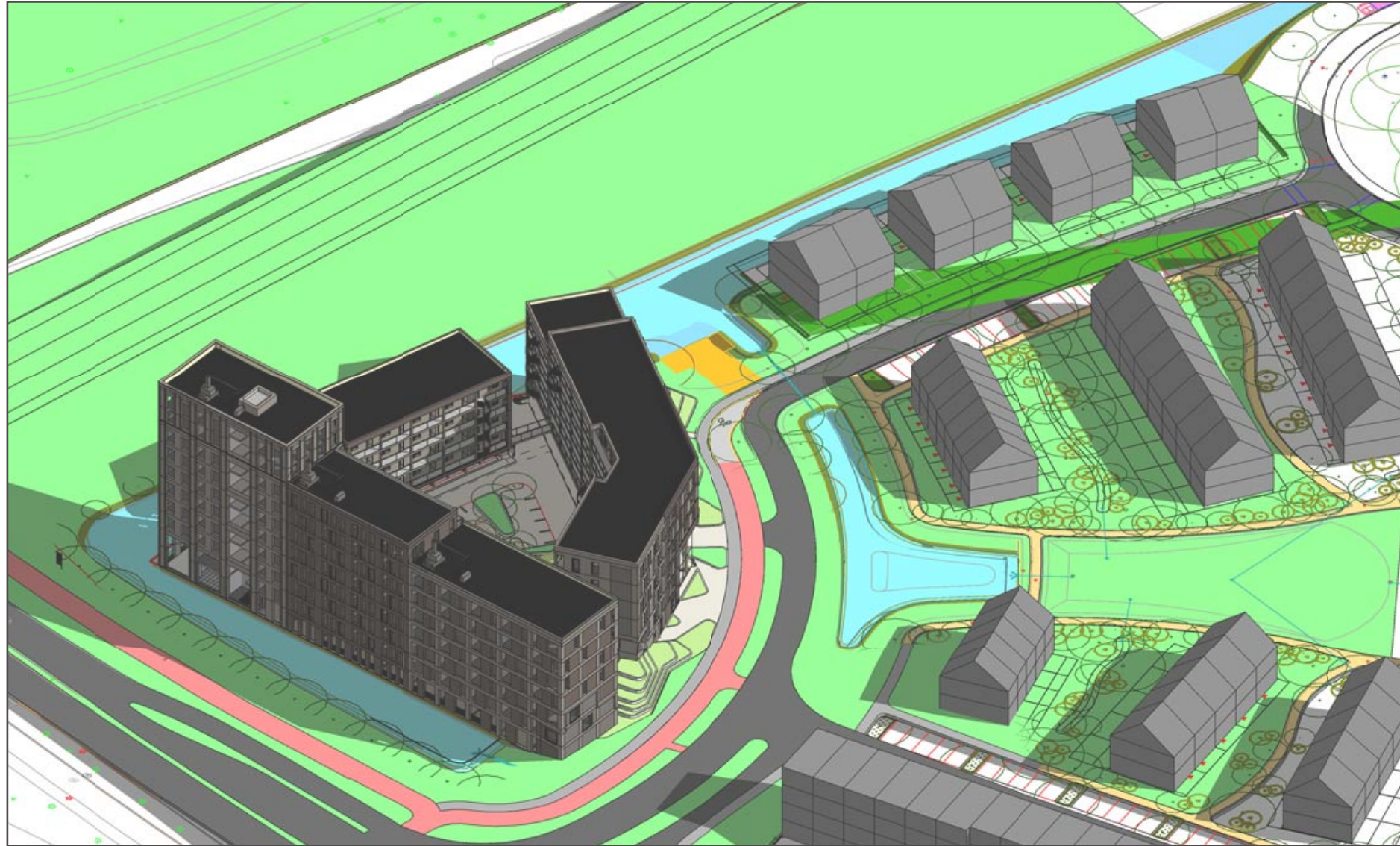


BEZONNINGSTUDIE VIJFSLUIZEN – VLAARDINGEN



Op 15.00 uur op 21 juni 12.00 uur

Voor vier jaargetijden is de schaduwwerking bepaald;

- hoogste zonnebaan aan de hemel op 21 juni,
- laagste zonnebaan aan de hemel op 21 december,
- lentepunt (middelste zonnebaan) op 21 maart,
- herfstpunt (middelste zonnebaan) op 21 september.

Gedurende de dag zijn 13 momentopnames gemaakt van de schaduwwerking: elk uur van 8.00 t/m 20.00 uur.

INHOUDSOPGAVE

TNO-NORM	–	3
FEBRUARI	–	4
MAART	–	7
JUNI	–	10
SEPTEMBER	–	13
OKTOBER	–	16
DECEMBER	–	19

'Lichte' TNO-norm:

*"Ten minste **2 mogelijke bezonningsuren per dag** in de periode van 19 februari - 21 oktober (gedurende 8 maanden) in midden vensterbank binnenkant raam."*

Getoetste data:

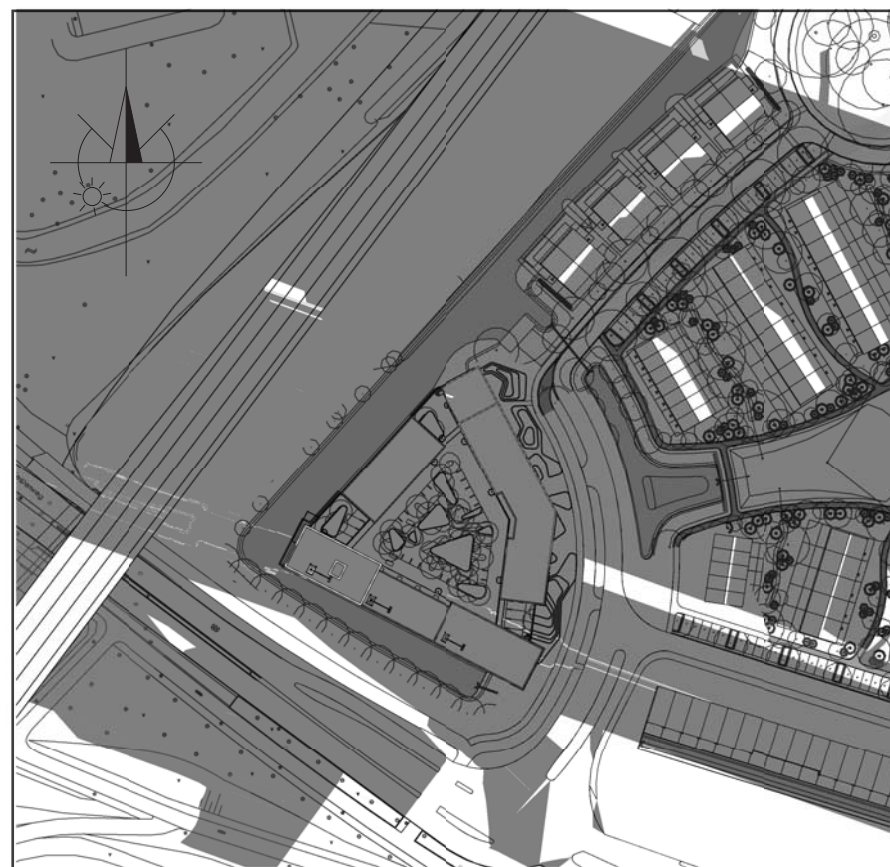
In de bouwfysica worden de dagen 21 maart, 21 juni, 21 september en 21 december genomen als maatgevende dagen voor de bezonning in de verschillende seizoenen. Voor de 'lichte' TNO-norm worden de dagen 19 februari en 21 oktober getoetst.

Conclusie:

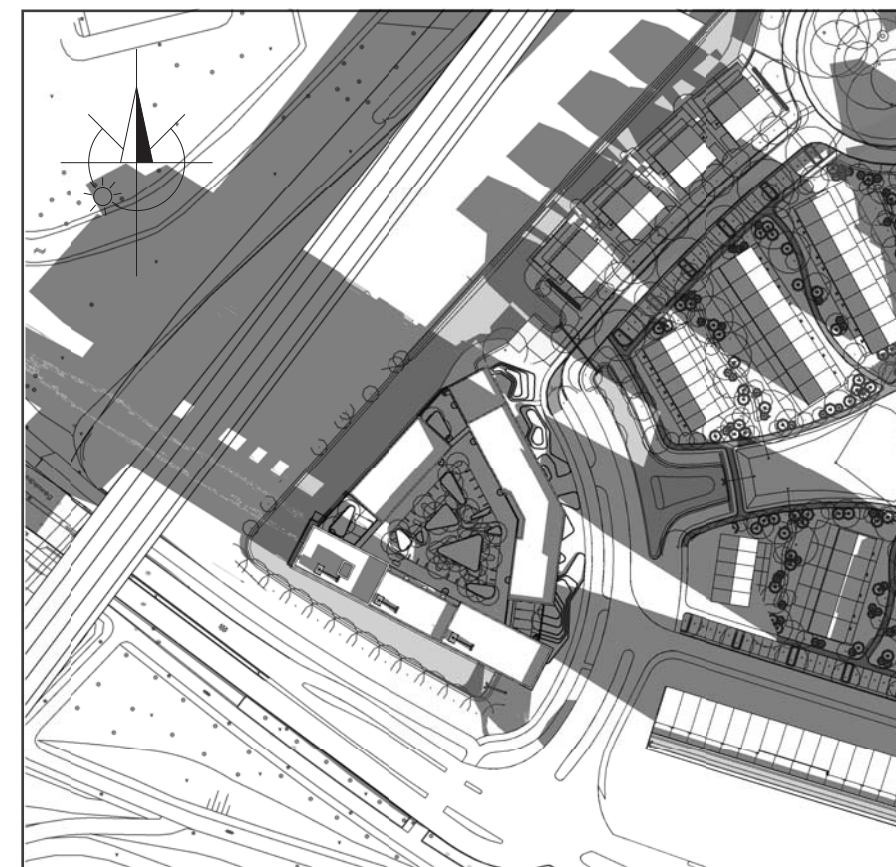
De schaduwwerking van het appartementenblok zorgt niet voor minder dan 2 mogelijke bezonningsuren per dag in de periode van 19 februari tot 21 oktober.

Hieruit kan geconcludeerd worden dat het ontwerp van het appartementenblok in 'Park Vijfsluizen' **voldoet** aan de 'lichte' TNO-norm ten opzichte van de naastliggende laagbouw.

