

STUDY AIM

The purpose of this study is to assess the proposed development in terms of (1) diffuse daylight access bbr kap 6:322 (2) direct solar access bbr kap 6:323 and (3) solar direct solar access on the streets and courtyards.

METHOD

Beräkningar för vsc tar hänsyn till himlens ljushet, himmelsavskärmning-en, omkringliggande byggnader och utvändiga skuggande byggnadsdelar, fasta skärmar etc. Beräkningarna är utförda med 'berkeley laboratory's radiance software' (radiance) med 'grasshopper/honeybee'. Rende-ringsmotorn 'radiance render engine' är betraktad som 'industristan-dard' mjukvara för fysiskt korrekt beräkning av ljus. Shading effects from plants and other vegetation are not considered in the calculations. For the assessment of direct sun on the facades, the assessment was carried out for the whole year, where according to bbr's chapter 6:323 where at least one room per dwelling should have direct sunlight at some point in the year.

(A) equinox (mars/sept 21) 09:00 – 17:00

This period is traditionally used for assesment of outdoor spaces in sweden. Boverket's document solklart from 1991 recommends 'minst 5 timmars sol mellan 9.00 – 17.00 Vid vår- och höstdagjämning i bostaden och på närmiljöns lektytor och sittplatser'. Three hours can be considered an absolute minimum for places where activities other than walking are intended.

Computers allow a more accurate assessment than a single day, like specific periods of interest that can be easily calculated for the time of year that people generally find themselves staying outside except april 21 to september 21. For this study these three periods of interest are defined as:

