be employed at each stage of the development including:
    - Any pre-construction checks required;
    - A timetable setting out key operations and identifying those operations where an ecologist will be present;
    - What to do if protected species are discovered during construction;
    - The appropriate working practices and timings of construction works;
    - The appropriate site clearance methods and timings;
    - If appropriate how foraging, breeding and movement/migration corridors will be protected during construction;
    - Other species-specific protection information as required for example temporary lighting plans, trench checks and exclusion fencing etc; and
    - What monitoring, checks and supervision will take place and how this will be recorded.

- The details of a suitably qualified Ecological Clerk of Works to oversee implementation of the CEMP and address any contingency measures where appropriate.

- A clear commitment for the Ecological Clerk of Works to submit written reports to the Authority within two weeks of each visit to supervise ecologically critical operations and of unannounced visits to check on adherence to the CEMP - in both cases evidencing implementation of the contents of the CEMP and containing dated photographs and associated text.

Biodiversity Ecological Management Plan (BEMP)

The BEMP must describe how all the retained and proposed habitats will be enhanced and created and established. This will detail how ongoing management proposals will ensure the habitats reach the conditions described in the Biodiversity Impact Calculation (BIA) and meet the timescales to target condition claimed in the calculation. The BEMP must be written by an ecologist and incorporate and develop the relevant recommendations from the Phase 1 Habitat Survey and protected species surveys.

It must include - and fully detail and explain - the following:

- The specific aims of your BEMP (habitat and species)
- A description of exactly how these aims will be achieved, what are the thresholds for success and the contingency plans if this is not achieved
- A BIA fully reflecting the current development proposals including impacts of drainage and utility proposals, suggested changes in topography etc.
- An up to date detailed habitat retention, enhancement, and creation plan - this plan, which will be required in pdf and shape file format, will show all retained and all new habitat areas that underpin the Biodiversity Impact Calculation

  Each habitat area/sub area that goes on to make up the habitat totals used in the BIA should be identified with a unique number or code so that it can be easily be referenced in the biodiversity impact assessment calculation and accompanying explanatory text and its exact hectarage must be marked on the plan**.**

  We strongly encourage significant corridors and areas for wildlife rather than retention of multiple small poor-quality corridors and areas, as this normally results in more sustainable and more ecologically productive areas and corridors for wildlife.

  When predicting the habitat type, habitat target condition and time to target condition we strongly advise that you look at the accompanying detail included in Warwickshire County Council's biodiversity offsetting calculator on a tab at the bottom of the calculator which says ***Habitat details***. This tab lists all habitats and describes them and their different conditions and gives more detail of the time needed to reach certain conditions.

- Lighting proposals that prevent light pollution impacting habitat areas including a contour diagram for all external and street lighting.
- A detailed list of non-habitat-based proposals your development will include and where these items will be included to enhance or benefit biodiversity e.g bird and bat bricks (which should be incorporated in at least a fifth of properties for bat bricks and a fifth for bird bricks), refugia, holts, dens, boundary treatments with facilitated hedgehog or badger routes, green walls etc
- The planting, sowing, spacing and management proposals for the new habitat to be created
- The specifics of how areas will be enhanced and when this will be done
- All associated landscaping plans including standard details
- Proposed maintenance of areas including maintenance access and movement proposals – specifics of all infrastructure, topography, including the load capacity of bridges and other structures and clearances of routes required to facilitate the proposed maintenance.
- All other species-specific enhancement that are to be provided and how these will be delivered – e.g. Newt / Badger specific mitigation plans and proposals etc
- A timetable for implementation, demonstrating that the works are aligned with the proposed phasing of construction and species and habitat requirements
- Adoption and maintenance proposals that will plausibly sustain the habitats and habitat condition claimed in the BIA for the minimum 30 year period

- A full 30 year management plan and details of legal agreements for any off-site offsetting that will not be being provided by NBBC or Warwickshire County Council (WCC)

Other considerations when preparing the habitat and species proposals plans, BIA calculation and BEMP

Ensuring sufficient space for wildlife

When creating new and protecting existing ecological habitat providing sufficient space is often key to its success and sustainability. The closer ecological habitat is to people, pets, hard landscaping and structures the greater the impact these factors will have on the habitat and the associated species it supports. This increasing impact will be via increasing disturbance, increasing risk of damage, compaction, predation, pollution and introduction of non-native species, and the increasing influence in the way this habitat is managed. Management changes can be due to cosmetic, physical and safety pressures. These factors will have a direct impact on the condition of the ecological habitat and will therefore impact how valuable it will be to wildlife and how it scores on the biodiversity impact assessment.

For these reasons we suggest that the most sensitive features and habitat are located as far away as possible from busier areas of the development and that buffers are used between development features and habitat to protect the habitat (both existing and new) and to reduce conflict between land uses.

Our required buffers/standoffs are outlined in the table below. You may note that the standoffs for new ecological features are similar or in some cases the same as the buffer distances required for existing ecological features (as set out in the habitat buffer table above). The reason for this is that the new features will require a similar space to existing features, over time, in order to reach the desired condition and to be successful and useful to wildlife.

New habitat recommended buffers

New ecological feature or habitat	**Buffer/standoff Zone**	**Suitable buffer can contain**	**Suitable buffer cannot contain**
New native woodland or groups of native trees planted for ecological benefit	To achieve a better condition at maturity and therefore score higher in the biodiversity impact calculation we suggest a significant buffer is provided. Minimum 30m or height of tallest tree at maturity, largest root protection area, zone of influence or widest canopy whichever is greatest	Native soft landscaping, grass or understory species. Footpaths at least 3m from tree stem/trunk	Services, structures or roads
Singular new native trees planted for ecological benefit	To achieve a higher biodiversity score and to be more sustainable we suggest a buffer consistent or greater than the height of tallest tree at maturity, largest zone of influence or widest canopy at maturity whichever is greatest	Native soft landscaping, grass or understory species. Footpaths at least 3m from tree stem/trunk	Services, structures or roads

Trees planted primarily for landscape benefit so street trees, garden trees, and trees in formally landscaped open space etc	Trees not specifically planted to achieve significant ecological benefit/condition can tolerate being closer to people and benefit the landscape and people in different ways. Care should still be taken when selecting the best species and location - See constraints and requirements as set out in Tree chapter	See constraints and requirements as set out in Tree chapter	See constraints and requirements as set out in Tree chapter
New native scrub, hedges and bushes	To achieve a higher biodiversity score and to be more sustainable we recommend a buffer that contains the canopy width or spread if they were to be left unmaintained approx. 4m(2m either side of stem) and 2m additional space beyond this hedge corridor - for the edge habitat. Total width required (excluding trees and maintenance strip) 8m. N.B Where hedges exist in public space please leave a 8m tractor maintenance access route alongside at least one side of the hedge, this should be beyond the unmaintained canopy width.	Native ground flora and grasses	Services, structures footpaths or roads
New or existing river, stream, pond or lake	12m from top of bank with additional space provided where there is existing accompanying habitat.	Soft landscaping - native species. Footpaths - no closer than 5m from top of bank	Services, structures, roads
New and existing ecologically valuable grasslands and marshes	5m from edge of meadow area	Soft landscaping - native species and/or grass species Footpaths or services (set back at least 2m from edge of meadow)	Services, structures or roads

Providing connectivity for wildlife

Providing connected habitats for the wildlife using your development site and using surrounding land is key to helping wildlife be more resilient to climate change and to cope with the pressures of urbanisation. Isolated populations of wildlife are much more vulnerable to extinction and a well-connected landscape of interlinked pockets and wider areas of habitat is almost always richer in biodiversity.

