Our Case Number: ABP-316272-23

Planning Authority Reference Number:

An Bord Pleanála

Ava Thornton
22 Terenure Road East
Rathgar
Dublin 6

Date: 22 August 2023

Re: Bus Connects Templeogue/Rathfarnham to City Centre Core Bus Corridor Scheme
Templeogue/Rathfarnham to City Centre

Dear Sir / Madam,

An Bord Pleanála has received your recent submission in relation to the above-mentioned proposed road development and will take it into consideration in its determination of the matter. Please accept this letter as a receipt for the fee of €50 that you have paid.

Please note that the proposed road development shall not be carried out unless the Board has approved it or approved it with modifications.

The Board has also received an application for confirmation of a compulsory purchase order which relates to this proposed road development. The Board has absolute discretion to hold an oral hearing in respect of any application before it, in accordance with section 218 of the Planning and Development Act 2000, as amended. Accordingly, the Board will inform you in due course on this matter.The Board shall also make a decision on both applications at the same time.

If you have any queries in relation to this matter please contact the undersigned officer of the Board at laps@pleanala.ie

Please quote the above-mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,

Eimear Reilly
Executive Officer
Direct Line: 01-8737184

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Submission of Prof McElwain (which was made to the NTA) is relied on by Ava Thornton, 22 Terenure Road East, Rathgar, Dublin 6 (and to be read in conjunction with the submission of Peter Thornton and Helen Callanan dated 15 August 2023) in opposition to the NTA application to ABP reference # 316272. (ABP online submission system does not permit more than one pdf or word document to be uploaded per application.) Oral hearing requested.

Coláiste na Tríonóide, Baile Átha Cliath
Trinity College Dublin
Ollscoil Átha Cliath | The University of Dublin

28th April 2019

Dear Sir/Madam,

We are writing to express our general concern regarding the level of provisions in place within the Bus Connect Programme for the protection of the ecosystem services provided by mature trees in the urban and suburban areas of Dublin that will be directly impacted by the NTA's Core Bus Corridor Project. As Professors in the Botany and Zoology Departments at Trinity College Dublin, we oversee research and teaching on the importance of trees in urban environments as part of a larger portfolio of research in botanical, zoological and environmental sciences. The Botany Department coordinates one of the largest EU projects in Europe, Connecting Nature led by Dr Marcus Collier, which is focused on quantifying the impacts and values, culturally and economically of trees and other green and blue infrastructures in cities, particularly in the context of anthropogenic climate change. Members of our department founded the Irish Forum on Natural Capital (www.naturalcapitalireland.com), which aims to value, protect and restore natural capital in Ireland, and to support the adoption of natural capital concepts in public policy and corporate strategy, promoting informed public and private sector decision-making. We are also leaders of a broader group of researchers from across Trinity called Nature+ https://naturalscience.tcd.ie/natureplus/, which has an overall vision to live in a world where "Natural Capital stocks, such as urban trees, with multiple benefits for the economy, society and businesses are valued, sustainably used, renewed and restored." To explain this vision a little further, Nature+ undertakes research on a broad range of natural capital stocks – from forests, bogs and wildflower meadows to disturbed urban environments – to quantify their ecological and cultural benefits and values for people (often referred to as ecosystem services). From this quantitative research we can then derive robust estimates of the total economic, biodiversity, cultural and aesthetic value of natural capital stocks such as urban street trees and the woody stocks of trees and shrubs in suburban and urban gardens. While it is recognized that trees on public land provide important public goods and services it is less recognized that trees and shrubs in private gardens also provide substantial public goods and services.

From our reading of the literature on the Core Dublin Bus Corridor Project, we are very encouraged to learn of the ambition to increase cycle ways to ~200km and public transport throughout the city. We agree that this is an essential requirement of planning needed to increase the sustainability of our transport system. Increased bike use will certainly reduce greenhouse gasses and other

particulate air pollutants providing a direct means of addressing the UN Paris Climate Agreement by reducing Irelands transport related carbon emissions.