(B) daytime 08:00 – 20:00

(C) lunchtid 11:00 – 15:00

(D) 'afterwork' 15:00 – 19:00

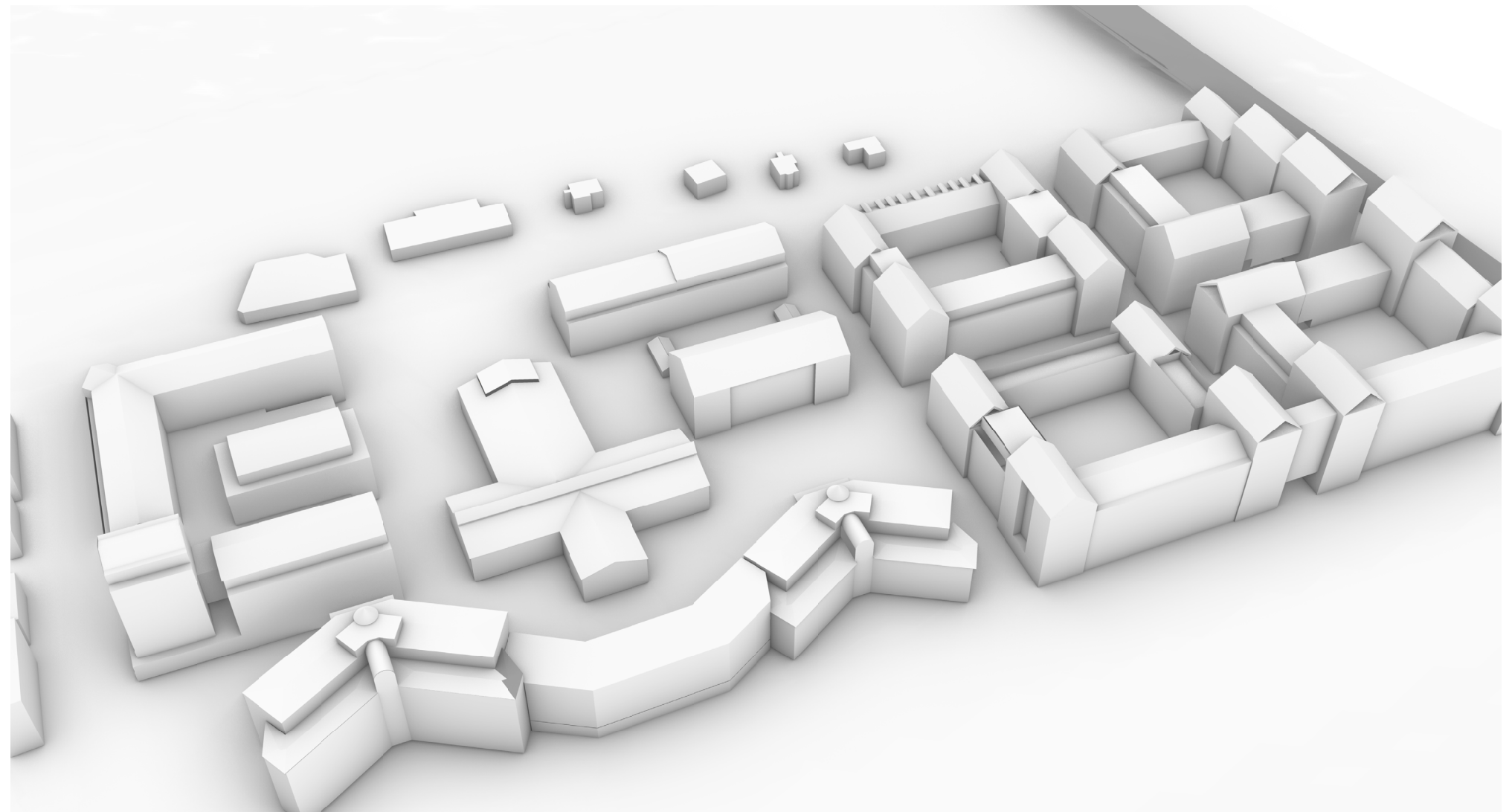
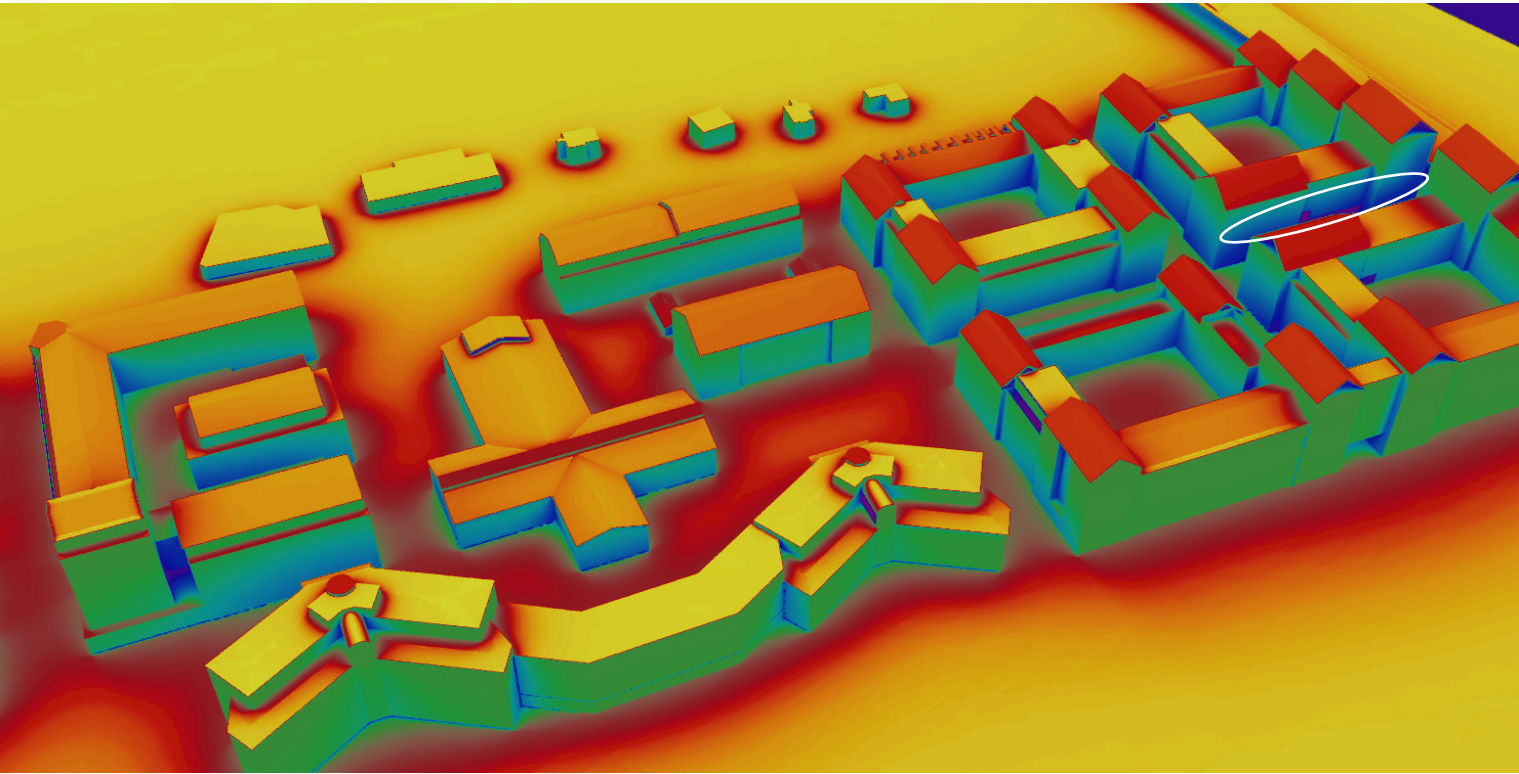
