

Windturbineproject Mechelen-Noord

Slagschaduwstudie

Ecopower

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1 Inleiding

Ecopower wenst de bouw en exploitatie van één windturbine te realiseren te Mechelen, op het terrein van de Vlaamse Milieumaatschappij (VMM), aansluitend op het bedrijventerrein Mechelen-Noord II. Ten zuidoosten van de windturbine is het af- en oprittencomplex E19/A1 – N16 gelegen en ten westen stroomt de Dijle met, achterliggend, de woonwijk Battel. Ten zuiden van de windturbine ligt het recyclagepark van IVAREM en de waterzuiveringsinstallatie van Aquafin. De windturbine zal een maximale rotordiameter van 140,8 m en een maximale tiphoogte van 230 m (inclusief de deels bovengrondse fundering van ca. 2,5 m boven het maaiveld) hebben. In het kader van de omgevingsvergunningsaanvraag van dit project onderzoekt voorliggende slagschaduwstudie, conform het punt 1 van het Addendum R20.1.6 Windturbines van het Omgevingsvergunningsdecreet, de slagschaduwimpact van de windturbine op haar omgeving.

In het volgende hoofdstuk wordt het begrip slagschaduw verduidelijkt (hoofdstuk 2). Vervolgens wordt omschreven wat de aanpak is om slagschaduwimpact te beperken conform de toepasselijke milieuregelgeving (hoofdstuk 3 en 4). Daarna wordt de methodologie van de berekening van de slagschaduweffecten bepaald (hoofdstuk 5). Finaal worden de resultaten gedetailleerd besproken en getoetst aan de geldende regelgeving (hoofdstuk 6).

Een overzicht van de beschouwde windturbine en zijn technische specificaties en locatie wordt getoond in Tabel 5-1.

In deze studie wordt gebruik gemaakt van verschillende benamingen om punten in de omgeving van de windturbine aan te duiden. 'Slagschaduwgevoelige objecten' verwijst naar alle gebouwen waarin gewoond of gewerkt wordt binnen de 0-uur slagschaduwcontour van een bepaald scenario. Bij deze gebouwen is de aanwezigheid slagschaduw dus mogelijk. 'Receptoren' verwijst op zijn beurt naar een selectie van gebouwen waarvoor er in deze studie berekeningen/modelleringsen gemaakt zijn. Er zijn bijgevolg meer slagschaduwgevoelige objecten dan receptoren. Elke receptor is een object, maar het omgekeerde is niet geldig. Een overzicht van de onderzochte receptoren wordt op Figuur 5-1 weergegeven.

De gedetailleerde slagschaduwmodelleringsen zijn weergegeven in 'Annex A: Gedetailleerde modelleringsen' bij deze slagschaduwstudie.

2 Wat is slagschaduw?

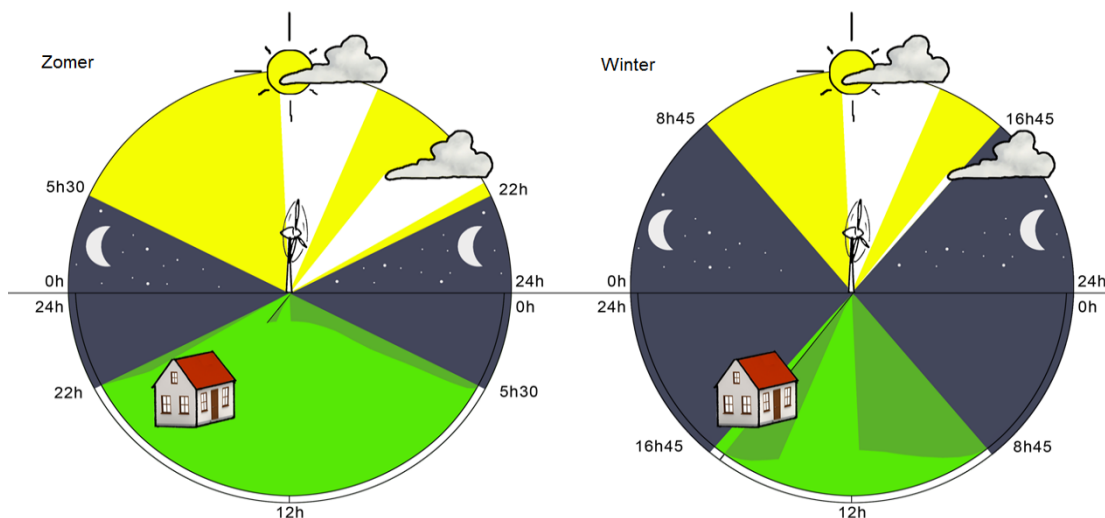
Een wiek van een draaiende windturbine zal bij helder en zonnig weer een wisselende schaduw werpen op diens achterliggende objecten. Bij afwezigheid van een tussenliggend obstakel (vegetatie, gebouwen,...) kan deze afwisselende lichtsterkte door een persoon waargenomen worden. Dit kan zowel rechtstreeks als onrechtstreeks, wanneer het fenomeen op een raampartij valt die bijdraagt tot de natuurlijke verlichting van een binnenruimte.

Een slagschaduwgevoelig object wordt door de milieuregelgeving gedefinieerd als een binnenruimte waarop slagschaduw van windturbines impact kan hebben. Het betreft concreet een woning, een kantoorgebouw of elk ander gebouw waarin mensen wonen en/of werken. Als er, met andere woorden, geen impact kan zijn kan men ook niet spreken van een slagschaduwgevoelig object (bv een magazijn zonder raam, kantoorgebouwen buiten de kantooruren, gesloten technische ruimtes, een woning zonder ramen aan de kant van de windturbines, ...).

De zone waar slagschaduw kan optreden is variabel en hangt af van de stand van de zon (positie en hoogte) en dus ook van het seizoen en het moment van de dag. De zone waar slagschaduw kan optreden is groter wanneer de zon laag staat, dus typisch in de ochtend (kort na zonsopgang) en tijdens de laatste uren van de dag (kort voor zonsondergang). In de winterperiode staat de zon bovendien lager aan de hemel, waardoor de schaduwkegel langer zal zijn dan in de zomer (wanneer de zon hoog staat).

Sowieso kan geen slagschaduw optreden in een cirkelsegment (van circa 80°) ten zuiden van de windturbine, aangezien de zon nooit in het noorden staat.

Op Figuur 2-1 is te zien dat in de zomer (links) de zon 's middags bijna loodrecht staat op het aardoppervlak, zodat de slagschaduwkegel klein is. Rechts wordt de grotere kegel weergegeven, die typisch is voor de winterperiode. Deze grotere kegel is het gevolg van de zon die 'lager' staat (dus onder een kleinere hoek staat ten opzichte van het aardoppervlak).



Figuur 2-1: Schaduwkegel in zomer- en winterperiode (resp. links en rechts).

3 Maatregelen ter bepaling en beperking van de slagschaduwimpact

Tijdens de huidige ontwikkelingsfase van een windturbineproject wordt het astronomisch maximum (zie paragraaf 3.1) en de verwachte slagschaduw voor een selectie van representatieve slagschaduwgevoelige objecten (zie paragraaf 3.2) berekend. Deze berekening conform de milieuregelgeving laat toe de slagschaduwimpact in te schatten en de vereiste maatregelen te begroten. Deze methoden bieden de noodzakelijke elementen voor de beoordeling van de vergunningsaanvraag.

Na het verkrijgen van de vergunningen worden, tijdens de ontwerpfase van het project, de maatregelen voor het beperken van slagschaduw verfijnd. Hiertoe worden alle relevante slagschaduwgevoelige objecten en hun reële afmetingen gedefinieerd in een automatische stilstandsmodule. Tijdens de uitbating van de windturbine gaat deze module in real-time na of er ter hoogte van een slagschaduwgevoelig object effectief slagschaduw optreedt. Indien de effectieve hoeveelheid slagschaduw de normen zoals opgelegd door VLAREM II (zie hoofdstuk 4) dreigt te overschrijden, wordt de windturbine preventief stilgelegd (zie hoofdstuk 3.3).

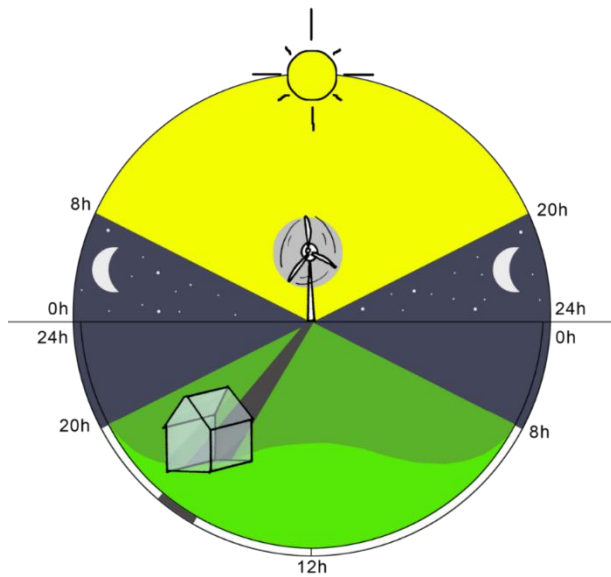
3.1 Astronomisch maximum

De berekening van het astronomisch maximum is nuttig om na te gaan op welke momenten en hoe lang slagschaduw zou kunnen optreden. Bij de bepaling van het astronomisch maximum van de slagschaduw worden voor de parameters volgende aannames gebruikt:

- **Zonneschijn:** De zon schijnt altijd van zodra ze op is en blijft schijnen tot ze onder is en wordt niet belemmerd door wolken.
- **Windsnelheid:** Er is steeds voldoende wind, zodat de windturbine altijd draait. Ze stopt nooit wegens windstil, onderhoud of een andere reden.
- **Windrichting:** De wind komt steeds uit dezelfde richting als de zon (O-Z-W), waardoor de rotor steeds loodrecht op de zon staat. Dit resulteert in een maximale slagschaduwoppervlakte. Er wordt geen correctie doorgevoerd voor de werkelijke windrichting.
- **Locatie en oriëntatie ramen van het object:** Een object wordt beschouwd als volgt:
 - Indien een woning: een serre met in elke gevel een raam op 1 m boven het maaiveld van 2 m hoog en 5 m breed¹. In de huidige milieuwetgeving wordt een huis dat als serre beschouwd wordt, omschreven als een "greenhouse". Dit begrip zal verder zo in dit document gebruikt worden. Elke glaspartij is steeds gericht naar de zon (object ontvangt licht uit alle richtingen);
 - Indien geen woning: volgens de reële afmetingen, ligging en oriëntatie (zie Tabel 5-3).
- **Obstakels:** Er zijn geen obstakels (noch natuurelementen, noch andere gebouwen) die zorgen voor een permanente schaduw en op die manier slagschaduw verhinderen.

Figuur 3-1 illustreert de aannames voor de bepaling van het astronomisch maximum voor een dag (0h tot 24h).

¹ In WindPRO wordt er een raamvlak van 2 m hoog en 5 m breed op 1 m boven het maaiveld gemodelleerd dat ten alle tijden in de richting van de zon staat.



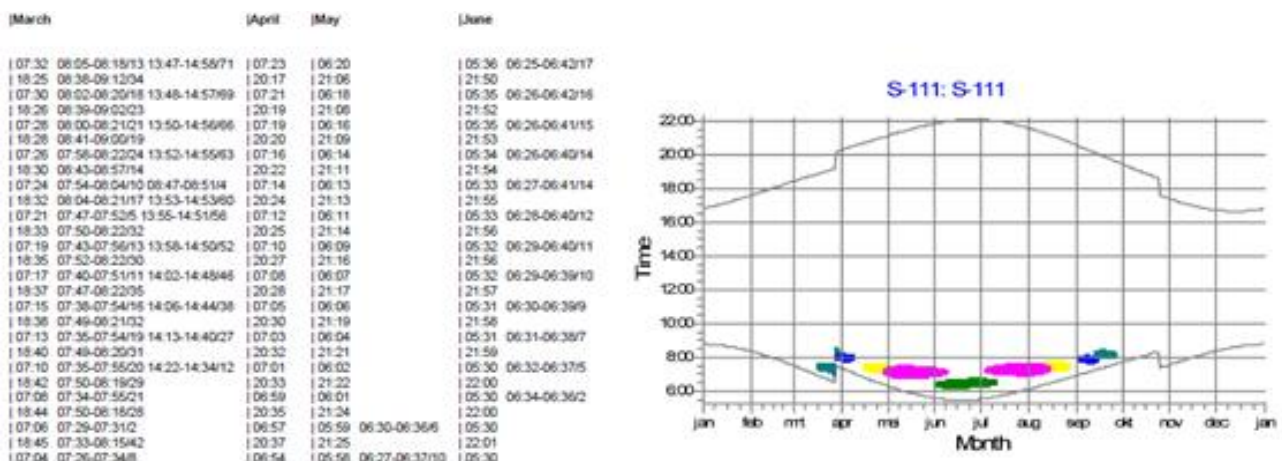
Figuur 3-1: Astronomisch maximum.

