

Brf Sothönan 100, Aspudden, Stockholm - Daylight analysis

Vertical Sky Component and markup

2020 06 09

STUDY AIM

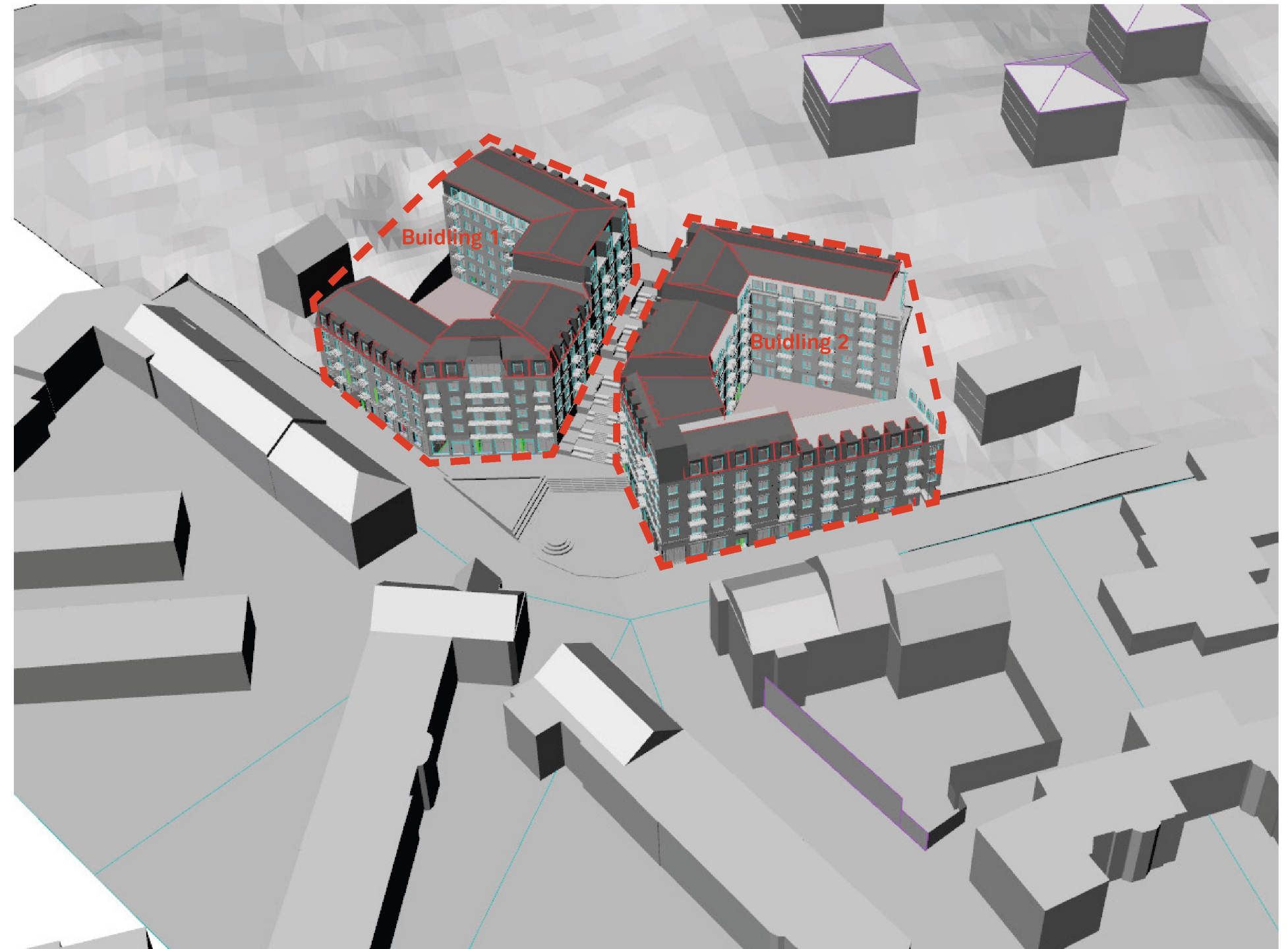
The purpose of this study is to assess the proposed development in the area of Brf Sothönan 100 in terms of vertical sky component (VSC) and consequently daylight access to buildings (1) and a markup for the lowest 3 representative floors. A markup is a simple visual survey of the plan drawings. Based on our extensive experience a rating is provided of the likelihood of a room of passing BBR 6:322 Daylight (2). Additionally, rooms facing the most critical areas, towards the narrow street/stairs have been simulated for compliance according to BBR 6:322 Daylight (3).