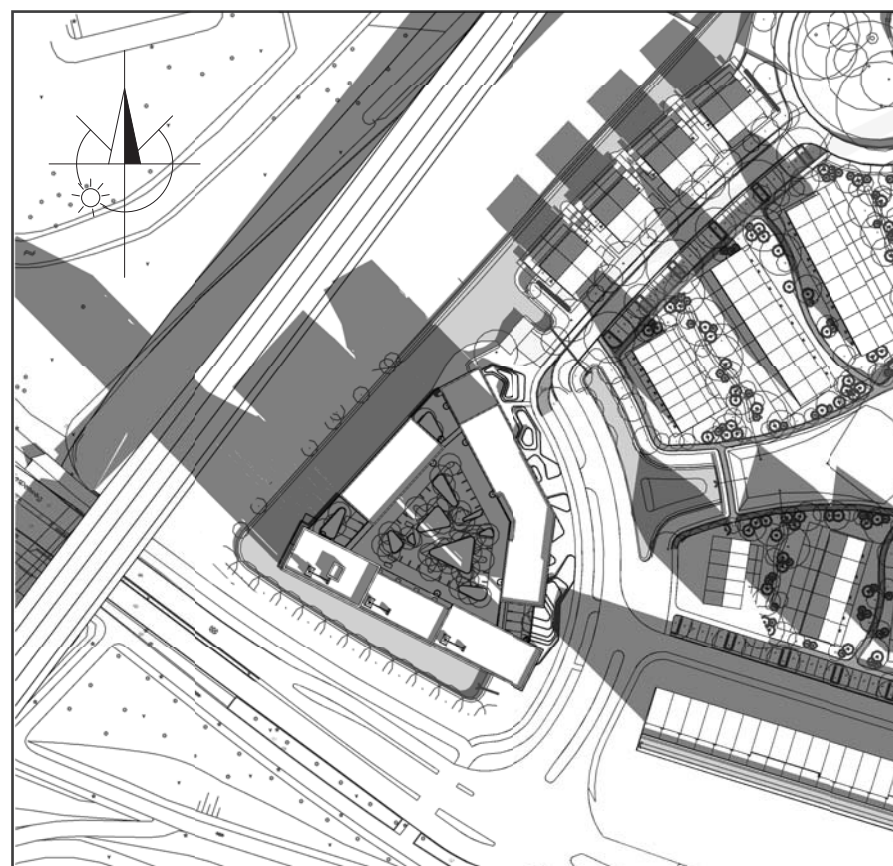
Bezonningsstudie 19 februari



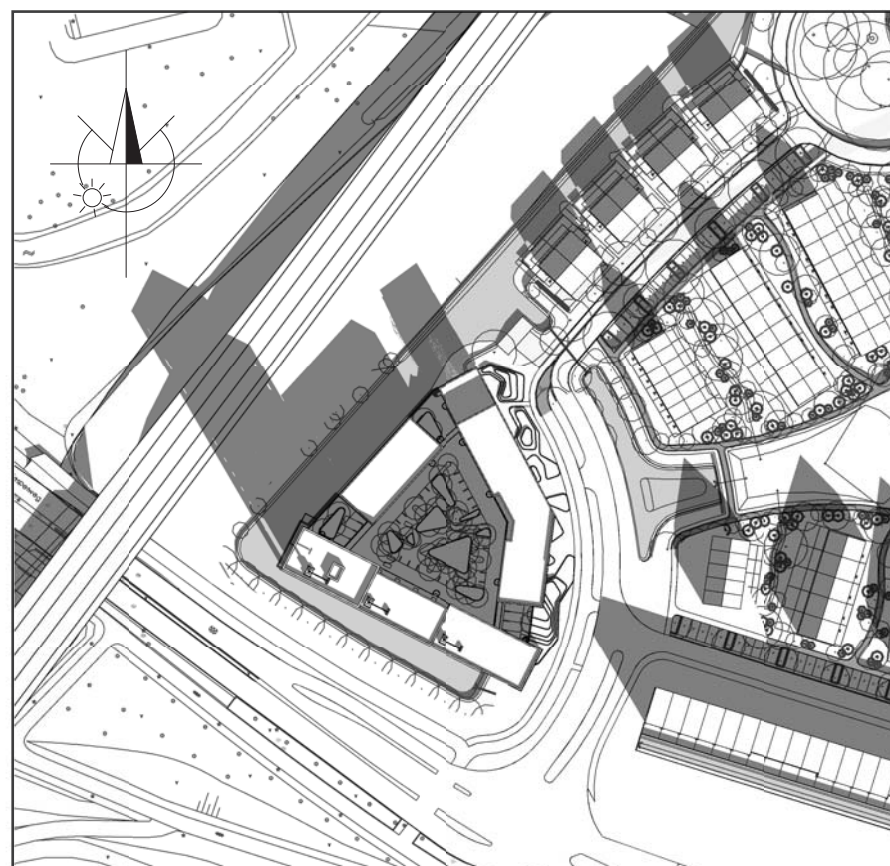
19 februari 08.00uur



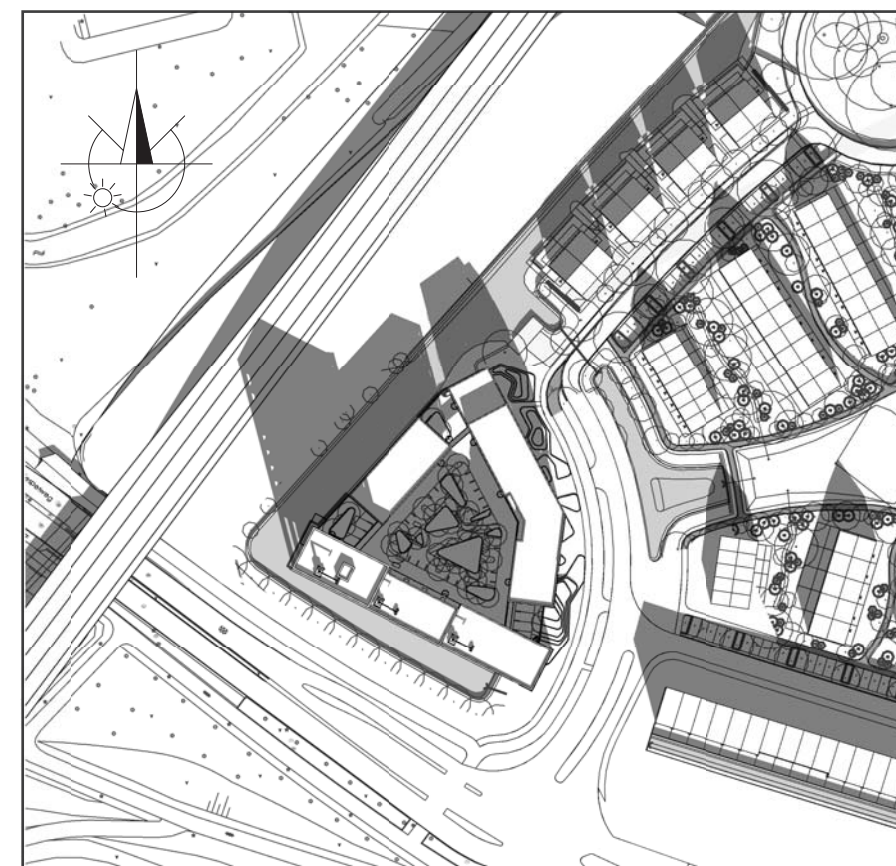
19 februari 09.00uur



19 februari 10.00uur

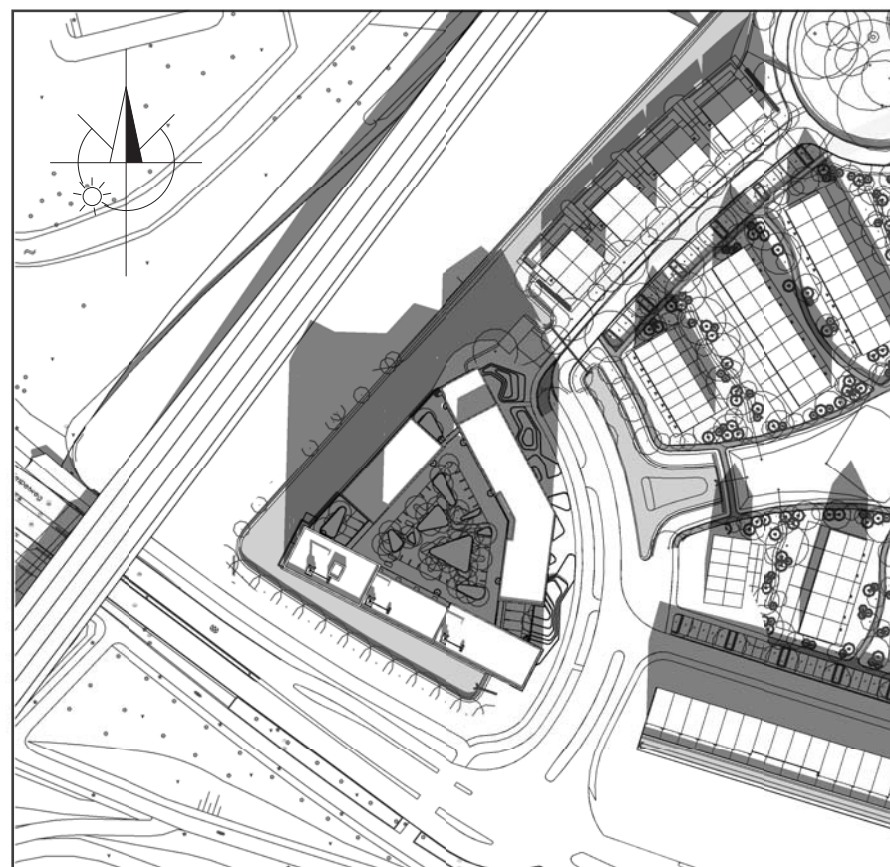


19 februari 11.00uur

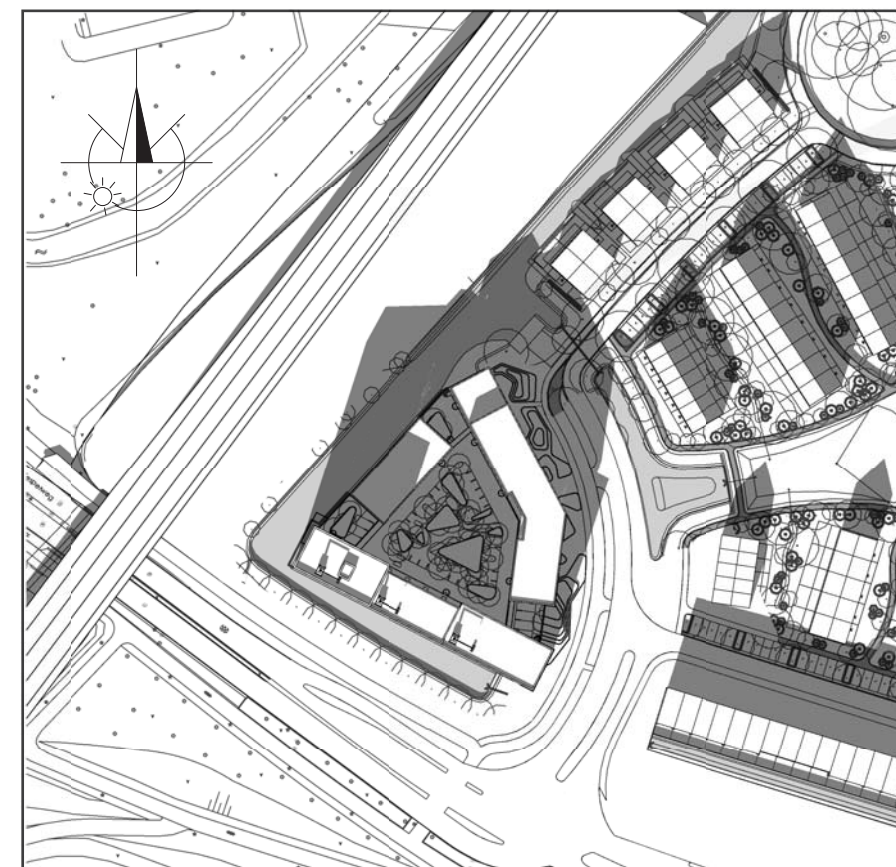


19 februari 12.00uur

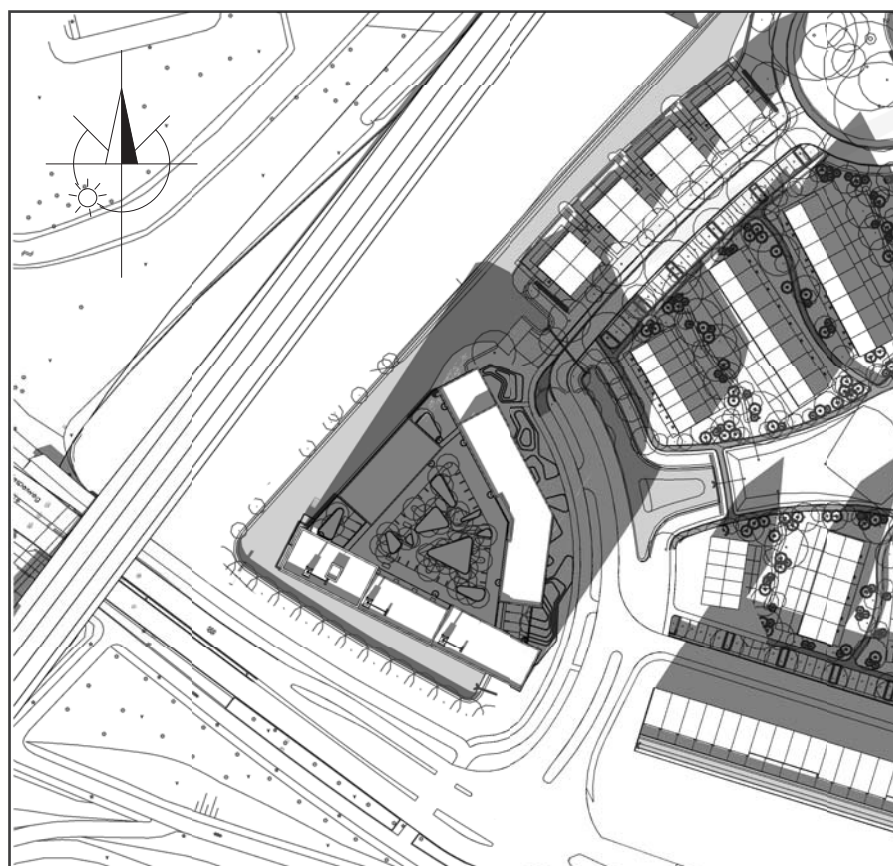
Bezonningsstudie 19 februari



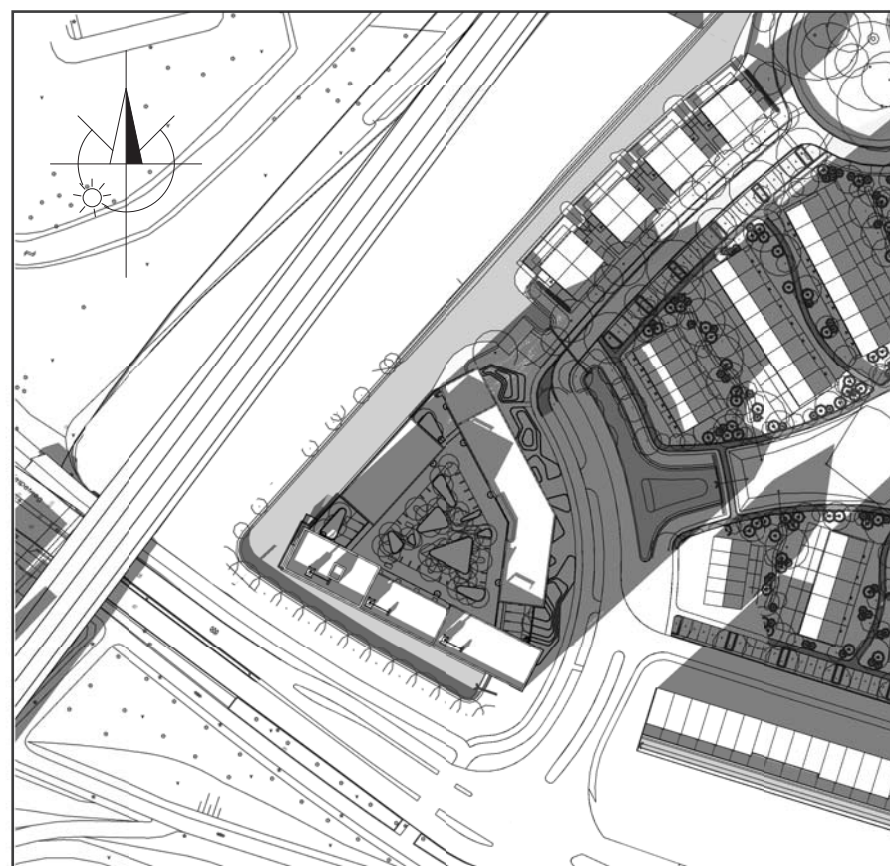
19 februari 13.00uur



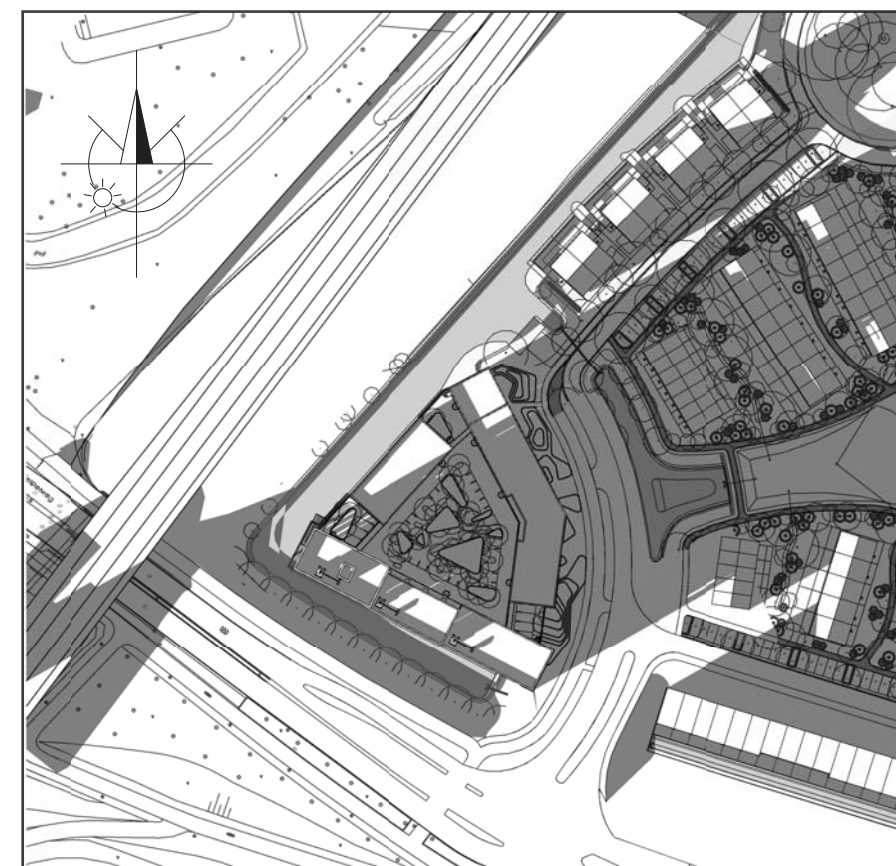
19 februari 14.00uur



19 februari 15.00uur

