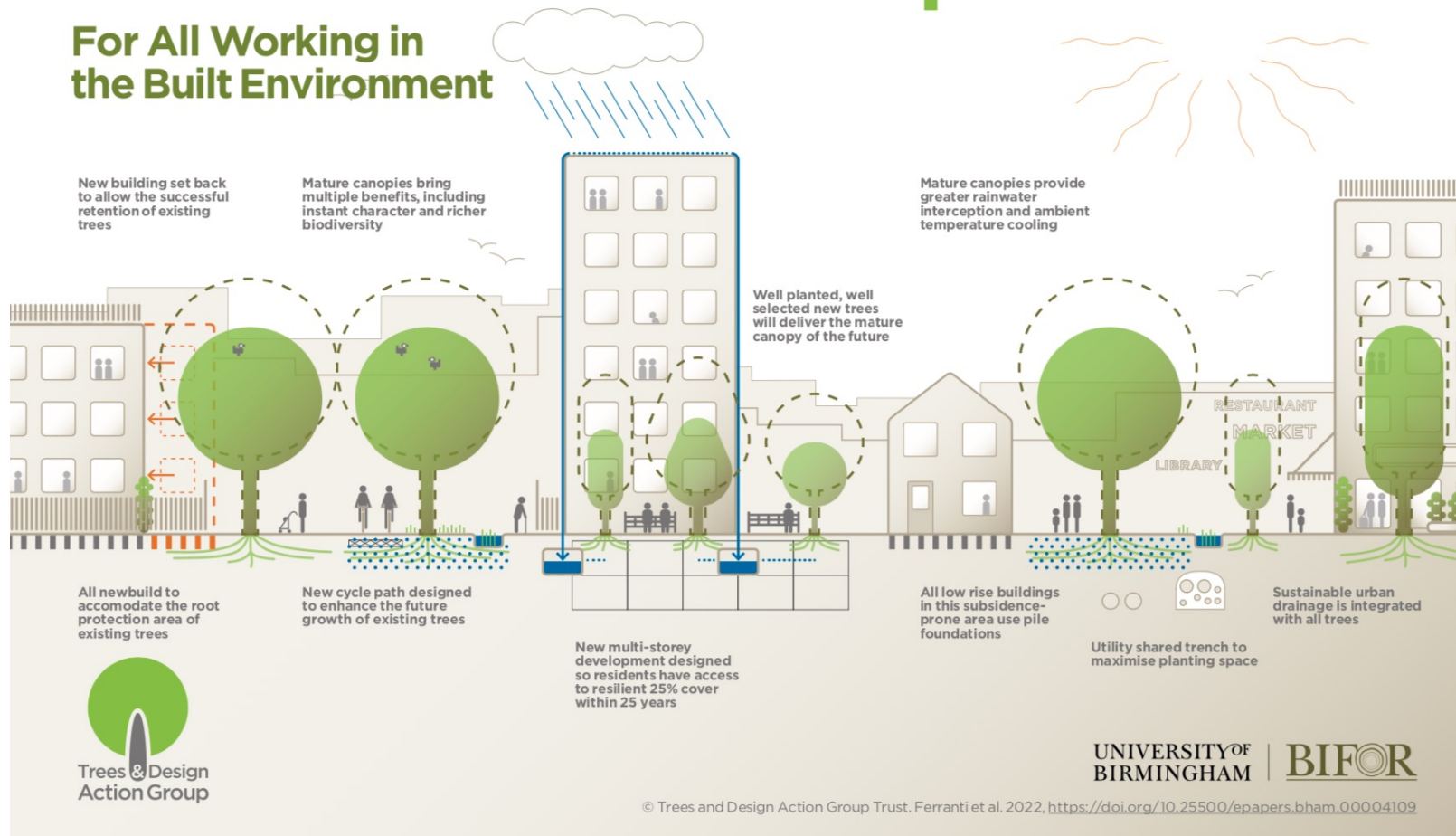


# First Steps in Trees and New Developments

## For All Working in the Built Environment



**Fig.1 Mitigation (ie new planting to replace existing trees) is necessary where tree loss is unavoidable, but it cannot be exclusively relied upon to secure good tree outcomes from developments. Here's why:**