Within an urban development there are normally two locations for delivering this connectivity, in private green space and in publicly accessible greenspace PAG.

Providing wildlife connectivity within private green spaces

In general, well connected, permeable (i.e no barriers for example fencing large gaps in habitat) dark, native and undisturbed habitat works best for most native species. Within garden spaces this may mean providing suitably sized native tree(s), native shrubs, a green wall/roof, using a hedge instead of a fence and crucially when thinking about ground moving species providing gaps for wildlife to access garden spaces/networks ie. leaving sufficient gaps along the bottom of the fence line. For specific ideas on how to make private spaces more wildlife friendly and crucially wildlife permeable please refer to Part A of this SPD titled Householder and up to 9 dwellings or consult your ecologist.

Whilst providing habitats and connectivity within private spaces is welcomed and encouraged, we recognise that this privately owned provision may be less secure then publicly/communally owned and managed habitat. For this reason, it is crucial that more important or sensitive wildlife routes are managed by an organisation with the experience and ongoing commitment/legal requirement to look after them appropriately.

Providing wildlife connectivity within PAG

Providing important wildlife connections within publicly accessible/publicly owned space is likely, in most cases, to provide greater security to the provision and may result in the provision/habitat reaching a better condition.

A great opportunity for increasing connectivity for wildlife within new development is by connecting new green space to existing green space, a theme which is encouraged throughout this SPD, and via providing and enhancing species accessible green links as part of your Accessible Green Network.

In brief the Accessible Green Network can be considered, in terms of wildlife and people, in a neighbourhood and strategic context. Neighbourhood greenspace corridors should facilitate the species found locally and other commonly found urban species. The strategic green links should cater not only for locally found and commonly found species, but also for species which are more disturbance/light sensitive and species found in the wider context, which may be moving through the landscape. Examples are given in the Accessible Green Network chapter of the different types of landscape features found in each network type, but the design of these networks will be informed by the wildlife surveys that you complete.

5. Trees

5.1 Introduction

Trees add value, they are attractive to industry and commerce and are fundamental contributors to any given sense of place. There is significant evidence that trees are good for people; that they improve quality of life and that their integration in residential environments can help produce pleasant places to live. Evidence suggests also that trees add value to properties. Some of the more desirable property addresses are notable for having a higher quantity and quality of tree canopy cover. We strongly advocate the retention of trees in all types of development and the provision of new trees for future generations to enjoy.

Trees can take generations to grow, generations to replace, and be lost in a momentary action and so upmost care is needed when developing land to protect these important features.

The advice in this SPD is to be considered in conjunction with the most recent British Standards publications (or the latest subsequent revision/alternative thereof), in particular **BS 5837:2012** *Trees in relation to design, demolition and construction – Recommendations* and Nuneaton and Bedworth Borough Council's Tree Policy as amended. Proposals for tree works and/or planting will not be acceptable unless they conform to the recommendations of **BS: 3998:2010** *Tree works – Recommendations* and **BS 8545:2014** *Trees: from nursery to independence in the landscape – Recommendations* or accompanied with a clear, relevant and acceptable justification. Similarly, attention should be given to **NJUG Volume 4**: Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity

to Trees and other documents where applicable. Any deviation from the recommendations and/or advice contained within any publications (or the latest subsequent revision/alternative thereof) mentioned in this document will require a justification to be submitted to the LPA for consideration.

Please note that throughout this document, “tree/s” refers also to groups, woodlands and hedges unless specified.

It is recommended that this document is read in full before first contact is made with the Planning Department. Failure to evaluate fully the impacts of development at the earliest opportunity could affect the efficacy and efficiency of the planning process and may well lead to a reduction in the value and desirability of the development through tree cover losses.

From start to finish the protection of trees will be considered paramount by the LPA. Therefore, it is critically important to recognise early how trees may become damaged or at risk. It is important to recognise that there are various pervasive myths that concern trees. Perhaps the most damaging in terms of construction and demolition is the myth that roots are a reflection of the upper tree anatomy. Trees do *not* have deep tap roots as often imagined. Rather than being deeply penetrating, most roots are in fact found in the top metre of soil and will typically spread well beyond the canopy line (and designated Root Protection Areas which are only a representation of the **minimum** rooting area that should be afforded for tree protection, by default). Works within and abutting RPAs will not be permissible unless justification is provided to the LPA and approved. Note: even a small trench 0.5 metres (20 inches) deep to accommodate a cable or drain may lead to the loss of the tree. Trees rely on the stability of soil-structure and ground conditions in which they grow and changes in this environment can easily become critical. Damage to the rooting system, however, is often overlooked or misunderstood.

Examples of the most common ways tree damage is caused are as follows:

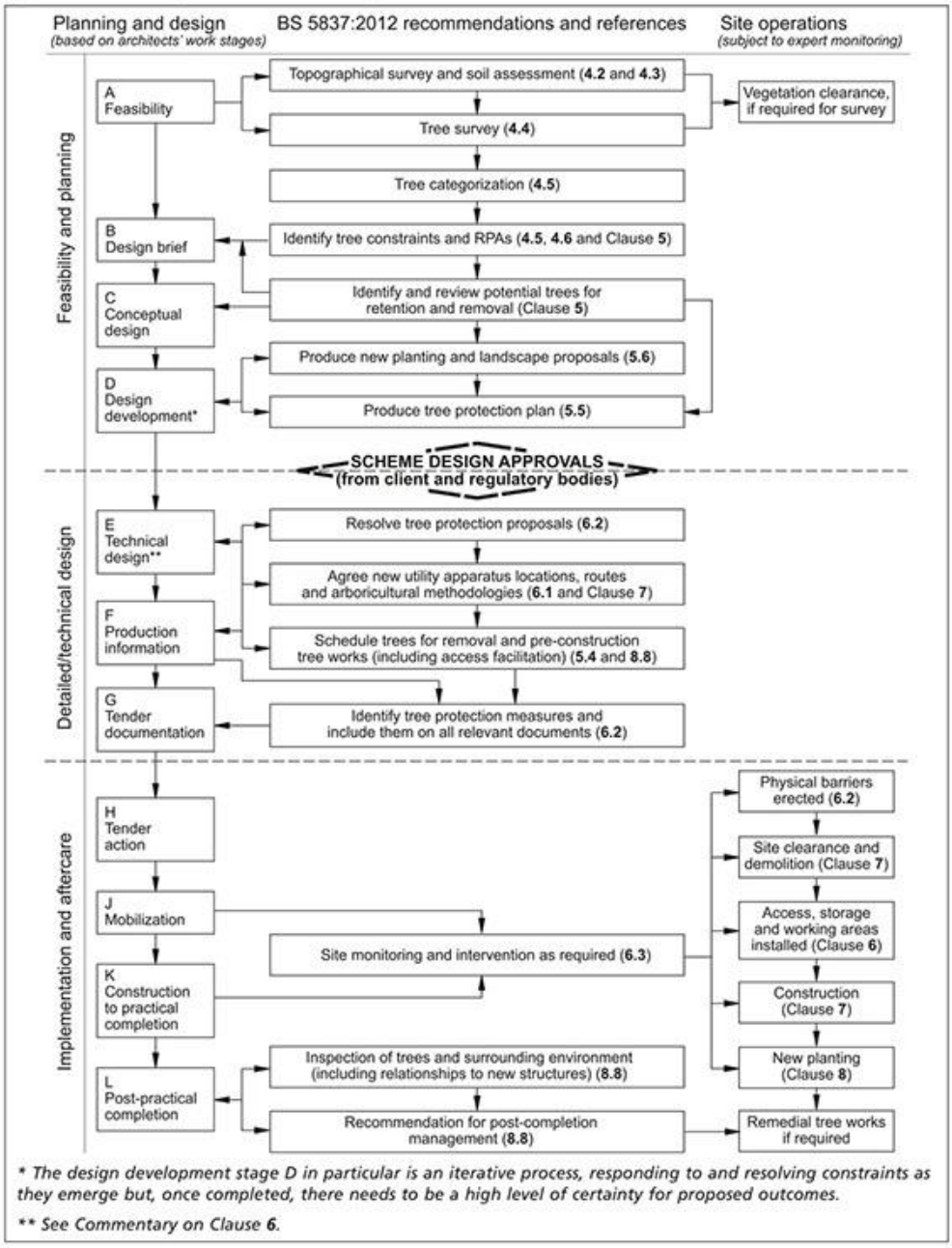
- compaction of the soil from repeated movement of heavy machinery.
- raising or lowering soil levels
- alteration of the water table
- root bark damage from site stripping or grading.
- cutting of roots during excavation for foundations and services.
- the spillage of petrol or diesel, mixing of cement and the storage of toxic materials or machinery under the canopy of a tree
- burning waste materials too close to the tree.
- removal of branches to create space for scaffolding or access of heavy plant
- bark wounds or broken branches caused by machinery.

The LPA considers that the surest way to integrate existing trees into a proposed development successfully is to allow enough space in the design to enable trees to realise their full genetic potential without outgrowing their surroundings. Ecologically, the longer a tree’s lifespan the greater its contribution. In retaining trees, development should seek to also retain all the other associated benefits that the tree can potentially provide. It should not be expected that it is acceptable, or possible, to make a big tree into a smaller healthy tree to assist retention, or to squeeze the tree into such a space that is unable to thrive. Therefore, it is paramount that all retained trees are fully recognised as constraints within the planning process and that, ultimately, they require accommodation throughout their contributing years. Therefore, it is important to recognise that retained trees were there from the outset; their existence precedes the design.

With the above in mind it is important that all parties involved in design and realisation of a project understand, at the earliest opportunity, where trees sit in the process and what documentation will (or will likely) be required by the LPA. Tree protection and the successful long-term retention of healthy/thriving trees is more likely to be successful if the correct information is submitted in the correct sequence and approved as part of the initial planning

application. To this effect attention is drawn to *BS 5837:2012* Figure 1: *The design and construction process and tree care which* is shown below.

Figure 1 **The design and construction process and tree care**



** The design development stage D in particular is an iterative process, responding to and resolving constraints as they emerge but, once completed, there needs to be a high level of certainty for proposed outcomes.*

*** See Commentary on Clause 6.*

BS 5837 Table B1: *Delivery of tree-related information into the planning system* is also provided below. It is expected that all information in this table is provided to the LPA unless it has been agreed otherwise.

Table B.1 **Delivery of tree-related information into the planning system**

Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions)	Existing and proposed finished levels
	Tree retention/removal plan (finalized)	Tree protection plan
	Retained trees and RPAs shown on proposed layout	Arboricultural method statement – heads of terms
	Strategic hard and soft landscape design, including species and location of new tree planting	Details for all special engineering within the RPA and other relevant construction details
	Arboricultural impact assessment	
Reserved matters/ planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method	Arboricultural site monitoring schedule
		Tree and landscape management plan
	Dimensioned tree protection plan	Post-construction remedial works
	Arboricultural method statement – detailed	Landscape maintenance schedule
	Schedule of works to retained trees, e.g. access facilitation pruning	
	Detailed hard and soft landscape design	

Development site layouts are expected to:

a. provide the retention of as much of the existing tree cover as is practicable.
b. ensure trees retain or are allocated adequate space within the design and overall landscape of the area.
c. make adequate provisions for the long-term retention of trees and woodlands
d. ensure tree retention also includes the retention of associated benefits and value (e.g. amenity, aesthetic, and ecological contributions etc).
e. nullify or satisfactorily reduce potential threats that may put undue pressures on tree retention.
f. provide for the retention (and enhancement where appropriate) of existing hedgerow cover where practicable. (The blanket retention of hedgerows is not necessarily required. The retention of hedgerows should select those that add significant value and give them sufficient space so that their value can be retained and increased. New hedgerow planting can be made in strategic areas to replace ecologically poor hedgerows that may need to be removed).
g. ensure the long-term retention of all 'important hedgerows' in accordance with the Hedgerow regulations 1997
h. allow appropriate space for new planting and choose the right tree for the right place
i. ensure landscape schemes make provision for sufficient replacement planting to compensate adequately for any loss of existing trees and resulting loss of amenity

Development documents must include sufficient information to allow for a full, detailed arboricultural assessment based on the short and long-term impacts of development

Site works and work commencement

Developers will be required to notify the LPA prior to commencement of any works on site, including demolition. At this stage the Council Officers will request evidence (or inspect) that the protection measures are correct and in place. Ad-hoc visits may be made throughout the construction phase to check that tree protection measures are still

in place. Where a breach of any tree protection related planning condition is identified, the LPA will exercise their powers of enforcement, where necessary, to ensure compliance.

The LPA will not only expect developers to obtain the appropriate professional advice during the application stage, but may attach a condition to ensure adequate supervision of the construction phase by a Project Arboriculturist and to provide a schedule of events and a report of findings.

If difficulties are experienced at any time during a construction/demolition process in complying with conditions relating to trees (e.g. in maintaining the distances for protective fencing in accordance with the Tree Protection Plan) or it is desired that the terms of any conditions be modified, it will be necessary to obtain the written agreement of the LPA.