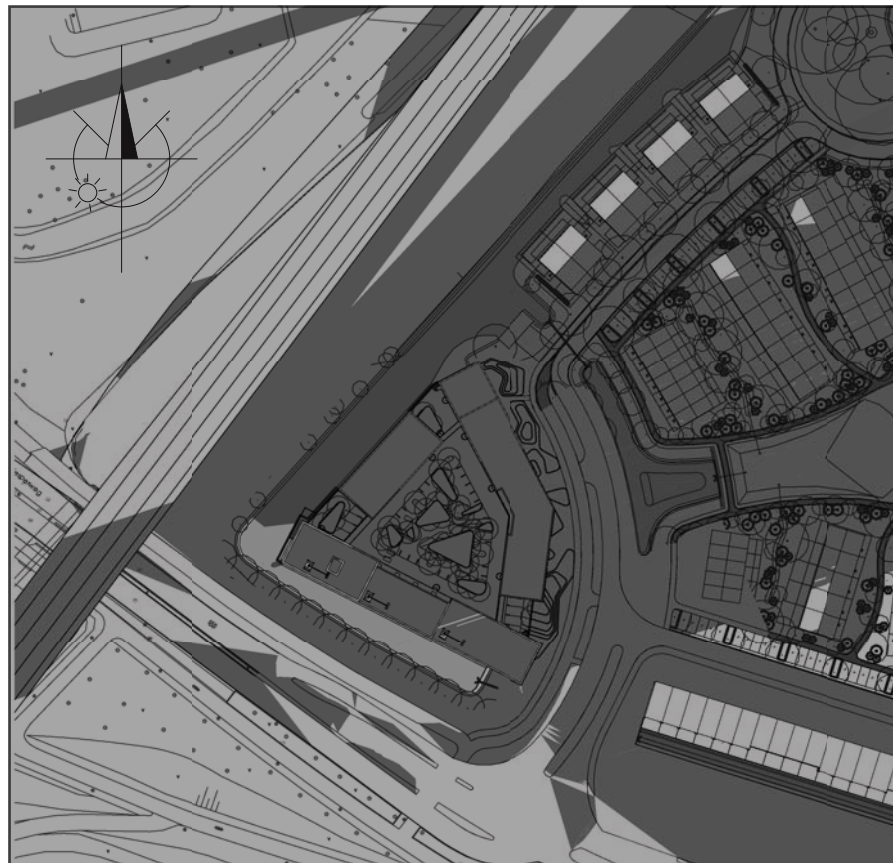


19 februari 16.00uur

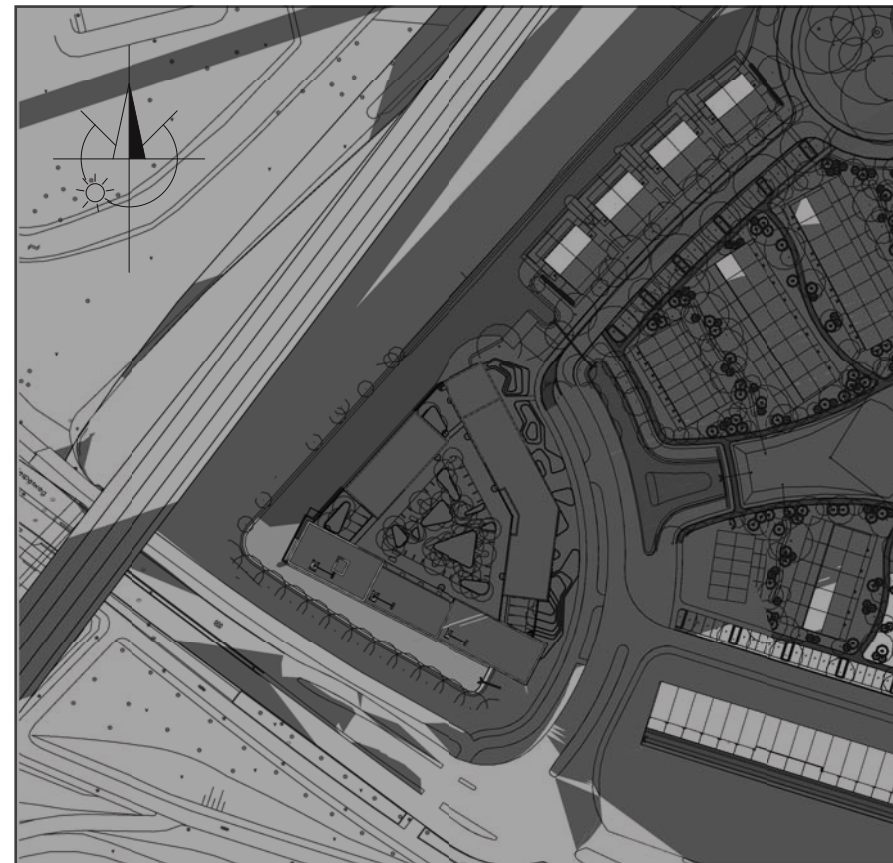


19 februari 17.00uur

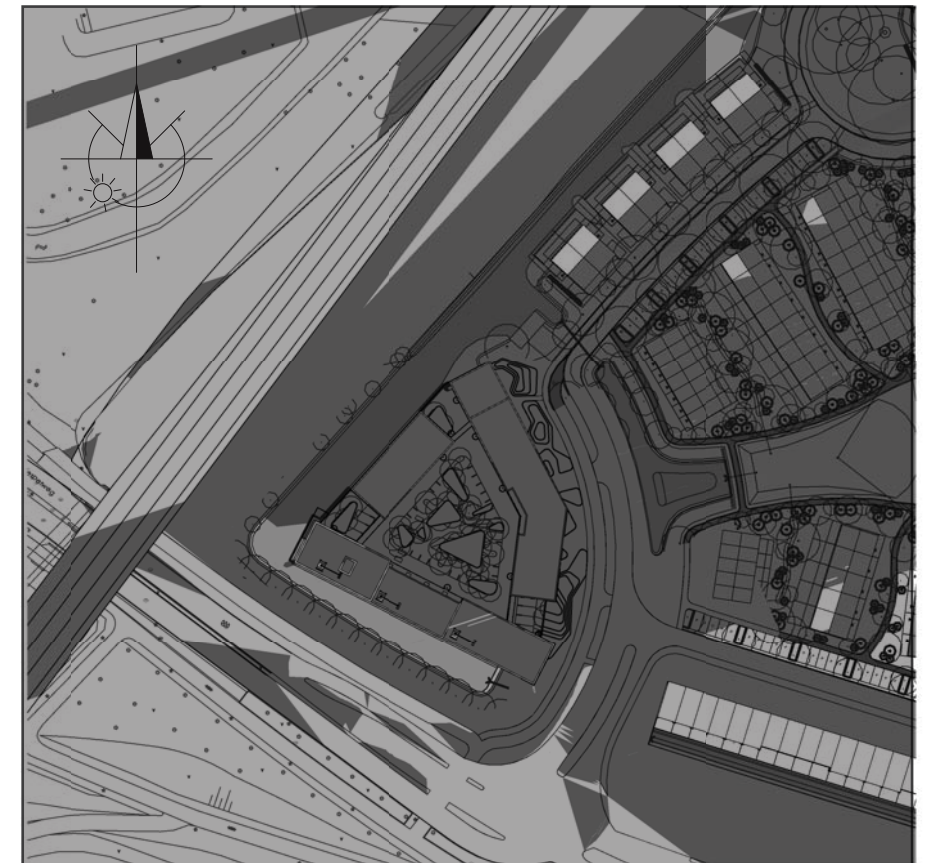
Bezonningsstudie 19 februari



19 februari 18.00uur

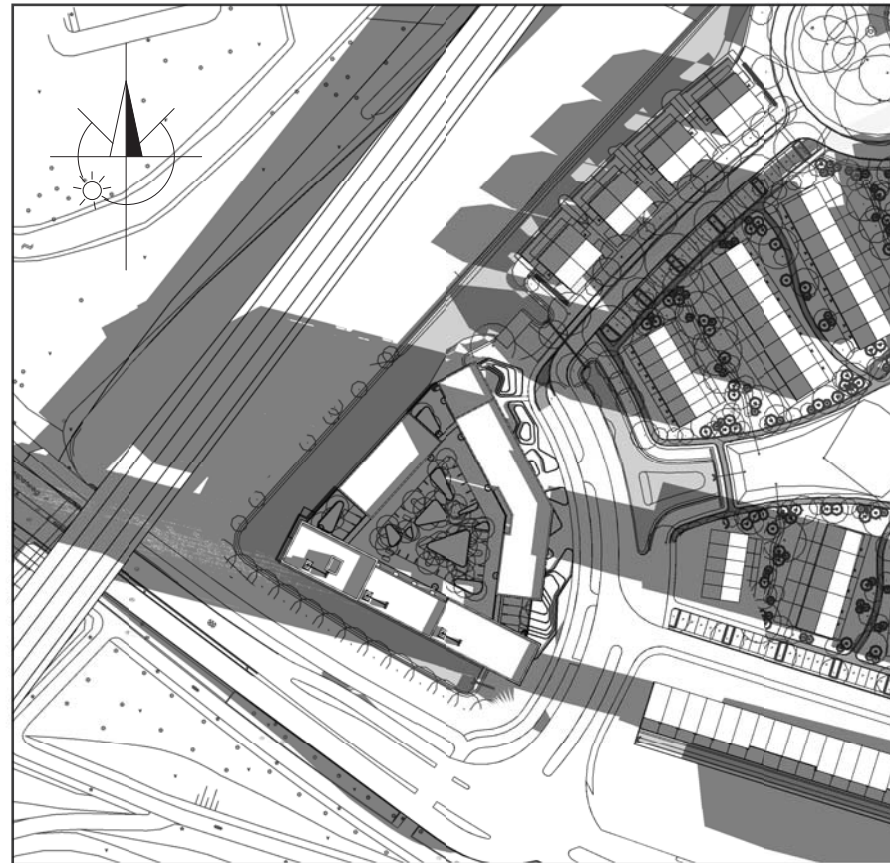


19 februari 19.00uur

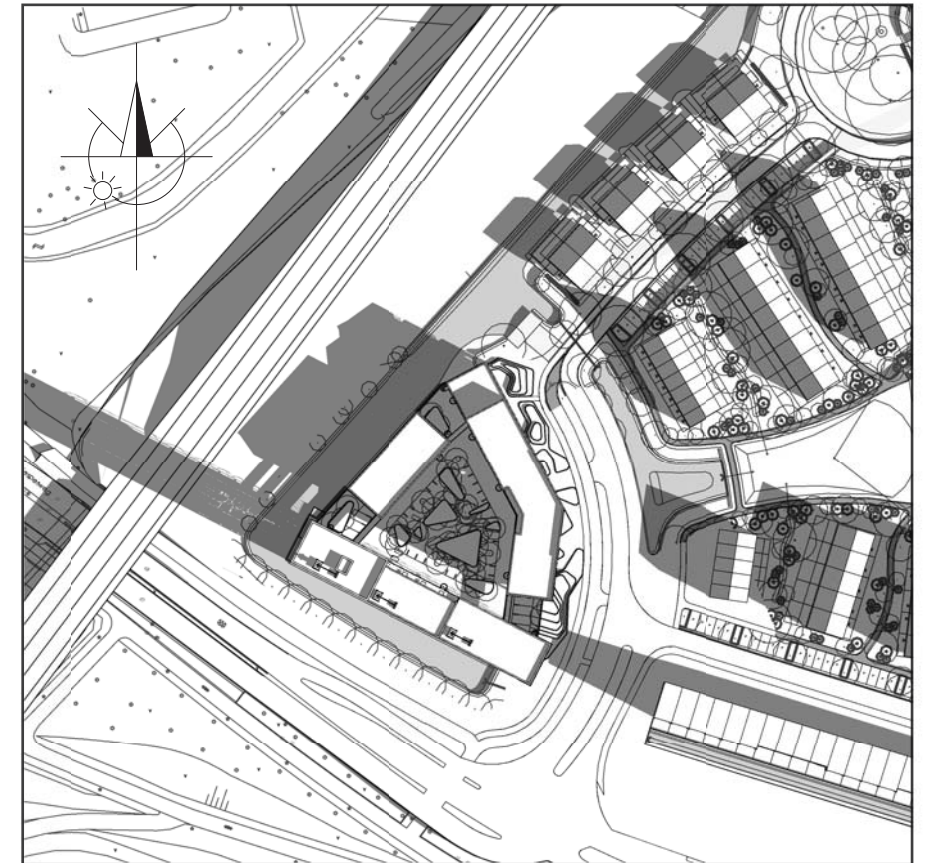


19 februari 20.00uur

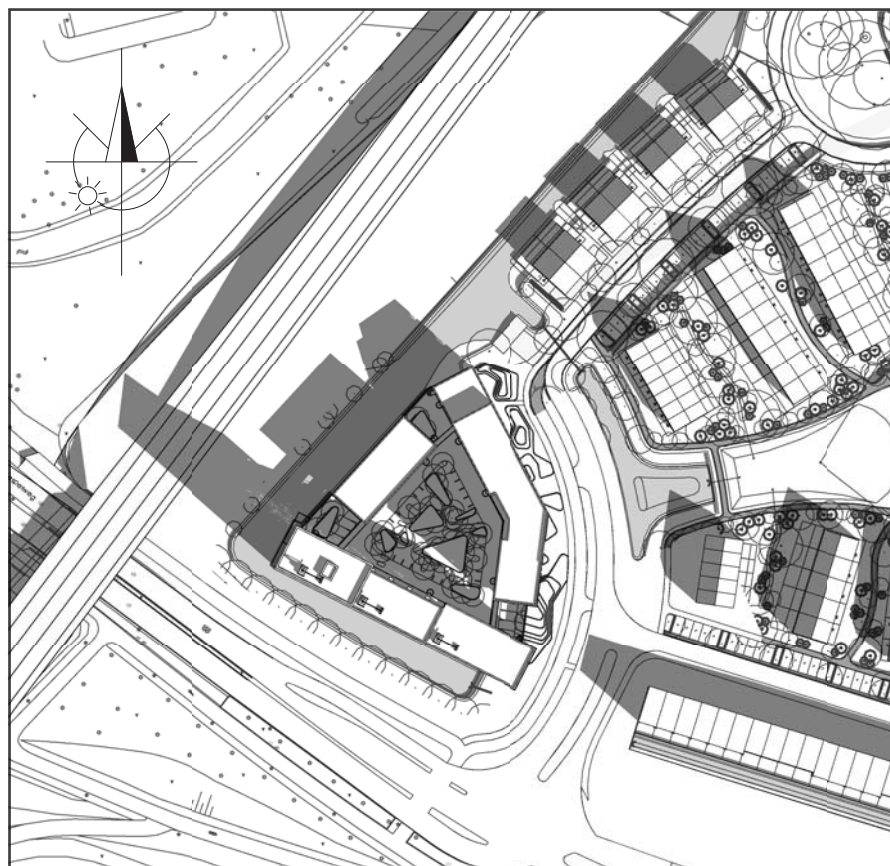
Bezonningsstudie 21 maart



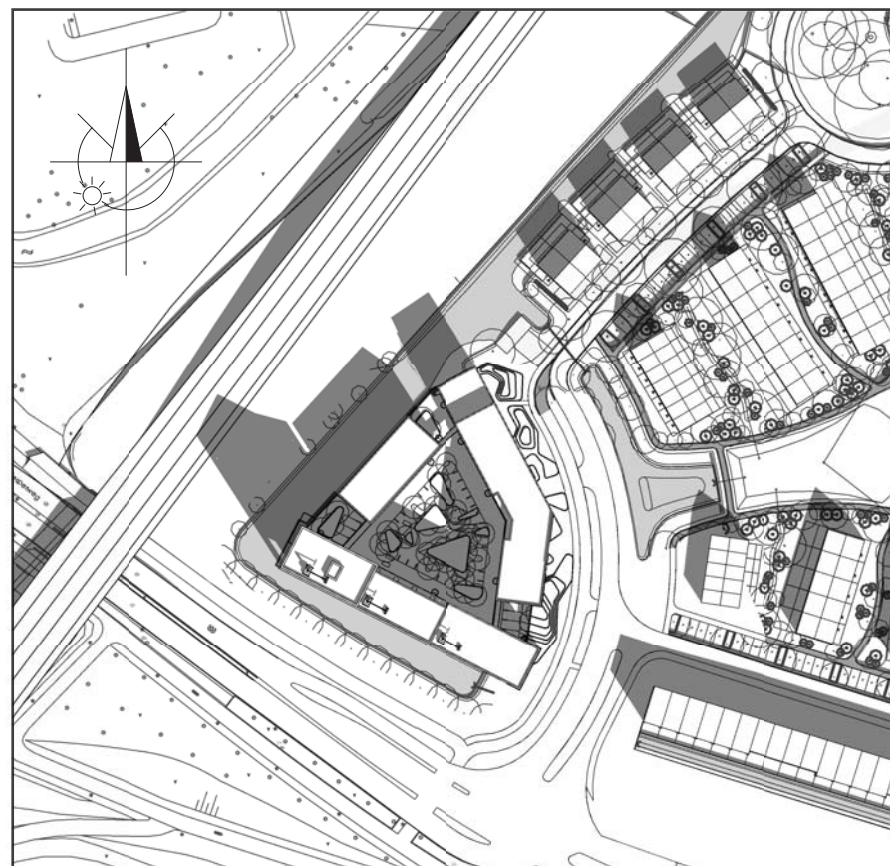
21 maart 08.00 uur



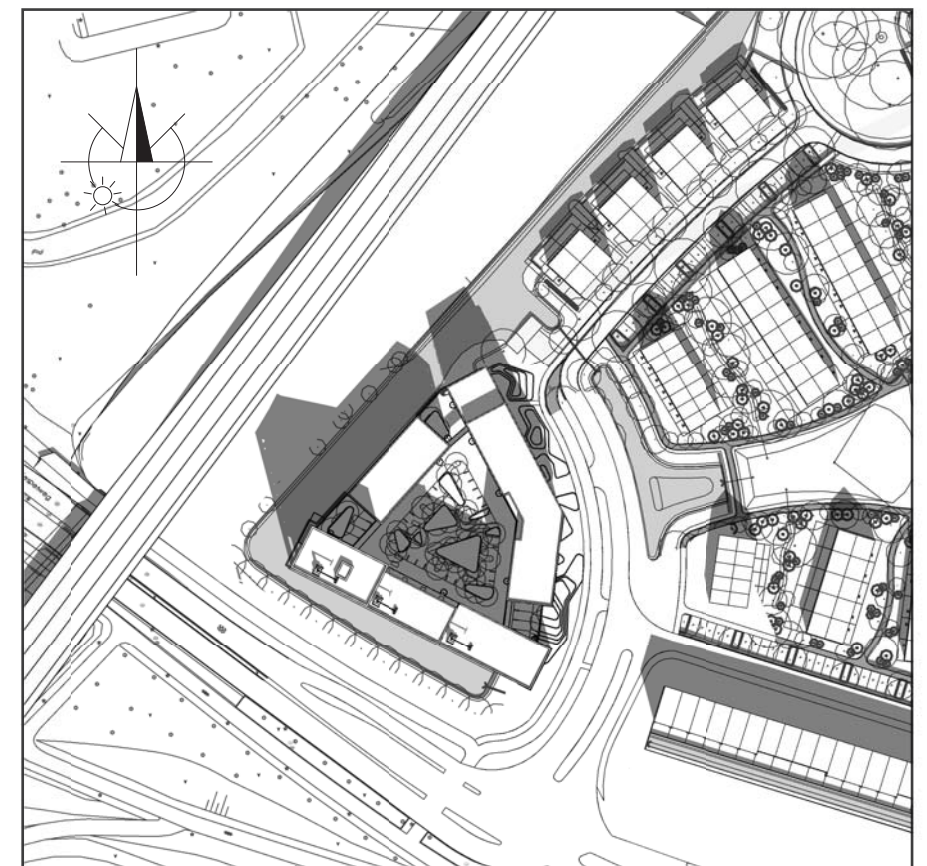
21 maart 09.00 uur



21 maart 10.00 uur