Deze aannames schetsen een **hypothetische worst-case-situatie**, zowel op meteorologisch vlak als op vlak van het object zelf.

De resultaten van de berekeningen worden weergegeven in een slagschaduwkalender (zie Figuur 3-2). Deze kalender geeft weer wanneer in het jaar en op welk moment tijdens de dag slagschaduw **in theorie** zou kunnen optreden. Op alle andere momenten kan sowieso geen slagschaduw optreden.

Er wordt een onderscheid gemaakt tussen slagschaduwkalenders van een (slagschaduwgevoelig) object en slagschaduwkalenders van een windturbine. Beide slagschaduwkalenders kunnen zowel numeriek als grafisch weergegeven worden.

- De slagschaduwkalender van een object geeft aan wanneer (datum en uur) er ter hoogte van het object slagschaduw er **in theorie** slagschaduw zou kunnen optreden en van welke windturbine deze slagschaduw op dat ogenblik afkomstig is.
- De slagschaduwkalender van een windturbine geeft aan wanneer (datum en uur) deze windturbine **in theorie** slagschaduw kan veroorzaken op (minstens) één van de geselecteerde representatieve slagschaduwgevoelige objecten.



Figuur 3-2: Voorbeeld van een slagschaduwkalender.

In werkelijkheid treedt slagschaduw pas op wanneer bovenstaande aannames opgaan voor alle parameters (zonneshijn, windsnelheid, windrichting, locatie en oriëntatie van de ramen, obstakels). Daarom zal het astronomisch maximum een overschatting zijn van de werkelijke verwachte slagschaduwduur.

3.2 Verwachte slagschaduwduur voor representatieve greenhouse-objecten

De bepaling van de te verwachten slagschaduw voor representatieve greenhouse-objecten is nog steeds een **conservatieve benadering** van de realiteit. Hierbij worden volgende aannames gebruikt:

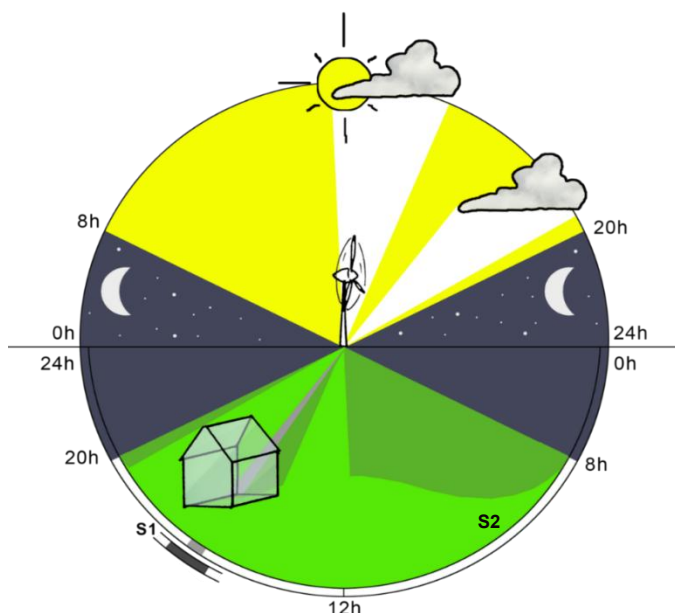
- **Zonneschijn:** De zon wordt af en toe belemmerd door wolken en schijnt dus niet elke dag van zonsopgang tot zonsondergang².
- **Windsnelheid:** De windturbine draait niet tijdens windstille of stormachtige periodes.
- **Windrichting:** De windrichting is variabel en de rotor staat steeds loodrecht op de windrichting, degene niet noodzakelijk overeenkomt met de invalrichting van het zonlicht.
- **Locatie en oriëntatie ramen van het object:** Volgens de aannames van het Astronomisch maximum (zie §3.1).
- **Obstakels:** Er zijn nog steeds geen obstakels (noch natuurelementen noch andere gebouwen) die zorgen voor permanente schaduw en op die manier slagschaduw verhinderen.

De normale gemiddelde meteorologische omstandigheden (bewolking, variabele windsnelheid en -richting) worden dus in rekening gebracht, maar het object is nog steeds theoretisch in het geval van woningen (locatie en oriëntatie van de ramen), net als de omgeving (vrij van obstakels zoals gebouwen of vegetatie).

Rekening houdend met normale omstandigheden voor zonneschijn, windsnelheid en windrichting, **bedraagt de verwachte slagschaduw slechts 10% tot 30% van de resultaten weergegeven in de slagschaduwkalenders (het astronomisch maximum)**. Bovendien is dit nog steeds een overschatting van de werkelijkheid omwille van de conservatieve aannames voor het (onrealistische) object en de (lege) omgeving.

De resultaten van de berekening van de verwachte slagschaduwduur kunnen eveneens weergegeven worden op slagschaduwkalenders.

Figuur 3-3 illustreert dat de verwachte slagschaduw (aangeduid als S2 op de figuur) veel kleiner is dan het astronomisch maximum (aangeduid als S1 op de figuur) door het in rekening brengen van normale meteorologische omstandigheden (bewolking, variabele windsnelheid en -richting).



Figuur 3-3: Verwachte slagschaduw.

² Slagschaduw wordt slechts beschouwd vanaf zonnehoeken groter dan 3° ten opzichte van de horizon. Bij een lagere stand van de zon is het zonlicht immers te zwak en wordt er veel zonlicht afgeschermd door vegetatie en gebouwen.

3.3 Maatregelen – automatische stilstandsmodule

De berekening van de verwachte slagschaduw geeft een eerste belangrijke inschatting van de hoeveelheid slagschaduw veroorzaakt door de windturbine. Deze methode is met name geschikt om tijdens de studie en vergunningsfase van een windproject na te gaan wat de impact op de energieproductie is van of de maatregelen die genomen worden om slagschaduwimpact te beperken tot de van toepassing zijnde slagschaduwnormen.

Gezien er slagschaduwgevoelige objecten zijn waarvoor de norm vermeld in VLAREM II overschreden kan worden (zie ook hoofdstuk 6), wordt de windturbine uitgerust met een automatische stilstandsmodule (of anders genaamd 'slagschaduwmodule', zie hoofdstuk 4).

De locaties en effectieve afmetingen van alle relevante slagschaduwgevoelige objecten worden in het systeem van de slagschaduwmodule geprogrammeerd, alsook de locaties en de eigenschappen van eventuele andere windturbines waarmee cumulatieve effecten mogelijk zijn. De module is daardoor in staat om de aanwezigheid en locatie van effectieve slagschaduw te bepalen. Wanneer de slagschaduwnorm dreigt overschreden te worden ter hoogte van een slagschaduwgevoelig object, wordt de turbine automatisch tot stilstand gebracht.

4 Regelgevend kader

De VLAREM-regelgeving (VLAREM II, Afdeling 5.20.6., B.S. 21 maart 2012, inclusief de wijzigingen van 20 september 2013 en 5 september 2016) vormt actueel het normenkader. In deze regelgeving worden volgende definities aangehouden:

- **Verwachte slagschaduw:** Het aantal uren slagschaduw dat aan de hand van de correcties met klimatologische maandnormalen verwacht mag worden.
- **Effectieve slagschaduw:** Het aantal uur slagschaduw dat effectief ter hoogte van een relevant slagschaduwgevoelig object opgetreden is, bepaald op basis van metingen of bepaald uit het logboek van de windturbine.
- **Slagschaduwgevoelig object:** Een binnenruimte waarop slagschaduw van windturbines impact kan hebben.

De krachtlijnen van de VLAREM II-voorwaarden inzake slagschaduw zijn de volgende:

1. als een slagschaduwgevoelig object zich bevindt binnen de contour van vier uur verwachte slagschaduw per jaar van de windturbine, wordt de windturbine uitgerust met een automatische stilstandsmodule;
2. de exploitant houdt een logboek bij per windturbine. Dat logboek vermeldt de nodige gegevens om de effectieve slagschaduw voor elk relevant slagschaduwgevoelig object binnen de contour van vier uur verwachte slagschaduw per jaar te bepalen. In het logboek worden voor elk relevant slagschaduwgevoelig object binnen de contour van vier uur verwachte slagschaduw per kalenderjaar volgende gegevens bijgehouden:
 - 1° de lijst van alle relevante slagschaduwgevoelige objecten met hun respectievelijke Lambertcoördinaten;
 - 2° een slagschaduwkalender voor elk relevant slagschaduwgevoelig object in tabelvorm waarin de astronomisch maximaal mogelijke slagschaduwduur voor elke windturbine wordt weergegeven.
3. de exploitant stelt minstens de eerste twee exploitatiejaren een controlerapport op, op basis van de gegevens vermeld in lid 1 en 2. Dat rapport vermeldt tenminste hoeveel effectieve slagschaduw elk relevant slagschaduwgevoelig object binnen de contour van vier uur verwachte slagschaduw per jaar heeft getroffen en welke remediërende maatregelen eventueel zijn genomen;
4. tenzij anders vermeld in de milieuvergunning, geldt voor elk relevant slagschaduwgevoelig object volgens art. 5.20.6.2.3 van VLAREM II:
 - een maximum van 30 uur effectieve slagschaduw per jaar, met een maximum van dertig minuten effectieve slagschaduw per dag voor objecten in industriegebied (met uitz. van woningen)
 - een maximum van 8 uur effectieve slagschaduw per jaar, met een maximum van dertig minuten effectieve slagschaduw per dag voor objecten in andere gebieden en alle woningen.

5 Methodologie

Om de slagschaduwimpact van de windturbine te bepalen, worden onder meer de isocontouren van de verwachte slagschaduw per jaar berekend met behulp van de rekensoftware WindPRO. Deze software berekent de verwachte slagschaduw naar de onmiddellijke omgeving waarbij met volgende zaken rekening gehouden wordt:

- Technische specificaties windturbine: Het exacte type windturbine dat door de initiatiefnemer zal gebouwd worden, is momenteel nog niet gekend. Voor de berekening van de slagschaduwimpact wordt uitgegaan van een worst-case windturbine type met een maximale tiphoogte van 230,5 meter en een maximale rotordiameter van 141³ meter. De masthoogte wordt uit deze waarden afgeleid⁴. De gegevens van de gemodelleerde windturbine worden weergegeven in Tabel 5-2.⁵
- Zonneschijnstatistieken: De zon schijnt van zodra ze op is en blijft schijnen tot ze onder is, maar er zijn ook bewolkte periodes. De klimatologische data opgenomen in WindPRO worden gebruikt. Deze zijn gebaseerd op de "Klimaatstatistieken van de Belgische gemeente: Mechelen (NIS 12025)".
- Windstatistieken: De windturbine draait vaak, maar er zijn ook windstille en stormachtige periodes. Daarnaast draait de gondel met de wind mee. Voor de bepaling van het aantal draaiuren van de windturbine per windrichtingsector is uitgegaan van de windstatistieken o.b.v. KNMI-KNW data over de periode 1999 t/m 2018 voor een overwogen gemiddelde van het project met het Lambert coördinaat (156748;193542), gelegen op ca. 1,2 km van de geplande windturbine van het project en op een hoogte van 150 meter.
- Receptoren: Volgens de assumpties van §3.1 en §3.2
- Er zijn geen obstakels (noch natuurelementen, noch andere gebouwen) die zorgen voor permanente schaduw.

In deze studie worden 51 relevante receptoren geselecteerd en besproken. Deze receptoren werden geïdentificeerd op basis van luchtfoto's en de berekende slagschaduwcontouren. De isocontouren van 0 uur en 4 uur verwachte slagschaduw van het project werden hiervoor geraadpleegd. De receptoren zijn zo gekozen dat ze een goed beeld geven van de slagschaduwimpact van het project. Toch blijft dit slechts een selectie van receptoren, en zijn dus niet alle objecten binnen de contour van 4 uur verwachte slagschaduw opgenomen.