Operatives should be aware of all tree protection measures, and a copy of the approved Tree Protection Plan, any Arboricultural Method Statements and a copy of the planning consent, with conditions, should be made available for inspection on the site. It must be understood by all operatives that the protective fencing must not for any reason be removed or tampered with, without prior approval.

If a retained tree is, or might be damaged in any way, the contractor should inform the LPA immediately.

No tree protection should be removed until a Council Officer or the developer's appointed Project Arboriculturist (by agreement) has inspected the site and/or has formally approved removal. Failure to comply could prevent the full discharge of tree protection conditions.

5.2 Survey and document requirements

Documentation in relation to trees is required at the initial point that the development is presented to the Council for consideration unless otherwise stated.

Documentation required in relation to trees includes:

5.2.1 Land Surveys (LS)

Land Surveys must show all relevant site features accurately and clearly. The survey must include the location and identification of all trees, hedgerows, and shrubs over 2 meters in height or with a minimum 7.5cm indicative stem when measured at 1.5 meters above ground. The survey should include a scale drawing of 1:100 or 1:200 and be in a usable/agreed digital format. It will ideally be made available before any application for planning permission is submitted. It should also include as a minimum requirement: spot heights of ground levels throughout the site, location of trees on adjoining land that are less than half a tree height or 12 times the stem diameter, whichever is greatest, from the proposed development boundary. It will include all groupings and/or woodland planting relating to such qualifying trees.

Surveys must:

a. be completed by suitably qualified person
b. be precise and clear
c. show all relevant site features in and around the site*
d. be scaled at 1:100 or 1:200 or as agreed
e. be in a common digital format
f. include the spot heights of ground levels throughout the site
g. include accurate location and identification of all trees and shrubs (over 2 metres height and/or with a stem of 750mm at 1.5 metres above ground)

h. include the location of trees on adjoining land that may be impacted by the development i.e. trees that may already have or which may go on to have mature RPAs, canopies or fall zones within the development site or trees which may exert influence within the development site as per the Association of British Insurers guidelines.
i. show accurate canopy spreads. If this is irregular it should be shown as such
j. show numbered trees - which are then consistently numbered in other development documentation for example CEMP and BEMP documents, development outline and landscape plans etc.

* Site features might include: trees, hedges, shrubs, structures, old buildings, watercourses, ditches, services, service runs, roads, driveways, walls and any areas of nature conservation interest.

5.2.2 Tree surveys (TS)

Tree Surveys will be required by default if there are existing trees on site or where qualifying trees are within 15m, or 12 times the indicative diameter of the tree when measured at 1.5 metres (from the ground), of any boundary where construction is likely to be proposed (unless good reason and evidence can be provided to negate such a requirement).

Recommendations within, or arising from, the findings of the TS should be based on the condition and value of the trees as they are and NOT on a preconceived layout for the site or from assumptions regarding the future status of the trees - unless reasonably based on the species, age and condition of the tree as per TS inspection. Where trees cannot be viewed or inspected assumptions should be reasonably favourable and/or 'rounded up'.

A TS will only be undertaken by a suitably qualified Arboriculturist, with experience of trees on development sites. It will be expected to meet the applicable requirements of sections 4.2 to 4.5 of British Standard 5837: 2012 'Trees in relation to design, demolition and construction – Recommendations'.

The Tree Survey (TS) must assess all existing qualifying trees and should include at least the following information:

a. species of tree
b. identification of any trees protected by Tree Preservation Orders or Conservation Areas.
c. show accurately plotted information with reference numbers (that cover all eligible trees)
d. height (in meters)
e. diameter of stem measured in accordance with Annex C, BS5837:2012
f. canopy spread (in metres) referencing all four cardinal directions
g. height of crown base (i.e. clearance above ground of lowest branches; in metres)
h. age class (e.g. young, middle age, mature, over-mature, veteran)
i. assessment of condition (physiological and structural)
j. preliminary tree management recommendations (e.g. remove deadwood, crown lift etc)
k. desirability for retention in accordance with Table 1 of BS 5837: 2012. Retention categories should be clearly differentiated on all relevant plans
l. numeration as per LS.
m. estimated remaining contribution (in years)
n. be used in conjunction with the LS and TCP if a tree likely to be affected by the proposal
o. be based on the condition and value of the trees as they are, and NOT as they might be or how they might relate to a preconceived layout for the site
p. a tree quality assessment (see table 1 of BS 5837: 2012 – to be recorded in plan on TS drawing and to include the recommended relevant subcategories (arboricultural, landscape and conservation/cultural values)
q. the applicable requirements of 4.2 to 4.5 of BS 5837 2012 (or current version thereof)
r. all ecological advice that has been requested and/or is clearly useful information in relation to trees. An evaluation report may also be requested, to be added to the survey.

5.2.3 Tree Constraints Plan (TCP)

NBBC consider the TCP to be an essential element of the process. It is essential to the efficacy and success of a project that information from the LS and TS is interpreted correctly so that the proper selection of trees, suitable for retention, are known suitably early. This plan will show the constraints that these trees impose on the site now, and how areas of constraint, or the constraint of individual trees, relate to the proposed development. All applicable hedges should be included in this plan. This document should be overlayed to the proposed outline development plan and the detailed development plan at the relevant application stage. The TCP will illustrate as clearly as possible all known constraints imposed by trees (above and below the ground) and it must be complete and made known by relevant persons prior to determining the layout of the development. The TCP should be seen as a design tool, or aid, that helps to disclose / make clear to designers the constraints imposed by trees, both above and below the ground, and that must be used to inform the design process where applicable.

Please note: there is often a misconception that category 'C' trees, being those of lower quality and value, are dispensable. However, in certain situations it may be a requirement that certain category 'C' trees are retained until new planting has established.

Section 5 of BS: 5837 must be followed.

The following shall be clearly shown.

1. **Below ground:**

a. The TCP should illustrate all RPAs (with reference to section 4.6 – 5.2.4 and Table 2 of BS 5837: 2012 for more information and detailed guidance on the calculation of this area.
b. The tree species zone of influence as identified by the Association of British Insurers
c. The anticipated root spread, paying due attention to site features like banks and structures that may have influenced how the root area has developed

2. **Above ground:**

a. The current spread of trees (Category A, B and C trees)
b. The ultimate height and spread of trees at maturity
c. Anticipated shading impacts *from* the trees (the LPA may request details of possible shading from building *on to* trees)

This information will contribute to the final size of the buffer zone/s or the root protection area/s that will be required to protect the existing trees. See further detail in the Biodiversity/CEMP chapter.

Buffer Zones may be requested for areas where it would be unreasonable to locate inhabited buildings. These should be established regarding the ultimate size of trees in relation to proposed buildings. Zones will allow trees to grow and mature naturally without unreasonably dominating buildings or gardens either now or in the future and should also take account of reasonable daylight requirements. It may be acceptable to locate uninhabited buildings (e.g. garages) or lightly loaded structures such as driveways, paths or hard standing within a buffer zone. However, incursions of any kind shall not be made into RPAs without clear justification.