21 maart 11.00 uur

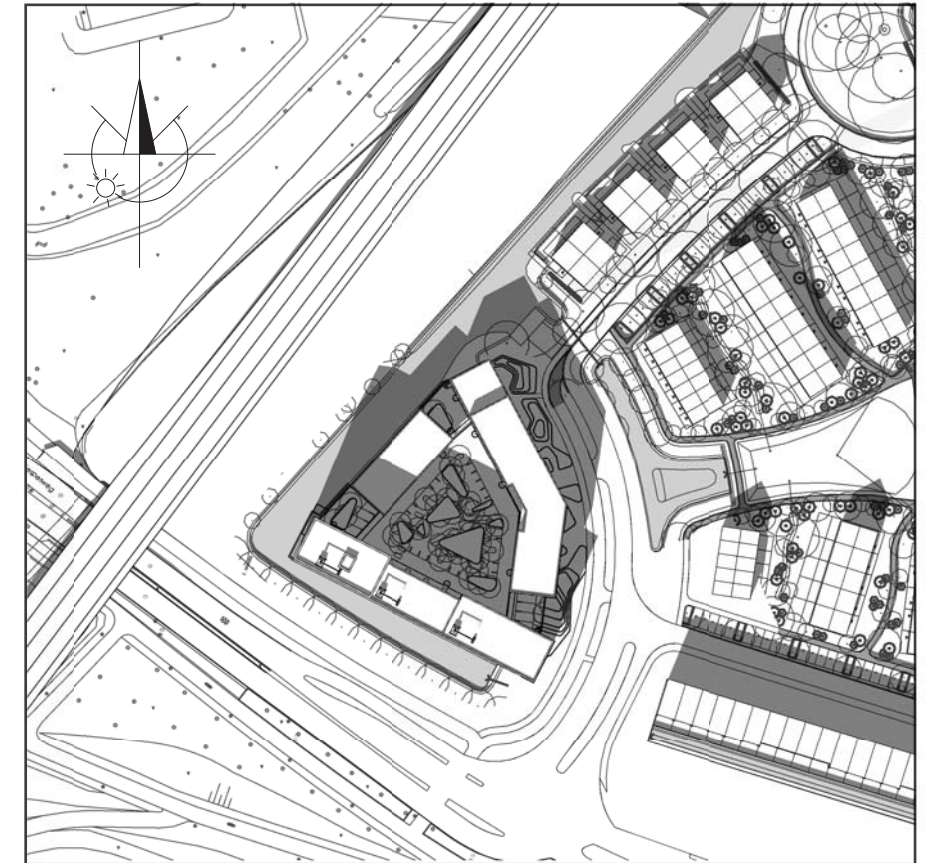


21 maart 12.00 uur

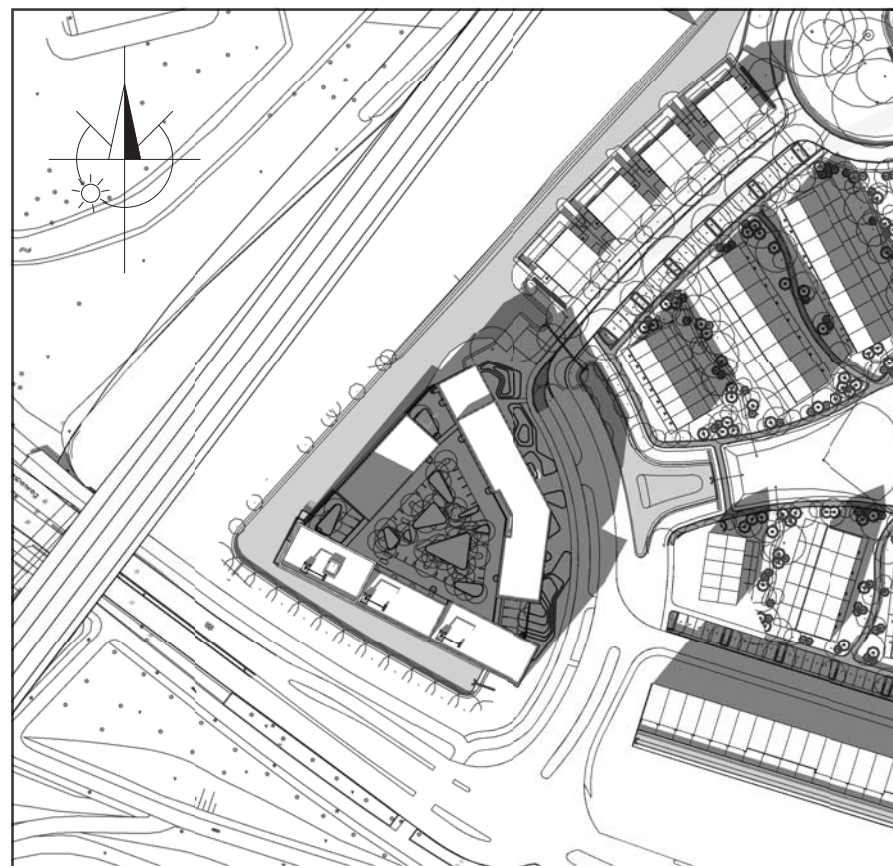
Bezonningsstudie 21 maart



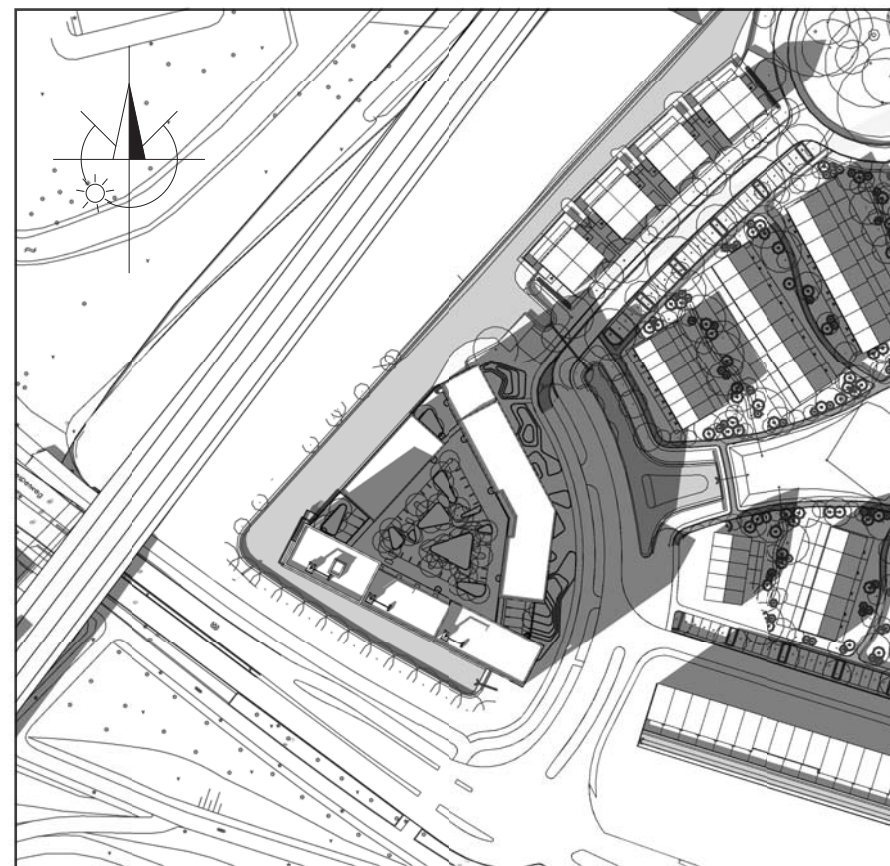
21 maart 13.00 uur



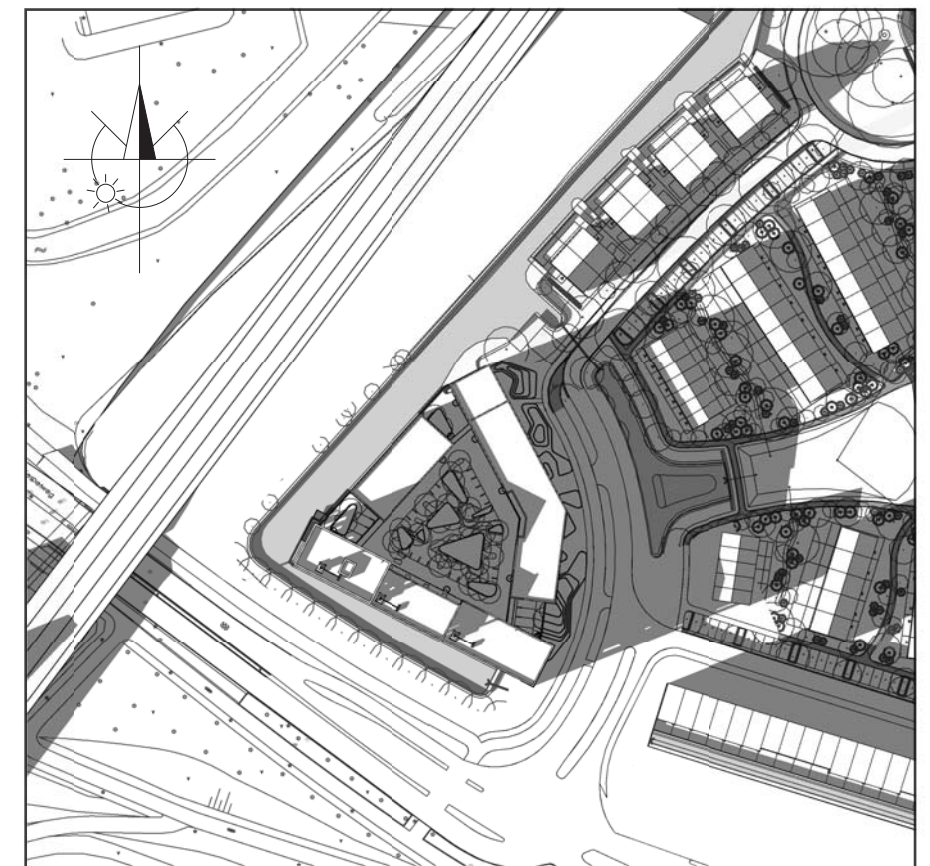
21 maart 14.00 uur



21 maart 15.00 uur



21 maart 16.00 uur

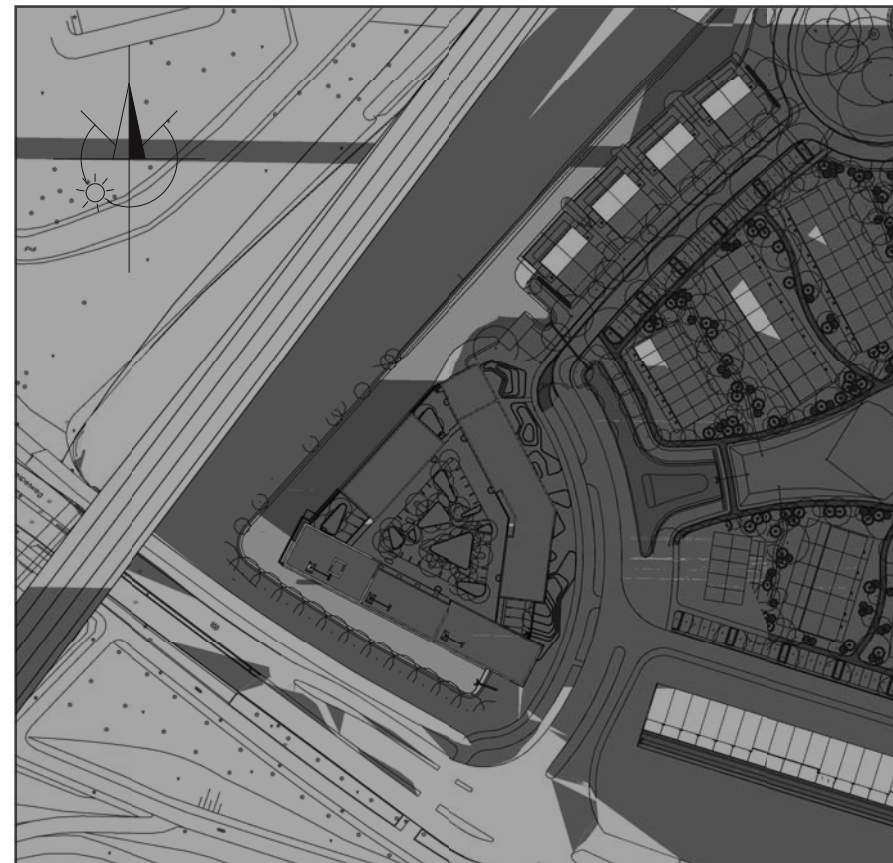


21 maart 17.00 uur

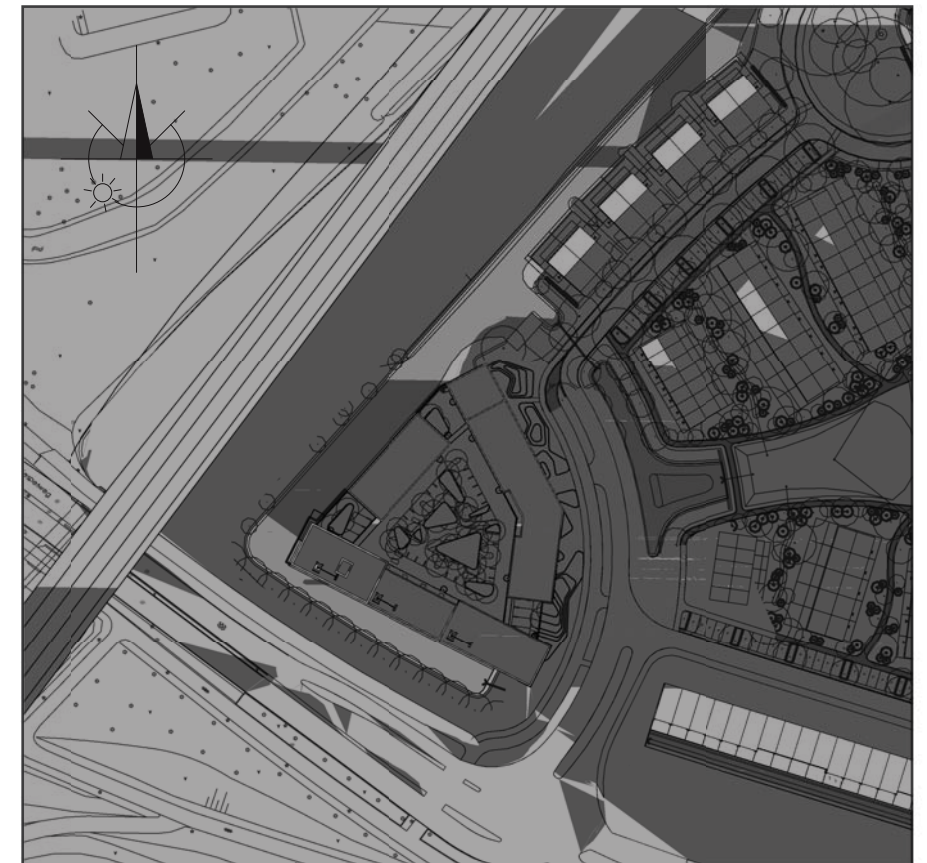
Bezonningsstudie 21 maart



21 maart 18.00 uur

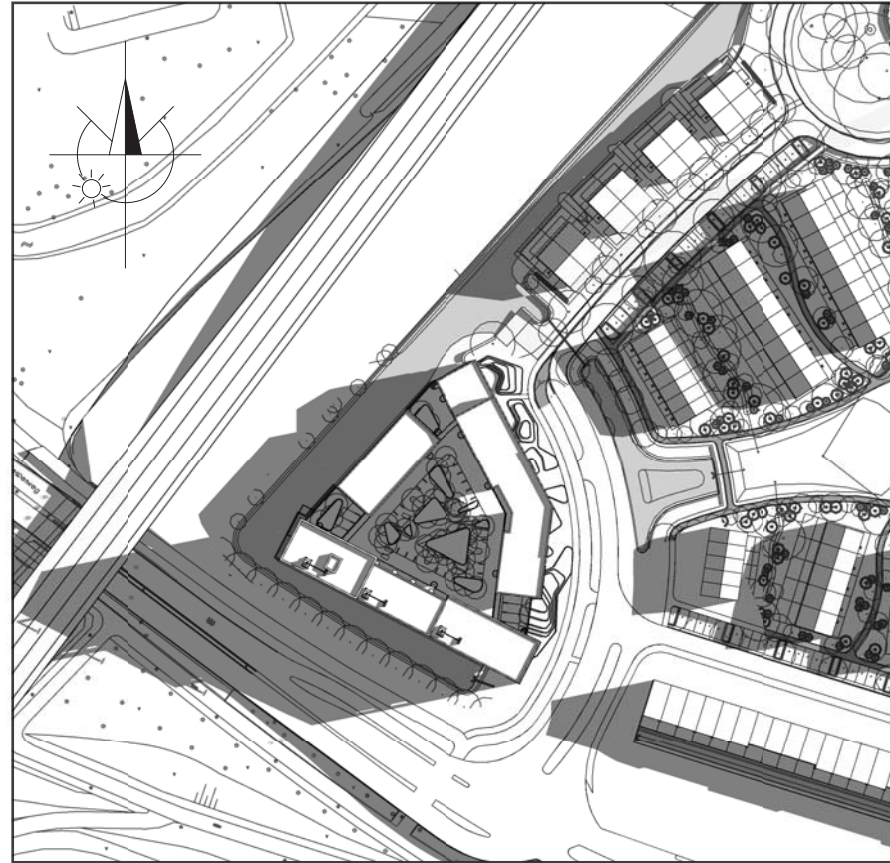


21 maart 19.00 uur

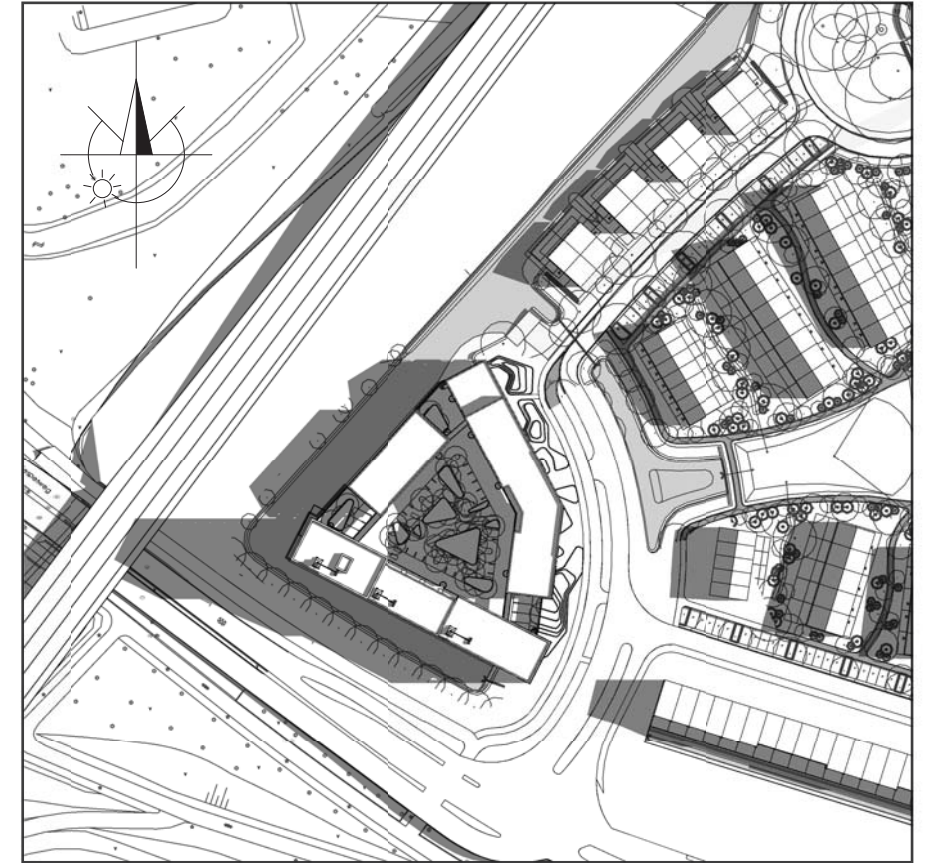


