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City and Neighbourhood Services Department
Forward Planning Team
Mossley Mill
Carnmoney Road North
Newtownabbey BT36 5QA

Dear Madam/Sir

Woodland Trust response to Antrim and Newtownabbey Council's consultation on its *Draft Local Development Plan*

Thank you for the opportunity to comment on your draft Local Development Plan.

About the Woodland Trust

The Woodland Trust is the UK's leading woodland conservation charity and aims to protect native woods, trees and their wildlife for the future. We do this by restoring and improving woodland biodiversity and increasing people's understanding and enjoyment of woods and trees. The Woodland Trust Northern Ireland (WTNI) has been working to plant and protect trees and woods in Northern Ireland since 1996. Northern Ireland is one of the least wooded countries in Europe, with just 8% woodland cover compared to the European average of 46%. Ancient woodlands (areas wooded since 1600) are home to many rare and threatened species but this important and fragile habitat covers just 0.08% of Northern Ireland's landscape.

Detailed comments on the Draft LDP

The Trust supports the Council's commitment to the protection of biodiversity, and Green Infrastructure, in general, but I have some suggestions that are intended to further the aims of your documents.

The most obvious omission is that there is no reference within your document to the sub-category of PAWS (Plantations on Ancient Woodland Sites), nor the Ancient Woodland Inventory. Furthermore, protection of ancient woodland and long established woodland could be improved.

I suggest insertion of new lines, where you feel most appropriate in the relevant section (for example between paragraphs DM 39.1 and 39.2): **"Damage to or loss of an irreplaceable habitat (such as ancient and long established woodland) will always result in net loss of biodiversity; no amount of compensation can achieve net gain. Therefore, the need for and/or benefits of development in such locations will have to be wholly exceptional. In such cases, as a last resort, compensatory measures will be secured to minimise net loss of biodiversity, but these measures will not be included in the assessment of benefits of the proposal."**

Mention should be made of restoring PAWS, so I suggest a new paragraph/sentence in the appropriate section: **“We will commit to the restoration of plantations on ancient woodland sites.”**

With regard to protecting existing veteran trees, I suggest an additional paragraph: **“For veteran trees, where a more precautionary sites approach is warranted, Root Protection Area (RPA) distances should be greater than the standard buffers stated in BS 5837:2012. The RPA should follow the guidance in “Ancient and other veteran trees: further guidance on management” (Lonsdale, D; 2013), and be a minimum of 15 times the diameter of the tree trunk or 5 metres beyond the canopy, whichever is the greater.”**

More could be said on the particular benefits of greater canopy cover, and increasing trees and the extent of woods. I therefore suggest inserting a standalone paragraph in the appropriate section: **“There is now a wealth of evidence on the many benefits of woodland, trees and high canopy cover, including improving: physical and mental health; air quality; water quality; water management (reducing flooding); soil quality; shading; cooling through evapotranspiration; as well as the more obvious benefit of improving biodiversity. The background research and evidence for this, along with guidance on the retention and planting of trees in new development, can be found in the report “Residential Development and Trees” (Woodland Trust, 2019, www.woodlandtrust.org.uk/publications/2019/01/residential-developments-and-trees/)”**

With regard to the technical aspects of planting new trees I suggest you reference: “BS 8545:2014 “Trees: from nursery to independence in the landscape””

Further comments on the cross-cutting benefits of woodland, and a high canopy cover outside woodland.

I have expanded on some of the topics in *Residential Development and Trees* below, **and suggest you incorporate this information, and the references, to bolster your existing text where appropriate, perhaps in your sections on flood risk and increasing resilience to climate change.**

Flood Risk

Trees can reduce the likelihood of surface water flooding in urban situations, when rain water overwhelms the local drainage system, by regulating the rate at which rainfall reaches the ground and contributes to run off. There is a positive role here for the use of trees with SUDS initiatives. Slowing the flow increases the possibility of infiltration and the ability of engineered drains to take away any excess water. This is particularly the case with large crowned trees. Research by the University of Manchester has shown that increasing tree cover in urban areas by 10 % reduces surface water run-off by almost 6%. (*Using green infrastructure to alleviate flood risk, Sustainable Cities* - www.sustainablecities.org.uk/water/surface-water/using-gi/). The Woodland Trust has also produced a policy paper illustrating the benefits of trees for urban flooding – *Trees in Our Towns – the role of trees and woods in managing urban water quality and quantity* (<https://www.woodlandtrust.org.uk/mediafile/100083915/Trees-in-our-towns.pdf>).

