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What does this mean for the UK, Willmott Dixon and the construction sector?

The Timber Story

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If managed correctly timber is a renewable and sustainable resource. Well managed forests maintain habitats, provide jobs and homes for millions of people, regulate rainfall and atmospheric conditions, and provide a home for two-thirds of all animal and plant species.

Trees & climate change

Trees, like all plants, 'breathe' carbon dioxide as humans breathe oxygen. The amount of carbon dioxide taken from the atmosphere by plants is balanced with the amount put back into the atmosphere by natural processes. Small changes as a result of human activities can have a large impact on this delicate balance by increasing the 'greenhouse effect'.

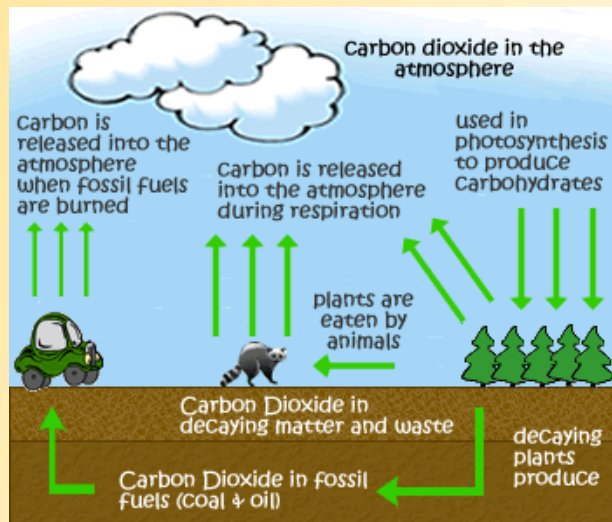


Figure 1: Diagrammatic representation of the carbon cycle (www.realtrees4kids.org/sixeight/cycles.htm)

Carbon dioxide is one of a number of known greenhouse gases which is responsible for up to a quarter of the 'greenhouse effect' on Earth. Others include methane and water vapour.

Why don't we want more carbon dioxide in the atmosphere?

The greenhouse effect; what does it actually mean? The Earth is surrounded by the atmosphere which acts as a greenhouse around the earth, allowing some of the sun's rays through, absorbing some rays and reflecting others back into space. The earth's average temperature is 15°C; without the atmosphere it would be an average of -18°C⁵ and too cold for many forms of life.

The increase in carbon dioxide in the atmosphere has effectively thickened the "greenhouse" meaning that less of the sun's rays are escaping back out into space but remaining within the atmosphere warming the Earth and leading to climate change.

How do trees affect climate change?

The main way carbon dioxide is removed from the atmosphere is by photosynthesis in plants. Therefore the less plants, the less carbon dioxide can be removed from the atmosphere by them. Not only are plants vital in regulating the amount of carbon dioxide in the atmosphere they also act as a "carbon sink". This means that carbon is stored in the trees and the timber they produce, only



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being released when they are burnt or decompose. This is why deforestation accounts for 20% of the global carbon emissions.

Deforestation

Deforestation is the clearing of forests for timber and then using the land for agriculture, mineral extraction, and building. As well as influencing the release of carbon dioxide the world forests provide a home for 50 million people along with two thirds of all plant and animal species; they help to regulate rainfall and prevent flooding. In addition the forest root systems keep soil intact – without the forests the soil is eroded away into rivers and can build up causing more flooding problems.

What is sustainable forestry?

In sustainable forestry the 'farming' of trees is conducted in a managed way, replanting at least the same number of trees that are removed, therefore maintaining a balance. Other benefits of sustainable forestry are the management of species biodiversity, the prevention of displacement of indigenous peoples and providing a means of income which allows them to continue to live in the forests, and maintain their culture.

At a UK level

In the UK we use 50 million cubic metres of timber every year (enough to fill Wembley stadium nearly 44 times!); approximately 85% of this is imported. A recent report by WWF found that the UK was the third-largest importer of illegal timber and wood products (after China and Japan) and that 7.2% of the timber imported into the UK was from an illegal source.

It is estimated that two-thirds of illegally sourced timber goes into the construction sector.

Each year 420,000 tonnes of waste wood is produced by households, 670,000 tonnes of waste wood is produced through waste packaging (pallets & crates). Construction and demolition produce 750,000 tonnes but less than 10% of this is recovered and recycled.

In 2005 the UK government introduced an updated Timber Procurement Policy which requires all central departments to include contract conditions that all contractors should only supply legally and sustainably sourced timber and wood derived products, whether solid wood (e.g. planks, plywood) or as part of a product (e.g. paper, furniture). Also established was CPET – the Central Point for Expertise on Timber - is funded by the Department for Environment, Food and Rural Affairs and provides detailed information and advice on how public sector buyers and their suppliers can meet the UK Government's timber procurement policy requirements in practice.

How does this affect Willmott Dixon?

Timber has been used in buildings for thousands of years and is popular again with constructors realising its sustainability benefits. Timber framed and 'solid' timber buildings can be seen in recent Willmott Dixon projects in the housing and education sector.

Willmott Dixon has seen the effect of the Government policy adopted by clients with projects specifying legal and certified sustainable timber. To gain credits



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under BREEAM and the Code for Sustainable Homes, timber sourcing has to be from the right places. To prevent timber products from degrading they are treated with chemicals that can impact on internal air quality in a building and be harmful to human health. The glues used in laminated products such as medium density fibre (MDF) board, chipboard, glulam beams and oriented strand board (OSB) can contain a chemical known as urea formaldehyde which is a known carcinogen. The chemicals used in its treatment can also influence the credits awarded in relation to its VOC (volatile organic carbon) content.

For more information or guidance on selecting timber products, please contact Re-Thinking.

How do I know if the timber I am buying is from sustainable forestry?

Independent schemes such as the Forestry Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification schemes (PEFC), provide a certification scheme that forest owners / timber suppliers can sign up to which audits the whole process and provides a guarantee that the timber supplied is not only legal but also from sustainably managed forest. The audit process is termed 'Chain of Custody' and demonstrates that at every stage the legal timber is being passed through the supply chain. Ensuring compliance with Chain of Custody can be challenging but is a requirement to obtain some of the credits in 'green' building rating systems, for example BREEAM and the Code for Sustainable Homes. This is important as some logging although legal is not managed in a sustainable way. Research has shown that legal logging can be just as destructive as illegal logging if not managed effectively.

What does this mean to me personally?

To reduce the amounts of timber used, try to refurbish and re-use timber products wherever possible. In the garden use old pallets and sleepers for compost bins and plant native species trees and hedges to provide habitats for wildlife.

There are many everyday products that contain timber and through careful purchasing consumers can alter the impact logging has on the planet. The first action could be to buy products with a recycled content, be it toilet paper, envelopes or chipboard – using these products will not only help reduce the amount of trees that need to be cut down but also prevent that waste from entering landfill.

When purchasing any type of timber derived product you should ideally always look for a logo certifying sustainability such as FSC. Many high street retailers have made a commitment to move towards only supplying sustainable timber so make sure next time you buy a new kitchen or garden furniture the timber you are buying meets these requirements.



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