**Lag time**

**>25yrs**

**Even with robust mitigation approaches it can take at least 25 years to match the benefits provided by the existing trees.**

**Likelihood of survival**

**<60%**

**In some cases, up to 60% of newly planted trees in residential settings do not survive beyond five years.<sup>13</sup>**

**Cumulative impacts**

**>40%**

**Within three years, 40% of existing trees found on development sites in Bristol were removed.<sup>14</sup>**

**Using this guide**

The benefits that any tree can provide often depends on how well it is integrated into a development. The principles and actions below will help developers and their design teams as well as Local Planning Authorities (LPAs)'s tree officers and planners to maximise the benefits of trees in developments. Actions are colour-coded to indicate best timeframe for implementation:

- Before applying for planning consent.
- When applying for planning consent.
- After planning consent has been secured.
- Anytime.

# Understand

No design work, however conceptual, should start until the tree constraints associated with a development site are well understood.

## **Why:**

Save time and money!

The earlier tree-related constraints are integrated into a project, the greater the ability to cost-effectively achieve a mutually beneficial relationship between built structures and trees.

# Understand

No design work, however conceptual, should start until the tree constraints associated with a development site are well understood.

## **Actions for developers**

- Appoint an *arboricultural consultant*<sup>9</sup> at the outset with scope to contribute to the iterations of the design process.
- Ensure that findings from the BS5837:2012<sup>10</sup> compliant tree survey and *tree constraints plan* inform feasibility studies.
- Ensure key local policies affecting trees in developments also inform feasibility studies (eg required approach for tree loss mitigation; possible obligations to achieve a defined quantum of *canopy cover* or green area ratio for the site).

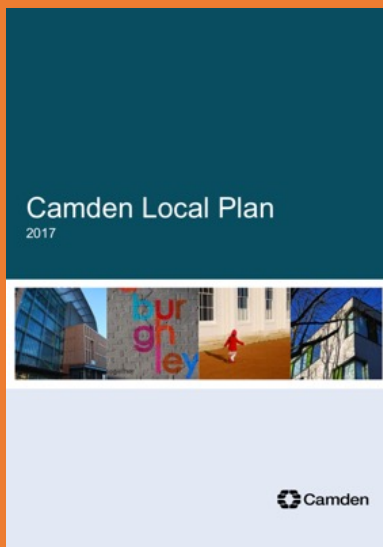
# Understand

No design work, however conceptual, should start until the tree constraints associated with a development site are well understood.

## **Actions for LPAs**

- Have an adopted Tree Strategy<sup>11</sup>.
- Ensure all land allocated for development undergoes an arboricultural assessment so that trees, hedges and woodlands warranting protection are identified.
- Alongside tree surveying requirements, consider embedding in validation (i) the systematic measuring of canopy cover; and (ii), where coherent with the local approach to reducing tree loss, the use of tree valuation (eg CAVAT<sup>12</sup>).





### Replacement and additional planting

- 6.80 Where the loss of trees or vegetation of value cannot be avoided or would adversely affect their future growth, the Council will require suitable replacements capable of providing at least equal amenity and ecological value. Where this cannot be achieved on-site, the Council will require a financial contribution towards re-provision.

### Tree Survey

- 2.36 Existing trees within a development site should be assessed using the [Capital Asset Value for Amenity Trees \(CAVAT\)](#)<sup>3</sup>. The resulting value calculated for each tree should accompany the Tree Survey. All information about using CAVAT can be found on the London Tree Officers Association website [here](#).

### Arboricultural Impact (or Implications) Assessment (AIA)

- 2.50 The assessment process involves:
- Identifying the impacts a proposal is likely to have on trees within the site or nearby, the finished building/structure and the future wellbeing of occupants;
  - Incorporating measures to avoid and mitigate (reduce) impacts;
  - Assessing the significance of any residual effects after mitigation;
  - Identifying appropriate compensation measures – including CAVAT values to offset significant residual effects;
  - Identifying opportunities for ecological enhancement; and
  - Justification for the removal of any tree to show the loss of the tree is unavoidable.

### Funding for off-site contributions and compensation

- 3.23 This will be achieved through securing a commuted sum where the cost of replacement planting is calculated according to its CAVAT (Capital Asset Value for Amenity Trees) value<sup>5</sup>.