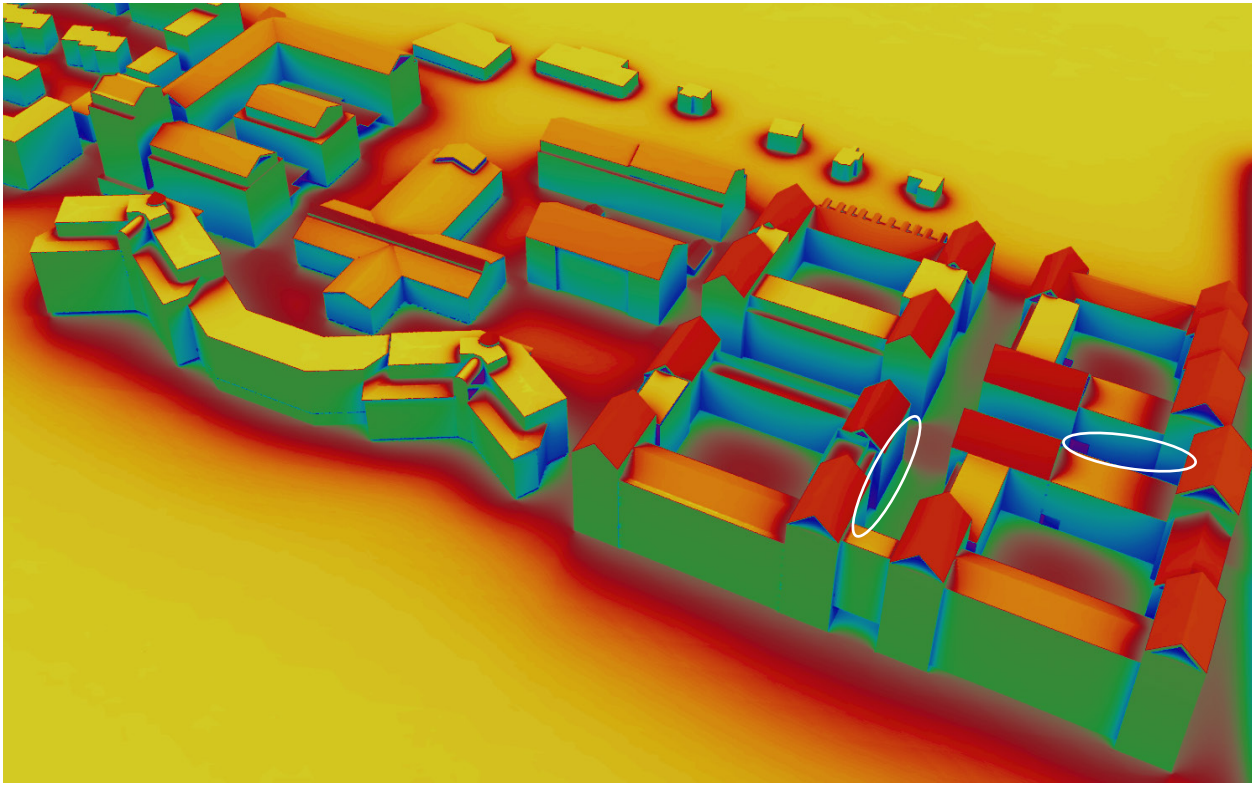
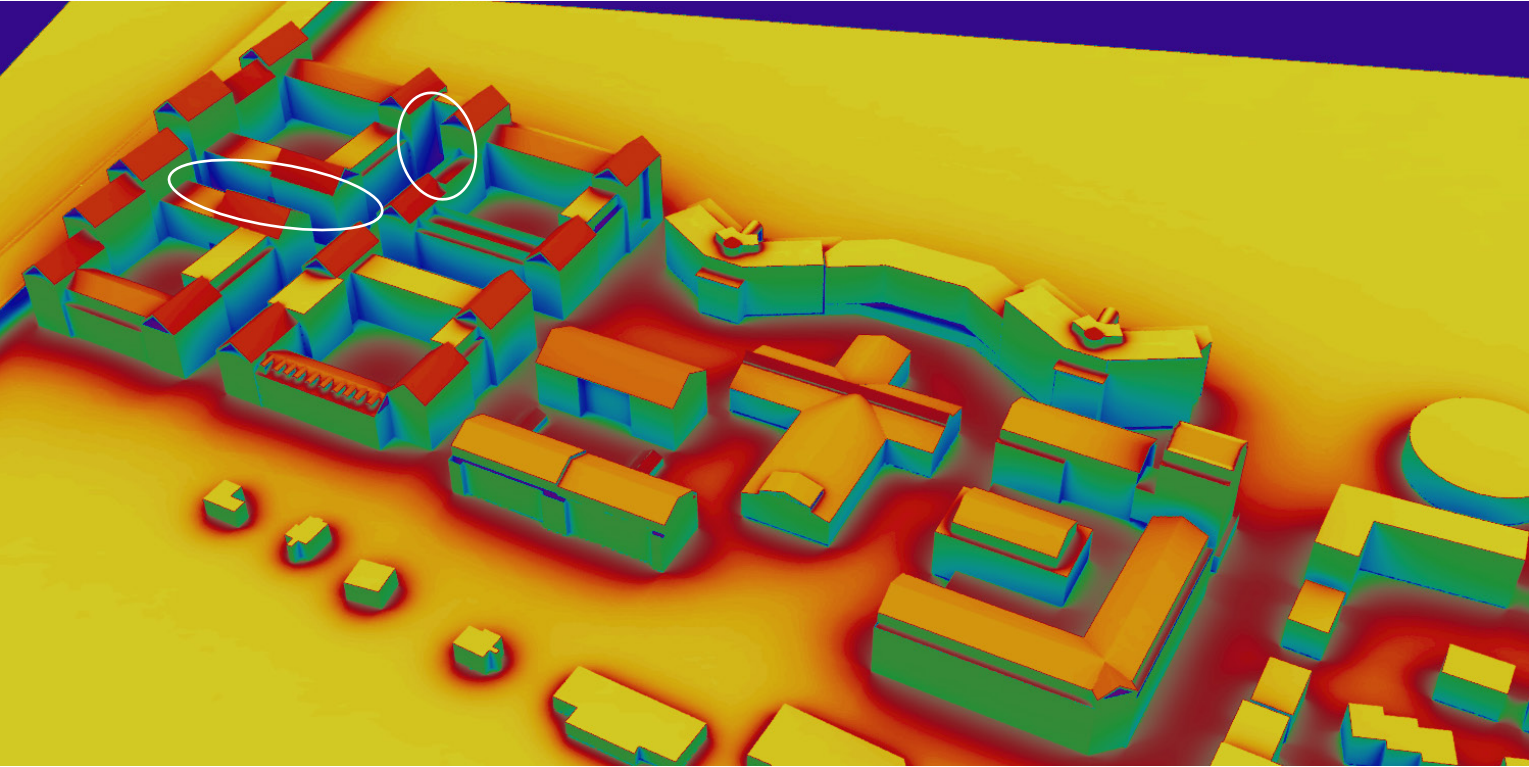