21 maart 20.00 uur

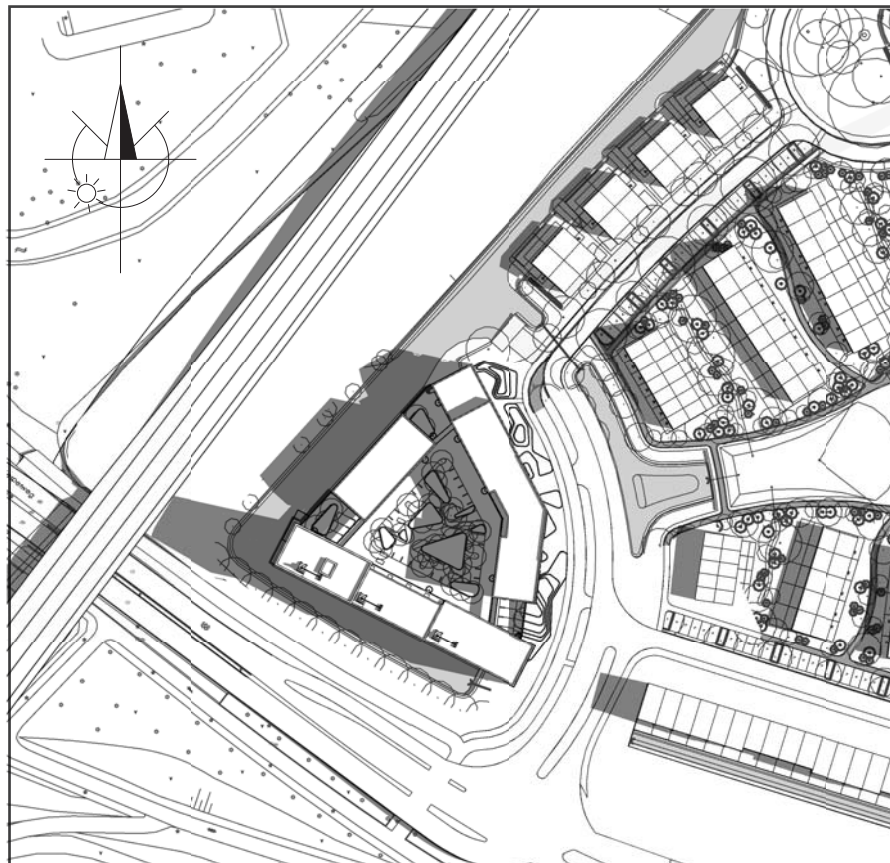
Bezonningsstudie 21 juni



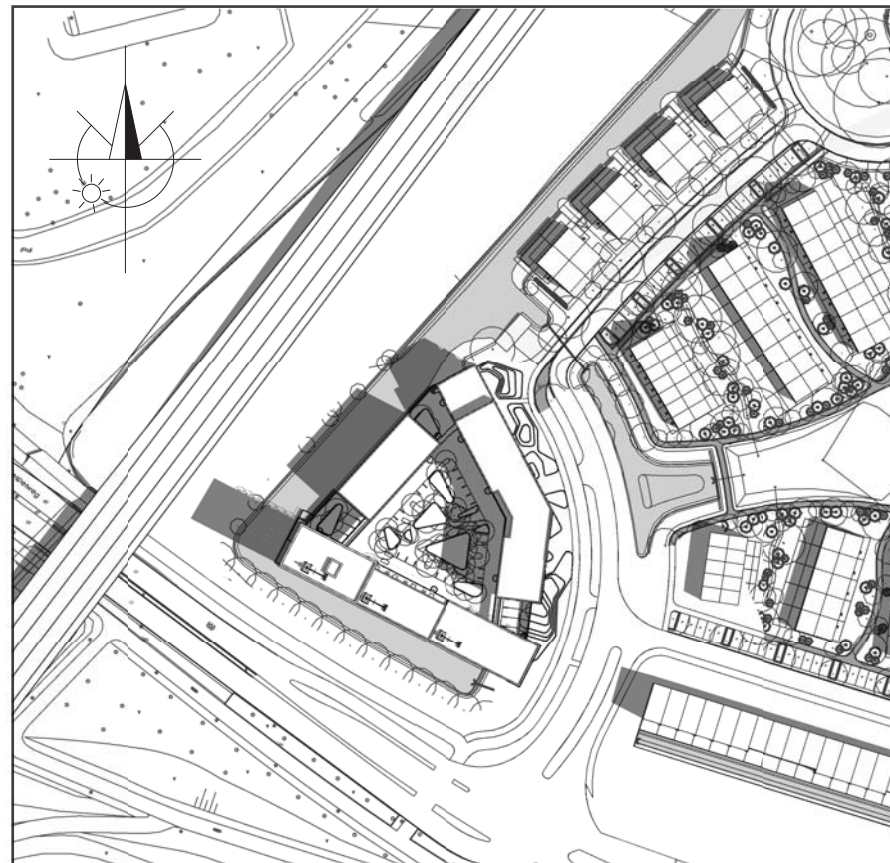
21 juni 08.00uur



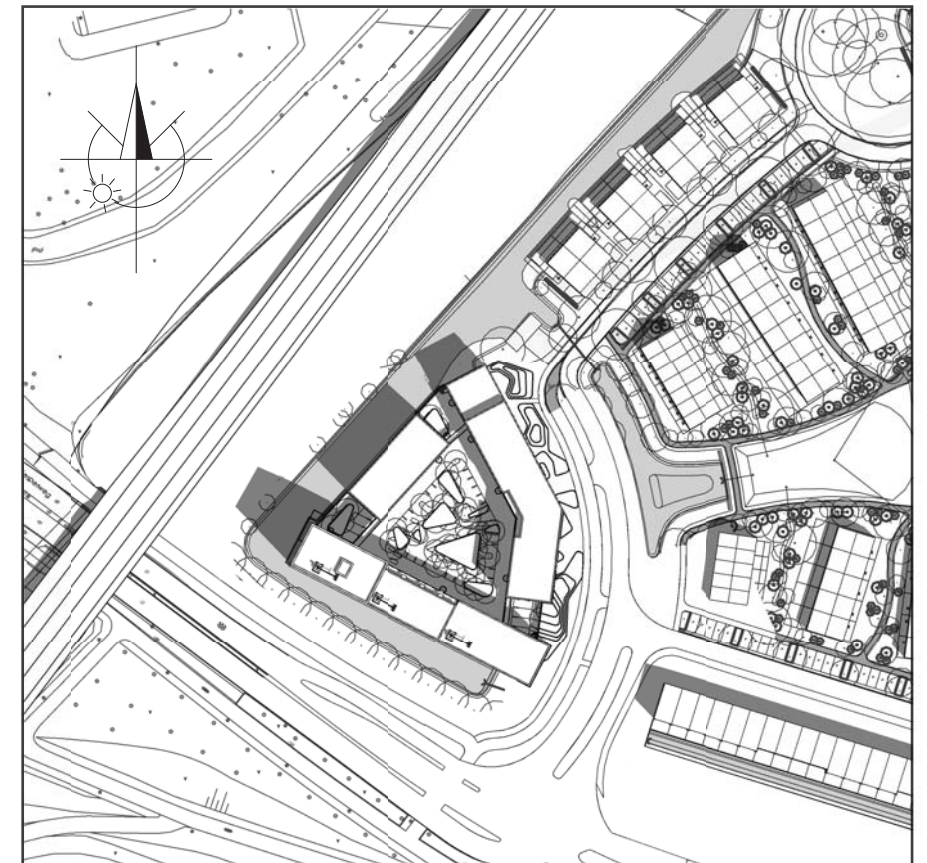
21 juni 09.00uur



21 juni 10.00uur

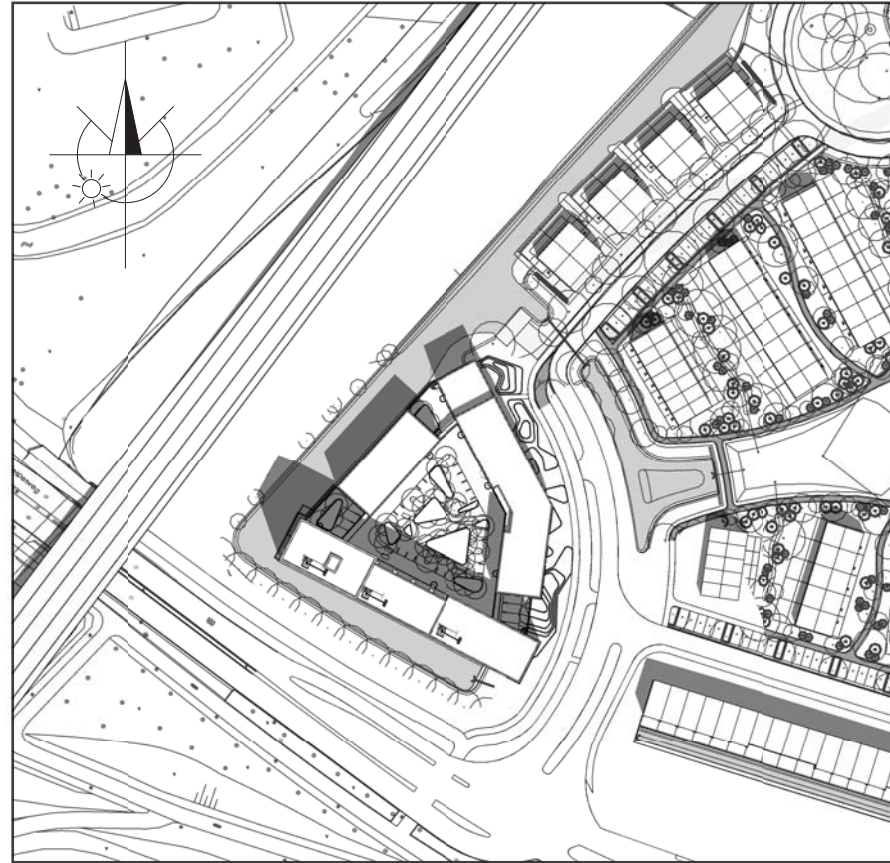


21 juni 11.00uur

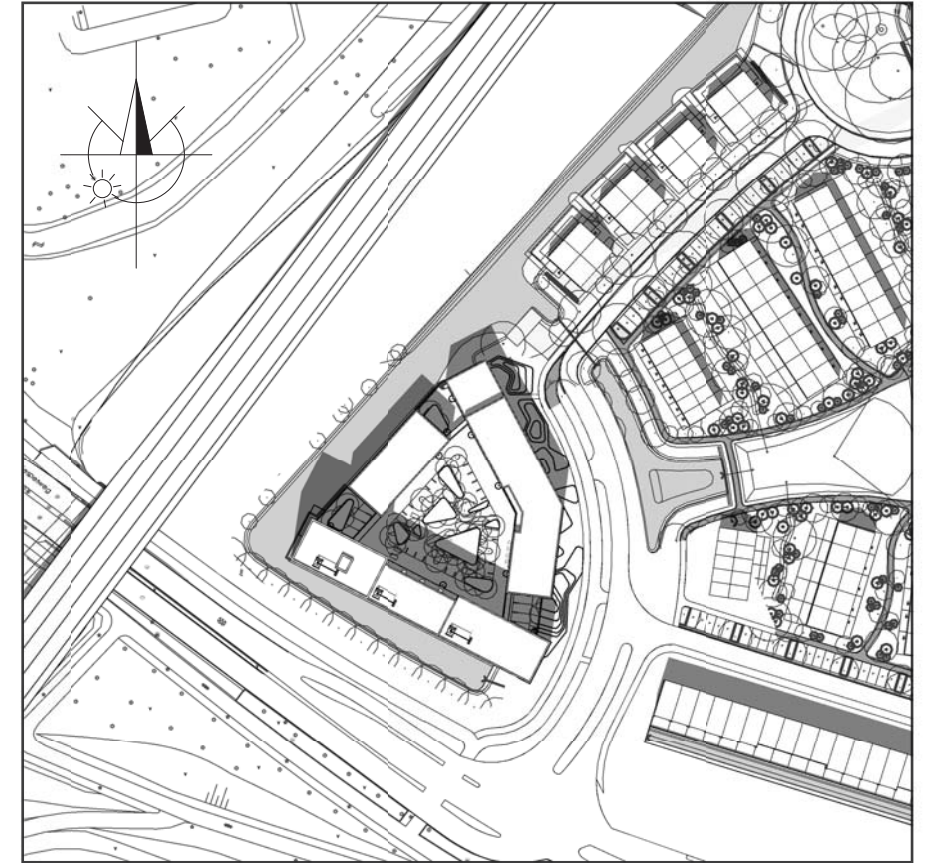


21 juni 12.00uur

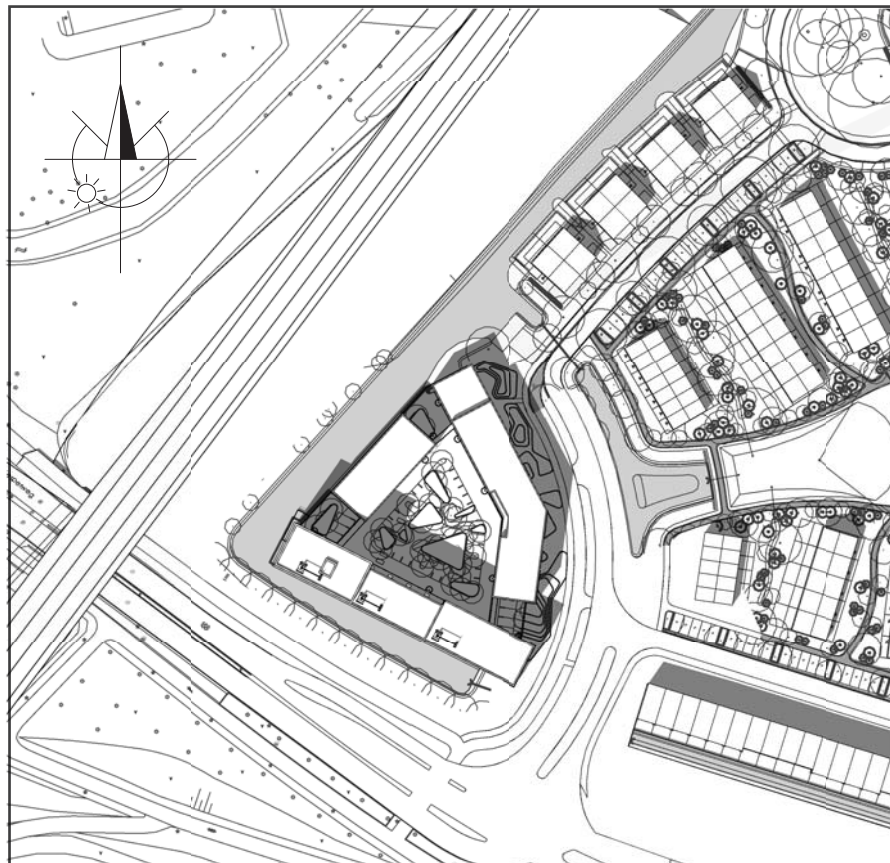
Bezonningsstudie 21 juni



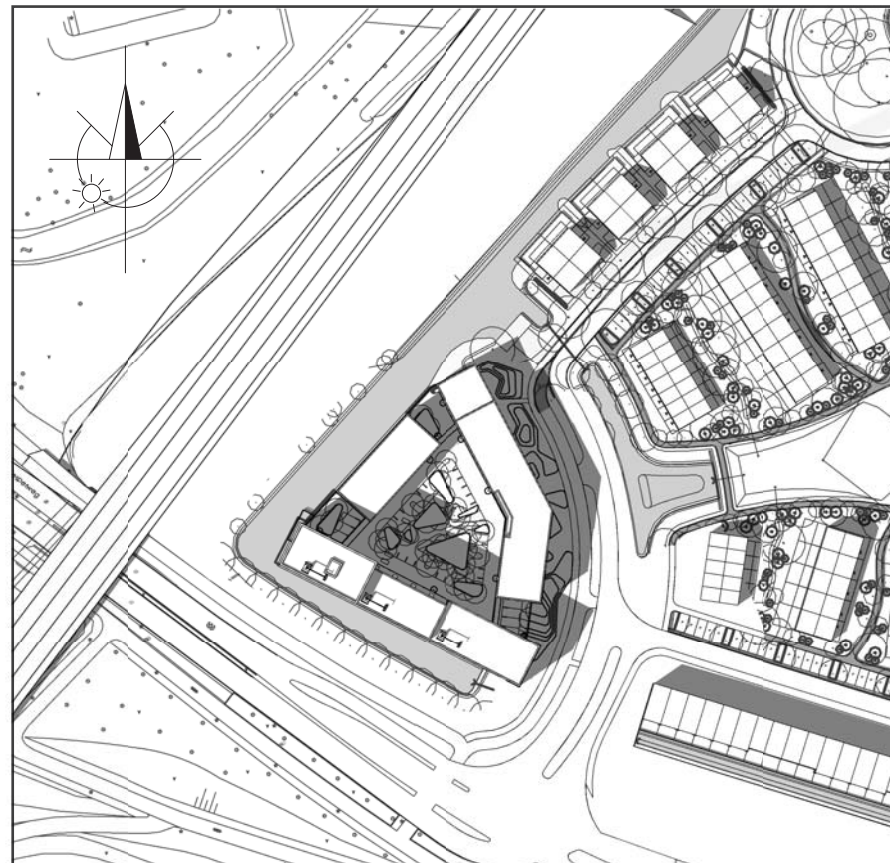
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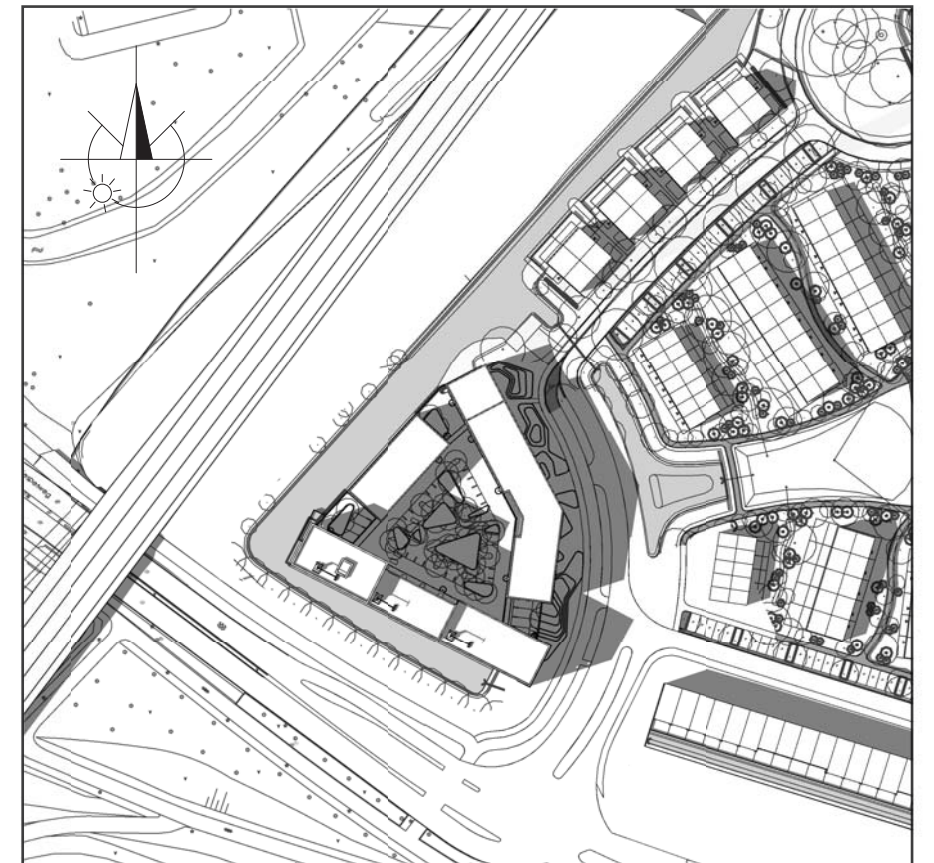
21 juni 14.00uur