In Tabel 5-2 zijn de geselecteerde representatieve receptoren weergegeven. Per receptor wordt ook aangeduid of het gaat over een woning, of over een ander type van gebouw (bv. kantoor, magazijn,...), al dan niet gelegen in industriegebied.

Figuur 5-1 toont de kaart met de relevante windturbine en de geselecteerde representatieve receptoren.

Tabel 5-1: Gegevens van de gemodelleerde windturbine in functie van de slagschaduwberekeningen (merk op dat dit type voor slagschaduw worst case is ten opzichte van het type dat in de vergunningsaanvraag aangevraagd zal worden, vandaar de verschillen).

Windturbine	Lambert 72 coördinaat: X	Lambert 72 coördinaat: Y	Max masthoogte* (in meter)	Max. rotor-diameter (in m)	Max. tiphoogte* (in m-mv)
WT1	155615	193121	160	141	230,5

* Hoogtes zijn uitgedrukt inclusief bovengrondse fundering van ca. 2,5 m

³ De maximale rotordiameter die wordt aangevraagd in de vergunning is 140,8 m. Deze rotordiameter is echter niet beschikbaar in WindPro en er wordt in deze studie bijgevolg gewerkt met een worst-case aanname van 141 m.

⁴ In dit geval bedraagt de berekende masthoogte (voor de slagschaduwberekeningen): $230,5 - 141/2 = 160$ m. De finaal gebouwde windturbine kan een andere (hogere of lagere) masthoogte hebben, maar de hier gehanteerde waarden voor tiphoogte, rotordiameter en masthoogte vormen het worst case-scenario voor slagschaduw.

⁵ Dit zijn worst-case waarden. In de vergunning wordt 227,5 m boven fundering, het zij 230 m boven maaiveld als tiphoogte, 140,8 m als rotordiameter en 164,5 m als maximale masthoogte aangevraagd.

Tabel 5-2: Gegevens van de gekozen representatieve receptoren in functie van de slagschaduwberekeningen.

ID	Lambert 72-coördinaten		Omschrijving	Functie
	X (m)	Y (m)		
1	154366	192450	Gentsesteenweg 161	Bedrijf*
2	154462	192538	Gentsesteenweg 149	Bedrijf*
3	154879	193515	Hogeweg 136	Woning
4	155352	193176	Steenhoevestraat 6	Bedrijf
5	155788	193263	Blarenberglaan 23A	Bedrijf
6	156053	193586	Blarenberglaan 13	Woning
7	156190	192865	Oude Antwerpsebaan 287	Woning
8	156413	192818	Oude Antwerpsebaan 230	Woning
9	156643	192662	Galgestraat 91	Woning
10	156968	192440	Molenbergstraat 26	Woning
11	157122	192290	Oude Antwerpsebaan 22	Woning
12	156643	192803	Slachthuislaan 34	Woning
13	156383	193358	Blokhuisstraat 45	Woning
14	156445	193728	Oude Baan 20	Woning
15	156177	193793	Schaliënhoeverdreef 7	Bedrijf
16	155872	193891	Generaal De Wittelaan 9	Bedrijf
17	155145	193034	Hogeweg 181	Woning
18	155010	193212	Hogeweg 211	Woning
19	154976	193446	Hogeweg 124	Woning
20	155245	192973	Hogeweg 116	Woning
21	155593	193233	Zandvoortstraat 3	Bedrijf
22	154846	193310	Baron Eduard Empainlaan 100	Woning
23	155013	192940	Baron Eduard Empainlaan 60	Woning
24	155050	192824	Baron Eduard Empainlaan 50	Woning
25	155356	192670	Hogeweg 76	Woning
26	156908	193236	Karekietstraat 75	Woning
27	156611	194063	Antwerpsesteenweg 104	Woning
28	155752	193382	Blarenberglaan 21C	Bedrijf

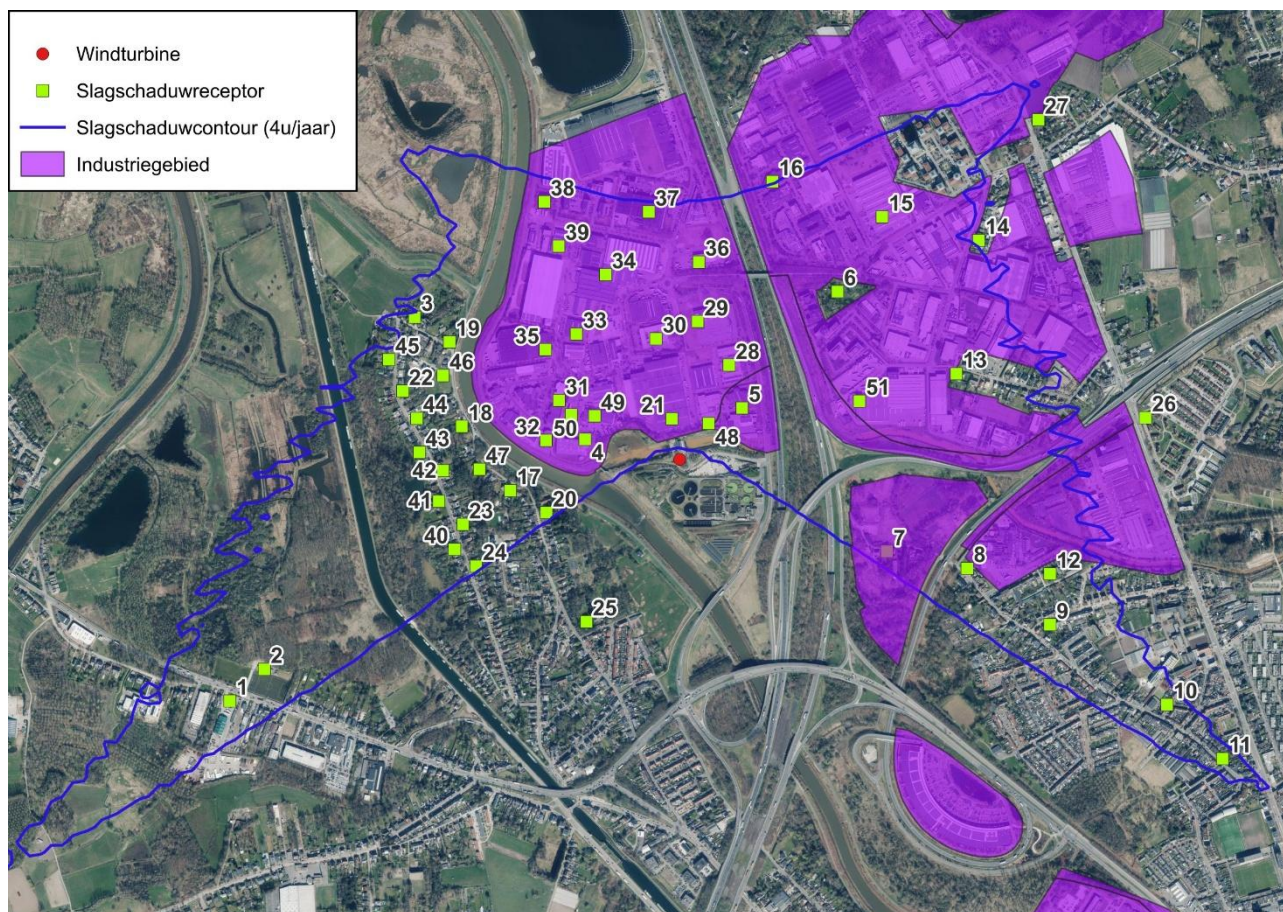
ID	Lambert 72-coördinaten		Omschrijving	Functie
	X (m)	X (m)		
29	155665	193503	Blarenberglaan 19	Bedrijf
30	155549	193455	Zandvoortstraat 1	Bedrijf
31	155280	193284	Wayenborgstraat 22	Bedrijf
32	155244	193173	Wayenborgstraat 16	Bedrijf
33	155328	193468	Zandvoortstraat 12	Bedrijf
34	155409	193633	Zandvoortstraat 16	Bedrijf
35	155242	193425	Zandvoortstraat 15B	Bedrijf
36	155668	193668	Blarenberglaan 2A	Bedrijf
37	155529	193807	Zandvoortstraat 53	Bedrijf
38	155239	193835	Zandvoortstraat 27C	Bedrijf
39	155279	193712	Zandvoortstraat 21	Bedrijf
40	154990	192871	Baron Eduard Empainlaan 61	Woning
41	154946	193004	Baron Eduard Empainlaan 75	Woning
42	154958	193089	Baron Eduard Empainlaan 74	Woning
43	154892	193140	Baron Eduard Empainlaan 89	Woning
44	154885	193234	Baron Eduard Empainlaan 92	Woning
45	154807	193397	Baron Eduard Empainlaan 115	Woning
46	154958	193353	Hogeweg 239	Woning
47	155059	193093	Hogeweg 191	Woning
48	155695	193220	Blarenberglaan 23I	Bedrijf
49	155379	193241	Steenhoevestraat 7	Bedrijf
50	155314	193244	Steenhoevestraat 4	Bedrijf
51	156114	193282	Blokhuisstraat 49	Bedrijf

* Bedrijfsgebouwen die niet gesitueerd zijn in industriegebied worden beoordeeld als woningen.

Receptoren ter hoogte van bedrijven in industriegebied worden gemodelleerd volgens de reële situatie, volgens de parameter uit Tabel 5-3.

Tabel 5-3: Detailparameter van de receptoren ter hoogte van bedrijven in industriegebied

ID	Breedte (m)	Hoogte (m)	Hoogte raam boven maaiveld (m)	Oriëntatie
4	5.0	5.0	7.8	Dakraam naar boven gericht
5	10.4	1.0	2.0	Bureauraam naar het zuiden gericht
15	56.0	5.0	10.4	Dakraam naar boven gericht
16	10.3	2.5	7.1	Dakraam naar boven gericht
21	80.0	4.0	15.9	Dakraam naar boven gericht
28	50.0	3.0	7.4	Dakraam naar boven gericht
29	10.0	4.0	9.6	Dakraam naar boven gericht
30	20.4	2.1	4.0	Dakraam naar boven gericht
31	14.6	1.5	1.0	Bureauraam naar het zuiden gericht
32	12.0	2.6	7.8	Dakraam naar boven gericht
33	13.0	3.0	7.5	Dakraam naar boven gericht
34	32.0	3.0	10.3	Dakraam naar boven gericht
35	2.0	2.0	11.8	Dakraam naar boven gericht
36	6.0	4.0	9.3	Dakraam naar boven gericht
37	60.0	2.0	9.0	Dakraam naar boven gericht
38	29.4	1.5	11.0	Bureauraam naar het zuiden gericht
39	28.0	3.0	5.6	Dakraam naar boven gericht
48	3.0	1.0	3.0	Bureauraam naar het zuiden gericht
49	30.0	3.0	11.0	Dakraam naar boven gericht
50	12.5	5.0	5.0	Dakraam naar boven gericht
51	22.0	3.0	10.0	Dakraam naar boven gericht



Figuur 5-1: Aanduiding van de relevante windturbine, de verwachte 4 u/j slagshadowcontour en de representatieve slagshadowreceptoren, met de stedenbouwkundige bestemmingen industriegebied als achtergrond.

6 Resultaten

In Tabel 6-1 wordt voor de representatieve receptoren de verwachte maximale slagschaduwduur per dag en de verwachte maximale slagschaduw per jaar weergegeven van het project:

Belangrijk is te vermelden dat de resultaten in de tabel (m.u.v. de kolommen 'Effect na maatregelen') de maximale en/of verwachte slagschaduwduur vóór afregeling van de windturbine weergeven, met name zonder het gebruiken van een automatische stilstandsmodule.

Een toetsing aan de normen vermeld in hoofdstuk 4 werd uitgevoerd, met aanduiding van kleurencodes. Een rode kleur betekent dat de norm overschreden wordt en milderende maatregelen vereist zijn (toepassing van een stilstandsmodule); groen betekent dat de norm niet overschreden wordt en geen milderende maatregelen nodig zijn.

Tabel 6-1: Berekende slagschaduwduur (dagelijks maximum en verwacht jaartotaal) voor het project met WindPRO.