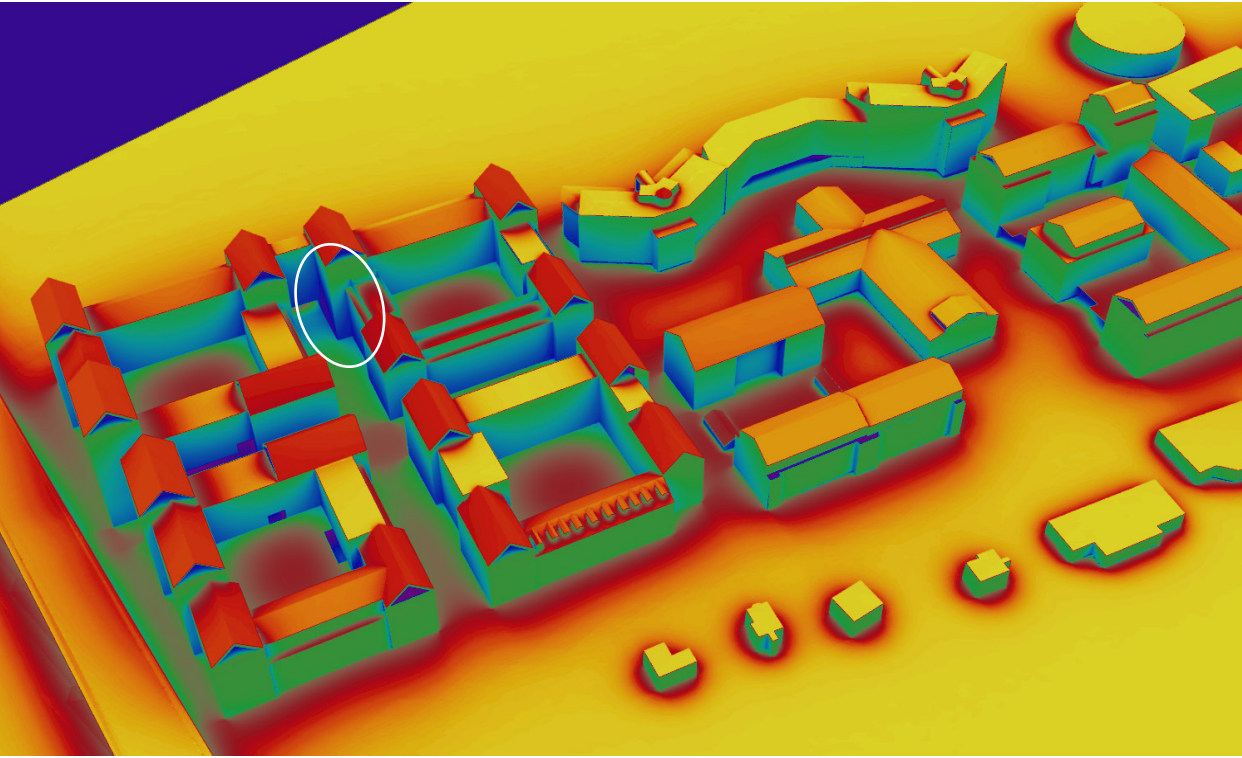
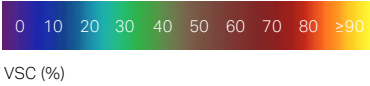
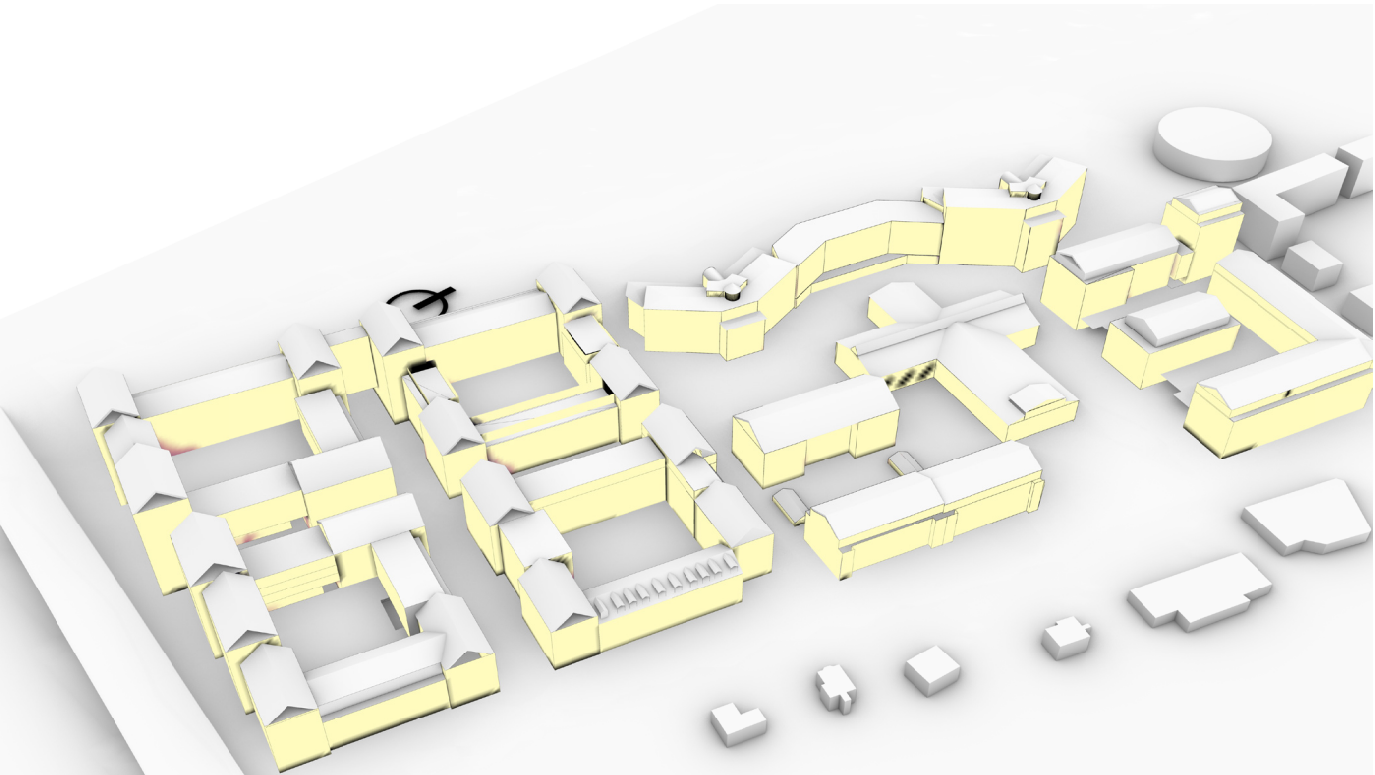