METHOD

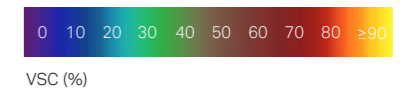
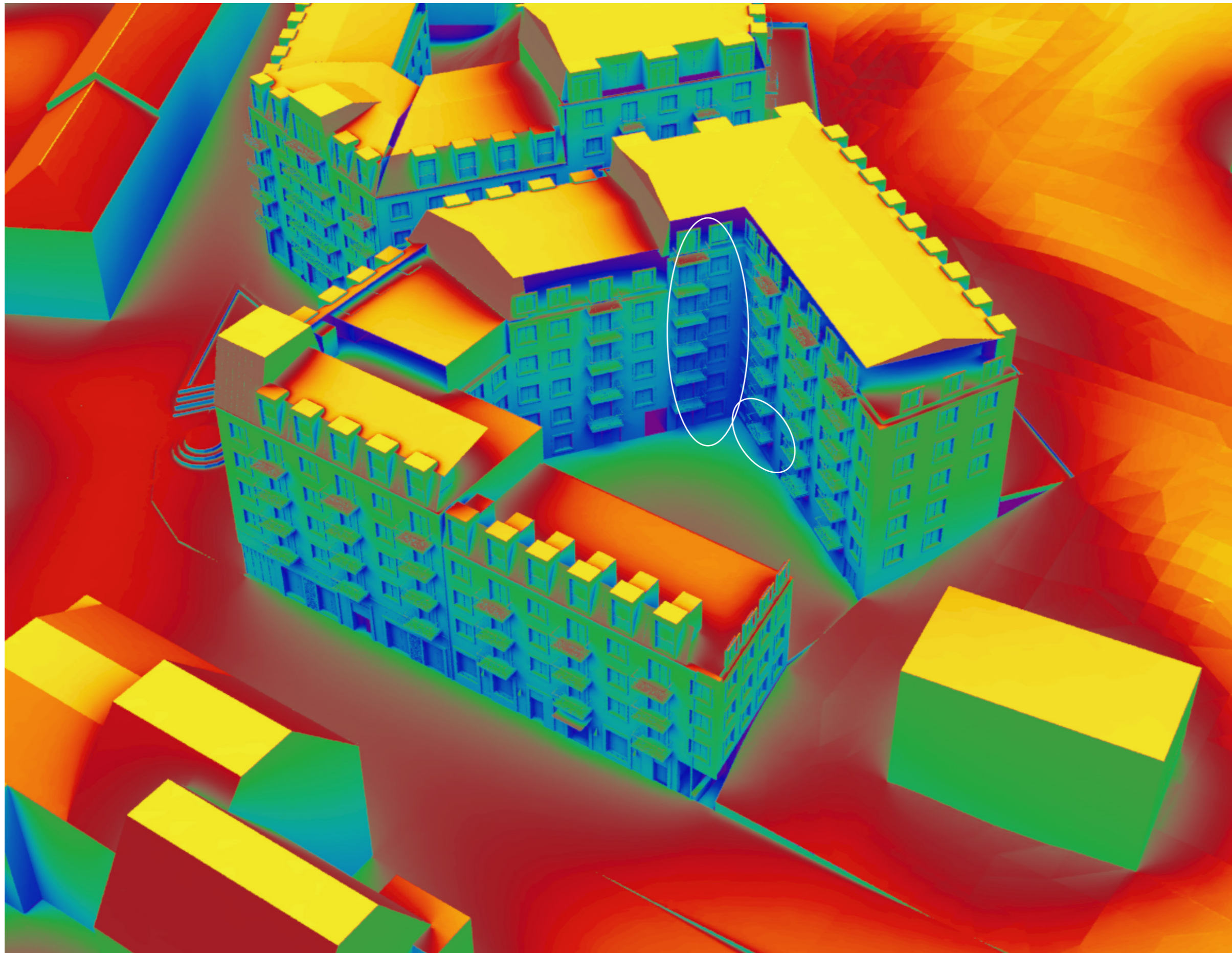
The calculations for VSC take into account the brightness of the sky, the obstruction of the visible portion of the sky, surrounding buildings and any external obstructing building elements, eg fixed shading and etc. The calculations for VSC are carried out using 'Berkeley Laboratory's Radiance software' (Radiance) through 'Grasshopper/Honeybee'. The rendering engine 'Radiance render engine' is considered to be the industry standard software for carrying out physically accurate daylight calculations. Shading effects from plants and other vegetation are not considered in these calculations.

