

## Practical recommendations

The consequences of scaffold branch cuts for trees are overwhelmingly negative—especially if they are done on the trunk or on parts of the crown that are crucial to the tree's statics. They should therefore always be avoided if at all possible. Ways to avoid scaffold branch cuts include **early clearance cutting** or reducing a branch back as far as a supplying branch.

Almost all wounds with a diameter of more than 10 cm carry a risk of penetration by wood decay fungi and subsequent destruction of the wood. This often only happens 10 to 20 years later. The risk of rot is smaller if only the sapwood is wounded, but larger if the heartwood is wounded—as is the case for a scaffold branch cut.



*Correct clearance cutting for branches over 10 cm in diameter (cutting as far as a supplying branch)*

## Bibliography

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[www.baumpflege-lexikon.de](http://www.baumpflege-lexikon.de)  
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## Maintain your trees!

Trees are highly developed plants and are among the largest organisms on Earth. They are living things that form an important part of our environment and perform many functions important to humans.

Do not allow your trees to be:

- Mutilated
- Damaged by non-professional pruning
- Destroyed by other human actions (e.g. damage during construction work).

**Protect and maintain your trees.**

**Choose the experts!**

The information in this leaflet comes from the book: „Praxis Baumpflege – Kronenschnitt an Bäumen“ (Practical Arboriculture – Crown Cutting on Trees)



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## Tree life

### Trees are living organisms

Trees perform a wide range of functions. They also “serve” people in many different ways. Over millions of years of evolution, they have “learned” various survival strategies. Nevertheless, they can be destroyed or mutilated by just a few incorrect pruning measures. In addition to topping, there are other inappropriate measures that often also cause severe damage to trees. The removal of **branches that are too thick to be removed** is an example of this.



### The definition of a “scaffold branch cut”

Any tree pruning measure where a branch with a diameter of over 10 cm is cut is defined as a scaffold branch cut.

## Why scaffold branch cuts are done

Unnecessary scaffold branch cuts are often done when tree care measures are left up to people who are not tree care professionals. These people are often convinced that they have done everything right because in their view, their task was to “create headroom” or “cut a tree away from a building”. In many cases, the opportunity to help the tree adapt to limited space (for example next to a road) and create the appropriate clearance at an early stage has been missed.

## Scaffold branch cut: too often tree damage, not tree care

It is incredible that the scaffold branch cut continues to be so widely used in practice, even though it is supposed to be done only in exceptional circumstances.

The people who carry out inappropriate scaffold branch cuts do not appear to be aware of the consequences of their actions.

The ZTV-Baumpflege (Additional Technical Contractual Terms and Guidelines for Tree Care) states that crown cutting measures involving the complete removal of scaffold branches may only be carried out in clearly justified, exceptional cases.

Particularly when the cut is directly on the trunk, **negative consequences** should be expected:

- **Supply shadow:** In some cases, the area below the cut no longer receives any supply of nutrients, and so it dies off.
- **Poor compartmentalization:** In the case of a scaffold branch cut, the heart (the interior) of the trunk is affected. This area has only a very limited ability to compartmentalize. This area has no ability to react to the damage because the heartwood is made up of dead wood with no living cells.
- **Penetration of fungi:** The poor compartmentalization and the size of the wound make it easy for wood decay fungi to penetrate the wood and reduce its stability. This has a very detrimental effect on public and traffic safety, especially in the case of wounds at forks.



Supply shadow



**Left:** Scaffold branch cuts lead to wood decay in the long term, which increases the risk of failure.

**Below:** Decay cavity at the crown origin as a result of a scaffold branch cut



- **Increasing risk of failure:** Wood decay predominantly affects the trunk because this is where most scaffold branch cuts are done. The trunk is the main supporting structure of the tree. The risk of failure increases.
- **Rot on multiple sides:** In some cases, scaffold branch cuts are done on multiple sides of the trunk at the same time. The consequence of this is that rot can penetrate all around the circumference of the trunk.
- **Risk of breakage at the crown origin:** A scaffold branch cut directly at the crown origin or at a fork reduces the stability of the remaining branches.
- **Premature felling:** Frequently, the result is that the tree has to be felled prematurely.

## Scaffold branch cuts are not always wrong

This leaflet is not intended to give the impression that the removal of branches with a diameter of more than 10 cm is incorrect in all cases. In fact, in some cases, it is a requirement for public and traffic safety—for example in the case of “crown pruning for safety”. This may be required for severely damaged trees that need to have the entire crown or sections thereof reduced at the scaffold branch / sturdy branch level.

## Other options and alternatives

A brief look at common practice makes it clear that most of the scaffold branch cuts that are done are unnecessary. The Additional Technical Contractual Terms and Guidelines for Tree Care set out clear rules for these measures, especially when it comes to clearance cutting: Scaffold branches should only be reduced **as far as is strictly necessary**.

This essentially means that all scaffold branch cuts directly on the trunk or on other load-bearing parts of the tree (e.g. thick side branches or on the tension side / upper side on hardwood trees) are **to be avoided**.

In such cases, the branches can be reduced. An expert professional should cut the branch back as far as the supplying branch or higher order branch.

When there is a need to cut scaffold branches because they are protruding into an area where a certain clearance is needed, this is a sign that clearance cutting measures started too late.

## The remedy: early formative pruning and clearance cutting