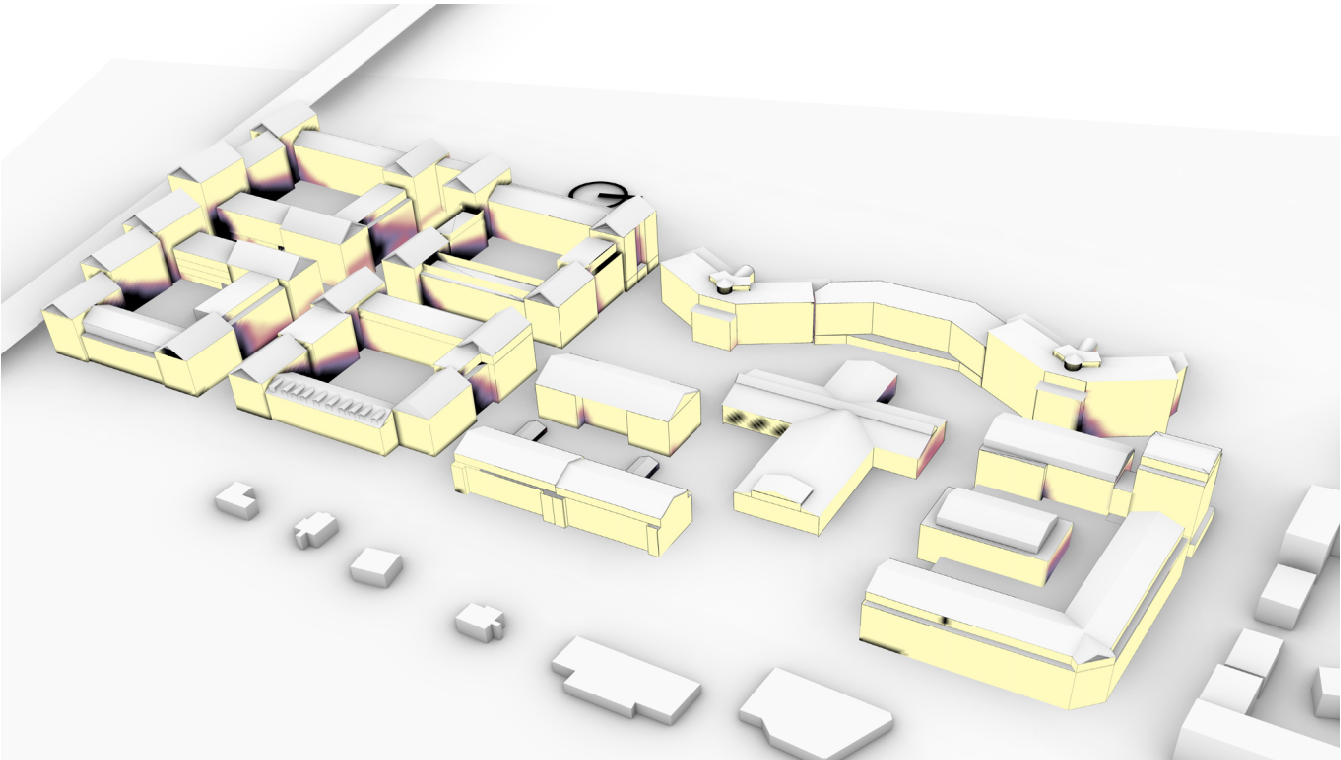
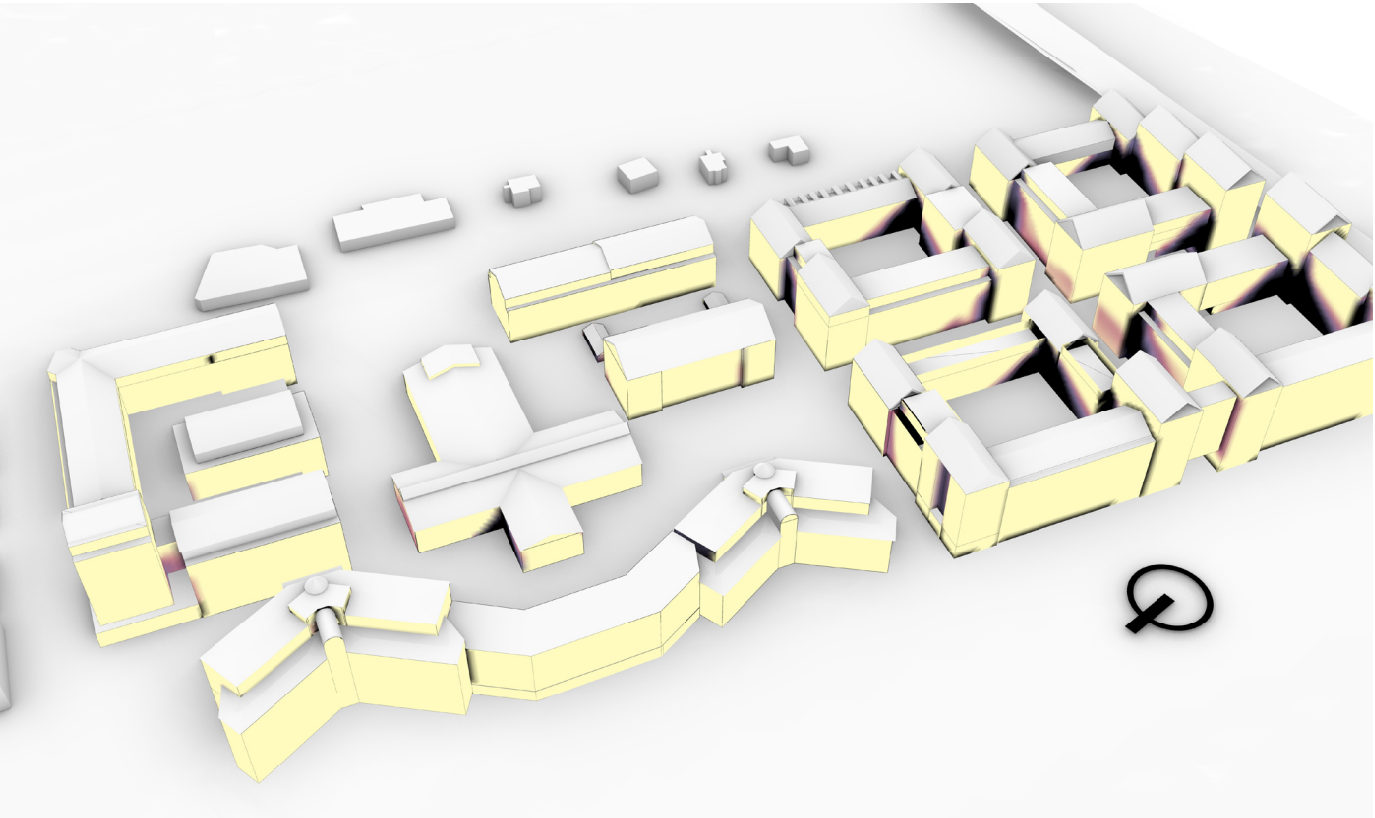