21 juni 15.00uur

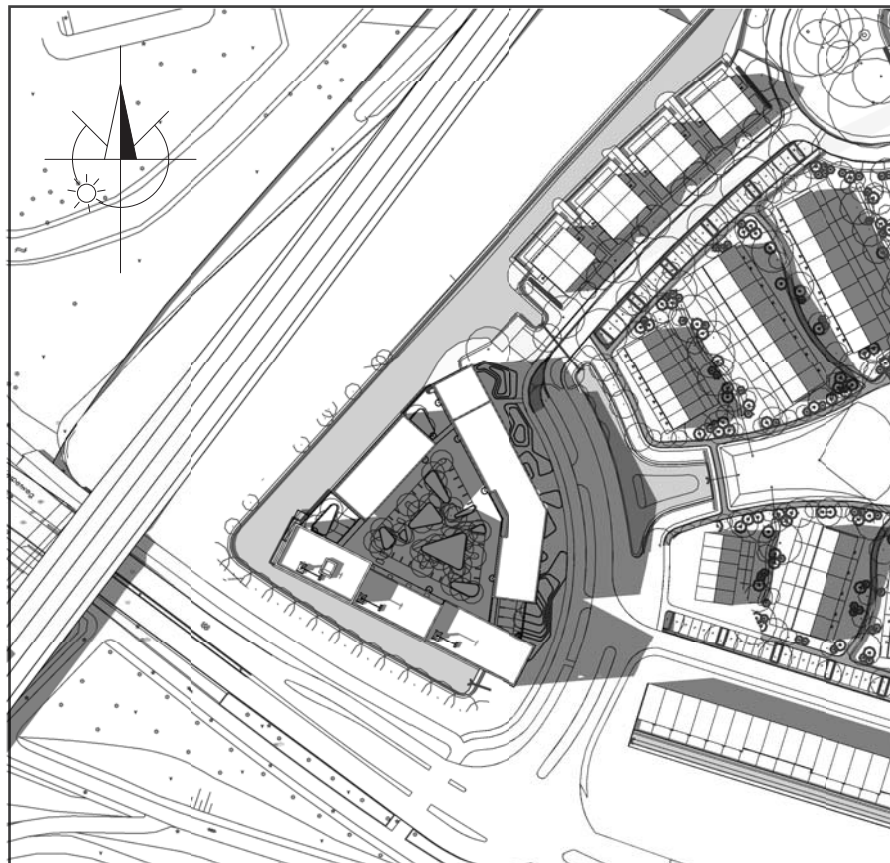


21 juni 16.00uur

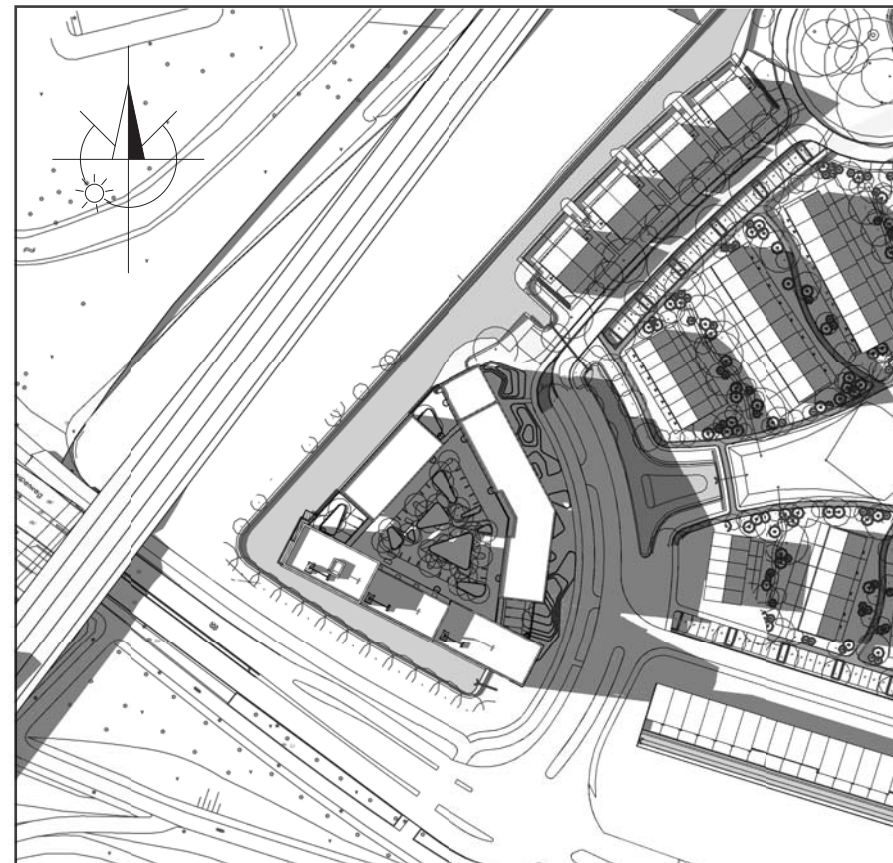


21 juni 17.00uur

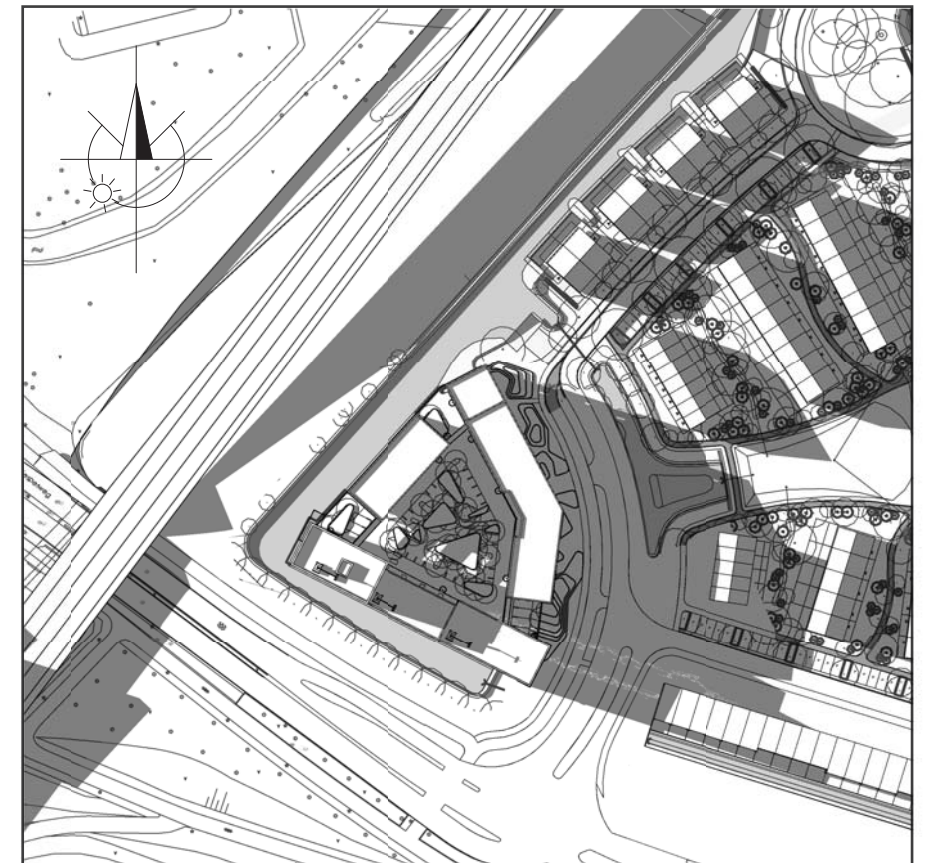
Bezonningsstudie 21 juni



21 juni 18.00uur



21 juni 19.00uur

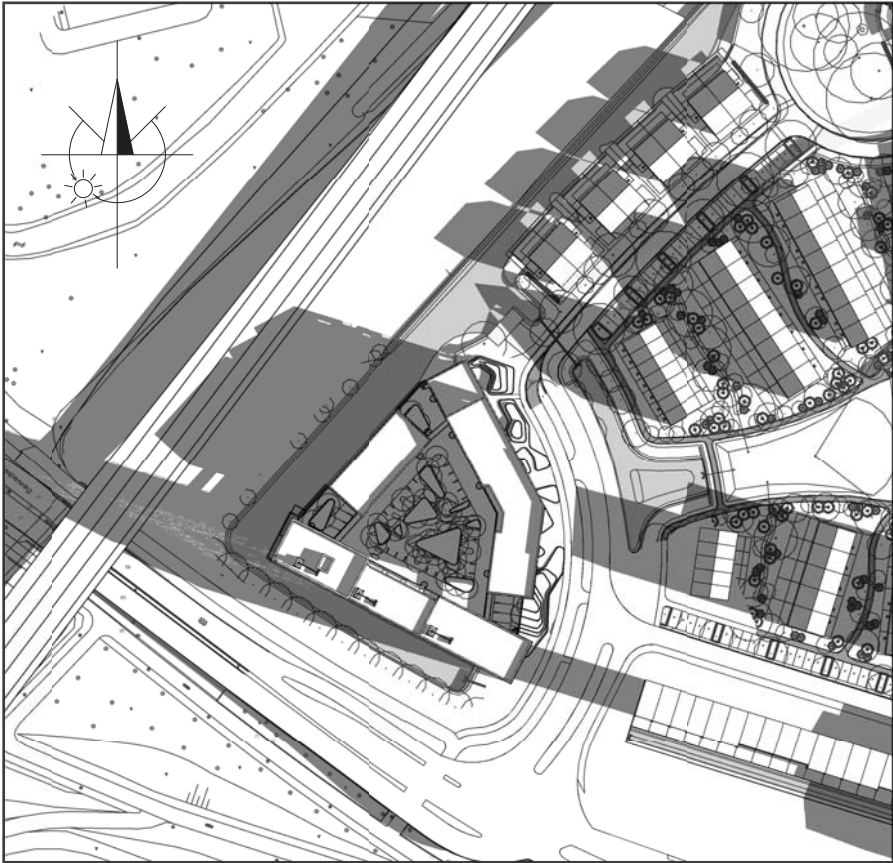


21 juni 20.00uur

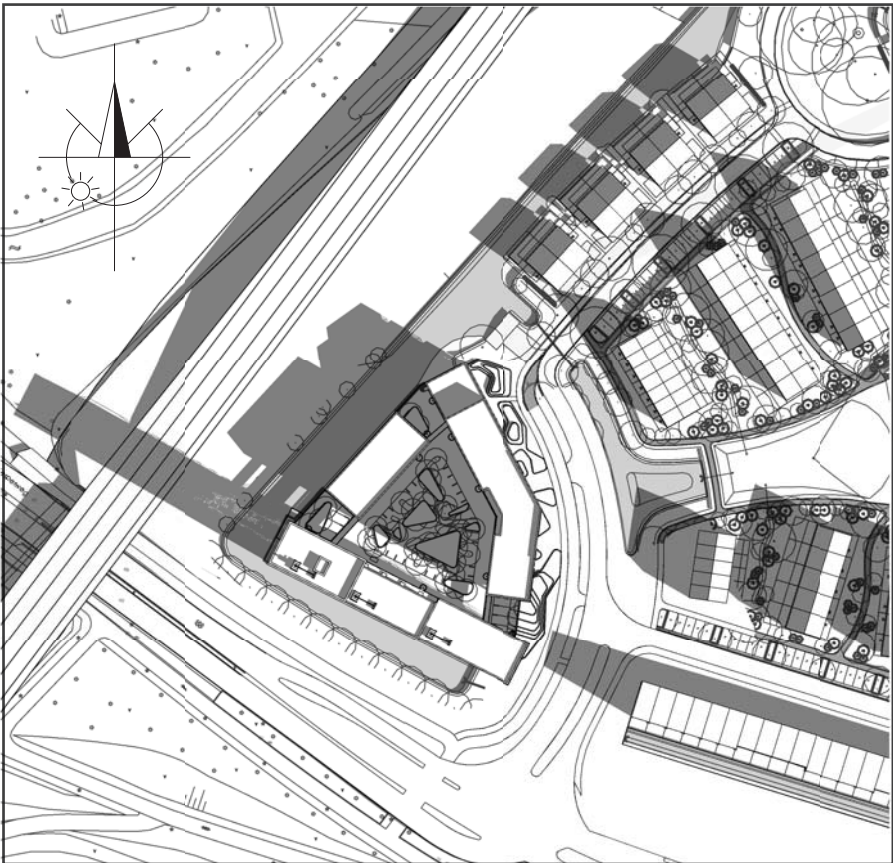
Bezonningsstudie 21 september



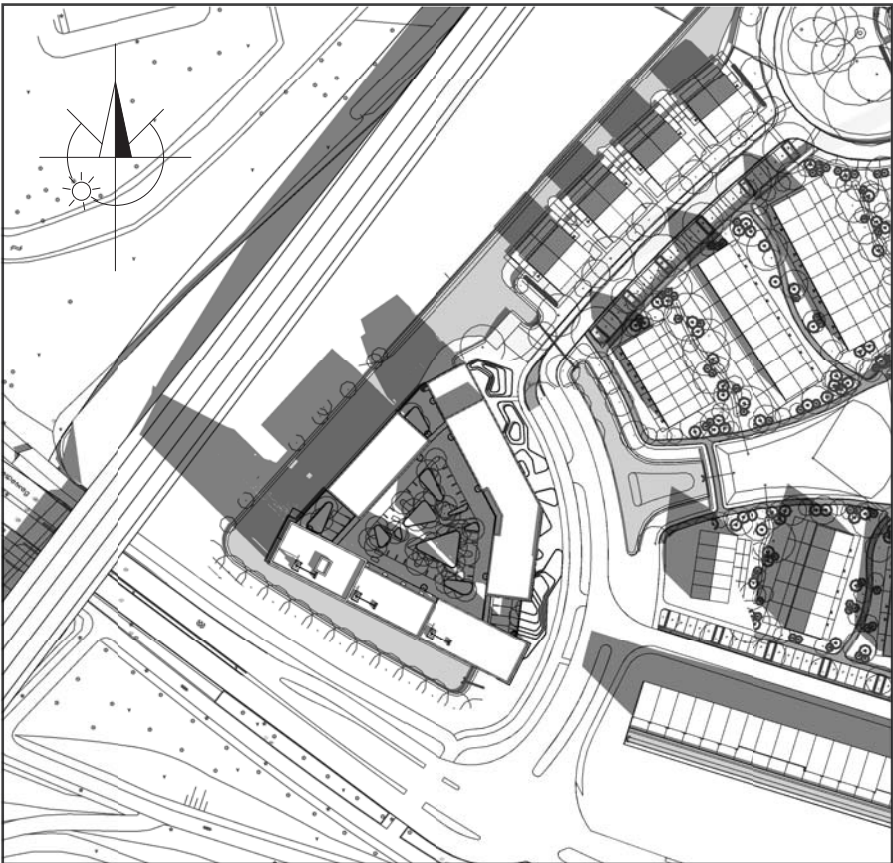
21 september 08.00uur



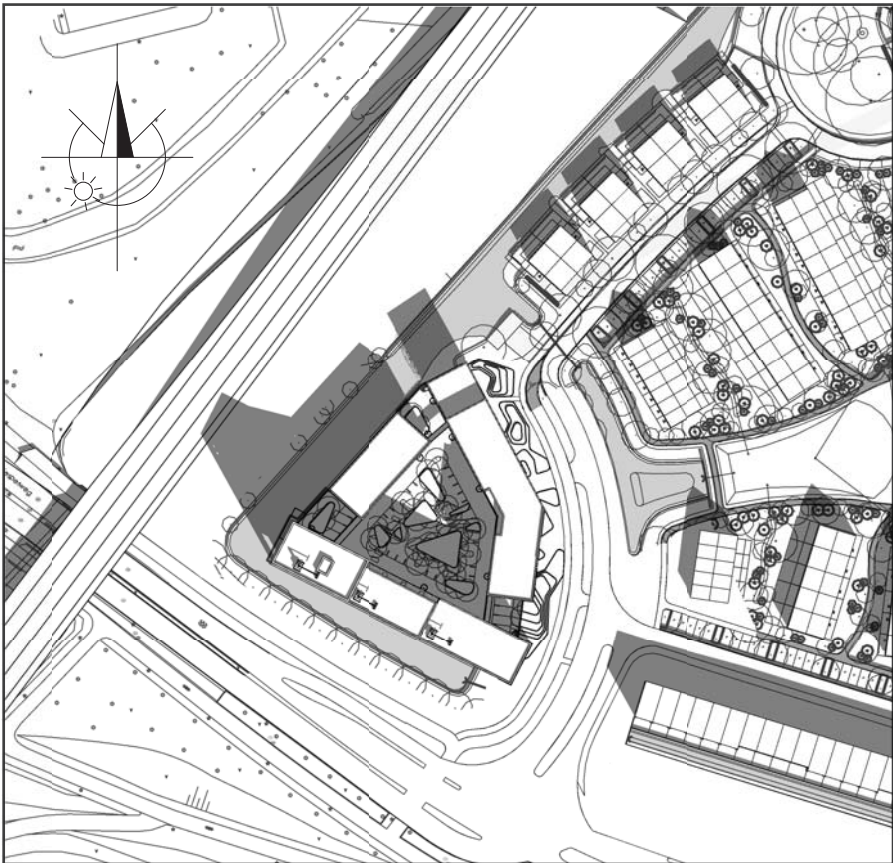
21 september 09.00uur



21 september 10.00uur

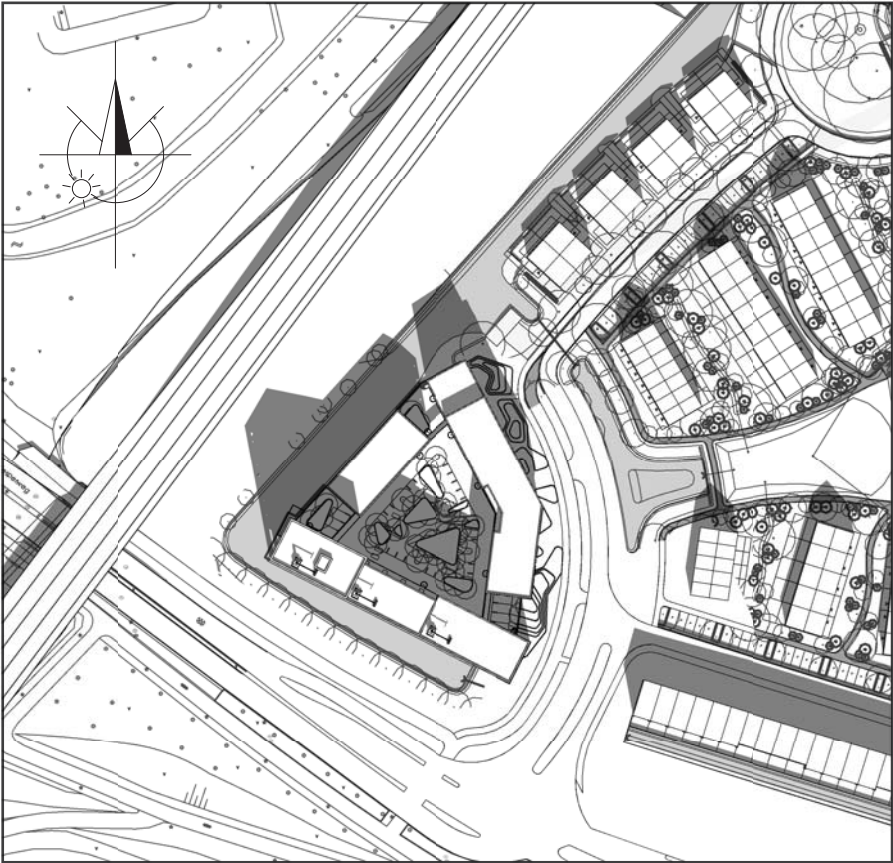


21 september 11.00uur

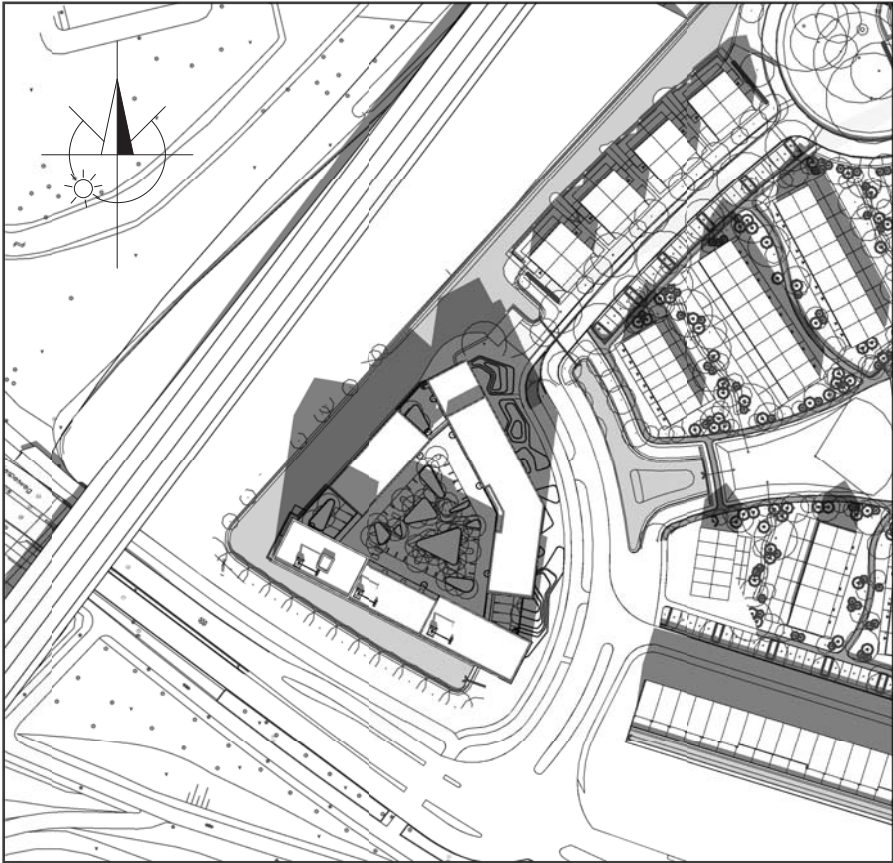


21 september 12.00uur

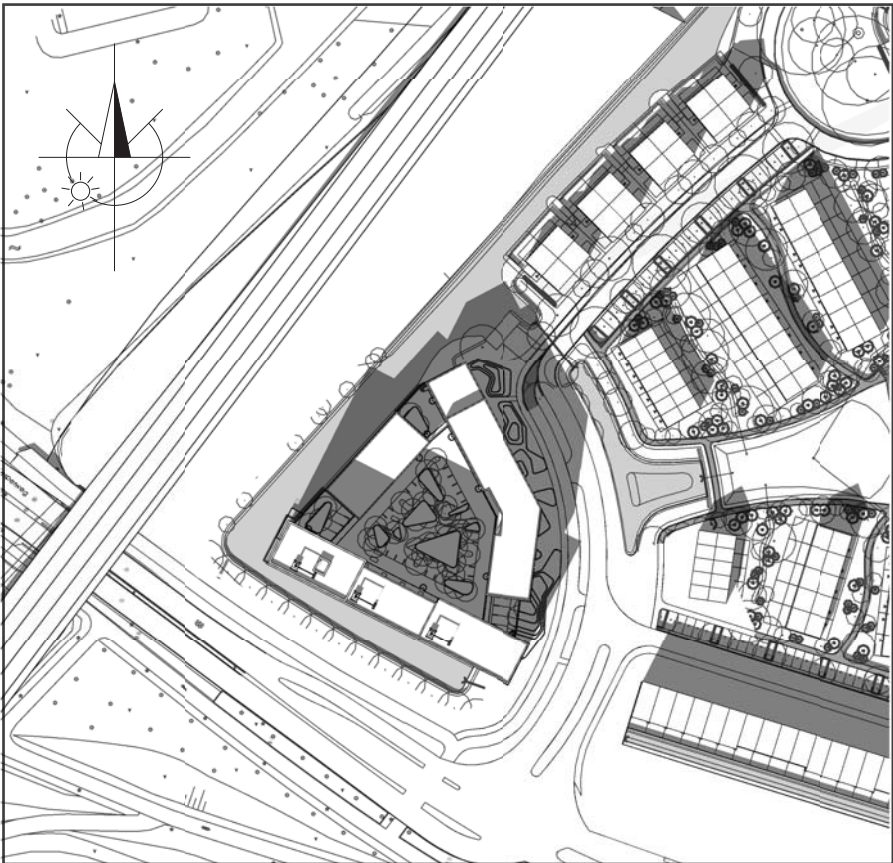
Bezonningsstudie 21 september



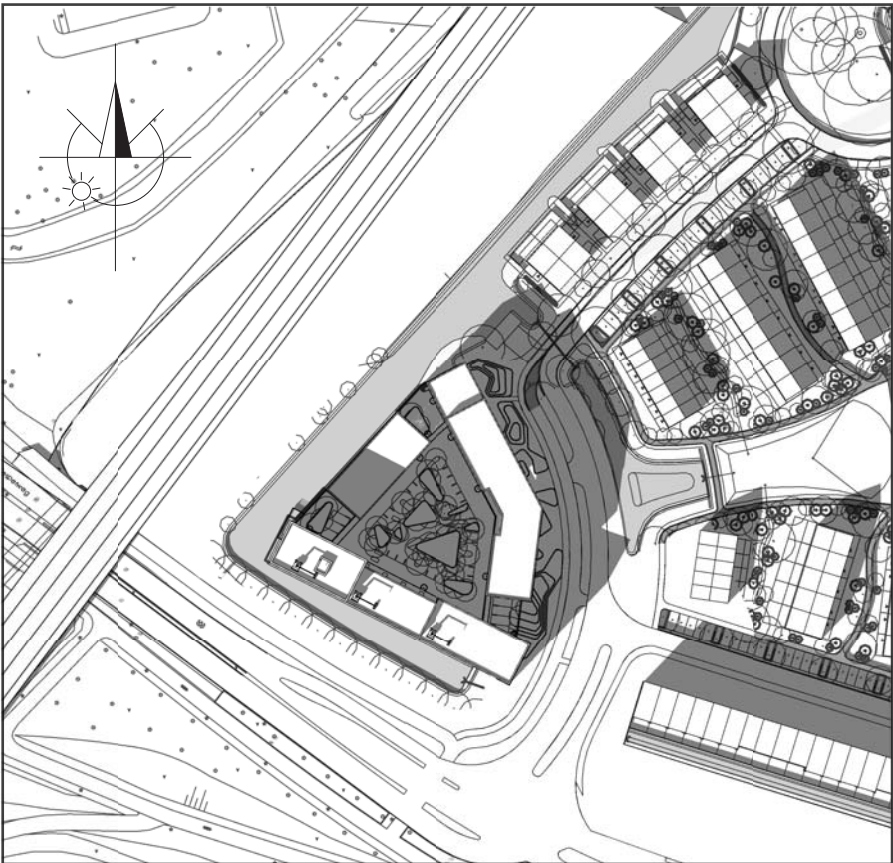
21 september 13.00uur



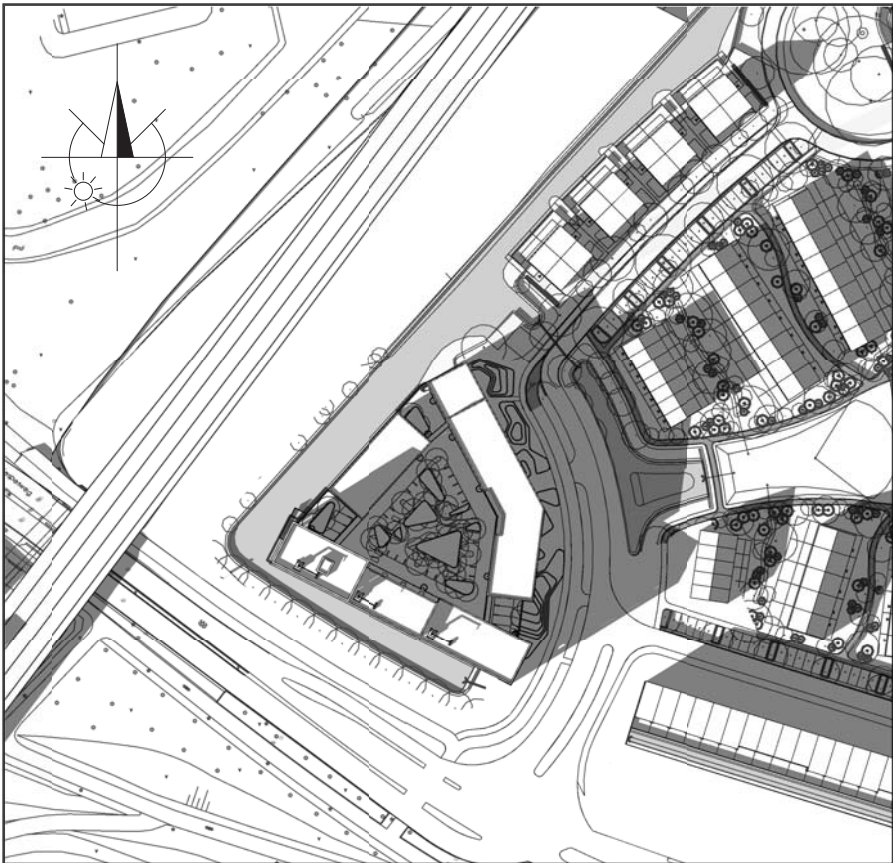
21 september 14.00uur