RESULT

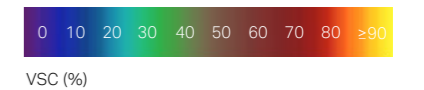
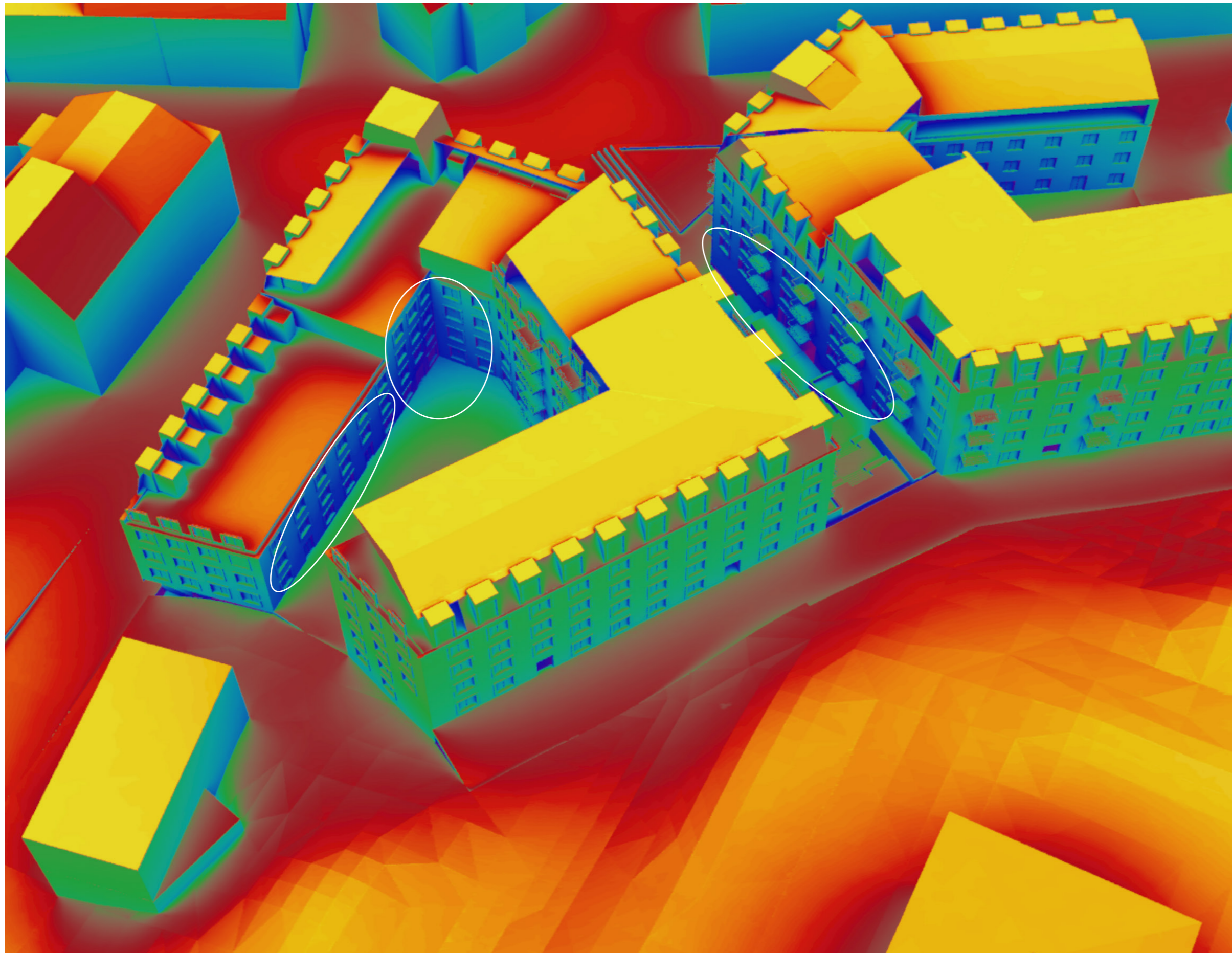
The final results are represented as images that show what the diagrams show the proportion of skylight coming from CIE overcast sky (cloudy sky) as it hits each facade. An assumption can then be made that windows, which receive values of about <10% VSC (shown in dark blue), are very likely to have difficulty meeting daylight requirements according to BBR. The markup results show the likelihood of a rooms of passing BBR 6:322 Daylight. Each rooms is awarded a different colour depending on the expected performance. The daylight simulation shows results of how the daylight enters the room and corresponding daylight factor value, together with the assessment of AF-method according to BBR.