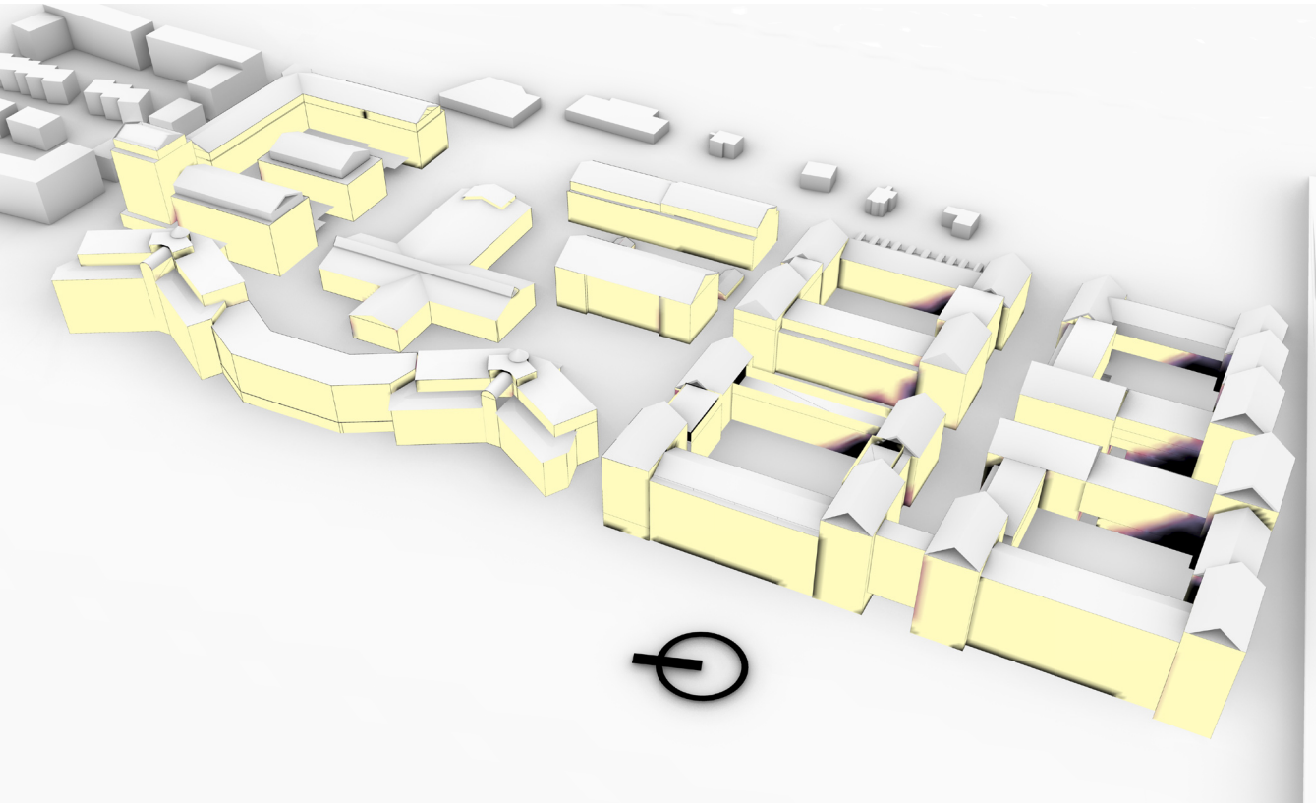
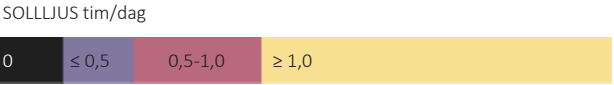