5.2.4 Arboricultural Impact Assessment (AIA)

The AIA should identify the impact of the proposed layout on existing trees and detail all measures available to reasonable mitigate adverse effects.

The AIA should also help inform the site layout and design as changes may still be made to assist mitigation. Where it is recognised that there are competing needs in other areas of the development it may be essential to identify the most important trees for retention and then to ensure that sufficient attention is given, and solutions sought, throughout the design and construction process to ensure that these trees, along with their value and benefits, can be retained **satisfactorily**. Mitigation for tree losses will always be a consideration.

5.2.5 Tree Protection Plan (TPP)

The production of an accurate LS, TS and TCP will aid the production of a successful TPP.

The physical protection of trees will also require additional support measures (e.g. informed staff via training/workshops, signage, inspection, and supervision) during the construction process. This is the best way to ensure successful tree retention.

An outline TPP should be provided at initial point of contact or at the outline application stage. This will help determine spatial planning and development layout decisions.
A detailed and complete TPP should be provided at the detailed development stage. This plan will inform exactly how trees are to be retained and protected during the development construction process.

Please refer to BS 5837: 2012 section 6 (including Figure 2 + 3) for advice on physical protection.

An outline Tree Protection Plan should include 2 plans and any necessary accompanying information:

a. A plan showing identified trees and their buffers on site, clearly identifying which will be retained and which will be removed, with an overlay of the outline development plan
b. A plan showing identified trees on site and their buffers, clearly identifying which will be retained and which will be removed, with an overlay of the outline plan for the construction phase plan of the development, including temporary accesses, temporary road site offices and storage areas.

A detailed Tree Protection Plan (TPP) should include the following:

a. A plan showing the trees to be retained or removed, clearly identified by number, the buffer areas, the precise location of protective barriers.
b. This plan should then be overlaid separately to the following site detail:
    i. the construction phase plan showing the locations of site huts, temporary toilet facilities, temporary drainage, temporary roads and accesses, storage areas of materials (inclusive of soil) and anticipated disturbance areas associated with the installation of services.
    ii. the final development plan including detailed landscaping plan indicating all boundary treatments, structures, other hard landscaping features and location of proposed services.
c. The specification of protective fencing must be identified.
d. The details of what operations will be supervised and recorded (via photos and site inspection reports) by the project arboriculturist.
e. Include a schedule of pruning work as identified in the tree survey – such works are understood to be done as recognized tree management (as per BS3998:2010), or as a precautionary measure based on the risk assessment of the tree in its new proposed location in relation to the development, or to prevent accidental damage during construction, or as a one-time operation to facilitate access.

The Council may require that a Project Arborist (PA) be named, and their contact details supplied to the relevant LPA Officers. Details of PA responsibilities, schedule of inspection and evidence of inspection may be further required. To

ensure the integrity of a protection system, and avoid tampering, further security measures may be requested as a condition. Signage will be required to say that protective fencing must be keep in place until specific permission has been given by the LA.

Failure to follow tree protection measures may result in a stop work notice or other measures being taken.

5.2.6 Arboricultural Method Statement (AMS)

Where trees are vulnerable to damage an AMS will be required and will be an integral component of tree protection and the successful retention of **healthy/thriving trees.**

A method statement is likely to be required when one or more of the following examples, or any practice that may result in the foreseeable harm of trees, is a consideration at the time a planning application is submitted:

a. Site construction access.
b. Demolition of existing structures.
c. Removal or replacement of existing surfacing.
d. Groundworks directly adjacent to trees designated for retention.
e. Positioning site huts and temporary toilets for use during the demolition/construction phase (including their drainage requirements).
f. Space requirements for storing materials, spoil and fuel
g. the mixing of cement/concrete or use of such material that may be harmful to a tree
h. Construction of underground service runs
i. Foundation excavations and construction works
j. The installation of bike sheds, bin storage or other temporary infrastructure.
k. Specification and installation of temporary and permanent access paths/driveways near trees.
l. Landscape operations (e.g. soil preparation within the RPA).
m. Space requirements for piling rigs, foundation excavations and construction works.
n. All changes in ground level, including the location of retaining walls, steps etc
o. Soil stripping

5.2.7 New Tree Planting scheme/plan

The aim of the tree planting schedule, which should be included in the landscaping plans, must as a minimum be such to retain and to increase overtime the overall coverage of trees in your development site post development, and to ensure that this coverage is sustainable.

We encourage:

- Street trees wherever possible
- Tree(s) in gardens
- Structural tree planting in open space and park areas
- Trees in green network corridors
- The use of trees to absorb run off pollution and the absorption of CO2
- Bigger trees where they are suitable for large open space areas

Retaining the coverage in the short term will mean that you will need to replace any removed trees using a 3/2/1 formula wherever possible: at least 3 new trees for loss of a large tree, 2 for a medium tree and 1 tree for a small tree. The coverage will then spread as the trees mature. We also strongly encourage developers to plant trees above our minimum canopy coverage threshold wherever possible, this is especially important where sites have low

coverage to start with. This increase in coverage will be subject to protecting other important habitats which may also be present or necessary on your development site.

An arborist must be involved in designing the landscape scheme (in relation to trees) as they will best placed to understand the behaviour, height, spread (above and below ground), needs and safety considerations of different trees.

Proposed tree and scrub/hedge planting will need to be planned prior to finalising the location and specification of structures and hard landscaping. This is because trees and hedges may influence the exact location and design of nearby hard landscaping and structures.

Early planning of where you would like trees will help you plan the spatial layout of your development. It can be extremely hard to squeeze in trees after the hard landscape is set. For this reason; we would like developers to indicate broadly how and where they will add trees into the landscape of their development, at the earliest possible point in the application process, so at the outline stage, if the development is being submitted in stages.

More space will be required for trees that are designed to provide ecological value. This is due to the fact that the closer a tree is to development, the more management of the tree will be necessary, the greater the impacts of the development are on the tree and the species it supports and as a result the lower its value to wildlife.

Less space is required for trees planted for purely landscape reasons, CO2 absorption, water absorption and aesthetic appeal. However, impacts will still need to be considered and mitigated (by choosing the right tree for the right location) so that the tree is allowed to reach its true potential and so that it is sustainable in the particular setting.