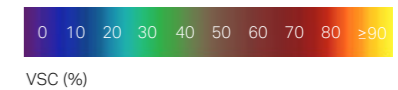
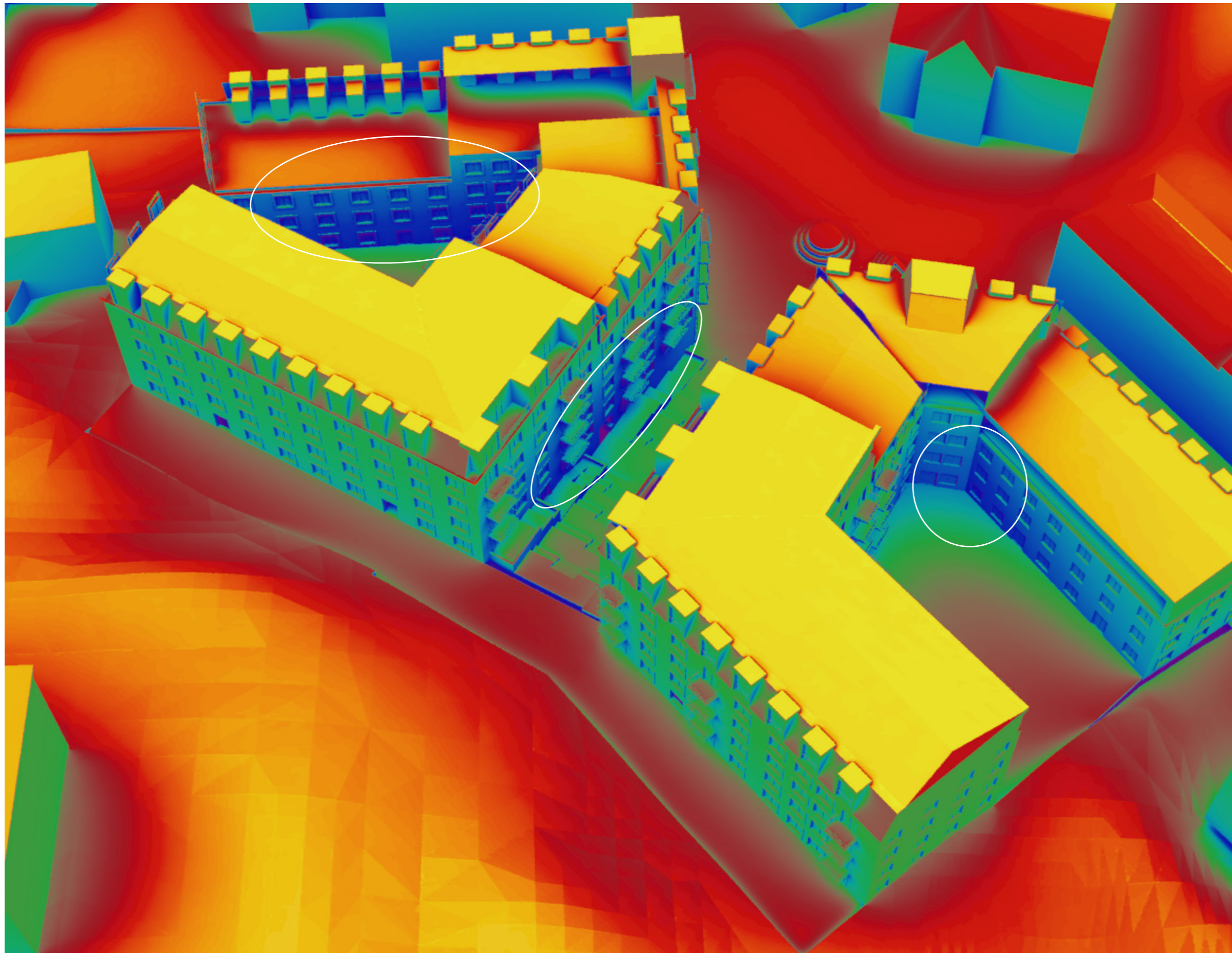
1. VERTICAL SKY COMPONENT