Illustration 1: 3D modell som används för beräkningarna

1. DAYLIGHT ACCESS - VERTICAL SKY COMPONENT (VSC)

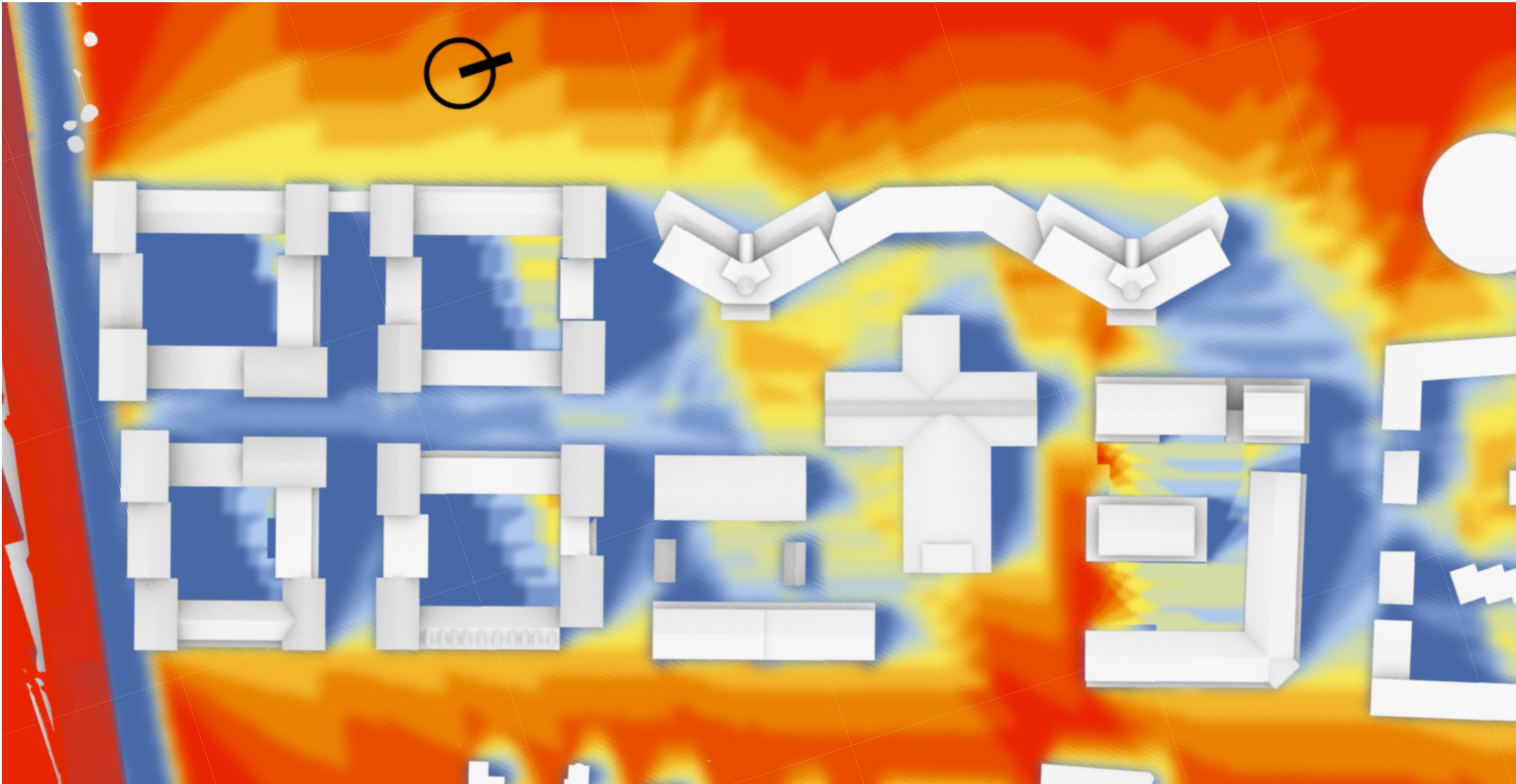
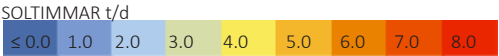


2.DIREKT SOLLJUS FASADER



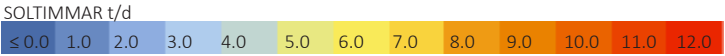
3. DIREKT SOLLJUS TILLGÅNG

VÅR- OCH HÖSTDAGSJÄMNING (MARS 21) 09:00 – 17:00



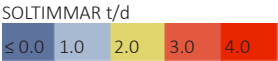
3. DIREKT SOLLJUS TILLGÅNG - DAGTID

APRIL 21 TILL SEPTEMBER 21 08:00 – 20:00



3. DIREKT SOLLJUS TILLGÅNG - LUNCHTID

MARS 21 TILL SEPTEMBER 21 11:00 – 15:00



3. DIREKT SOLLJUS TILLGÅNG - AFTERWORK

MARS 21 TILL SEPTEMBER 21 15:00 – 20:00

SOLTIMMAR t/d
≤ 0.0 1.0 2.0 3.0 4.0 5.0