ID	Lambert 72-coördinaten		Omschrijving	Functie	Maximum slagschaduw (uren per dag)		Verwachte slagschaduw (uren per jaar)	
	X (m)	X (m)			Project	Effect na maatregelen	Project	Effect na maatregelen
1	154366	192450	Gentsesteenweg 161	Bedrijf*	0:26	0:26	8:08	8:00
2	154462	192538	Gentsesteenweg 149	Bedrijf*	0:28	0:28	9:29	8:00
3	154879	193515	Hogeweg 136	Woning	0:40	0:30	4:48	4:48
4	155352	193176	Steenhoevestraat 6	Bedrijf	1:48	0:30	64:35	30:00
5	155788	193263	Blarenberglaan 23A	Bedrijf	2:04	0:30	73:51	30:00
6	156053	193586	Blarenberglaan 13	Woning	0:53	0:30	11:26	8:00
7	156190	192865	Oude Antwerpsebaan 287	Woning	0:52	0:30	11:18	8:00
8	156413	192818	Oude Antwerpsebaan 230	Woning	0:41	0:30	13:24	8:00
9	156643	192662	Galgestraat 91	Woning	0:32	0:30	9:04	8:00
10	156968	192440	Molenbergstraat 26	Woning	0:24	0:24	5:45	5:45
11	157122	192290	Oude Antwerpsebaan 22	Woning	0:21	0:21	4:44	4:44
12	156643	192803	Slachthuislaan 34	Woning	0:32	0:30	6:00	6:00
13	156383	193358	Blokhuisstraat 45	Woning	0:41	0:30	7:01	7:01
14	156445	193728	Oude Baan 20	Woning	0:33	0:30	4:29	4:29
15	156177	193793	Schaliënhoevedreef 7	Bedrijf	0:47	0:30	10:45	10:45
16	155872	193891	Generaal De Wittelaan 9	Bedrijf	0:38	0:30	3:36	3:36
17	155145	193034	Hogeweg 181	Woning	1:10	0:30	35:43	8:00
18	155010	193212	Hogeweg 211	Woning	0:53	0:30	11:45	8:00
19	154976	193446	Hogeweg 124	Woning	0:46	0:30	6:31	6:31
20	155245	192973	Hogeweg 116	Woning	1:01	0:30	14:24	8:00
21	155593	193233	Zandvoortstraat 3	Bedrijf	4:31	0:30	240:19	30:00
22	154846	193310	Baron Eduard Empainlaan 100	Woning	0:41	0:30	6:02	6:02
23	155013	192940	Baron Eduard Empainlaan 60	Woning	0:55	0:30	25:00	8:00
24	155050	192824	Baron Eduard Empainlaan 50	Woning	0:41	0:30	8:10	8:00
25	155356	192670	Hogeweg 76	Woning	0:00	0:00	0:00	0:00
26	156908	193236	Karekietstraat 75	Woning	0:26	0:26	2:47	2:47
27	156611	194063	Antwerpsesteenweg 104	Woning	0:26	0:26	3:24	3:24
28	155752	193382	Blarenberglaan 21C	Bedrijf	2:08	0:30	53:45	30:00
29	155665	193503	Blarenberglaan 19	Bedrijf	1:29	0:30	29:44	29:44
30	155549	193455	Zandvoortstraat 1	Bedrijf	1:43	0:30	34:38	30:00
31	155280	193284	Wayenborgstraat 22	Bedrijf	0:59	0:30	15:01	15:01
32	155244	193173	Wayenborgstraat 16	Bedrijf	1:25	0:30	37:46	30:00
33	155328	193468	Zandvoortstraat 12	Bedrijf	1:15	0:30	15:26	15:26
34	155409	193633	Zandvoortstraat 16	Bedrijf	1:08	0:30	14:13	14:13
35	155242	193425	Zandvoortstraat 15B	Bedrijf	1:06	0:30	12:33	12:33
36	155668	193668	Blarenberglaan 2A	Bedrijf	1:05	0:30	12:28	12:28
37	155529	193807	Zandvoortstraat 53	Bedrijf	0:50	0:30	5:39	5:39
38	155239	193835	Zandvoortstraat 27C	Bedrijf	0:50	0:30	6:19	6:19
39	155279	193712	Zandvoortstraat 21	Bedrijf	0:56	0:30	10:17	10:17
40	154990	192871	Baron Eduard Empainlaan 61	Woning	0:53	0:30	19:05	8:00
41	154946	193004	Baron Eduard Empainlaan 75	Woning	0:50	0:30	17:07	8:00
42	154958	193089	Baron Eduard Empainlaan 74	Woning	0:51	0:30	13:49	8:00
43	154892	193140	Baron Eduard Empainlaan 89	Woning	0:46	0:30	9:58	8:00
44	154885	193234	Baron Eduard Empainlaan 92	Woning	0:44	0:30	7:53	7:53
45	154807	193397	Baron Eduard Empainlaan 115	Woning	0:39	0:30	4:53	4:53
46	154958	193353	Hogeweg 239	Woning	0:47	0:30	7:18	7:18
47	155059	193093	Hogeweg 191	Woning	0:59	0:30	20:33	8:00
48	155695	193220	Blarenberglaan 23I	Bedrijf	2:46	0:30	138:25	30:00

ID	Lambert 72-coördinaten		Omschrijving	Functie	Maximum slagschaduw (uren per dag)		Verwachte slagschaduw (uren per jaar)	
	X (m)	X (m)			Project	Effect na maatregelen	Project	Effect na maatregelen
49	155379	193241	Steenhoevestraat 7	Bedrijf	1:57	0:30	52:48	30:00
50	155314	193244	Steenhoevestraat 4	Bedrijf	1:34	0:30	34:15	30:00
51	156114	193282	Blokhuisstraat 49	Bedrijf	1:05	0:30	18:43	18:43

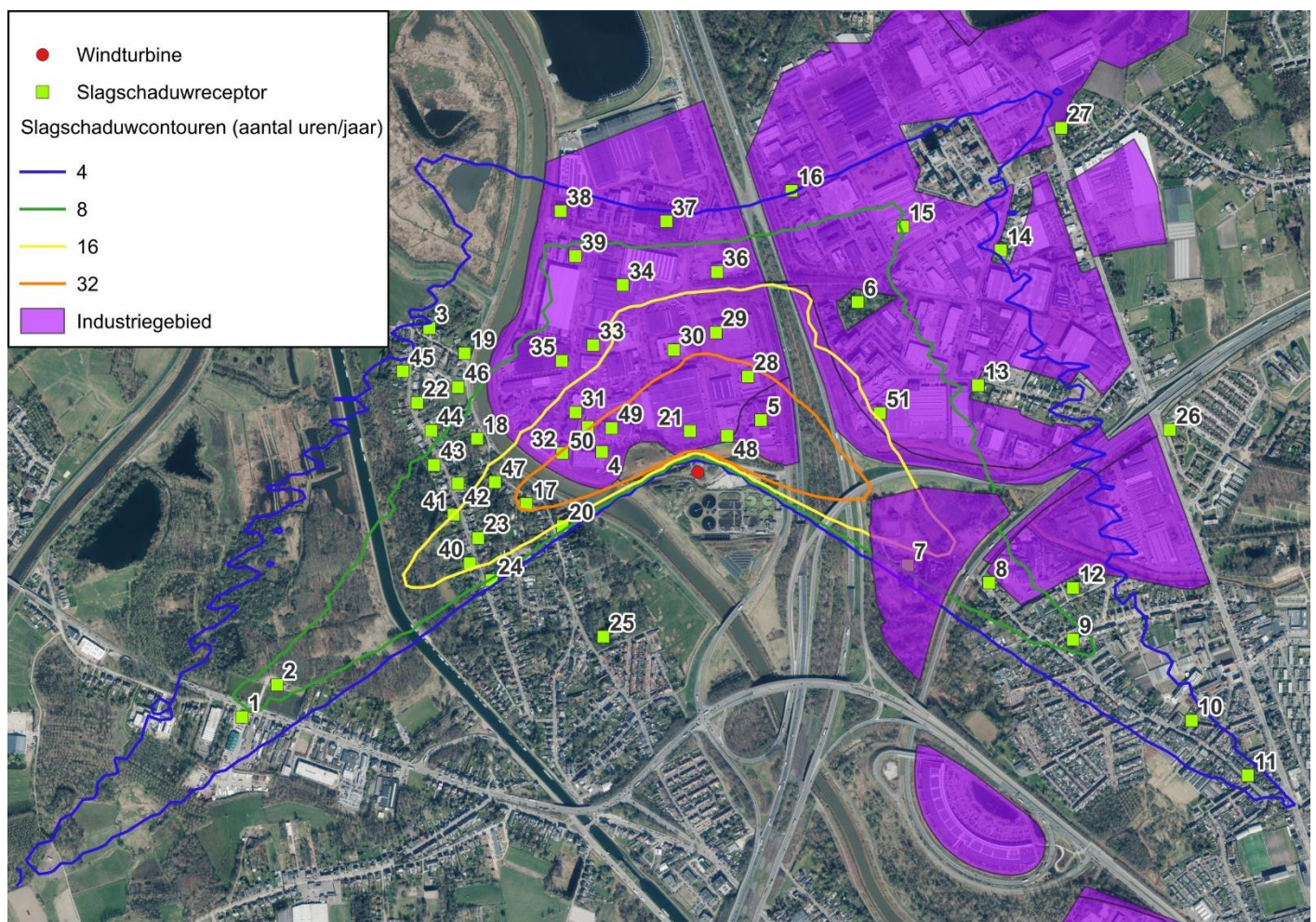
6.1 Het project

Onderstaande Figuur 6-1 toont de isocontouren voor verwachte slagschaduw op jaarbasis gecreëerd door uitsluitend het project, zonder afregeling van de windturbine. Uit de figuur is te zien dat de geselecteerde receptoren zich deels binnen en deels buiten de isocontour van 4 uur verwachte slagschaduw per jaar door het project bevinden. Enkele van de receptoren bevinden zich buiten deze isocontour en ondervinden dus beperkt tot geen slagschaduw afkomstig van het project. Dit is onder meer het geval voor de receptoren 16, 25, 26 en 27. Uit Tabel 6-1 is af te leiden dat receptor 25 helemaal geen slagschaduw kan ondervinden van het project.

Receptor 16 is voldoende noordelijk gelegen zodat verwacht wordt dat de receptor minder dan 4u slagschaduw van het project zal ontvangen (zie ook Tabel 6-1). De zon staat immers op de middag hoog aan de horizon in het zuiden. Daarom zal de slagschaduw niet zo ver reiken. Receptor 16 is gelegen in het industrieterrein Mechelen Noord I. Ter hoogte van deze receptor is het wel mogelijk dat de daglimiet van maximaal 30 minuten slagschaduw overschreden wordt. De slagschaduwduur per dag bedraagt immers maximaal 38 min.

Receptor 26 en 27 zijn voldoende (noord)oostelijk gelegen om minder dan 4u slagschaduw te ontvangen. Alle receptoren meer ten oosten van deze receptoren en bij uitbreiding ten oosten van de Antwerpsesteenweg (N41) zullen bijgevolg ook geen of minder dan 4u slagschaduw ondervinden van dit project.

Receptor 25 is ten zuiden van de windturbine WT1 gelegen. Deze receptor ontvangt geen slagschaduw gezien de zon nooit in het noorden staat. Receptor 25 is gelegen in het zuidelijke deel van het gehucht Battel. Receptoren meer ten zuiden van deze locatie zullen eveneens geen slagschaduw ondervinden.



Figuur 6-1: Slagschaduwcontouren voor het project voor afregeling van de windturbine, bepaald met het WindPRO-model.

Op basis van paragraaf 6.1 kan er geconcludeerd worden dat een aantal receptoren zich vóór afregeling van de windturbine **binnen de isocontour van 4u, maar buiten de isocontour van 8u** (voor woningen) **of 30u** (voor gebouwen in industriegebied, m.u.v. woningen) verwachte slagschaduw per jaar bevinden. Het betreft volgende gebieden:

- De gebouwen in het uiterste noorden van het gehucht Battel (3, 19, 22, 44, 45 en 46);
- De gebouwen in het noorden van de wijk Galgenberg, gelegen ten westen van de Antwerpsesteenweg (N1) en de Gentsesteenweg (N16) (10, 11 en 12);
- De gebouwen ten noorden van de R6 en ten westen van de Oude Baan (13 en 14);
- De bedrijven in het industriepark Mechelen-Noord I (15);
- De bedrijven in het bedrijventerrein Mechelen-Noord II (29, 31, 33 t.e.m. 39 en 51).