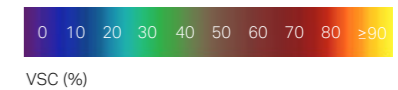
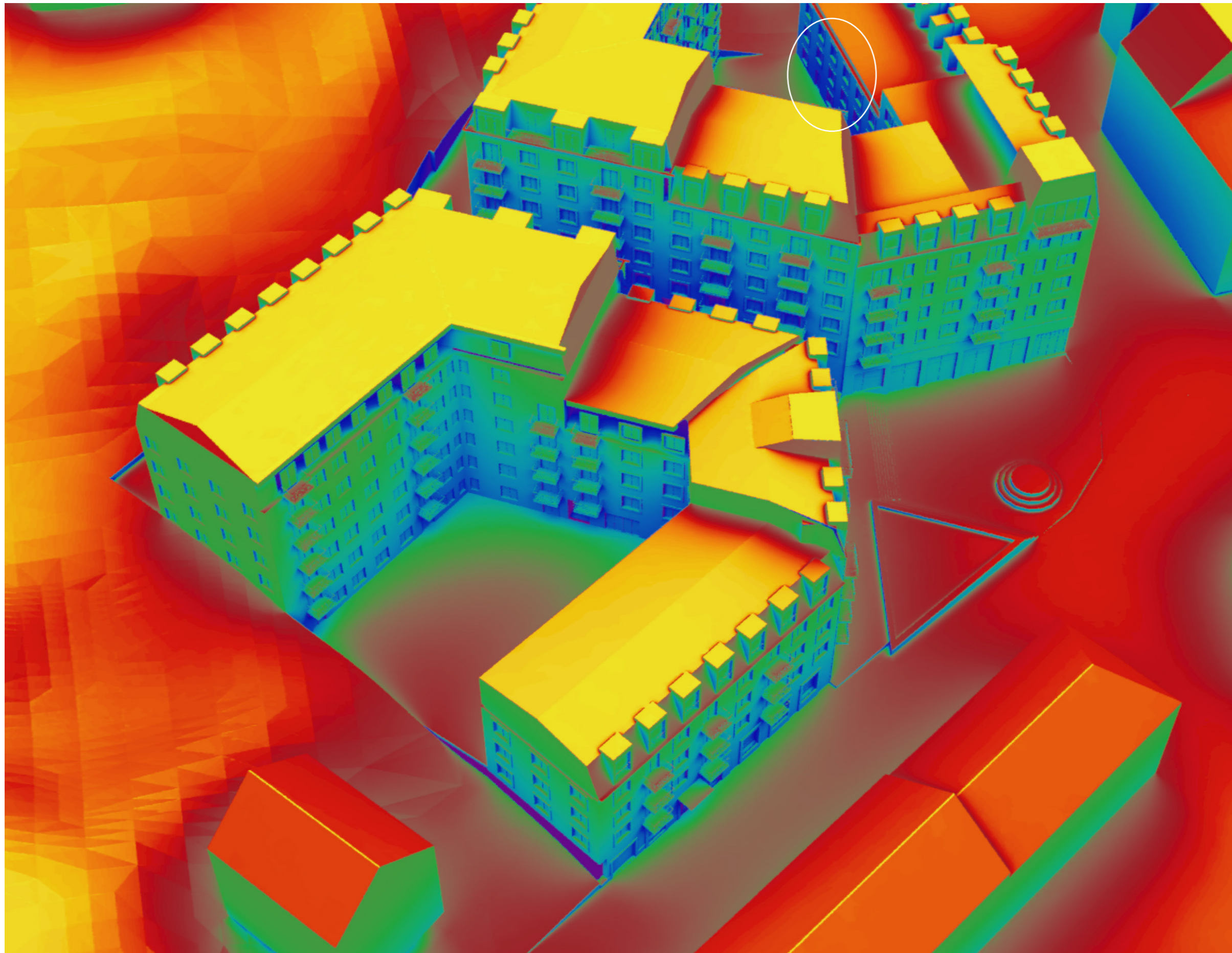
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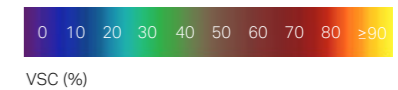