We are however deeply concerned with the lack of adequate consideration given to the removal of garden and street trees and shrubs throughout the proposed core bus corridors, particularly in those neighbourhoods of Dublin which have considerable mature stocks of trees in their streetscapes and gardens. We are particularly concerned by the lack of scientific definition provided for the term 'appropriate mitigation measures' in the following statement from the BusConnects literature and public consultation:

"Where there is simply no viable alternative, and where we know we have to remove trees, portions of gardens, driveways or parking, we will ensure appropriate mitigation measures are put in place, wherever practicable."

The following statement regarding the proposed planning for trees is also unsatisfactory.

"3.3.4 Trees Where trees are removed from roadsides and footpaths we will put in place a comprehensive replanting programme. This programme will use mature or semi-mature ready-grown trees where appropriate and, where it is feasible, plant them as close as possible to the original locations."

There is an opt out with the phrase '*where it is feasible, plant them as close as possible to the original locations*'. We would like to see a detailed development of what is proposed when it is not feasible to replace a mature tree close to its original location. Will there be a provision to plant a woodland with equivalent carbon sequestration potential in the same neighbourhood/ area where very mature trees are going to be removed? A planting replacement plan of a single 50 to 100 year old tree with young (5 to 10 year old) container grown trees is not equivalent in terms of natural capital stock replacement and the services provided. We request that a detailed natural capital plan for the bus corridor is carried out so that the true economic, ecological and cultural value of the proposed corridor is assessed so that an appropriate and equivalent replanting plan can be designed.

Urban and suburban street and garden trees reduce overall energy consumption (mainly fossil fuels in Dublin, with some solar) in winter and reduce electricity use for air conditioning in summer in warmer climates. Woody natural capital stocks in urban environments drastically reduce annual stormwater run-off due to rainwater interception by trees. The magnitude of interception increases with both above and below ground biomass and hence with the age of the tree. Urban trees actively improve the local air quality by adsorbing particulate pollutants such as PM10, PM2.5 which are particularly harmful to human respiratory health. Different species have different capacities to act as air pollution filters; species with rough micro-surface relief on their leaf surfaces remove more particulate matter than species with smooth leaf surfaces. Mature trees, due to their greater overall biomass remove vastly more particulates than young trees. The exact amount of particulate pollution removal can be directly quantified using tree allometry scaling relationships and species leaf traits. Urban and suburban tree and shrub stocks sequester carbon in secondary growth (wood) removing it from the atmosphere. They are therefore an important urban carbon sink for greenhouse gasses released from transport, home and business energy use. The larger and more mature the tree the greater its carbon sink capacity. Carbon sequestration potential can be calculated for every tree in the city from simple calculations of wood specific density (which is

species dependent) and above and below ground biomass estimates (can be calculated from diameter of trunk at chest height and tree trunk-height allometry equations). Every tree of course also has an aesthetic and cultural value to the communities/owners of the streets or garden in which it grows. This is much harder to put an economic value to, but projects such as *Connecting Nature* led by Dr Marcus Collier at Trinity are attempting to develop appropriate metrics.

A recent tree survey for Fingal County (using iTree and Curio) using the methodology described above estimated the summed yearly economic value of 27,683 trees in Fingal amounted to €2,476725 a year, with a replacement value of €23,605,852. Equivalent surveys should ideally be undertaken on all the proposed core BusConnect bus corridor routes so that the economic, biodiversity, cultural and aesthetic value of mature tree loss can be evaluated against the value gained via expansion of cycle routes and bus lanes and where necessary, appropriate mitigation can be designed and implemented. This should be undertaken particulalry in relation to carbon and particulate pollution as it would provide a more comprehensive environmental accounting for the bus corridor project than is currently evident from the literature provided as part of the consultation process. There are many digital tools which allow such a quantitative assessment of the economic value of street and garden trees to be carried out (e.g. https://www.itreetools.org/index.php).

Sincerely,

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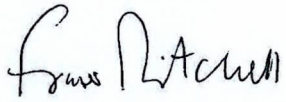

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