# Retain

Make the successful retention of existing, healthy, mature trees a strong priority.

## **Why:**

Increase prospects of securing planning consent.

Maximise the appeal of the future development.

Reduce the amount of effort needed to achieve local policy targets.

# Retain

Make the successful retention of existing, healthy, mature trees a strong priority.

## Actions for developers

- When proposing significant removals or works near protected trees, use pre-application advice to review the tree constraints plan, the proposed *tree removal plan* and an indicative *tree protection plan* with the LPA.
- Develop the tree protection plan and *arboricultural method statement* iteratively, elaborating on details as design progresses.
- Appoint an arboricultural consultant to monitor tree protection during construction, starting with a *pre-commencement site meeting* with the LPA before construction work starts.
- Ensure site operatives are briefed on tree protection: highlight good practices to be adhered to in the *construction management plan* and in visual displays onsite.
- Consider the most sustainable use of timber from removed trees.



# Retain

Make the successful retention of existing, healthy, mature trees a strong priority.

## Actions LPAs

- Impose monitoring conditions<sup>15</sup> on the implementation of agreed tree protection measures.
  - Do not sign monitoring conditions off until receipt of all satisfactory evidence.
  - Ensure that planning enforcement policies prioritise the prevention of tree breaches and that a *temporary stop notice (TSN)* can be issued quickly when needed.
  - When a serious tree protection breach occurs, serve a TSN. Where the context warrants it, communicate to the local press about such instances.
- Have a robust tree replacement policy to secure equitable mitigation of unavoidable tree losses eg like-for-like canopy cover, amenity value, or carbon benefits.
  - Place *Tree Preservation Orders* on onsite mitigation planting to ensure long-term protection.
  - When commuted sum payments are collected for offsite mitigation, focus on financing new planting sites (rather than routine replacement).

# Enhance

Seek to enhance the extent and resilience of the canopy cover of each site.

## **Why:**

Use trees to meet local environmental targets.

Enhance appeal and resilience of the site.

Enhance brand reputation.

# Enhance

Seek to enhance the extent and resilience of the canopy cover of each site.

## **Actions for developers**

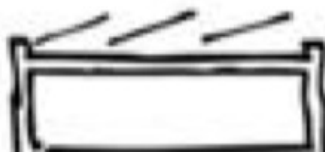
- Achieve species diversity and suitability to the site conditions<sup>16</sup>. Where possible, prioritise large canopy trees.
- Ensure both existing and new trees have a suitable growing environment with: continuous rooting trenches; load bearing media where needed; and access to stormwater runoff. Use BS8545:2014<sup>17</sup> and TDAG guidance<sup>18</sup>.
- Mandate the use of quality tree stock. Use BS8545:2014<sup>17</sup> to produce good specifications. Demand Plant Health Passports<sup>19</sup>.
- Plan and sufficiently resource post-planting care for three to five years as detailed in BS8545:2014<sup>17</sup>.

# Enhance

Seek to enhance the extent and resilience of the canopy cover of each site.

## **Actions for LPAs**

- Embed into local development management policies and design codes: (i) quantitative targets on the expected canopy contribution of individual sites; (ii) an integrated approach to trees and sustainable drainage; and, (iii) suitable planting specifications for trees in hard landscapes<sup>18</sup>.
- Enforce landscaping conditions. For sensitive operations, consider using bonds.
- Identify and maintain up-to-date records of prospective public realm planting sites to enable efficient use of tree-related commuted sums.



### Tree planting standard: the Greater Lyon approach

With the recent update of its local plan, Greater Lyon has started to require private developments to contribute to the delivery of its canopy cover objective. Development management policies featured in the Local Plan define the minimum area of land that new developments must set aside as "planting ground". The plan also sets out qualitative design requirements, which include the following:

- All planting grounds must be used for stormwater infiltration.
- A minimum of two-thirds of the required planting ground must be provided as one continuous area, with any given section having to be at least 4 metres wide.
- All planting grounds must be planted combining, as much as context permits, three strata of vegetation: grass, shrub and trees.
- A tree must be planted or retained for every 50 square metres of planting ground provided.
- Footpaths are allowed within planting grounds, provided they are permeable, but do not count towards the planting ground area calculation.