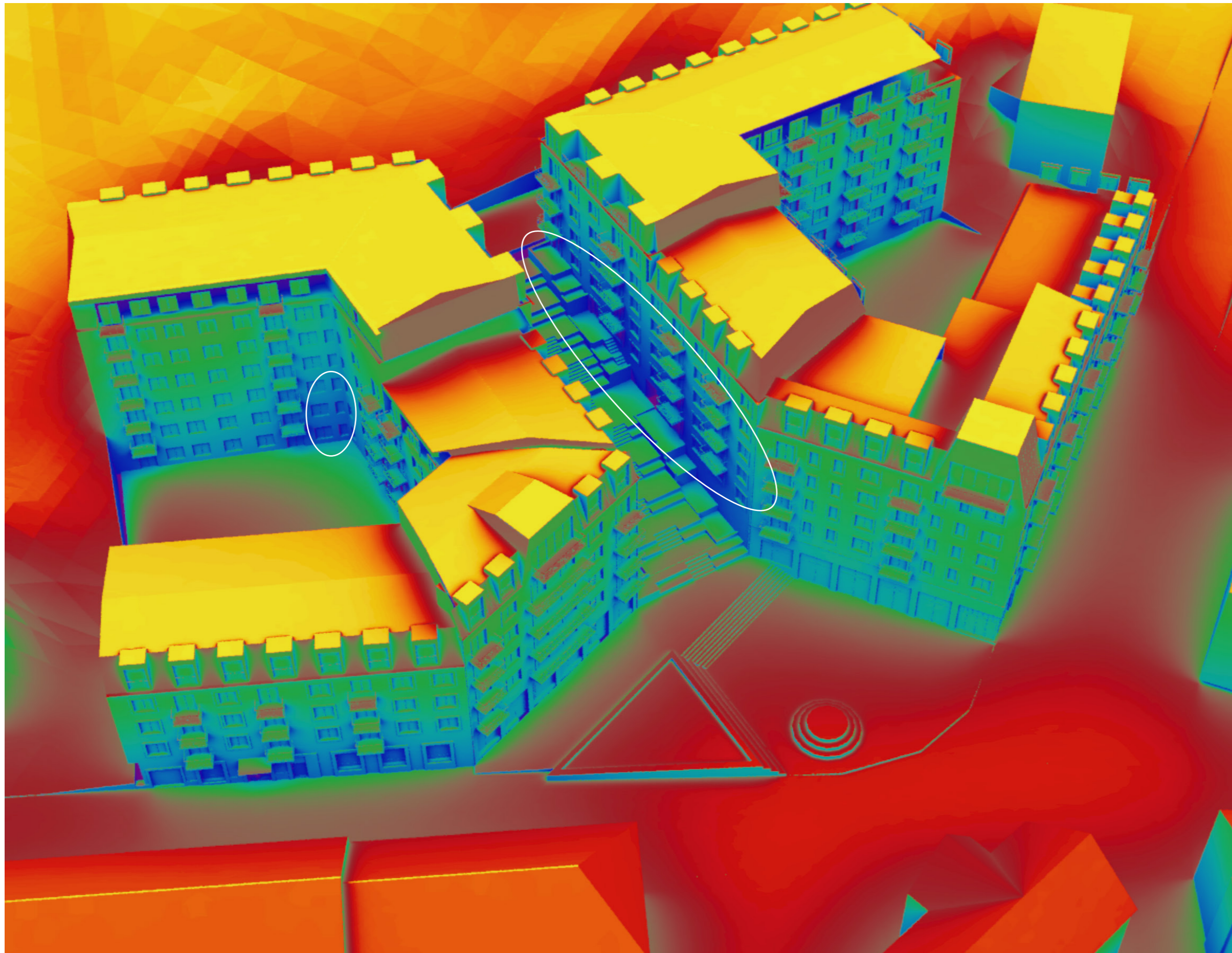
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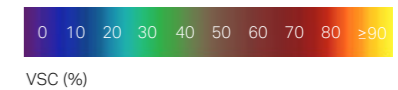
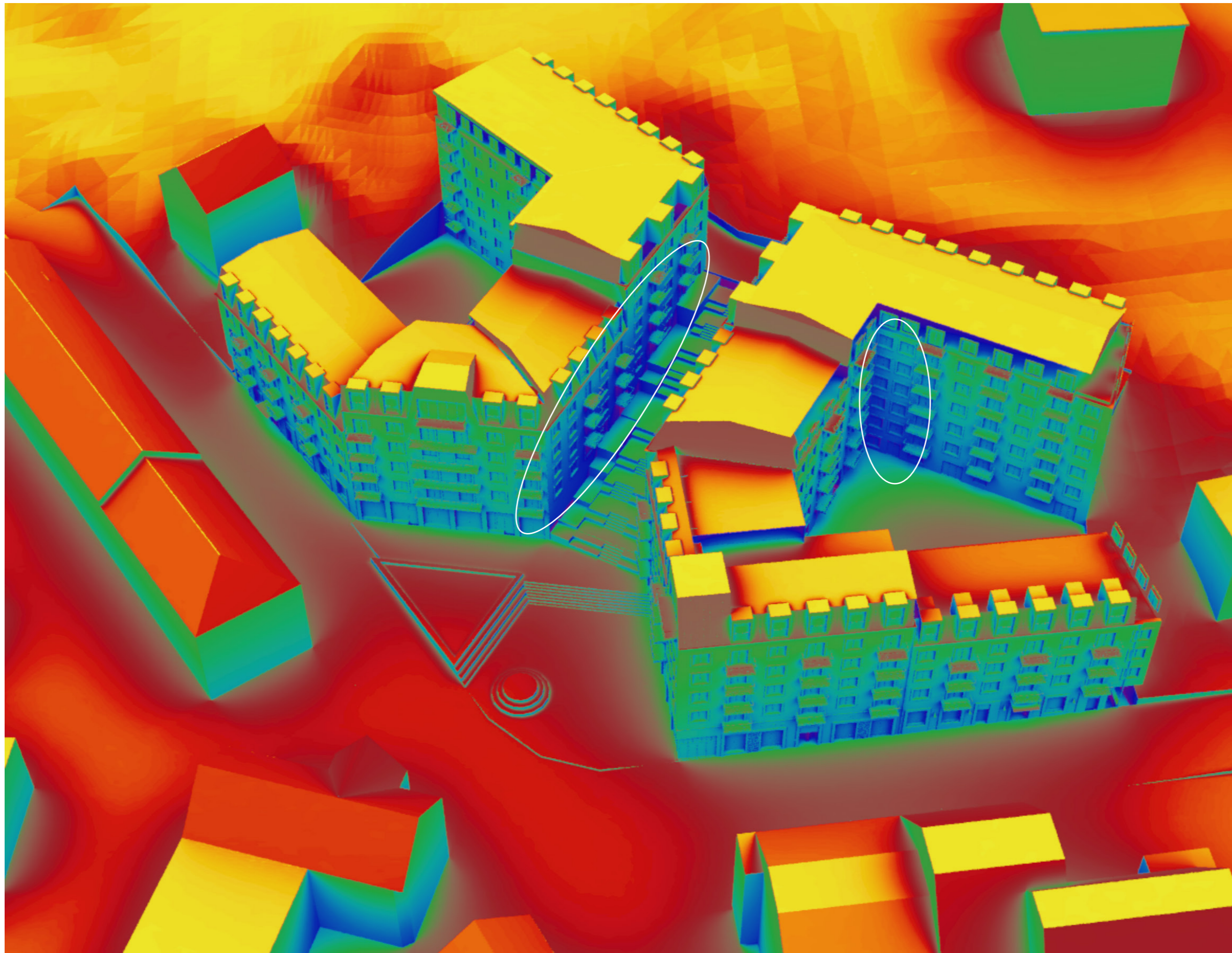
1. VERTICAL SKY COMPONENT