Ensure that:

• **The tree at full maturity should not cause legal nor significant general nuisance.** The tree's natural mature canopies or root spans should not touch properties. There is a degree of flexibility in this with regards to street trees, as these are often highly managed however this should be avoided in other locations

- **The tree's propensity to shed honeydew, seeds or fruit etc. is appropriately considered.** This will particularly influence the species selection of trees near parking areas and gardens.
- **The shading from mature trees will not be significant.** Shading of trees must be shown on your plans for existing trees. It should also be shown and considered in the selection and location of newly planted trees.
- **The shading impact from the development or other trees can be coped with by the species chosen**. Alter species and planting densities or location as necessary.
- **The species and planting positions in proximity to adjacent constructions, such as walls and buildings, will be such to avoid the risk of structural damage occurring as trees grow and mature.** Seek specialist advice when locating trees near buildings and structures as different trees will have different under and overground habits that may impact these structures. Selecting the right species and providing enough space is crucial in these locations for successful retention and enjoyment of the trees. If trees create an actionable nuisance then they are almost always removed.
- **The tree planting schedule will not prevent or make it difficult for adjacent residents to get building insurance.** Ensure trees generally have minimal influence on structures by picking tree species carefully when locating them near properties. Refer to The Association of British Insurer guidance to help pick appropriate species for the location.
- **The planting schedule will complement the surrounding architecture, the historic environment, and the local landscape in the long term**. (e.g. formal planting appropriate to formal environment; more irregular/varied

planting as suitable for an informal environment.)

- **The support systems which the tree relies on to grow and thrive will be those of good current practice and tailored to environmental context and tree requirements.** Provide enough soil and space for the roots and ensure the roots receive sufficient water and nutrients. As much soil/substrate volume as necessary should be allowed for tree root development to allow trees to reach their full genetic potential.

Choosing the right tree for the right location can be tricky so this planning must be done by someone with appropriate experience in this field.

When deciding on what the right tree is for the space please refer to guidance The Urban Tree Manual which has some very useful advice and provides further onward links and conform to BS 8545:2014 Trees : From nursery to independence in the landscape – recommendations.

6. Accessible Green Network Corridors (AGNC)

What is a Accessible Green Network Corridor?

An accessible green network is made up from two things, a green landscape/wildlife corridor and a path network. These elements must coexist for the space to qualify as PAG/a AGNC.

Paths and green networks can exist separately from each other within developments but it is only where these two elements exist together that they are considered PAG/an AGNC

Commercial developments will need to prioritise delivering accessible green network corridors when delivering their PAG on site. Providing sufficient and appropriately facilitated green networks will encourage staff to use active transport methods to get to work and reduce car use, it will also enhance biodiversity networks in the area.

When deciding where to provide paths your focus should be on getting people to work and supporting and enhancing wider networks that move through or adjacent to your development site. To understand the wider network please refer to the relevant Borough Plan concept plan to understand the broad movement corridors required in your area. Please note however that this is a concept plan not a masterplan and further routes may be required, and the location of proposed routes may change and in rare occasions routes may no longer be needed. Speak to your Planning Officer and/or the Parks and Greenspaces team for further advice of what is required where.

When deciding which green links need improving/ extending/providing through your development site please refer to your biodiversity survey work to understand how wildlife is using and moving through your development site.

For more information on Accessible Green Network Corridors including design specifications, landscape, health and safety and maintenance requirements please see appendix 1 PAG compliant Park, Allotments and Green Network Corridors. Specifications are also provided in the Parks and Green Spaces standard specification document which can be provided upon request.

7 Accessible Sustainable Drainage Systems (ASUDS)

7.1 Introduction

Commercial and industrial developments are required to provide a flood impact assessment and to provide sustainable drainage systems where necessary. Sustainable drainage systems are the drainage systems which collect and manage surface water runoff from developments. They are required on most developments to reduce the rate of water flow into the surrounding environment to pre-development rates and where required they must also cater for storm events. They are also used to protect the wider environment from pollutants in the runoff by creating systems that absorb the pollution before it reaches wider water courses.

Warwickshire County Council as Lead Local Flood Authority, Severn Trent and Ciria/Susdrain provide guidance and best practice advice for developers on the construction, functionality and design of drainage systems which you must appropriately accommodate in your SUDs design.

This document will examine the requirements we have to make these systems suitable for free public access, to make them valuable to wildlife, to ensure they can be managed suitably and safely and to describe how we want them designed in order to provide significant aesthetic and recreational value to the development. The standards we discuss are made on the assumption that the SUDS system will also be designed to fulfil the required drainage/flood alleviation functionality and the flood authority's and adoptees requirements.

If the SUDS satisfy the required functionality requirements and are designed to fulfil our accessibility and ecology standards then they will count towards your (PAG) requirement.

If SUDS are provided that do not meet our ASUD standards then they will not count towards your PAG requirement.

7.2 What is an accessible sustainable drainage system?

An accessible sustainable drainage system for the purposes of this SPD is a drainage system that not only delivers the required water management functionality, but which is also suitable for unsupervised public access, is appropriately provided with infrastructure for this public access, is safe enough that fencing is not generally required, is safe to manage, is economic to manage, has significant sustainable ecological value and provides tangible aesthetic value to the development.

7.3 What design standards do we require to make it an ASUD/PAG compliant?

For more information on Accessible Sustainable Drainage Systems including design specifications, landscape, health and safety and maintenance requirements please see appendix 1 PAG compliant Park, Allotments and Green Network Corridors. Specifications are also provided in the Parks and Green Spaces standard specification document which can be provided upon request.

8 Staff and visitor communal break out areas

8.1 Introduction

Communal staff and visitor break out areas are the spaces provided by employers on site for staff to have a break outside, to meet and welcome visitors. They are an accessible green space outside of buildings for all to use. These spaces in the context of this SPD should be soft landscaped to create a pleasant natural environment and must be

provided with hard landscaping and site furniture like paths and seating, as necessary, in order to facilitate a pleasant useable outdoor space.

8.2 When is this type of space required?

These spaces must be provided when the commercial development is unable to provide its full PAG requirements via required additions to the accessible green network or via providing accessible SUDS.

These spaces can be provided in isolation or in some cases in addition to other accessible green space provisions made elsewhere.

8.3 Break out area standards

8.3.1 Location

The location of break out areas must be adjacent or in very close proximity to the employment area, for example office or warehouse and if possible adjacent to or in view of nearby or adjacent open space.

The location of these areas should facilitate greatest use of them so a good position might be adjacent to common rooms, cafeterias near meeting rooms etc.

These areas can also help create pleasant views from inside buildings so positioning these areas or other attractive scenery outside of office or warehouse windows will increase their benefit to staff.

8.3.2 Size

The size of this area is dependent on the number of full time or equivalent employees and site opportunities and should be designed and facilitated to easily cater for the anticipated level of use.

8.3.3 Accessibility

This must be a communal area available to all staff and visitors (where appropriate) or be a fully publicly accessible area. The area must therefore be inclusive in its design.

8.3.4 Landscape

This area needs to be soft landscaped appropriately to the scale of the space. The aim of the landscaping will be to make the area a pleasant, predominantly green and living outdoor environment for staff and visitors to enjoy. How this will be achieved will be very dependent on the scale of the area, but we actively encourage features and landscaping that is beneficial to wildlife.