21 september 15.00uur

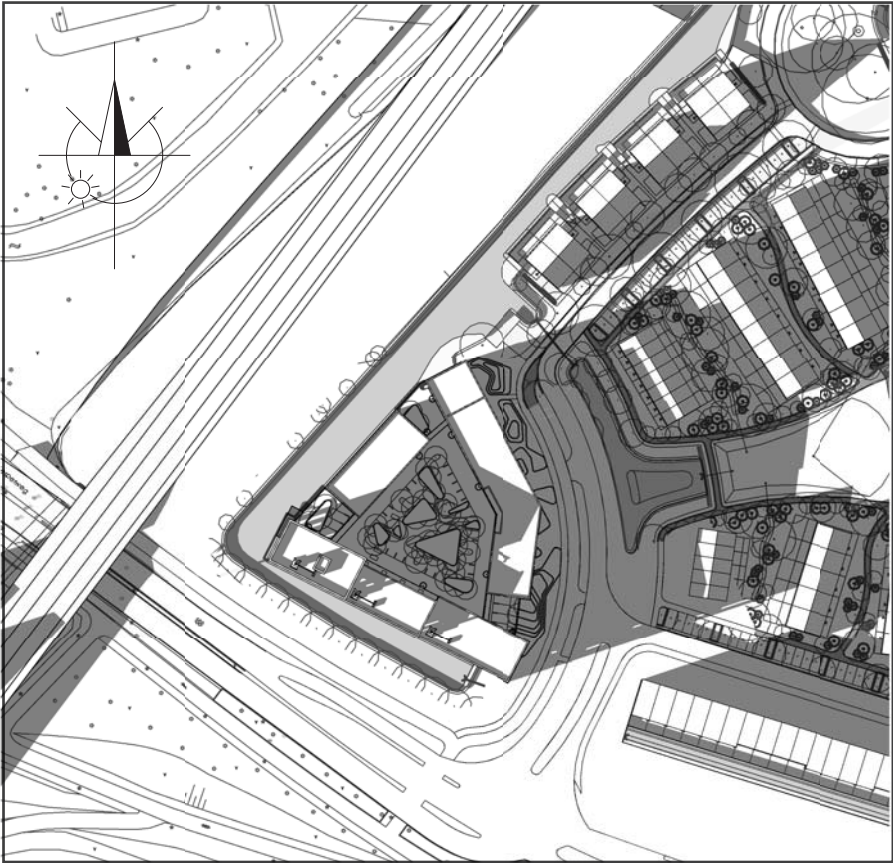


21 september 16.00uur



21 september 17.00uur

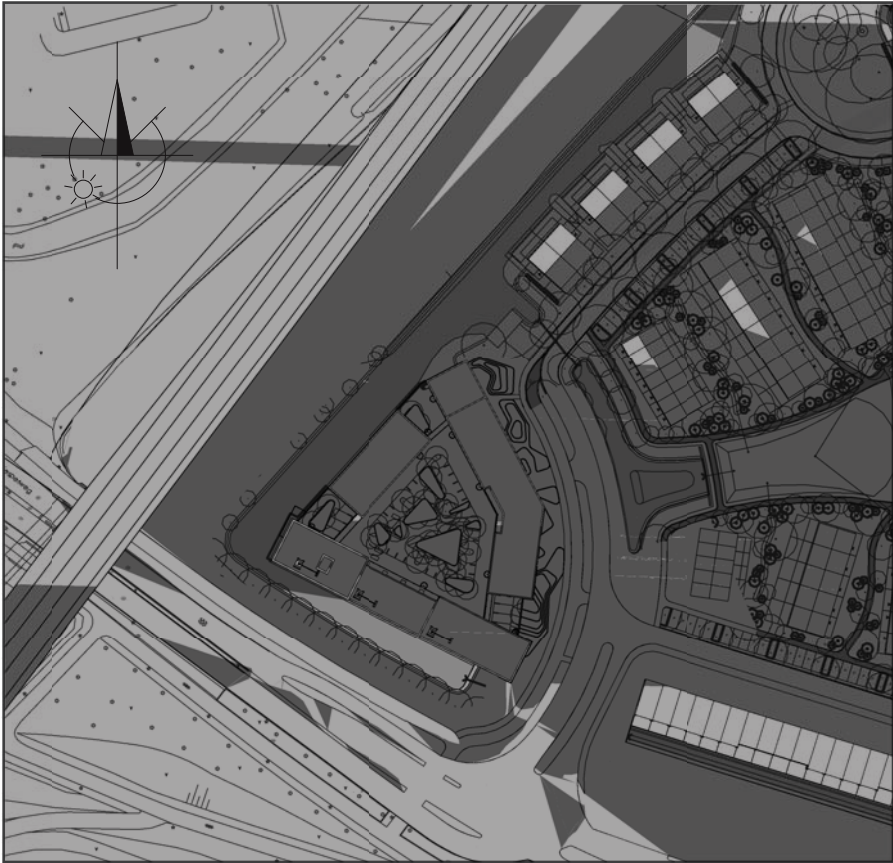
Bezonningsstudie 21 september



21 september 18.00uur

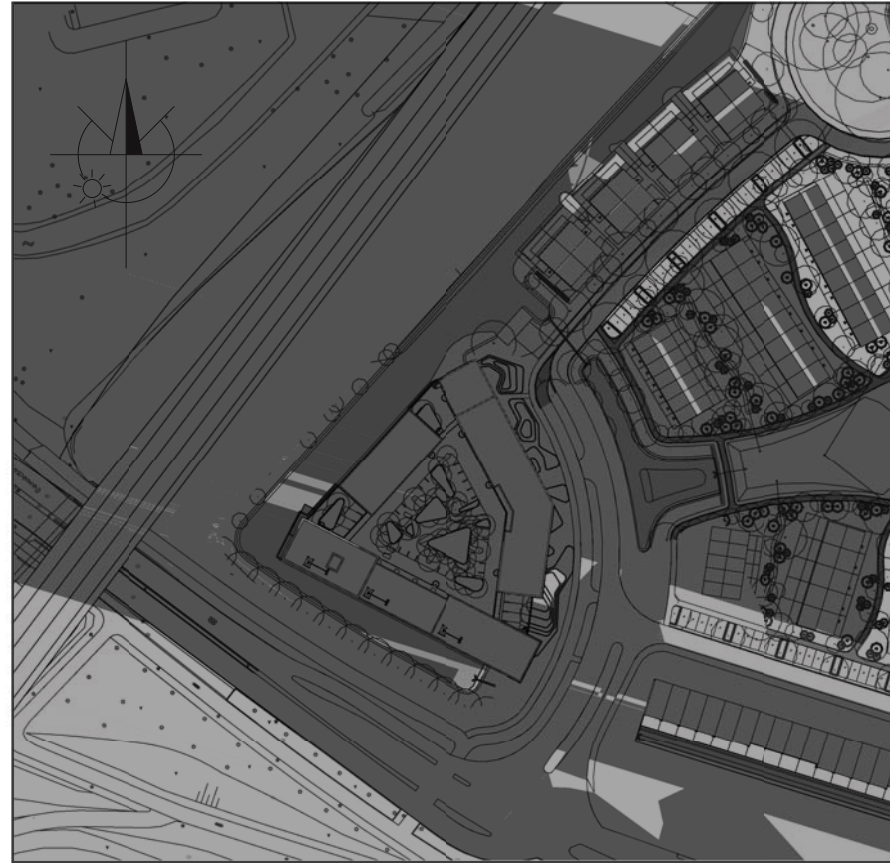


21 september 19.00uur



21 september 20.00uur

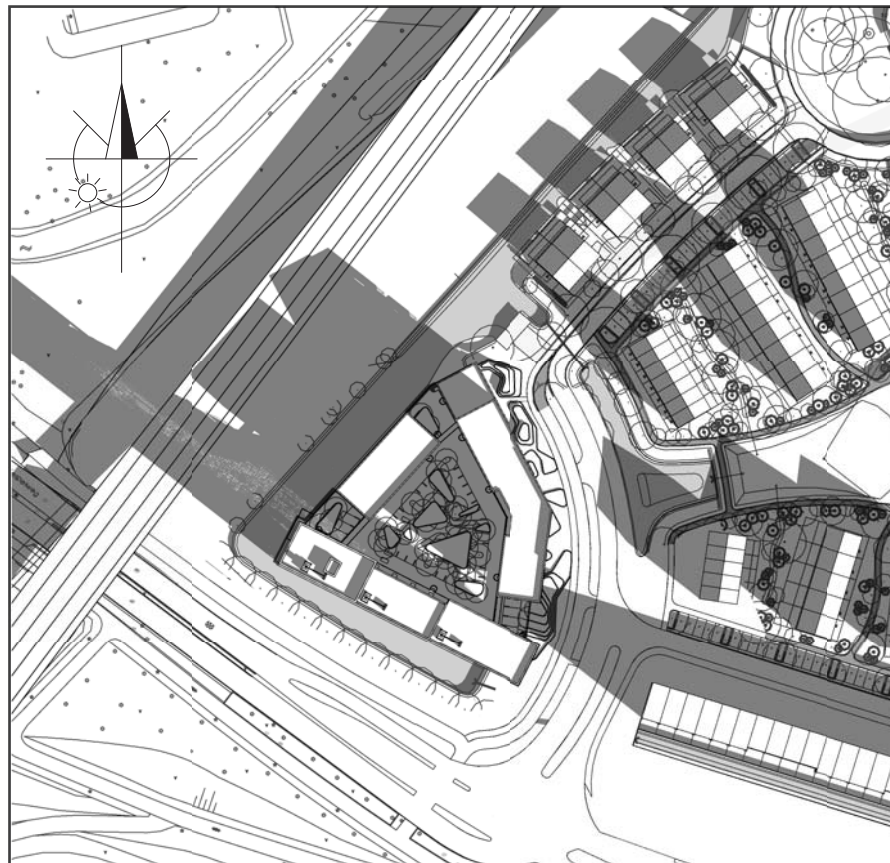
Bezonningsstudie 21 oktober



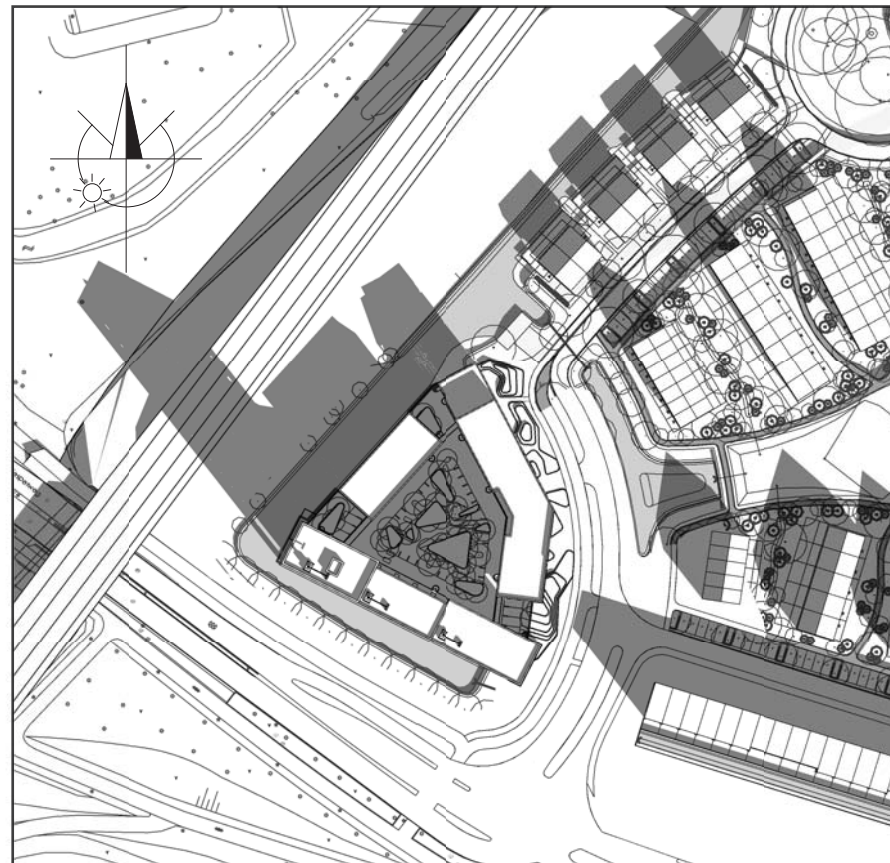
21 oktober 08.00uur



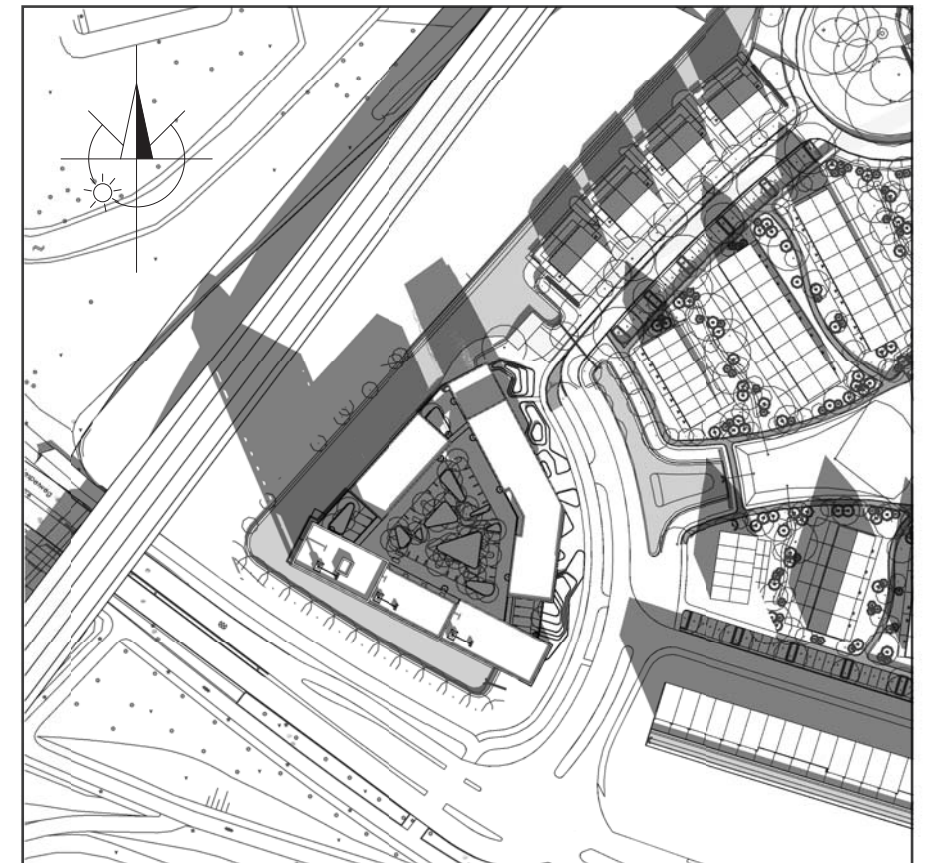
21 oktober 09.00uur



21 oktober 10.00uur

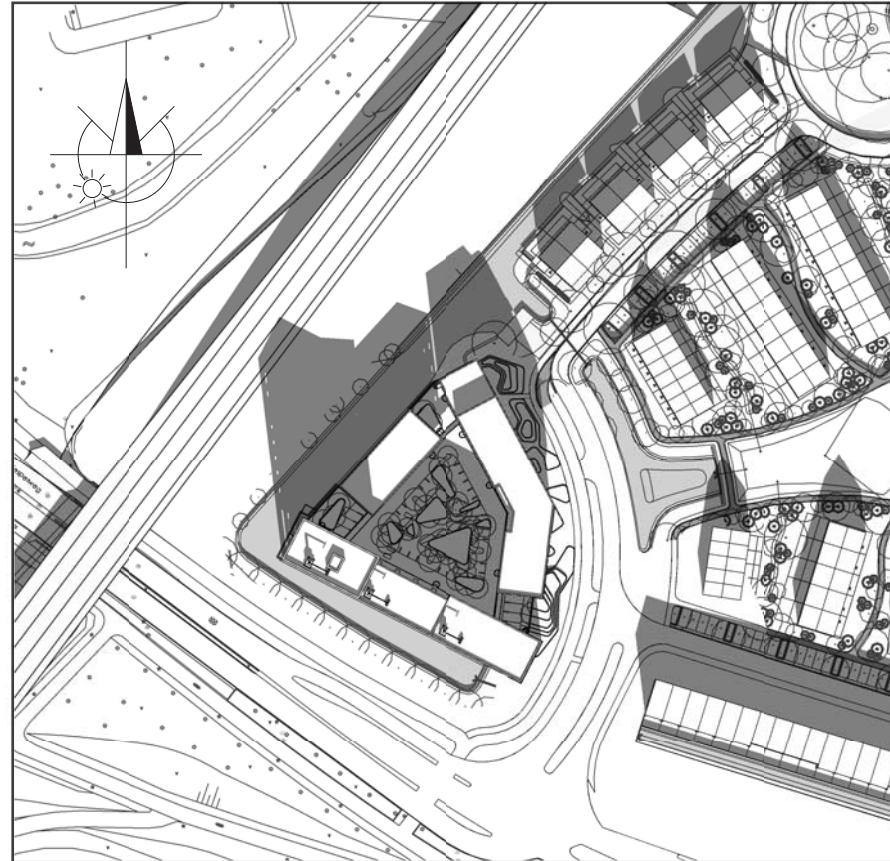


21 oktober 11.00uur

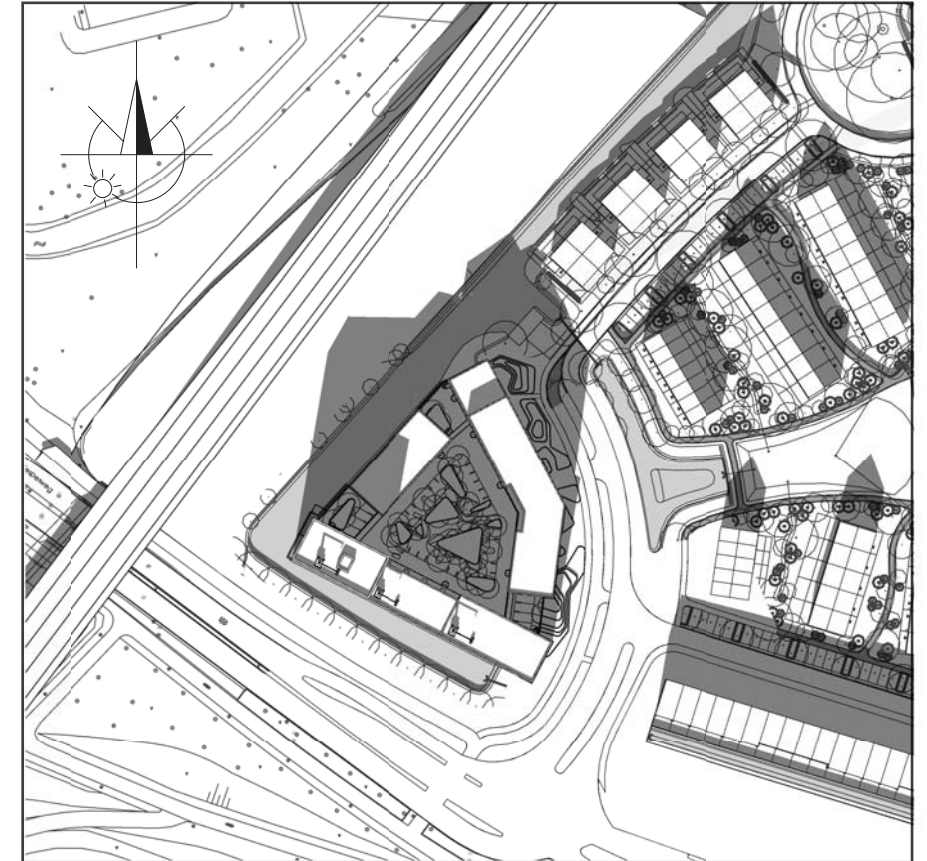


21 oktober 12.00uur

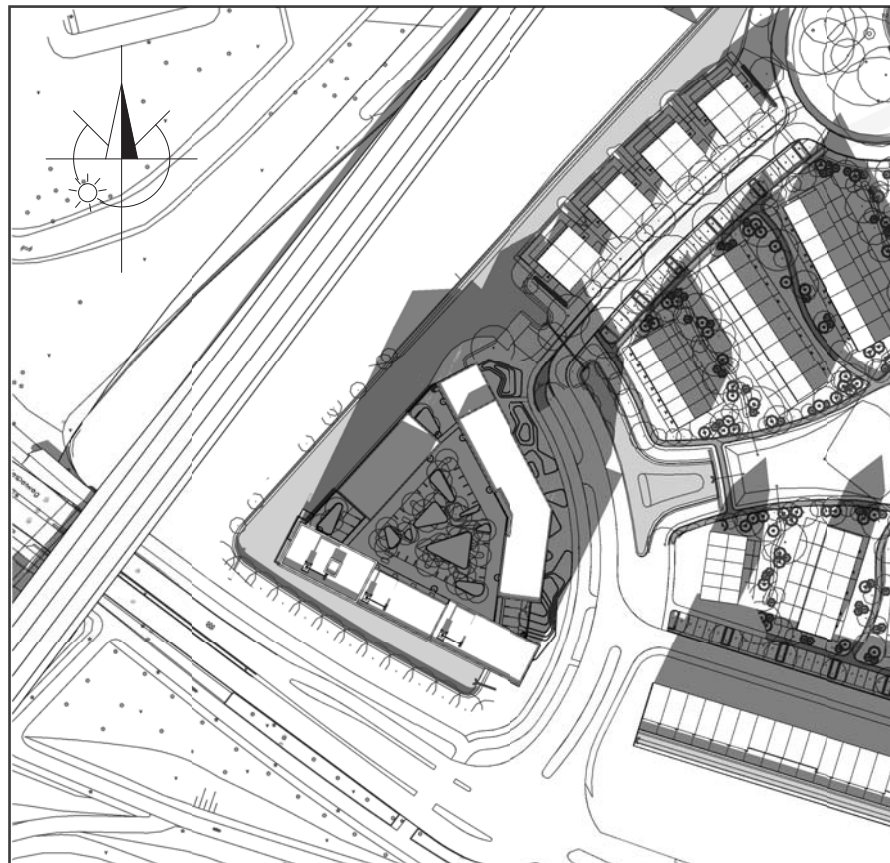
Bezonningsstudie 21 oktober



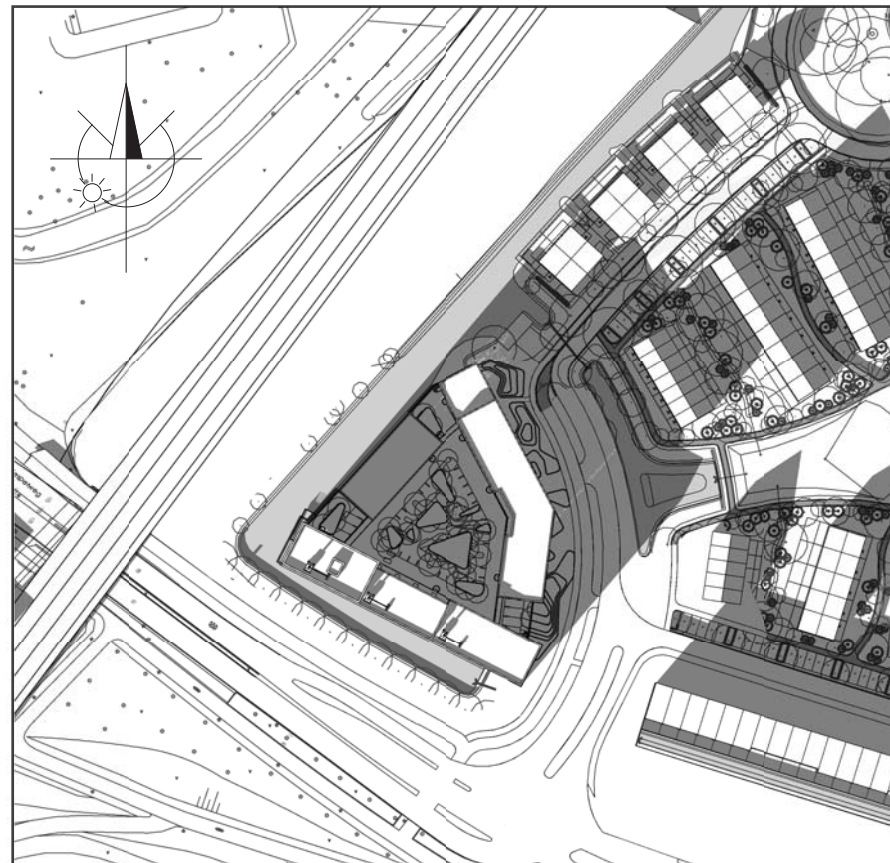
21 oktober 13.00uur



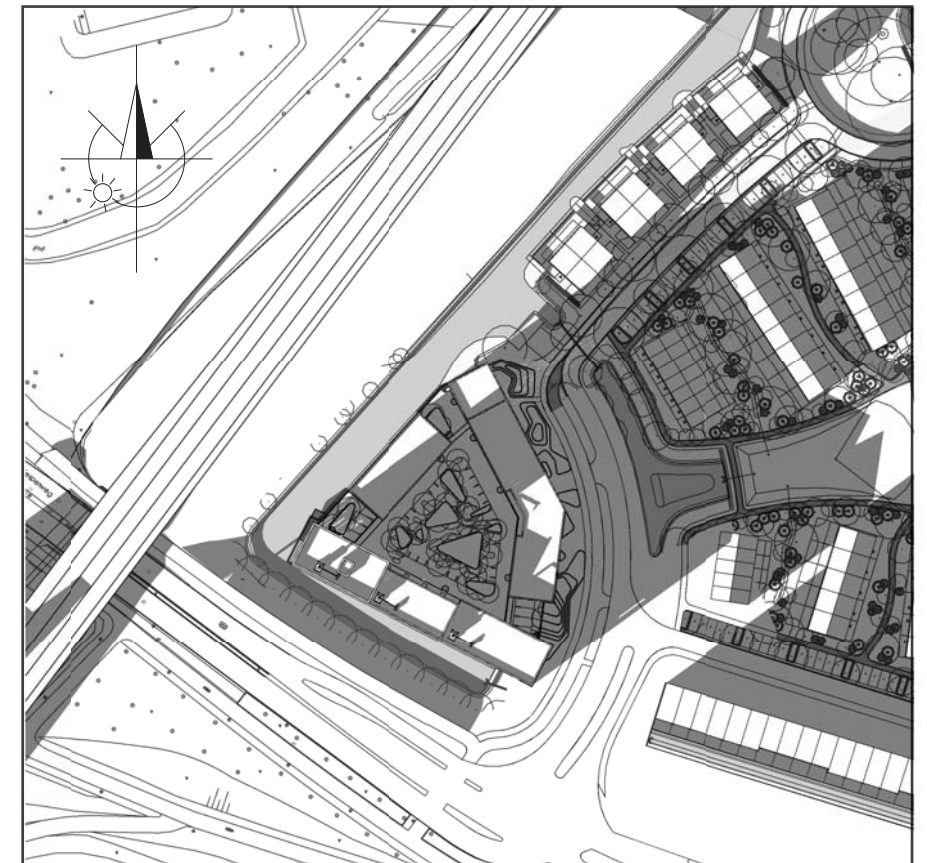
21 oktober 14.00uur



21 oktober 15.00uur