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2. DAYLIGHT MARK-UP

PLAN 11



- Godkänt - 38 stk
- Möjligt - 16 stk
- Tveksamt - 14 stk
- Osannolikt - 4 stk

2. DAYLIGHT MARK-UP
PLAN 12



- Godkänt - 44 stk
- Möjligt - 18 stk
- Tveksamt - 16 stk
- Osannolikt - 5 stk

2. DAYLIGHT MARK-UP
PLAN 13



- Godkänt - 75 stk
- Möjligt - 16 stk
- Tveksamt - 7 stk
- Osannolikt - 0 stk

2. DAYLIGHT MARK-UP

PLAN 14



- Godkänt - 88 stk
- Möjligt - 12 stk
- Tveksamt - 0 stk
- Osannolikt - 0 stk

2. DAYLIGHT MARK-UP

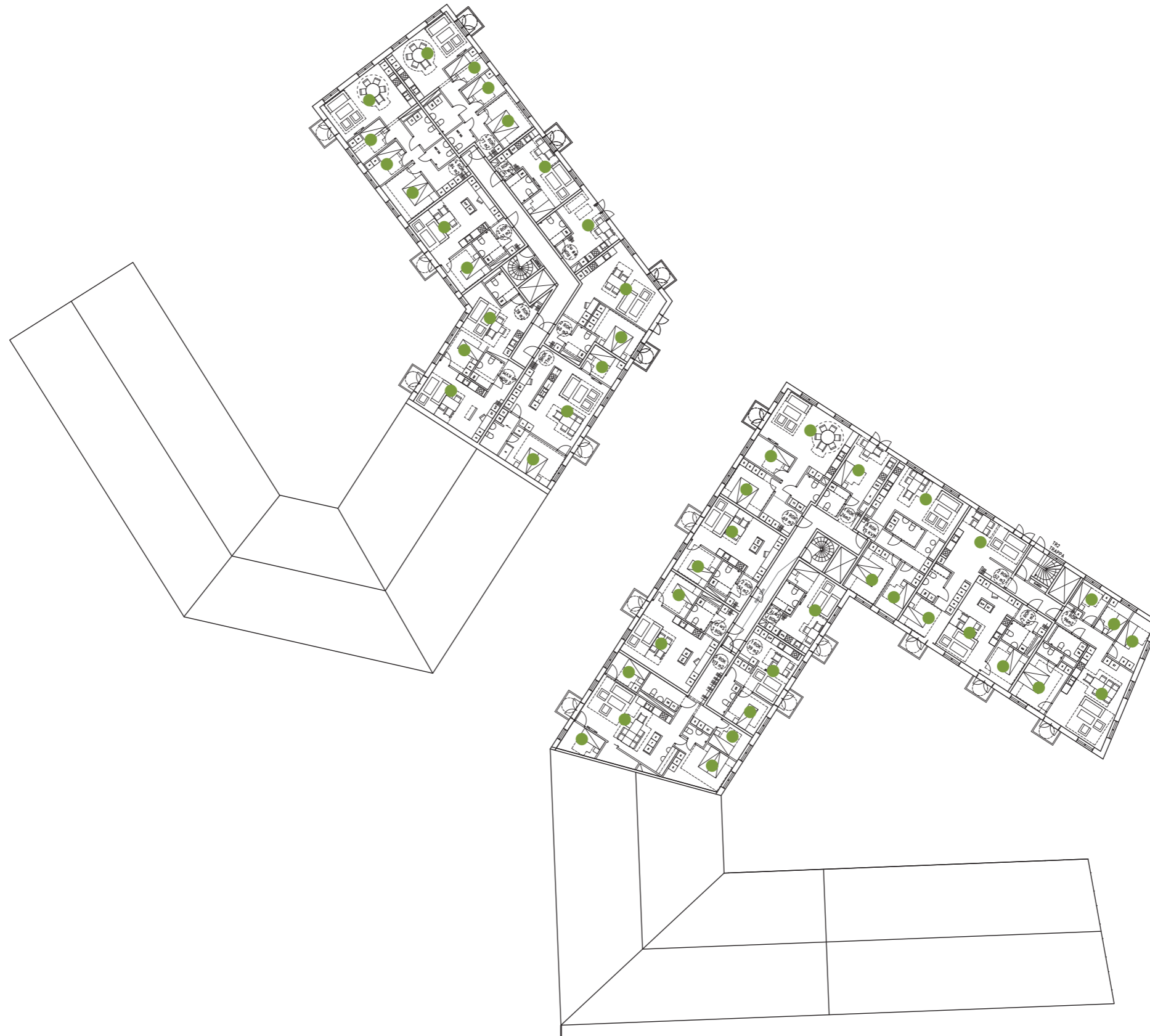
PLAN 15



- Godkänt - 76 stk
- Möjligt - 0 stk
- Tveksamt - 0 stk
- Osannolikt - 0 stk

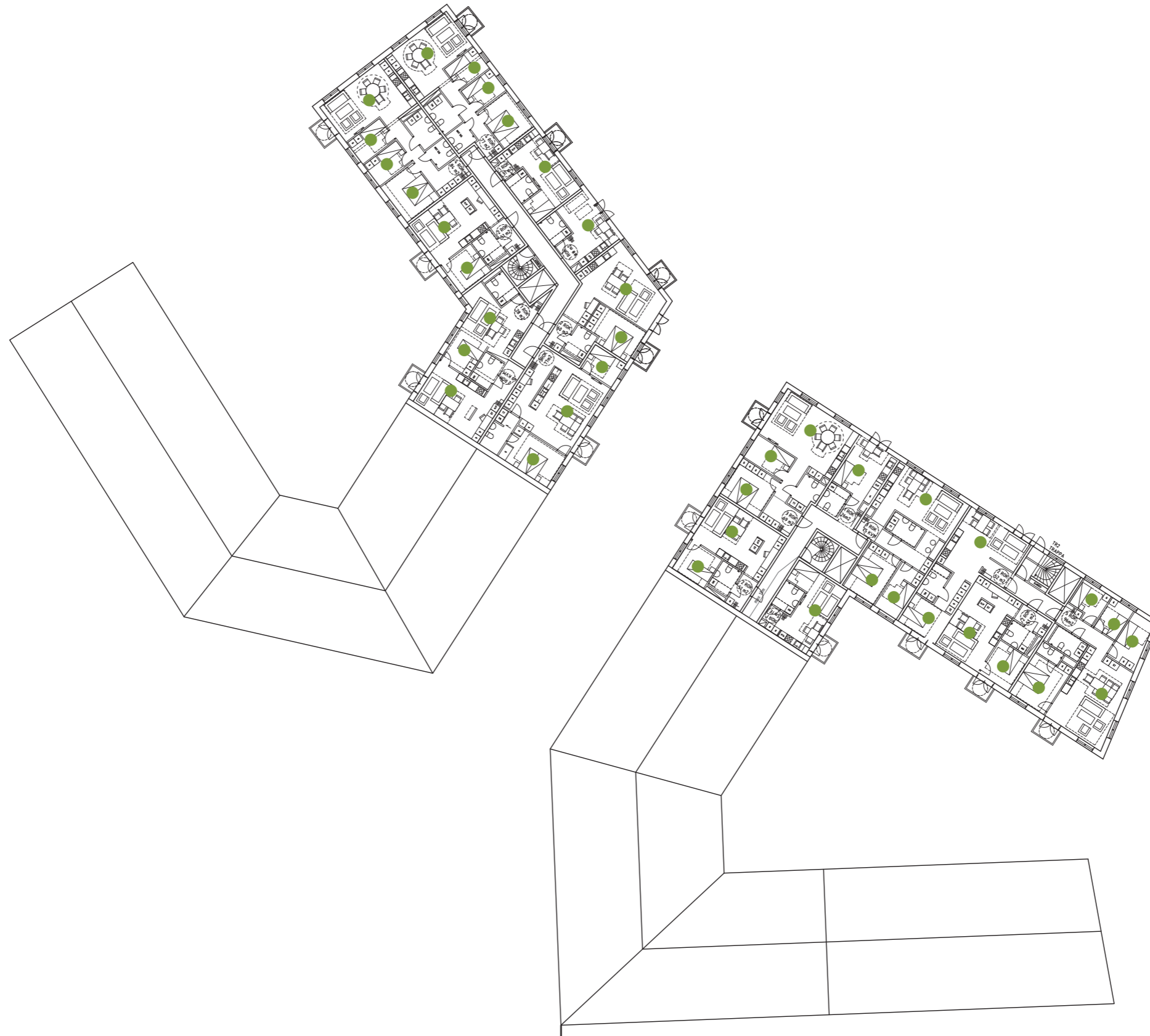
2. DAYLIGHT MARK-UP

PLAN 16



- Godkänt - 48 stk
- Möjligt - 0 stk
- Tveksamt - 0 stk
- Osannolikt - 0 stk

2. DAYLIGHT MARK-UP
PLAN 17



- Godkänt - 39 stk
- Möjligt - 0 stk
- Tveksamt - 0 stk
- Osannolikt - 0 stk