De berekende verwachte slagschaduw ter hoogte van deze receptoren ligt binnen de jaarlimiet van toegelaten slagschaduw. Receptoren 10, 11, 25, 26 en 27 voldoen daarnaast ook aan de daglimiet van 30 minuten slagschaduw per dag. Bij de overige receptoren bestaat de kans dat de daglimiet overschreden wordt. Milderende maatregelen zullen hier dus nodig zijn.

Er liggen enkele receptoren **binnen de isocontour van 8u** (voor woningen) **of 30u** slagschaduw per jaar (voor gebouwen in industriegebied, uitgezonderd woningen) vóór afregeling van de windturbine. Deze receptoren situeren zich in volgende gebieden:

- De gebouwen ten zuiden van de Gentsesteenweg (N16) (1);
- De bedrijven (niet in industriegebied gelegen) ten noorden van de Gentsesteenweg (2);
- De woning in het westelijk gedeelte van het industriegebied Mechelen-Noord I (6);
- De woningen ten noorden van de Luchtvaarstraat (7, 8 en 9);
- De bedrijven in het zuiden van het bedrijventerrein Mechelen-Noord II (4, 5, 21, 28, 30, 32, 48 t.e.m. 50)
- De woningen in de woonwijk Battel, ten westen van het bedrijventerrein Mechelen-Noord II (17, 18, 20, 23, 24, 40, 41, 42, 43 en 47);

Deze berekende verwachte slagschaduw (ter hoogte van deze receptoren (m.u.v. receptor 2) overschrijdt naast de jaarlimiet ook de daglimiet van maximaal 30 minuten effectieve slagschaduw.

Door toepassing van een automatische stilstandsmodule kan de toepasselijke VLAREM II-norm alsnog te allen tijde gerespecteerd worden.

6.2 Detailbespreking van enkele receptoren

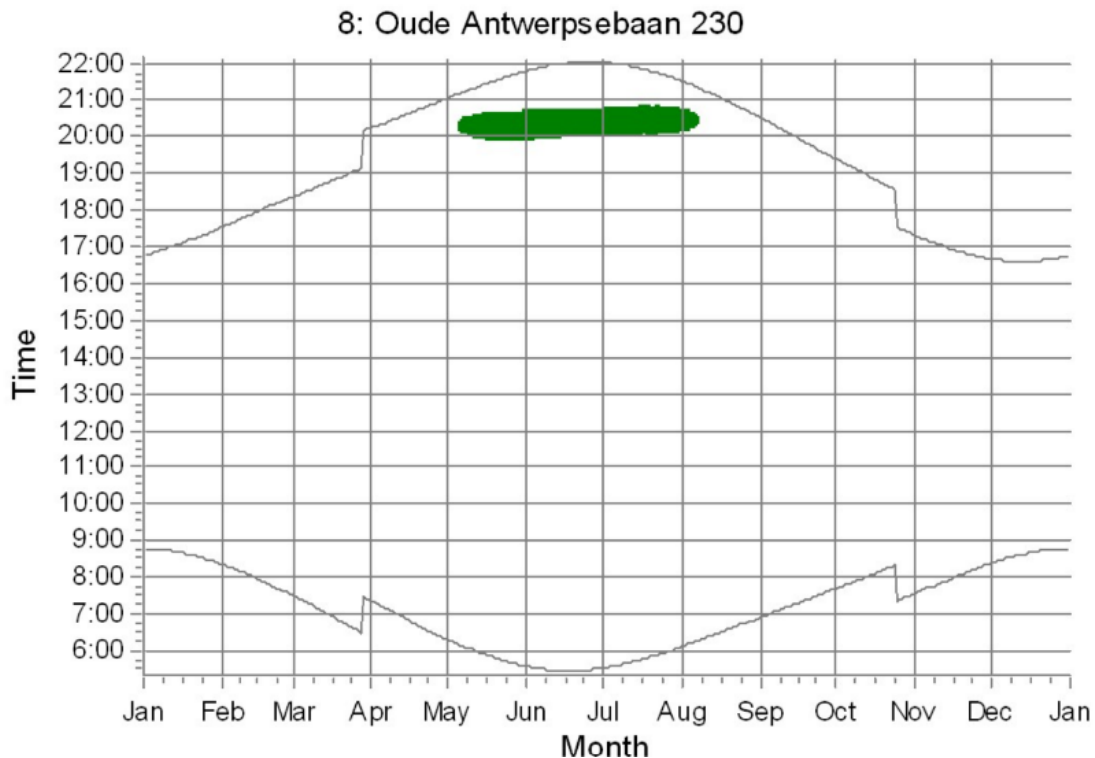
Enkele geselecteerde receptoren worden hierna meer in detail besproken voor het project. De getoonde slagschaduwkalenders geven alle momenten gedurende de dag weer waarop mogelijk slagschaduwimpact kan optreden ter hoogte van de betrokken receptor (astronomisch maximum). Hierbij staan de verschillende kleuren voor de bijdragen van de verschillende windturbine vóór het toepassen van milderende maatregelen. Op de momenten buiten de gekleurde zones kan er nooit slagschaduw optreden. De horizontale zwarte lijnen boven- en onderaan de kalender tonen het moment van zonsopgang en zonsondergang aan.

De berekeningsresultaten voor alle 51 representatieve geselecteerde receptoren alsook de bijhorende slagschaduwkalenders ervan, zijn terug te vinden in 'Annex A: Gedetailleerde modelleringen' bij deze slagschaduwstudie.

Receptor 8 (woning ter hoogte van Oude Antwerpsebaan 230)

Receptor 8 ligt ten zuidoosten van de geplande windturbine. De slagschaduwkalender in Figuur 6-2 geeft aan dat er ter hoogte van deze receptor vooral tijdens de avond (tussen ca. 20u en 21u) in de zomer slagschaduw kan optreden. De maximale mogelijke slagschaduwduur bedraagt ter hoogte van receptor 8 ongeveer 41 minuten per dag.

Uit Tabel 6-1 bleek reeds dat ter hoogte van de beschouwde receptor 8 de limiet van 8 uur slagschaduw in een gemiddeld jaar naar verwachting overschreden kan worden door toedoen van het project. De verwachte jaarlijkse slagschaduwduur ten gevolge van WT1 bedraagt immers 13 uur en 24 minuten. Milderende maatregelen zullen hier dus nodig zijn, zowel om de jaarlimiet als de daglimiet te respecteren.



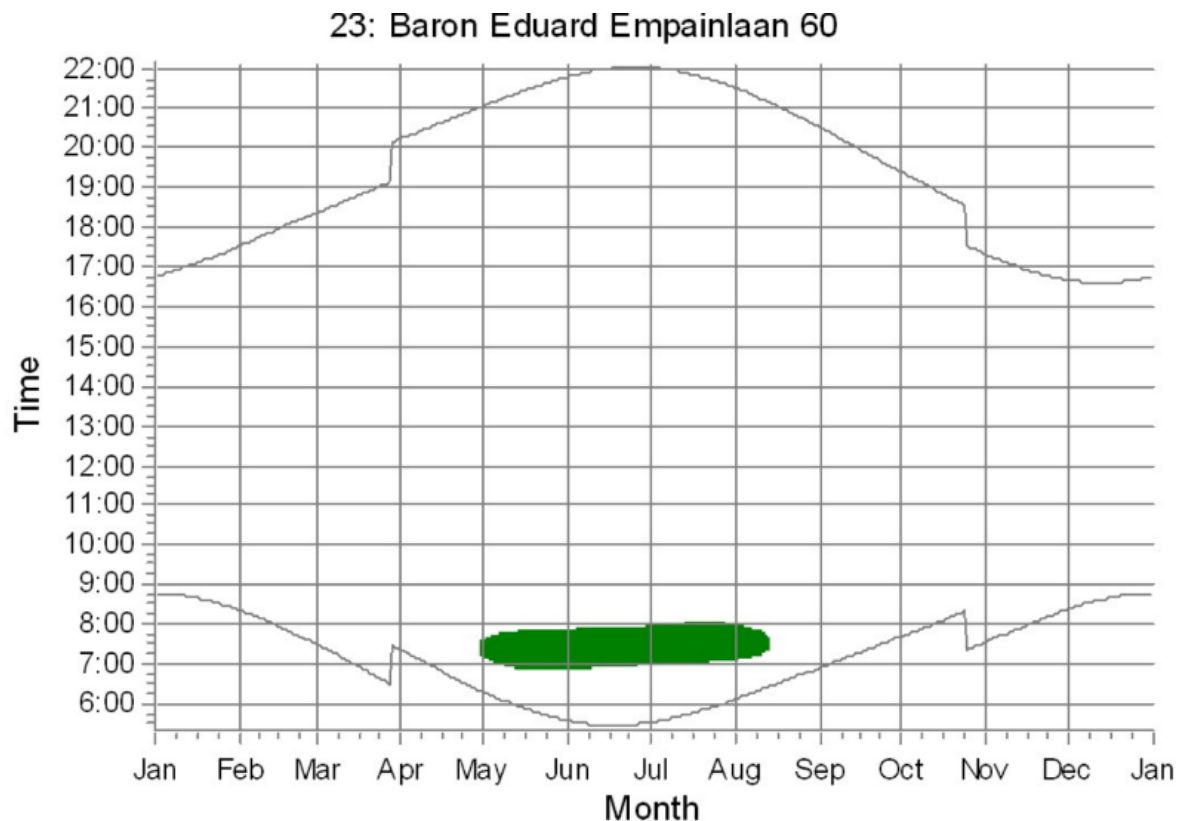
Figuur 6-2: Slagschaduwkalender vóór afregelen van de windturbine ter hoogte van receptor 8 (woning) ter hoogte van Oude Antwerpsebaan 230 in Mechelen, gelegen ten zuidoosten van de geplande windturbine van het project).

De slagschaduwkalender in Figuur 6-2 is representatief voor een aantal andere receptoren in het noordwesten van de wijk Galgenberg. Dit geldt onder meer voor de receptoren 7 t.e.m. 12. De receptoren kunnen vooral slagschaduw ondervinden in de late namiddag tijdens het voorjaar en het najaar. Ter hoogte van receptoren 7 en 9 wordt naar verwachting ook niet voldaan aan de jaarlimiet en daglimiet van effectieve slagschaduw van maximaal resp. 8 uur in een gemiddeld jaar en 30 minuten op een bepaalde dag in een gemiddeld jaar. Ter hoogte van receptoren 10 en 11 zal de slagschaduwduur de dag- en jaarlimiet niet overschrijden. Ter hoogte van receptor 12 zal waarschijnlijk voldaan worden aan de jaarlimiet, maar niet aan de daglimiet.

Receptor 23 (woning ter hoogte van Baron Eduard Empainlaan 60)

Receptor 23 ligt ten (zuid)westen van WT1. De slagschaduwkalender in Figuur 6-3 geeft aan dat er ter hoogte van deze receptor vooral tijdens de ochtend (tussen ca. 7u en 8u) in de zomer slagschaduw kan optreden. De maximale mogelijke slagschaduwduur veroorzaakt door WT1 van het project bedraagt ter hoogte van receptor 8 ongeveer 55 minuten per dag.

Uit Tabel 6-1 bleek reeds dat ter hoogte van de beschouwde receptor 23 de limiet van 8 uur slagschaduw in een gemiddeld jaar naar verwachting overschreden kan worden door toedoen van het project. De verwachte jaarlijkse slagschaduwduur ten gevolge van WT1 bedraagt immers 25 uur. Milderende maatregelen zullen hier dus nodig zijn, zowel om de jaarlimiet als de daglimiet te respecteren.



