

# Tornado Rating Document

## Weiler (Baden-Württemberg) Germany 07 JUN 2021

**Date:** 07 JUN 2021  
**Time:** 1730 CEST / 1530 UTC  
**Country:** Germany  
**State:** Baden-Württemberg  
**Place:** Weiler (Rainau com.)

**Path Length:** 0.9 km  
**Path Width:** 80 m  
**Starting Point:** 48.9107N 10.1772E  
**Altitude:** 467 m osl  
**Ending Point:** 48.9031N 10.1805E  
**Altitude:** 471 m osl  
**Movement:** NNW-SSE  
**Surface:** Land  
**Surface Details:** Farmland, Houses, Gardens, Trees  
**Intensity Rating:** IF1- / F1 / F1T2

Intensity Rating - based on „Tornado and Wind Damage Assessment Guide“ by ESSL (2018) and Hubrig, M.: Wooden Plants: A New Damage Indicator / Degree of Damage Matrix (2015).

Site survey and tornado damage mapping by Hendrik Sass. Photo material by Feuerwehr Rainau, H.Herdeg, S.Zeller and H.Sass.

Intensity rating operated by Thilo Kühne (ESSL)

### Buildings:

#### 01 Large barn (48.9096N 10.1772E)



Some slates blown down from the roof on the north side of the building.  
DI Roofs, DoD1 (<20% loss ratio): IF0+ / F0T1.

### 02 Large barn (48.9096N 10.1772E)



Some slates blown down from the roof on the north side of the building.  
DI Roofs, DoD1 (<20% loss ratio): IF0+ / F0T1.

### 03 Residential building (48.9083N 10.1781E)



Some slates blown down from the roof on the north side of the building.  
DI Roofs, DoD1 (<20% loss ratio): IF0+ / F0T1.

### 04 Road sign (48.9094N 10.1777E)



Damage very likely not caused by wind force, but by falling tree or large branches.

### 05 Greenhouse

Greenhouse moved and partly smashed. It is possible that some material was thrown onto the building. Damage not defined = Rating not possible.

## Vegetation:

### 05 Willow tree (48.9091N 10.1778E)

Some single branches snapped, mostly in the middle section of the tree.  
DI IV Soft Hardwood, DI Sub c (avg.), DoD2 results in upper F0 (F0T1).

### 06 Shrubs (48.9086N 10.1787E)



Broken directly over ground.  
DI IX Shrubs, DI Sub b (avg.), DoD4 results in F1 (likely low end F1) / F1T2.

### 07 Poplar (48.9094N 10.1775E)

Tree uprooted.  
DI IV Soft Hardwood, DI Sub c (avg), DoD3 results in low end F1 (F1T2).

## Result:

**Comparing all damage points, the tornado intensity results in IF1- (low-end F1) or F1T2 due to vegetation damage. Damage to buildings results in IF0+ (high-end F0) or F0T1.**

Intensity rating operated by Thilo Kühne (ESSL), 10 JUN 2021