These spaces will be more beneficial to staff if they sit alongside or in conjunction with other green open space for example onsite biodiversity provision or suds features, or offsite green infrastructure. If locating this space alongside

other open space is not possible, ensure that these spaces have a pleasant view of other outdoor spaces or a pleasant view is created i.e via artwork etc.

8.3.5 Health and Safety

This area must be safe to use unsupervised and so must adhere to safe by design principles and be risk assessed for its intended use. In addition, features alongside this designated area must also be made as safe as possible. Maintenance of this area must be safe for maintenance operatives and so maintenance will also need to be appropriately risk assessed.

Appendix I - Summary of documentation required.

Document required	Required at which stages of development	Summary of key factors/elements to include – full detail in SPD	Relevant Section(s) of SPD/ relevant standards or guidance	Submitted and Satisfactory?
Publicly Accessible Greenspace (PAG) and/or Communal Greenspace **Proposed provision plan**	**Outline** **Detailed application stage** **Full application**	**Outline stage** Must include a plan showing which areas of development are to be provided to a publicly accessible greenspace standard as per our guidance and standards. This plan must also clearly state what their function will be (e.g. park, allotment, green network corridor, SUDs, communal areas – for Commercial/Supported Living developments) and broadly what facilities are to be provided as part of this. Proposed quantity of PAG and or Communal Area to be provided (which meets or exceeds minimum requirements) must be stated at this stage **Full application stage/detailed application stage** A detailed plan must be provided showing which areas of the development are providing the required elements of publicly accessible open space. All the specifics of the facilities, infrastructure, adoption proposals, topography, landscape and maintenance must be provided to support this plan. The facilities and infrastructure proposed must satisfy the PAG standards as set within this SPD and the accompanying Parks and Greenspaces Standard Specification document.	Part D - Commercial Developments Chapters 2, 6-8 Appendix 1 - Detailed Design Standards for PAG compliant greenspace	
All green space (public and private) **Adoption proposal plan/ Agreed adoption plan**	**Outline** **Detailed application stage** **Full application**	**Outline stage** Broad area plan to show the proposed adoption of the different spaces within the development. Key features like suds, parks and green network to be labelled and adoption intention/proposal identified. **Full application stage or detailed application stage** Detailed plan which is agreed in principle with adoptee. Plan to include adoption of overground and underground features including services and boundary features like fences/hedges etc. Access agreements for example where one landowner needs to cross another's land to maintain a feature for example services/drainage etc as necessary should also be identified at this stage.	Appendix 1 - Detailed Design Standards for PAG compliant greenspace	

Document required	Required at which stages of development	Summary of key factors/elements to include – full detail in SPD	Relevant Section(s) of SPD/ relevant standards or guidance	Submitted and Satisfactory?
All green space **Legal documents accompanying adoption plan**	**Detailed application/full application stage**	Full details of legal agreement or proposed legal agreement/document with adoptee. This must clearly state any obligations that come with the adoption e.g maintenance/replacement/inspection requirements.	Appendix 1 - Detailed Design Standards for PAG compliant greenspace	
All green space **Maintenance plan and accompanying maintenance detail**	**Detailed application stage or full application stage**	Show clearly on a plan and describe in an accompanying document what is expected regarding the maintenance of the different areas being created/retained/enhanced. This document should indicate the following items 1. Short, medium and long-term maintenance proposals 2. The goals of this maintenance and process for amending the maintenance or facilities/layout if necessary. 3. What the maintenance operation involves Including a. The type of operation b. Frequency of operation c. Proposed outcomes of each maintenance visit using national standards wherever possible e.g defra litter standards d. The likely type of equipment or machinery needed to complete the operation. This will need to be linked with the maintenance access plan clearly showing how the machinery needed can access the different maintenance areas. 4. Inspection regimes and to what standards or criteria 5. Repair and replacement thresholds for facilities and for hard and soft landscaping.	Appendix 1 - Detailed Design Standards for PAG compliant greenspace. Biodiversity Chapters	
All green space **Maintenance access plan**	**Outline stage** . **Full application or detailed application stage**	Outline development stage 1. Maintenance routes and access points indicated on plan with minimum route widths and major infrastructure (like bridges) and their proposed capacity indicated on the plan. Detailed or full application stage 1. Spatial plan showing proposed access and movement routes for all proposed maintenance activities, including turning and access points from the main highway. 2. Full appropriately verified detail must be provided for all infrastructure along these routes to demonstrate how this infrastructure eg bridges, gates and paths provide the widths, load capacity and clearance needed to cater for the proposed access 3. Topographical detail will be required along these movement, maintenance and access routes to ensure that the routes and maintenance areas comply with the proposed machinery's manufacture's guidelines for use. For example for ride on mowers tractors, trailers, flails and balers etc as appropriate.	Appendix 1 - Detailed Design Standards for PAG compliant greenspace To comply with relevant manufactures' guidance for safe use, weight limits (in regard to structures), widths, clearance and turning circle requirements of proposed commercially viable equipment.	

Document required	Required at which stages of development	Summary of key factors/elements to include – full detail in SPD	Relevant Section(s) of SPD/ relevant standards or guidance	Submitted and Satisfactory?
All publicly accessible greenspace (PAG) and/or communal greenspace **Risk Assessments**	**At full/detailed application stage** Detailed risk assessments are required for all areas/facilities/ and infrastructure of PAG which are to be provided.	**Full/ detailed application stage** Detailed risk assessments are required for all areas and features of the PAG and or communal areas identifying and suitably managing hazards. Development design should aim to remove the hazard, reduce the hazard and finally once the hazard has been reduced as much as possible protect people against the hazard. We ask developers to remove or minimise the hazard before considering protective measures as per HSE/ROSPA guidance. The following key areas/themes need to be covered where relevant. 1. Communal areas and staff break out areas relevant to intended use 2. Suds/other waterbodies and watercourses /Water Safety 3. Trees (existing and new) 4. Green Network Corridors and the wider pedestrian and cycle movement around the site. 5. Ecological habitat (existing and new) 6. The performance of maintenance and maintenance access 7. The wider environment 8. Unsupervised access 9. The use by children/older people/the disabled 10. Crime and the perception of crime – Secure by design principles 11. Sustainability and durability of facilities/infrastructure being provided. 12. The land/facility adoptee and their ability to manage the facilities and equipment being provided. 13. Facility/land interaction with hazards within and outside of the development site Risk assessments must be written to an appropriate standard, by appropriately qualified or experienced individuals.	Appendix 1 - Detailed Design Standards for PAG compliant greenspace Biodiversity and Trees chapters Health and Safety Executive HSE The Royal Society for the Prevention of Accidents - RoSPA.	
Whole development Topographical Surveys	**Outline** **Detailed application stage** **Full application**	The topographical surveys required (pre and post development). Determining what changes are planned in topography **Outline** A topographical survey of the existing site identifying site features such as trees, water bodies, water courses, habitat areas/features, existing built features, roads etc. This must conform with RICS best practice guidance. An indicative plan is also required at this stage showing which areas are likely to be changed by the development. **Detailed application stage** A detailed topographical plan is required of the development site post development clearly showing new and existing features and highlighting any changes to levels proposed. **Full application Stage** Plans as described above in outline and detailed application stages	Biodiversity and Trees chapters Appendix 1 - Detailed Design Standards for PAG compliant greenspace RICS best practice guidance	

