



Carbon Capture and Long Term Environmental Benefits



Tree Planting in the Elmira Nature Reserve 2021

In 2021, 544 trees were planted in the Elmira Nature Reserve. These were from 31 species, ranging from large trees like oak, maple elm and hickory to smaller ones like dogwood and service berry.

85 of these trees were transplanted as large trees – some 30 feet high – the rest ranged from 3 to 6 feet high.

Trees for Woolwich calculates the environmental benefits from its tree plantings, looking at tonnes of CO2 sequestered, kilograms of air pollutants absorbed by the trees and litres of stormwater absorbed. The benefits are calculated over 40 year and 80 year periods.

For the 544 trees planted in the Elmira Nature Reserve in 2021, the 40 year and 80 year expected benefits are listed below.

		40 year benefit	80 year benefit
Carbon Dioxide	Tonnes	388	1518
Stormwater	Litres	2.8 million	10.4 million
Air Pollution	Kilograms	2470	10300

Carbon Dioxide – Trees sequester carbon dioxide in their trunks, branches roots and leaves. During its life, this also puts carbon into the soil. To put it in perspective, an average car produces 4.6 tonnes of CO2 annually, so the 80 year benefit is the equivalent to taking 330 cars off the road for a year.

Stormwater – Trees absorb water through their roots, and breath it out through their leaves. A tree will reduce stormwater runoff through this process, and reduce erosion, flooding and the need to process runoff.

Air Pollution – trees will absorb air pollutants like ozone, carbon monoxide, Sulphur dioxide through their leave, intercept particulate matter like dust ash and smoke.

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Trees for Woolwich 2021