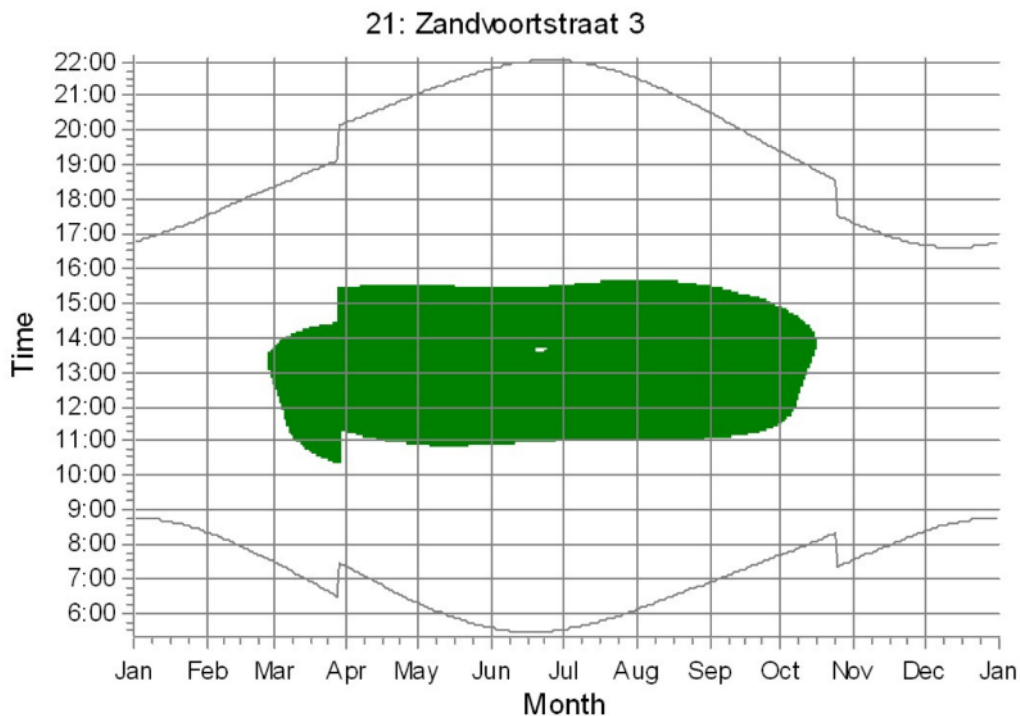
Figuur 6-3: Slagschaduwkalender vóór afregelen van de windturbine ter hoogte van receptor 23 (woning) ter hoogte van Baron Eduard Empainlaan 60 in Mechelen, gelegen ten zuidwesten van de geplande windturbine van het project).

De slagschaduwkalender in Figuur 6-3 is representatief voor een aantal andere receptoren in het (zuid)westen van het project. Dit geldt onder meer voor de receptoren 1, 2, 17, 20, 24 en 40. De receptoren kunnen vooral slagschaduw ondervinden in de ochtend en voormiddag tijdens de zomer. Voor deze receptoren is het mogelijk dat ofwel de daglimiet, de jaarlimiet ofwel beiden overschreden worden. Er dient opgemerkt te worden dat receptoren 1 en 2 bedrijfsgebouwen zijn, maar gezien ze niet in industriegebied gelegen zijn volgens de geldende bestemmingsplannen worden ze beoordeeld als woningen.

Receptor 21 (bedrijfsgebouw ter hoogte van Zandvoorstraat 3 in het industrieterrein Mechelen-Noord II)

Receptor 21 ligt ten noorden van de geplande windturbine WT1 in het industriegebied Mechelen-Noord II. De slagschaduwkalender in Figuur 6-4 geeft aan dat er ter hoogte van deze receptor vooral tijdens de middag (tussen ca. 11u30 en 15u00) in de lente- en zomermaanden slagschaduw kan optreden. De maximale mogelijke slagschaduwduur veroorzaakt door WT1 van het project bedraagt ter hoogte van receptor 21: 4u 31 minuten per dag, wat aanzienlijk boven de daglimiet van maximaal 30 minuten effectieve slagschaduw per dag is.

Uit Tabel 6-1 bleek reeds dat ter hoogte van de beschouwde receptor 21 de limiet van 30 uur (voor gebouwen in industriegebied, m.u.v. woningen) slagschaduw in een gemiddeld jaar naar verwachting overschreden zal worden door toedoen van het project. De verwachte jaarlijkse slagschaduwduur ten gevolge van windturbine WT1 bedraagt immers 240 uur en 19 minuten. Milderende maatregelen zullen dus nodig zijn om de jaarlimiet te respecteren.



Figuur 6-4: Slagschaduwkalender vóór afregelen van de windturbine ter hoogte van receptor 23 (bedrijfsgebouw) ter hoogte van Zandvoortstraat 3 in Mechelen, gelegen ten noorden van de geplande windturbine van het project).

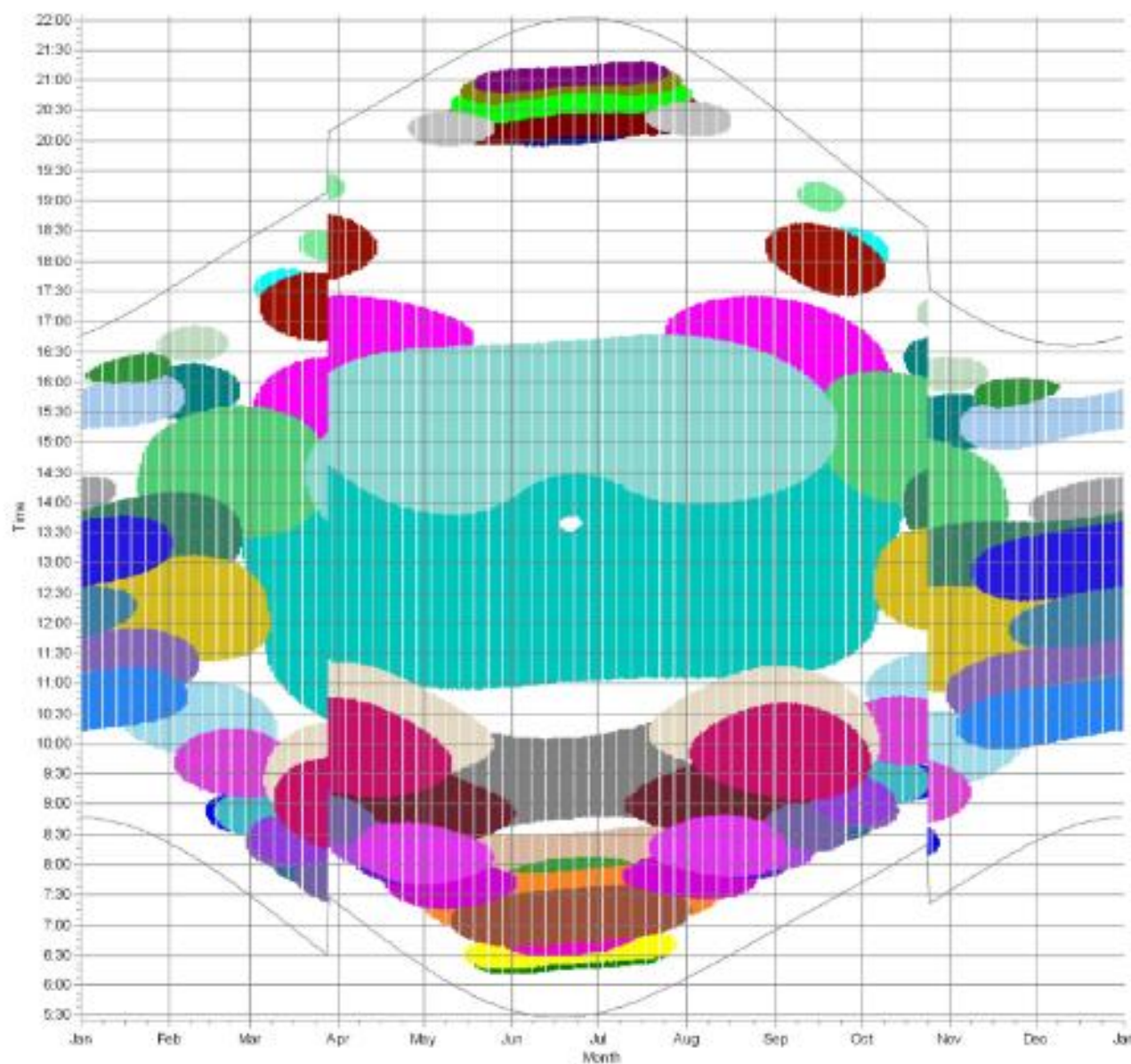
De slagschaduwkalender in Figuur 6-4 oogt imposant, maar betreft weliswaar nog steeds het astronomisch maximum. Zoals aangegeven in §3.2, bedraagt de verwachte slagschaduw slechts 10% tot 30% van de resultaten weergegeven in de slagschaduwkalenders. Na het nemen van milderende maatregelen op de resterende fractie aan verwachte slagschaduw, zal men de dag- en jaarlimieten kunnen respecteren.

6.3 Bespreking van slagschaduweffecten per windturbine

De mogelijke slagschaduw die door een individuele windturbine kan veroorzaakt worden ter hoogte van verschillende receptoren, kan eveneens grafisch voorgesteld worden aan de hand van een slagschaduwkalender (astronomisch maximum). De verschillende kleurvakken geven aan wanneer slagschaduw kan op treden ter hoogte van de verschillende geselecteerde receptoren. Dergelijke slagschaduwkalenders geven een eerste beeld van de mogelijke periodes van stilstand (slagschaduwmodule).

In 'Annex A: Gedetailleerde modelleringen' bij deze studie zijn de slagschaduwkalenders opgenomen van de geplande windturbine WT1.

In Figuur 6-5 wordt de slagschaduwkalender getoond voor WT1. Er dient benadrukt te worden dat deze figuur voor elke receptor het theoretisch maximaal aantal uren slagschaduw in een gemiddeld jaar voor afregeling van de windturbine toont. Dit is dus een **worst case-weergave**. Anderzijds zijn niet alle relevante receptoren opgenomen in de figuur (de receptoren waar er geen slagschaduw optreedt ten gevolge van deze turbine zijn niet weergegeven), maar slechts een selectie van representatieve receptoren. Toch kan deze figuur reeds een idee geven van de grootte van de impact inzake slagschaduw van de geplande windturbine.



Stadion recepties:

1: Gentschebierweg 26C	11: Oude Antwerpschebaan 22	21: Zandvoortstraat 2	31: Weyenbergstraat 16	41: Baron Edouard Empelaere 74
2: Gentschebierweg 24B	12: Stadhouderslaan 34	22: Baron Edouard Empelaere 108	32: Zandvoortstraat 12	42: Baron Edouard Empelaere 88
3: Hogeweg 135	13: Stadhouderslaan 45	23: Baron Edouard Empelaere 68	33: Zandvoortstraat 18	43: Baron Edouard Empelaere 92
4: Stadhouderslaan 6	14: Oude Baan 22	24: Baron Edouard Empelaere 50	34: Zandvoortstraat 15B	44: Baron Edouard Empelaere 115
5: Bierenbergplein 23A	15: Scholtenplein 7	25: Kerkplein 25	35: Bierenbergplein 24	45: Hogeweg 135
6: Bierenbergplein 23	16: Generaal De Wittebaan 3	26: Antwerpsebaan 104	36: Zandvoortstraat 20	46: Hogeweg 135
7: Oude Antwerpschebaan 287	17: Hogeweg 135	27: Bierenbergplein 21C	37: Zandvoortstraat 22C	47: Bierenbergplein 23
8: Oude Antwerpschebaan 290	18: Hogeweg 212	28: Bierenbergplein 19	38: Zandvoortstraat 22	48: Stadhouderslaan 7
9: Stadhouderslaan 41	19: Hogeweg 124	29: Zandvoortstraat 1	39: Baron Edouard Empelaere 61	49: Stadhouderslaan 4
10: Bierenbergplein 25	20: Hogeweg 118	30: Weyenbergstraat 22	40: Baron Edouard Empelaere 75	50: Stadhouderslaan 4
				51: Bierenbergplein 45

Figuur 6-5: Grafische voorstelling van de slagschaduwkalender voor de geplande windturbine WT1 voor afregeling van de windturbine.

7 Bespreking van de voorziene preventieve en milderende maatregelen

Gezien er zich slagschaduwgevoelige objecten bevinden binnen de contour van 4 uur verwachte slagschaduw per jaar (afkomstig van de geplande windturbine), dient de geplande windturbine uitgerust te worden met een automatische stilstandsmodule (slagschaduwmodule), overeenkomstig de bepalingen van VLAREM II, artikel 5.20.6.2.1. Deze slagschaduwmodule moet rekening houden met alle relevante slagschaduwgevoelige objecten zodanig dat de naleving van de toepasselijke slagschaduwnormen steeds gegarandeerd kan worden.