Document required	Required at which stages of development	Summary of key factors/elements to include – full detail in SPD	Relevant Section(s) of SPD/ relevant standards or guidance	Submitted and Satisfactory?
Biodiversity **Ecological Surveys**	**Pre app/initial consultation /outline**	1. Desk study identifying existing ecological data of the site and surrounding area 2. Phase 1 habitat plan created from an up-to-date survey completed at the appropriate time of year 3. Protected Species Surveys for all protected species that could be using the development site, or which may be affected by the development	Biodiversity Chapter To comply with The Joint Nature Conservation Committee (JNCC) guidance To comply with Natural England protected species guidance	
Biodiversity **Construction Ecological Management Plan CEMP**	**Detailed Application Stage/Full Application Stage**	1. Details of protected species licences 2. Habitat creation and retention plans 3. Details and management of services/drainage proposals that cross the habitat areas and buffers. 4. Details of what habitat safeguards are to be employed at each development stage. 5. A timetable setting out all key operations and identifying those operations where an ecologist will be present. 6. What management, if any, of the retained features or habitats is necessary during each development stage. 7. Details of what species safeguards are to be employed at each stage of the development including: 8. What monitoring, checks and supervision will be undertaken and how this process will be recorded. 9. The details of a suitably qualified Ecological Clerk of Works to oversee implementation of the CEMP and address any contingency measures where appropriate. The provision, detail and timing of written reports to the Authority	Biodiversity Chapter	
Biodiversity **Biodiversity Ecological Management Plan BEMP**	**Detailed Application Stage/Full Application Stage**	1. The specific aims of your BEMP (habitat and species) 2. How these aims will be achieved 3. The specifics of how areas will be enhanced and when this will be done. 4. Proposed maintenance of ecological features 5. All species-specific enhancement proposals 6. A timetable for implementation 7. Adoption and maintenance proposals 8. A 30 year management/monitoring plan	Biodiversity Chapter	
Biodiversity **Biodiversity Impact Assessment**	**Outline and Detailed Development stage / Full application stage**	1. A pre-development habitat and habitat condition plan 2. A pre-development key habitats and buffer plan. 3. A pre-development calculation of the value of the habitats on site prior to development 4. A pre-development calculation of the value of the habitats on site prior to development 5. A post-development habitat proposals plan 6. A calculation of the post-development value of the habitats on site 7. Calculation of biodiversity units lost/gained	Biodiversity Chapter Warwickshire County Council - Biodiversity Assessment Calculator	

Document required	Required at which stages of development	Summary of key factors/elements to include – full detail in SPD	Relevant Section(s) of SPD/ relevant standards or guidance	Submitted and Satisfactory?
Trees **Tree Surveys and plans**	**Pre app include 2 where possible** **Outline stage include 1-3** **Detailed Application Stage - include 4-7 (assuming 1-3 already provided)** **Full application stage - All items**	1. Land Survey (LS) - See topographical survey 2. Tree surveys (TS) – what trees are on site and adjacent to site and details of said trees size/maturity/condition and value/importance 3. Tree Constraints Plan (TCP) - which areas are to be fully protected during all stages 4. Arboricultural Impact Assessment (AIA) - what's the impact on trees/tree cover and how will net gains be achieved 5. Tree Protection Plan (TPP) – including buffers and protection methods 6. Arboricultural Method Statement (AMS) – working methods in relation to tree protection where required. 7. New Tree Planting scheme/plan – details of new trees to be planted - can be incorporated in landscape plan.	Tree and Biodiversity Chapters	
Landscape plan	**Detailed Application Stage** **Full application stage**	Provide a plan showing all retained existing and proposed soft and hard landscaping Include 1. Soft landscaping a. Species, number and size b. Planting method/ spacing/density c. For trees please also show mature canopy and species' recommended minimum distance to building. d. For native scrub and hedges please indicated mature unmanaged spread and the proposed managed size and spread. 2. Hard Landscaping a. Specifications including relevant drawings/dimensions/colour/materials/supplier etc. b. Life expectancy c. Verified capacity/suitability for intended use including load capacity. d. Construction methods where appropriate e. Image of appearance where appropriate	Appendix 1 - Detailed Design Standards for PAG compliant greenspace Nuneaton and Bedworth Borough Council's Parks and Greenspaces Standard Specification	
SUDs	**Outline Application Stage** **Detailed/Full application Stage**	**Outline application Stage** – Broad location of SUDS and identification of whether it will be a PAG compliant SUDs provision or not. **Detailed/full application stage for PAG compliant SUD features** 1. Design and full specification including materials/cross sections of basins/ditches/structures etc. 2. Demonstration of compliance with this SPD's PAG requirements for SUDs 3. Description and relevant plans of ecological habitats to be provided as part of SUDs and demonstration of how design will provide wider environmental benefits e.g water filtering/cleansing etc 4. Engineer confirmation/support of feasibility of ecological and environmental aspirations -retention of water/ cleansing of water/maintenance access etc 5. Landscaping 6. Maintenance plan 7. Adoption proposal and full detail of agreements. 8. WCC approval of design and corresponding compliance with Flood Risk & Sustainable Drainage Local guidance for developers	ASUDs Chapter Appendix 1 - Detailed Design Standards for PAG compliant greenspace Flood Risk & Sustainable Drainage Local guidance for developers – Warwickshire County Council - Local Flood Authority	

		Detailed/full application stage for non-PAG compliant SUD features 1. Design and full specification including materials/cross sections of basins/ditches/structures etc. 2. Landscaping 3. Maintenance plan 4. Adoption proposal/agreements 5. WCC approval of design and compliance with Flood Risk & Sustainable Drainage Local guidance for developers		
Green Network Corridors (GNCs)	**Outline** **Detailed/Full application**	**Accessible Green Networks** are made up of either a neighbourhood or strategic path - depending on the path's importance e.g. a locally used path or path which is part of the wider active transport network – which is either of local or strategic importance depending on the landscape features included and its relevant importance to wildlife. **Outline application Stage** – Plan indicating broad location/links of proposed additions to /new sections of AGNCs and identification of whether provision will be PAG compliant or not. Indication of whether path networks/green network features are neighbourhood or strategic in nature. **Detailed/Full application** 1 Full details of hard and soft landscaping of all elements of AGNCs 2 Adoption proposals/agreements 3 Maintenance plans 4 Full specifications of all features	Accessible Green Network Chapter/ Appendix 1 - Detailed Design Standards for PAG compliant greenspace/ Biodiversity Chapter	