ÉVAPOTRANSPIRATION

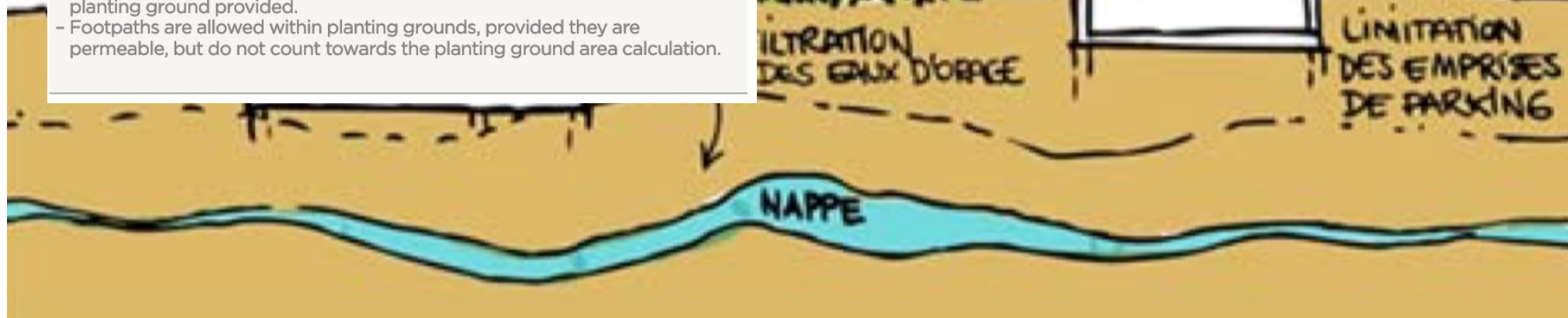


VENTILATION  
NATURELLE

FILTRATION  
DES EAUX D'ORAGE

LIMITATION  
DES EMPRISES  
DE PARKING

NAPPE





**POLICY DM34 – DELIVERING GREEN INFRASTRUCTURE AND BIODIVERSITY  
IN DEVELOPMENT**

- 1. All development is required to protect and enhance green infrastructure features and networks both on and off site.**
- 2. Developments likely to affect the significance of designated or non-designated green infrastructure assets are required to evidence a thorough understanding of context through the preparation of a proportionate assessment of existing and planned green infrastructure and ecological features and networks both on the site and in the locality, and demonstrate how:
  - a) Through physical alterations and a management plan:
    - i. Existing green infrastructure will be protected or maintained;**
    - ii. Opportunities to enhance existing and provide new green infrastructure have been maximised, including delivering long lasting measurable net gains.****
  - b) A sequential approach has been taken to avoid, minimise, mitigate, and finally compensate for (on then off site) any harm.****
- 3. In all cases, development is required as a minimum to:
  - a) Secure adequate buffers to valuable habitats;**
  - b) Achieve a future canopy cover of at least 25% of the site area on sites outside of the town centres and 0.5HA or more;**
  - c) Within town centres and on sites below 0.5HA development is required to maximise the opportunities available for canopy cover (including not only tree planting but also the use of green roofs and green walls);**
  - d) Make provision for the long term management and maintenance of green infrastructure;**
  - e) Protect trees to be retained through site layout and during construction.****

# Wycombe District Council







# Canopy Cover Supplementary Planning Document

March 2020

Guidance to accompany policy DM34 of the  
Wycombe District Council Local Plan

## Calculation Worksheets

Figure 3. (1.) Site Summary Worksheet

- This worksheet contains the summary of site information and canopy calculations. It is the first worksheet to be used and is the last to be referred to in the process before making an application.

Figure 4. (2.) Retained Canopy Worksheet

- This is used for calculating retained tree canopy in m<sup>2</sup>. If there are existing trees on site this worksheet is the next to be filled in with tree survey information.

Figure 5. (3.) New Canopy Worksheet

- This worksheet is filled in as landscape design begins to be worked out. It predicts the future canopy value in m<sup>2</sup> on the basis of proposed new tree planting. It also informs the design and layout of the soil for trees to grow in.

Figure 6. (4.) New Green Infrastructure Elements Worksheet

- This worksheet is used to calculate canopy value in m<sup>2</sup> of new GI Elements, these elements are only required if the canopy cover target can not be met by using trees alone.



Thank you  
Questions?