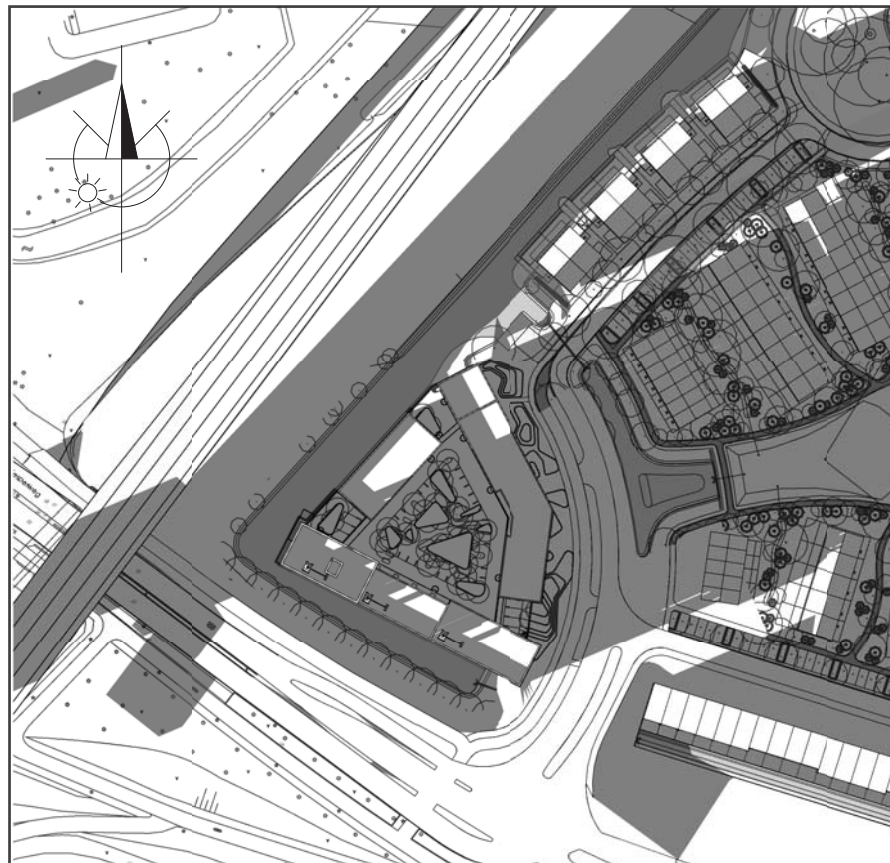


21 oktober 16.00uur

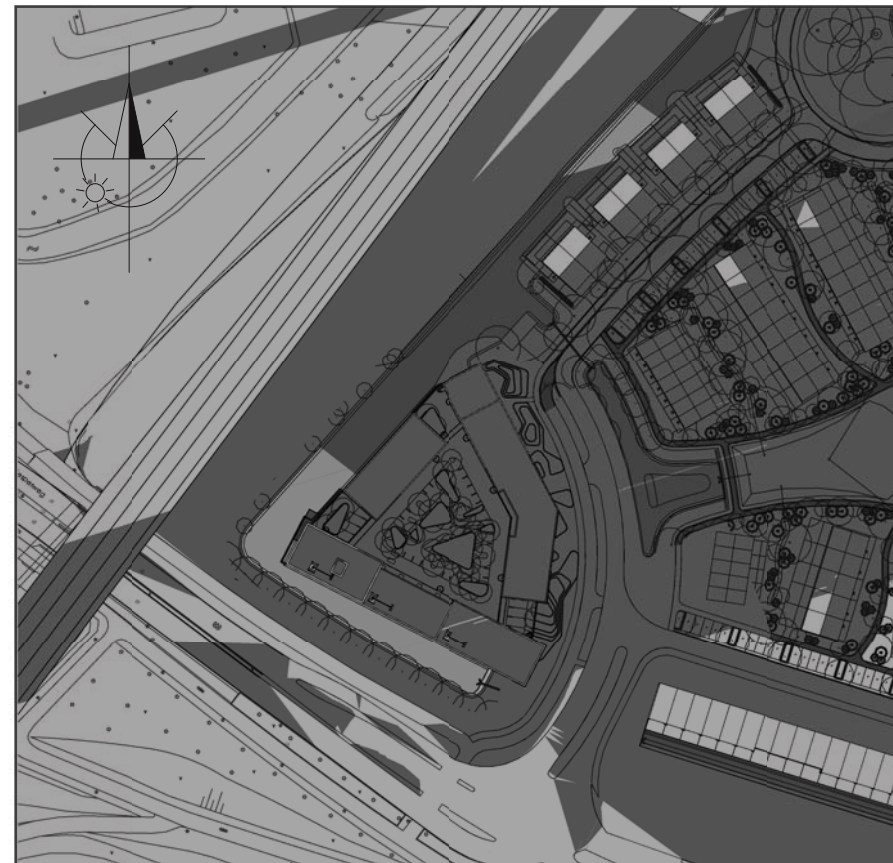


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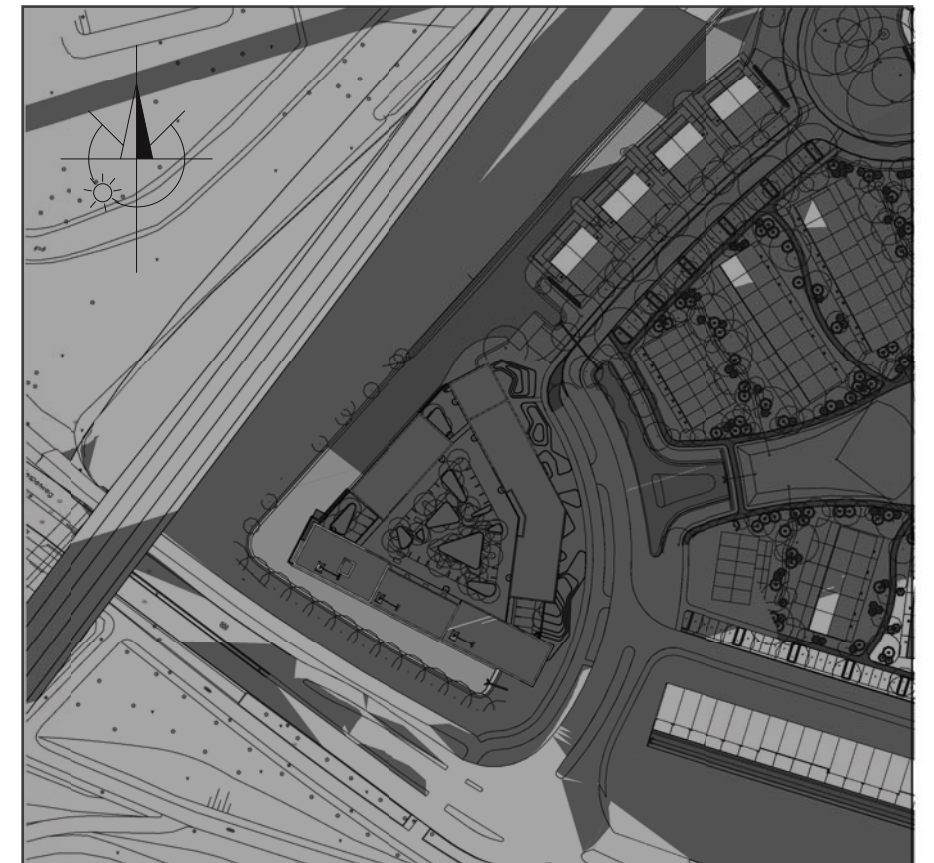
Bezonningsstudie 21 oktober



21 oktober 18.00uur

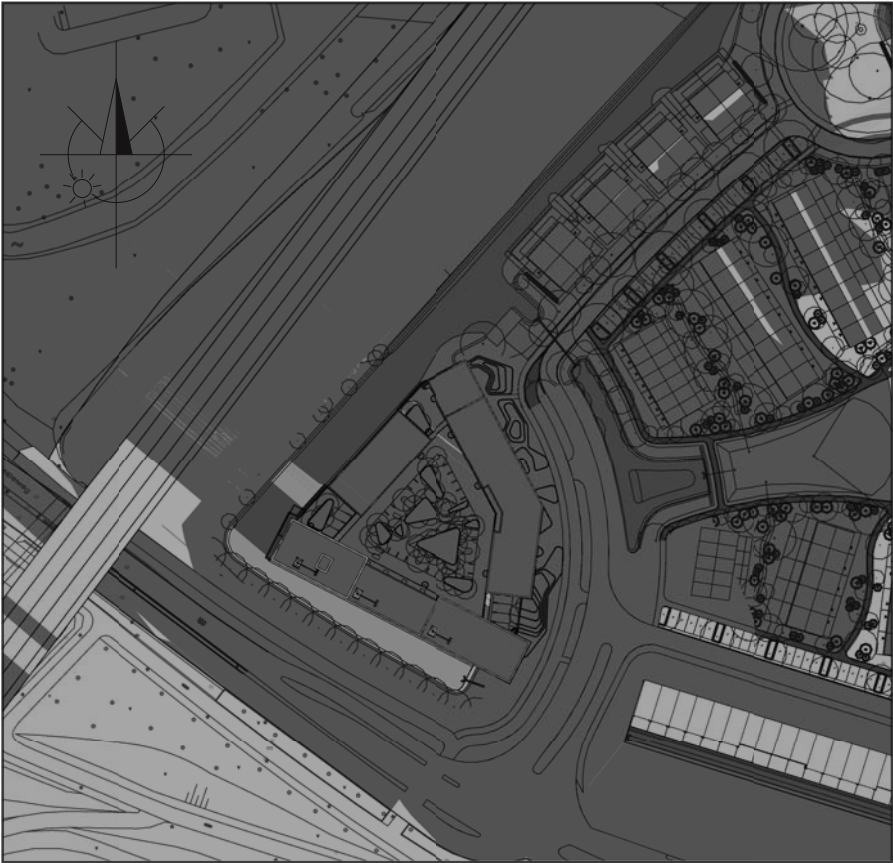


21 oktober 19.00uur



21 oktober 20.00uur

Bezonningsstudie 21 december



21 december 08.00uur



21 december 09.00uur



21 december 10.00uur



21 december 11.00uur



21 december 12.00uur

Bezonningsstudie 21 december



21 december 13.00uur



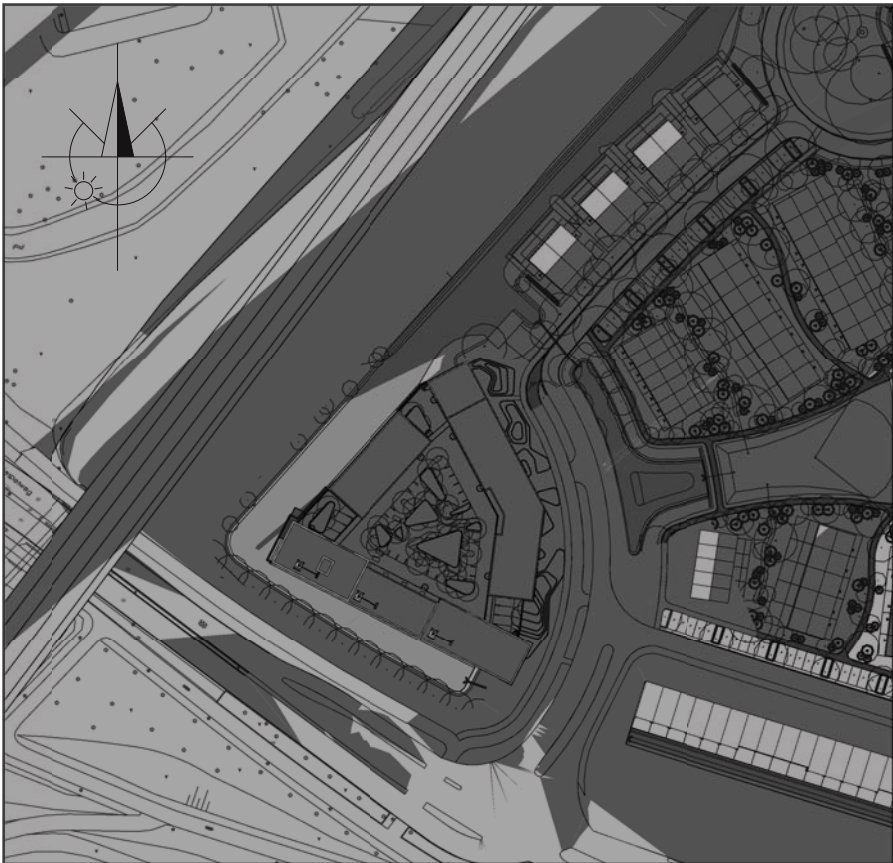
21 december 14.00uur



21 december 15.00uur

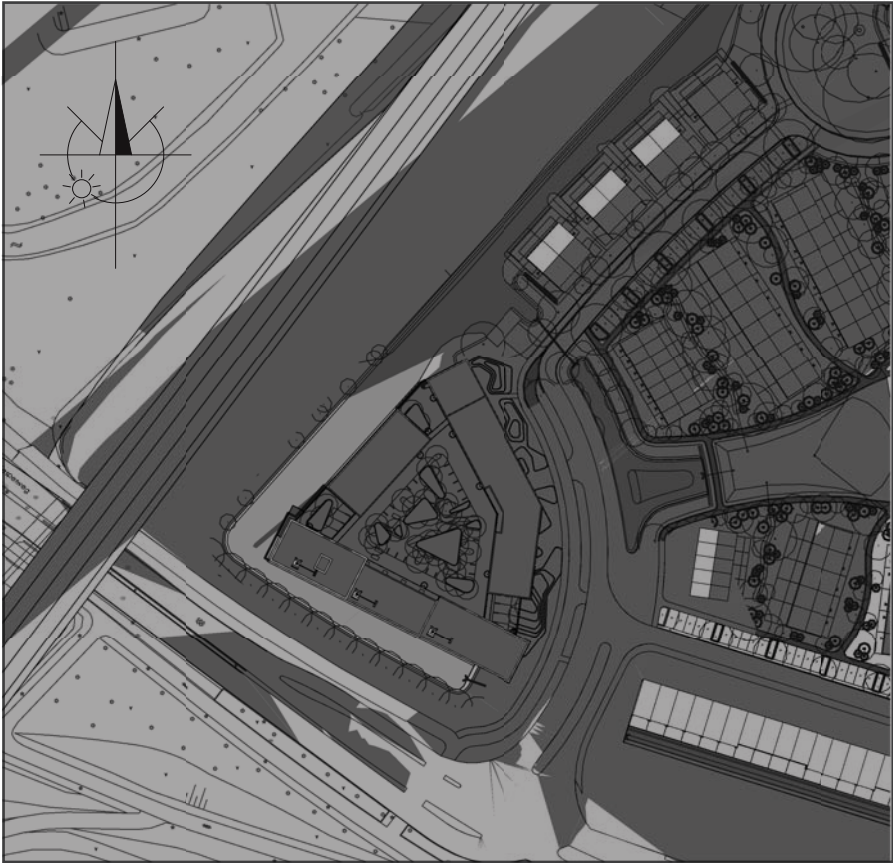


21 december 16.00uur

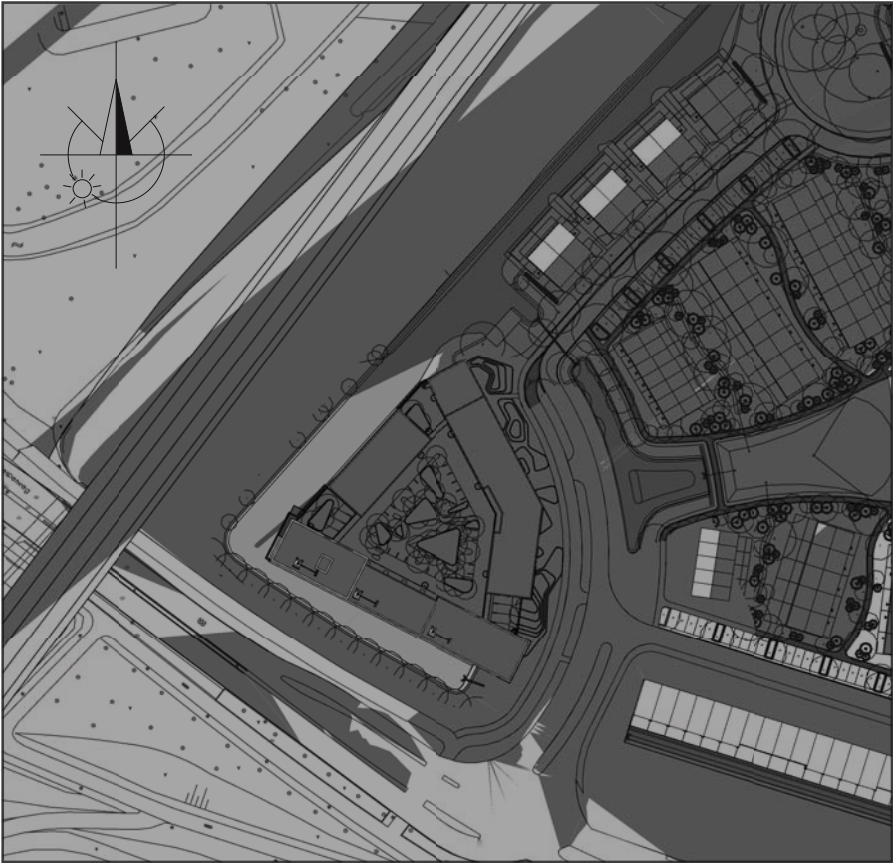


21 december 17.00uur

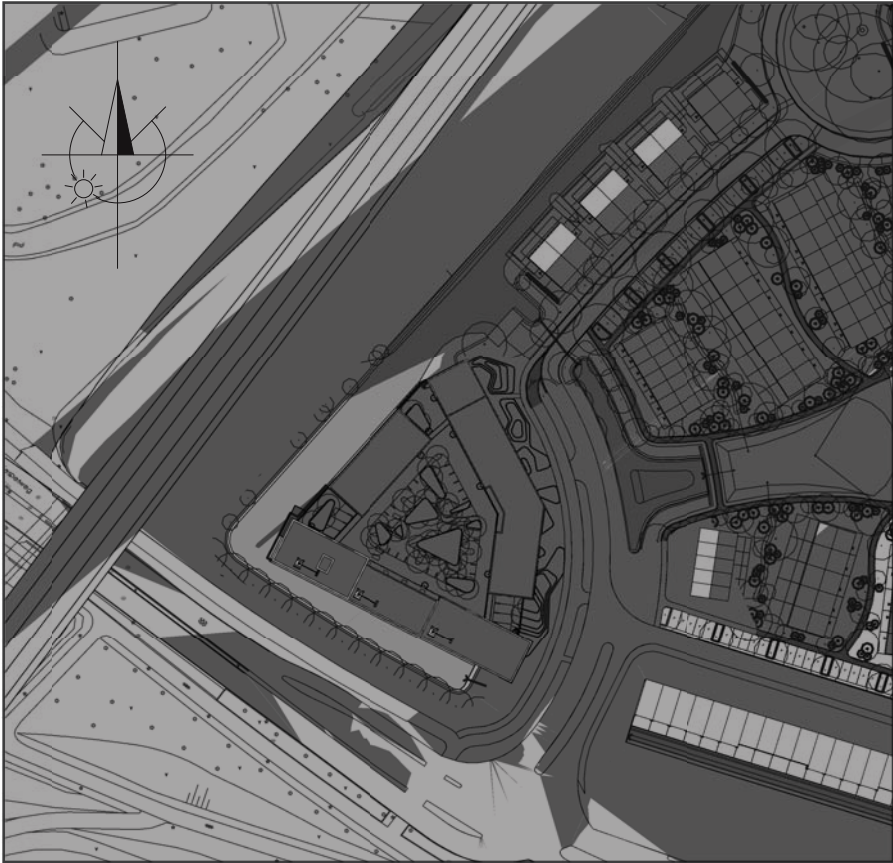
Bezonningsstudie 21 december



21 december 18.00uur



21 december 19.00uur



21 december 20.00uur