Tijdens de exploitatiefase van de windturbine wordt de intensiteit van het zonlicht voortdurend gemeten met behulp van enkele sensoren die op de windturbine zijn bevestigd. Wanneer uit deze metingen blijkt dat het zonlicht op een bepaald ogenblik sterk genoeg is om schaduw te veroorzaken ($>120 \text{ W/m}^2$ ingestraalde energie), wanneer op datzelfde ogenblik ook is voldaan aan de andere voorwaarden om slagschaduw te veroorzaken ter hoogte van een bepaald object (stand van de zon, windrichting, windsnelheid,...) en wanneer de slagschaduwnorm dreigen overschreden te worden voor dat object, wordt de windturbine automatisch tot stilstand gebracht door de slagschaduwmodule. Hiervoor hoeft geen operator in te grijpen. De windturbine wordt pas opnieuw opgestart als er geen overschrijding van de norm kan optreden. De impact van deze stilstanden op de globale energieopbrengst van de windturbine is beperkt.

De genomen maatregelen worden in alle transparantie gerapporteerd. Indien nodig zal de werking van de automatische stilstandsmodule worden bijgesteld. Ecopower stelt hiertoe ook minstens de eerste twee jaren van de uitbating een slagschaduwcontrole rapport op, conform de toepasselijke milieuregelgeving. Het controle rapport geeft aan hoeveel effectieve slagschaduw elk relevant slagschaduwgevoelig object heeft getroffen, het aantal stilstanden dat werd geïmplementeerd en welke bijkomende remediërende maatregelen er eventueel genomen zijn (bv. fysieke afscherming). De effectieve slagschaduw op een slagschaduwgevoelig object kan jaarlijks variëren naargelang de weersomstandigheden. De slagschaduwmodule garandeert evenwel dat de toepasselijke slagschaduwnorm nooit overschreden wordt.

8 Conclusies slagschaduwimpact

In deze slagschaduwstudie werd de verwachte slagschaduw ingeschat ter hoogte van een aantal relevante geselecteerde slagschaduwgevoelige receptoren in de omgeving van de geplande windturbine van Ecopower.

Voor **het project** kan besloten worden dat, zonder de toepassing van milderende maatregelen, de toepasselijke VLAREM II-normen ter hoogte van sommige van de beschouwde receptoren niet gerespecteerd worden. De overschrijdingen van de limieten situeren zich vooral ter hoogte van de receptoren in en rond het industriegebieden van Mechelen-Noord I en II en het noordelijke deel van de woonwijk Battel.

Toch kunnen de toepasselijke VLAREM II-normen ter hoogte van alle receptoren te allen tijde gerespecteerd worden door toepassing van een automatische stilstandsmodule. Hierdoor blijft eventuele impact door slagschaduw beperkt tot een aanvaardbaar niveau. De impact van deze stilstanden op de globale energieopbrengst van de windturbine is beperkt.

Ecopower verbindt er zich derhalve toe de geplande windturbine uit te rusten met een automatische stilstandsmodule, zoals ook wordt vereist overeenkomstig de bepalingen van VLAREM II. **Hierdoor kunnen de toepasselijke jaarlimieten en daglimieten uit VLAREM II ter hoogte van alle receptoren te allen tijde gerespecteerd worden.**

Annex A: Gedetailleerde modelleringen

Project:

Mechelen-Noord

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SHADOW - Main Result

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Maximum distance for influence

Calculate only when more than 20 % of sun is covered by the blade

Please look in WTG table

Minimum sun height over horizon for influence

3 °

Day step for calculation

1 days

Time step for calculation

1 minutes

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

Monthly aggregation of real case reduction

Line-of-sight calculation has been deactivated. This means that sheltering from obstacles, areas or hills are not taken into account.

All coordinates are in

Belgian Lambert72-BD72 (BE 2001 <±1m)

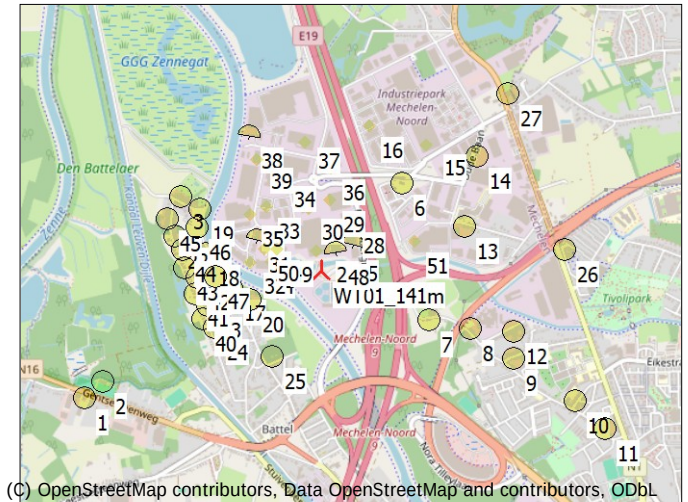
WTGs

	X	Y	Z	Row data/Description	WTG type			Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
					Valid	Manufact.	Type-generator				Calculation distance [m]	RPM [RPM]
WT01_141m	155.615	193.121	5,0	Turbine Mechelen Noord_1...No	ENERCON	E-141	EP4-4.200	4.200	141,0	160,0	1.833	10,6

Shadow receptor-Input

No.	Name	X	Y	Z	Upper left		Upper right		Lower left		Lower right		Top elevation a.g.l. [m]	Bottom elevation a.g.l. [m]	Width [m]	Height [m]	Elevation a.g.l. [m]	Degrees from south cw [°]	Slope of window [°]	Direction mode
					X	Y	X	Y	X	Y	X	Y								
				[m]																
1	Gentsesteenweg 161	154.366	192.450	5,0											5,0	2,0	1,0		90,0	"Green house mode"
2	Gentsesteenweg 149	154.462	192.538	5,0											5,0	2,0	1,0		90,0	"Green house mode"
3	Hogeweg 136	154.879	193.515	1,7											5,0	2,0	1,0		90,0	"Green house mode"
4	Steenhoevestraat 6	155.352	193.176	5,0	#										5,0	5,0	7,8	0,0		
5	Blarenberglaan 23A	155.788	193.263	5,0			155.783	193.264	155.793	193.261	155.783*	193.264*	155.793*	193.261*	3,0	2,0	10,4	15,6	90,0	
6	Blarenberglaan 13	156.053	193.586	5,0											5,0	2,0	1,0		90,0	"Green house mode"
7	Oude Antwerpsebaan 287	156.190	192.865	5,0											5,0	2,0	1,0		90,0	"Green house mode"
8	Oude Antwerpsebaan 230	156.413	192.818	5,2											5,0	2,0	1,0		90,0	"Green house mode"
9	Galgestraat 91	156.643	192.662	5,0											5,0	2,0	1,0		90,0	"Green house mode"
10	Molenbergstraat 26	156.968	192.440	5,0											5,0	2,0	1,0		90,0	"Green house mode"
11	Oude Antwerpsebaan 22	157.122	192.290	5,0											5,0	2,0	1,0		90,0	"Green house mode"
12	Slachthuislaan 34	156.643	192.803	5,0											5,0	2,0	1,0		90,0	"Green house mode"
13	Blokhuisstraat 45	156.383	193.358	5,0											5,0	2,0	1,0		90,0	"Green house mode"
14	Oude Baan 20	156.445	193.728	5,0											5,0	2,0	1,0		90,0	"Green house mode"
15	Schallenhoedreef 7	156.177	193.793	5,0	#										56,0	5,0	10,1	-24,0		
16	Generaal De Wittelaan 9	155.872	193.891	5,0	#										2,5	10,3	7,1	-28,4		
17	Hogeweg 181	155.145	193.034	5,9											5,0	2,0	1,0		90,0	"Green house mode"
18	Hogeweg 211	155.010	193.212	5,0											5,0	2,0	1,0		90,0	"Green house mode"
19	Hogeweg 124	154.976	193.446	4,6											5,0	2,0	1,0		90,0	"Green house mode"
20	Hogeweg 116	155.245	192.973	5,0											5,0	2,0	1,0		90,0	"Green house mode"
21	Zandvoortstraat 3	155.593	193.233	7,1	#										80,0	4,0	15,9	-12,0		
22	Baron Eduard Empainlaan 100	154.846	193.310	4,2											5,0	2,0	1,0		90,0	"Green house mode"
23	Baron Eduard Empainlaan 60	155.013	192.940	6,5											5,0	2,0	1,0		90,0	"Green house mode"
24	Baron Eduard Empainlaan 50	155.050	192.824	8,8											5,0	2,0	1,0		90,0	"Green house mode"
25	Hogeweg 76	155.356	192.670	10,0											5,0	2,0	1,0		90,0	"Green house mode"
26	Karekietstraat 75	156.908	193.236	5,0											5,0	2,0	1,0		90,0	"Green house mode"
27	Antwerpsesteenweg 104	156.611	194.063	5,0											5,0	2,0	1,0		90,0	"Green house mode"
28	Blarenberglaan 21C	155.752	193.382	5,0	#										3,0	50,0	7,4	79,2		
29	Blarenberglaan 19	155.665	193.503	5,0	#										10,0	4,0	9,6	-11,9		
30	Zandvoortstraat 1	155.549	193.455	8,8	#										2,1	20,4	4,0	78,0		
31	Wayenborgstraat 22	155.280	193.284	5,0			155.256	193.224	155.270	193.220	155.256*	193.224*	155.270*	193.220*	2,5	14,6	1,5*	14,9	90,0	
32	Wayenborgstraat 16	155.244	193.173	5,0	#										2,6	12,0	7,8	14,4		
33	Zandvoortstraat 12	155.328	193.468	6,1	#										3,0	13,0	7,5	11,7		
34	Zandvoortstraat 16	155.409	193.633	7,0	#										3,0	32,0	10,3	10,5		
35	Zandvoortstraat 15B	155.242	193.425	5,0	#										2,0	2,0	11,8	0,0		
36	Blarenberglaan 2A	155.668	193.668	5,0	#										4,0	6,0	9,3	-6,2		
37	Zandvoortstraat 53	155.529	193.807	5,0	#										2,0	60,0	9,0	11,3		
38	Zandvoortstraat 27C	155.239	193.835	3,6			155.225	193.837	155.254	193.832	155.225*	193.837*	155.254*	193.832*	12,5	29,4	1,5*	8,7	90,0	
39	Zandvoortstraat 21	155.279	193.712	5,0	#										3,0	28,0	5,6	10,4		
40	Baron Eduard Empainlaan 61	154.990	192.871	6,6											5,0	2,0	1,0		90,0	"Green house mode"
41	Baron Eduard Empainlaan 75	154.946	193.004	2,9											5,0	2,0	1,0		90,0	"Green house mode"
42	Baron Eduard Empainlaan 74	154.958	193.089	4,9											5,0	2,0	1,0		90,0	"Green house mode"
43	Baron Eduard Empainlaan 89	154.892	193.140	2,6											5,0	2,0	1,0		90,0	"Green house mode"
44	Baron Eduard Empainlaan 92	154.885	193.234	2,6											5,0	2,0	1,0		90,0	"Green house mode"
45	Baron Eduard Empainlaan 115	154.807	193.397	5,0											5,0	2,0	1,0		90,0	"Green house mode"
46	Hogeweg 239	154.958	193.353	3,9											5,0	2,0	1,0		90,0	"Green house mode"
47	Hogeweg 191	155.059	193.093	5,4											5,0	2,0	1,0		90,0	"Green house mode"
48	Blarenberglaan 231	155.695	193.220	5,5											3,0	1,0	3,0	-8,0	90,0	Fixed direction
49	Steenhoevestraat 7	155.379	193.241	5,0	#										30,0	3,0	11,0	14,0		

To be continued on next page...