The Woodland Trust believes that trees and woodlands can also deliver a major contribution to resolving a range of water management issues, particularly those resulting from climate change like flooding and the water quality implications caused by extreme weather events. They offer opportunities to make positive water use change whilst also contributing to other objectives, such as biodiversity, timber & green infrastructure - see the Woodland Trust publications *Stemming the flow – the role of trees and woods in flood protection* - <https://www.woodlandtrust.org.uk/publications/2014/05/stemming-the-flow/> and *Woodland actions for biodiversity and their role in water management* -

<https://www.woodlandtrust.org.uk/mediafile/100263208/rr-wt-71014-woodland-actions-for-biodiversity-and-their-role-in-water-management.pdf?cb=001108c3a78944299140a996b2cd7ee8>.

In addition, a joint Environment Agency/Forestry Commission publication *Woodland for Water: Woodland measures for meeting Water Framework objectives* states clearly that: *'There is strong evidence to support woodland creation in appropriate locations to achieve water management and water quality objectives'* (Environment Agency, July 2011-<http://www.forestry.gov.uk/fr/woodlandforwater>).

Air quality, urban heat islands, climate change and health

The Woodland Trust has published a report on the importance of trees in urban green space in improving air quality, and considers species choice for new planting – see *Urban Air Quality*

<https://www.woodlandtrust.org.uk/mediafile/100083924/Urban-air-quality-report-v4-single-pages.pdf>

Trees and woodland improve air quality by adsorbing pollutants such as sulphur dioxide and ozone, intercepting harmful particulates from vehicle emission, smoke, pollen and dust and of course release oxygen through photosynthesis. This helps to reduce the occurrence of the problems caused by chronic respiratory disease.

Research on the impact of installing a kerbside line of young birch trees demonstrated more than 50% reductions in measured Particulate Matter (PM) levels inside those houses screened by the temporary tree line. The researchers concluded that “the efficacy of roadside trees for mitigation of PM health hazard might be seriously underestimated in some current atmospheric models.”

This underlines that trees will have a proportionately greater effect in urban areas, where they are close to sources of pollution and nearer to people who might be affected.

Furthermore, increasing tree cover in urban areas can help mitigate the ‘urban heat island effect’. This occurs in towns and cities as the buildings, concrete and other hard surfaces such as roads act as giant storage heaters, absorbing heat during the day and releasing it at night. The resultant effects can be dramatic; on some days there is a difference of as much as 10°C between London and its surrounding areas. Projections for our changing climate suggest this problem will get markedly worse.

The problem is exacerbated by a lack of green space. Natural green space, and trees in particular, provide both direct cooling from shade (protection from radiant heat and UV radiation) and reduce the ambient temperature through the cooling effect of evaporation and transpiration from the soil and plant leaves.

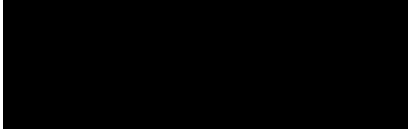
The impact on health of urban heat islands is two-fold; firstly, higher temperatures increase ground level ozone production exacerbating the symptoms of chronic respiratory conditions. Secondly prolonged high temperature can precipitate cardiovascular or respiratory failure or dehydration, particularly amongst the elderly, very young or chronically ill. In the 2003 summer heat wave more than 2,000 people died in Britain alone and more than 35,000 died across Europe.

Research at the University of Manchester using computer modelling has shown how increasing urban green space can mitigate urban heat island effect. Without any increase in green space, by 2050 the temperature in Manchester is projected to rise by 3°C. However, if the amount of green space increases by just 10% then the temperature rise in the city could potentially eliminate the effects of climate change on increasing surface temperatures. However, reducing tree cover by the same percentage could lead to an increase of 8.2°C under some scenarios.

The economic quantification of the above benefits with respect to woodland is demonstrated in the report “The Economic Benefits of Woodland” (Europe Economics, 2015, www.woodlandtrust.org.uk/publications/2015/03/the-economic-benefits-of-woodland/)

I trust you can accommodate these suggestions, which are intended to support and further the aims of your draft LDP. Please get back to me if you have any queries on this, or require further clarification.

Yours sincerely,



Richard Barnes MCIEEM
Lead Government Affairs Officer, Westminster & Northern Ireland