Scale 1:40.000
New WTG
Shadow receptor

Project:

Mechelen-Noord

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SHADOW - Main Result

Calculation: Slagschaduw Mechelen-Noord - Project_141m

...continued from previous page

No.	Name	X	Y	Z	Upper left X	Y	Upper right X	Y	Lower left X	Y	Lower right X	Y	Top elevation a.g.l.	Bottom elevation a.g.l.	Width	Height	Elevation a.g.l.	Degrees from south cw	Slope of window	Direction mode
				[m]									[m]	[m]	[m]	[m]	[m]	[°]	[°]	
50	Steenhoevestraat 4	155.314	193.244	5,0	#										12,5	5,0	5,0	15,6		
51	Blokhuisstraat 49	156.114	193.282	5,0	#										3,0	22,0	10,0	0,0		

*) Fields typed #) See details in: Detailed assumptions

Calculation Results

Shadow receptor

No.	Name	Shadow, worst case			Shadow, expected values
		Shadow hours	Shadow days	Max shadow	Shadow hours
		per year [h/year]	per year [days/year]	hours per day [h/day]	per year [h/year]
1	Gentsesteenweg 161	25:57	69	0:26	8:08
2	Gentsesteenweg 149	30:24	74	0:28	9:29
3	Hogeweg 136	26:57	53	0:40	4:48
4	Steenhoevestraat 6	257:35	172	1:48	64:35
5	Blarenberglaan 23A	240:40	156	2:04	73:51
6	Blarenberglaan 13	56:39	85	0:53	11:26
7	Oude Antwerpsebaan 287	47:46	68	0:52	11:18
8	Oude Antwerpsebaan 230	56:15	94	0:41	13:24
9	Galgestraat 91	38:10	84	0:32	9:04
10	Molenbergstraat 26	24:17	78	0:24	5:45
11	Oude Antwerpsebaan 22	20:09	68	0:21	4:44
12	Slachthuislaan 34	24:49	60	0:32	6:00
13	Blokhuisstraat 45	27:22	52	0:41	7:01
14	Oude Baan 20	21:36	50	0:33	4:29
15	Schaliënhoevedreef 7	62:26	94	0:47	10:45
16	Generaal De Wittelaan 9	23:32	46	0:38	3:36
17	Hogeweg 181	123:02	120	1:10	35:43
18	Hogeweg 211	47:25	70	0:53	11:45
19	Hogeweg 124	35:04	59	0:46	6:31
20	Hogeweg 116	47:22	58	1:01	14:24
21	Zandvoortstraat 3	917:15	231	4:31	240:19
22	Baron Eduard Empainlaan 100	28:01	53	0:41	6:02
23	Baron Eduard Empainlaan 60	84:19	104	0:55	25:07
24	Baron Eduard Empainlaan 50	26:17	49	0:41	8:10
25	Hogeweg 76	0:00	0	0:00	0:00
26	Karekietstraat 75	10:58	33	0:26	2:47
27	Antwerpsesteenweg 104	19:36	60	0:26	3:24
28	Blarenberglaan 21C	226:28	133	2:08	53:45
29	Blarenberglaan 19	170:52	134	1:29	29:44
30	Zandvoortstraat 1	211:28	154	1:43	34:38
31	Wayenborgstraat 22	65:44	100	0:59	15:01
32	Wayenborgstraat 16	144:52	140	1:25	37:46
33	Zandvoortstraat 12	101:17	109	1:15	15:26
34	Zandvoortstraat 16	104:14	104	1:08	14:13
35	Zandvoortstraat 15B	74:18	87	1:06	12:33
36	Blarenberglaan 2A	79:51	86	1:05	12:28
37	Zandvoortstraat 53	40:24	60	0:50	5:39
38	Zandvoortstraat 27C	49:38	70	0:50	6:19
39	Zandvoortstraat 21	78:58	96	0:56	10:17
40	Baron Eduard Empainlaan 61	62:29	84	0:53	19:05
41	Baron Eduard Empainlaan 75	58:21	93	0:50	17:07
42	Baron Eduard Empainlaan 74	48:23	76	0:51	13:49
43	Baron Eduard Empainlaan 89	36:30	62	0:46	9:58
44	Baron Eduard Empainlaan 92	32:46	58	0:44	7:53
45	Baron Eduard Empainlaan 115	24:24	49	0:39	4:53
46	Hogeweg 239	35:43	60	0:47	7:18
47	Hogeweg 191	72:00	97	0:59	20:33
48	Blarenberglaan 23I	427:01	186	2:46	138:25
49	Steenhoevestraat 7	229:36	162	1:57	52:48
50	Steenhoevestraat 4	148:40	126	1:34	34:15
51	Blokhuisstraat 49	68:59	83	1:05	18:43

Project:

Mechelen-Noord

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16/07/2026 10:30/4.2.303

SHADOW - Main Result

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case	Expected
		[h/year]	[h/year]
WT01_141m	Turbine Mechelen Noord_141m	3083:48	740:32

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

The calculation of the total expected values for a given receptor assumes a weighted average directional reduction for all WTGs contributing to shadow flicker within the same day. In the case where shadow flicker from different WTGs is not concurrent within the day, the total expected time at a given receptor may deviate marginally from the individual flicker time caused by each turbine separately.

Project:

Mechelen-Noord

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Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Detailed Results

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Worst case, Shadow hours per year [h/year]

Receptor	WTG WT01_141m	Total
1	25:57	25:57
2	30:24	30:24
3	26:57	26:57
4	257:35	257:35
5	240:40	240:40
6	56:39	56:39
7	47:46	47:46
8	56:15	56:15
9	38:10	38:10
10	24:17	24:17
11	20:09	20:09
12	24:49	24:49
13	27:22	27:22
14	21:36	21:36
15	62:26	62:26
16	23:32	23:32
17	123:02	123:02
18	47:25	47:25
19	35:04	35:04
20	47:22	47:22
21	917:15	917:15
22	28:01	28:01
23	84:19	84:19
24	26:17	26:17
25	0:00	0:00
26	10:58	10:58
27	19:36	19:36
28	226:28	226:28
29	170:52	170:52
30	211:28	211:28
31	65:44	65:44
32	144:52	144:52
33	101:17	101:17
34	104:14	104:14
35	74:18	74:18
36	79:51	79:51
37	40:24	40:24
38	49:38	49:38
39	78:58	78:58
40	62:29	62:29
41	58:21	58:21
42	48:23	48:23
43	36:30	36:30
44	32:46	32:46
45	24:24	24:24
46	35:43	35:43
47	72:00	72:00
48	427:01	427:01
49	229:36	229:36
50	148:40	148:40
51	68:59	68:59
Total	3083:48	

Worst case, Shadow days per year [days/year]

Receptor	WTG WT01_141m	Total
1	69	69
2	74	74
3	53	53
4	172	172
5	156	156
6	85	85
7	68	68

To be continued on next page...

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
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Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Detailed Results

Calculation: Slagschaduw Mechelen-Noord - Project_141m

...continued from previous page

Receptor	WTG WT01_141m	Total
8	94	94
9	84	84
10	78	78
11	68	68
12	60	60
13	52	52
14	50	50
15	94	94
16	46	46
17	120	120
18	70	70
19	59	59
20	58	58
21	231	231
22	53	53
23	104	104
24	49	49
25	0	0
26	33	33
27	60	60
28	133	133
29	134	134
30	154	154
31	100	100
32	140	140
33	109	109
34	104	104
35	87	87
36	86	86
37	60	60
38	70	70
39	96	96
40	84	84
41	93	93
42	76	76
43	62	62
44	58	58
45	49	49
46	60	60
47	97	97
48	186	186
49	162	162
50	126	126
51	83	83
Total	4549	

Worst case, Max shadow hours per day [h / day]

Receptor	WTG WT01_141m	Total
1	0:26	0:26
2	0:28	0:28
3	0:40	0:40
4	1:48	1:48
5	2:04	2:04
6	0:53	0:53
7	0:52	0:52
8	0:41	0:41
9	0:32	0:32
10	0:24	0:24
11	0:21	0:21
12	0:32	0:32
13	0:41	0:41
14	0:33	0:33
15	0:47	0:47

To be continued on next page...

Project:

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Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Detailed Results

Calculation: Slagschaduw Mechelen-Noord - Project_141m

...continued from previous page

Receptor	WTG	Total
	WT01_141m	
16	0:38	0:38
17	1:10	1:10
18	0:53	0:53
19	0:46	0:46
20	1:01	1:01
21	4:31	4:31
22	0:41	0:41
23	0:55	0:55
24	0:41	0:41
25	0:00	0:00
26	0:26	0:26
27	0:26	0:26
28	2:08	2:08
29	1:29	1:29
30	1:43	1:43
31	0:59	0:59
32	1:25	1:25
33	1:15	1:15
34	1:08	1:08
35	1:06	1:06
36	1:05	1:05
37	0:50	0:50
38	0:50	0:50
39	0:56	0:56
40	0:53	0:53
41	0:50	0:50
42	0:51	0:51
43	0:46	0:46
44	0:44	0:44
45	0:39	0:39
46	0:47	0:47
47	0:59	0:59
48	2:46	2:46
49	1:57	1:57
50	1:34	1:34
51	1:05	1:05
Total	52:35	

Real case, Shadow hours per year [h/year]

Receptor	WTG	Total
	WT01_141m	
1	8:08	8:08
2	9:30	9:29
3	4:49	4:48
4	64:36	64:35
5	73:51	73:51
6	11:26	11:26
7	11:18	11:18
8	13:24	13:24
9	9:04	9:04
10	5:45	5:45
11	4:45	4:44
12	6:00	6:00
13	7:01	7:01
14	4:29	4:29
15	10:46	10:45
16	3:37	3:36
17	35:43	35:43
18	11:45	11:45
19	6:32	6:31
20	14:24	14:24
21	240:20	240:19
22	6:03	6:02
23	25:07	25:07

To be continued on next page...

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SHADOW - Detailed Results

Calculation: Slagschaduw Mechelen-Noord - Project_141m

...continued from previous page

Receptor	WTG	Total
	WT01_141m	
24	8:11	8:10
25	0:00	0:00
26	2:48	2:47
27	3:25	3:24
28	53:46	53:45
29	29:44	29:44
30	34:39	34:38
31	15:02	15:01
32	37:46	37:46
33	15:27	15:26
34	14:14	14:13
35	12:34	12:33
36	12:28	12:28
37	5:39	5:39
38	6:19	6:19
39	10:17	10:17
40	19:06	19:05
41	17:08	17:07
42	13:49	13:49
43	9:58	9:58
44	7:53	7:53
45	4:53	4:53
46	7:18	7:18
47	20:34	20:33
48	138:26	138:25
49	52:48	52:48
50	34:15	34:15
51	18:43	18:43
Total	740:32	

Total time can be different from the sum in case of concurrent Shadow flicker events

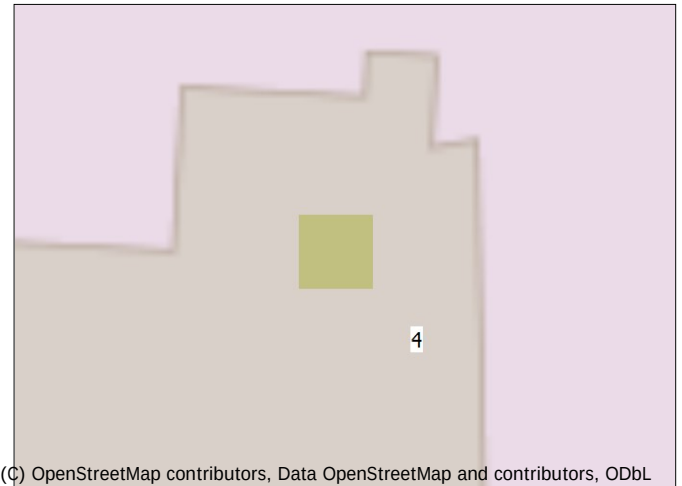
SHADOW - Detailed assumptions

Calculation: Slagschaduw Mechelen-Noord - Project_141m

4 - Steenhoevestraat 6

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.349	193.173
155.354	193.173
155.354	193.178
155.349	193.178



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL

Scale 1:500

Shadow receptor

15 - Schaliënhoevedreef 7

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
156.153	193.779
156.204	193.802
156.202	193.806
156.151	193.784



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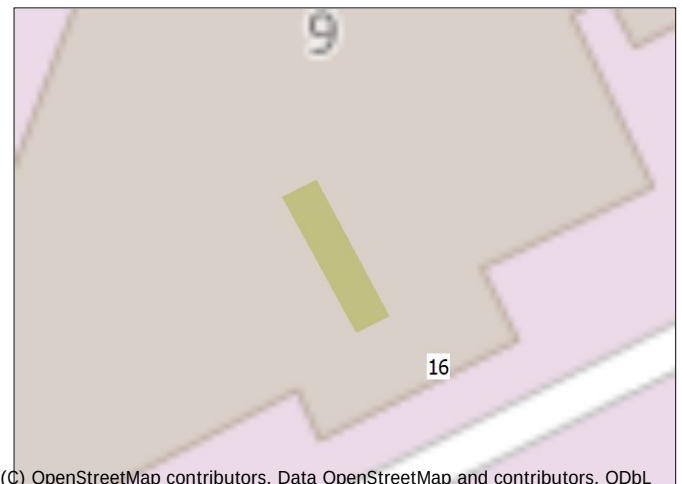
Scale 1:750

Shadow receptor

16 - Generaal De Wittelaan 9

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.873	193.886
155.876	193.887
155.871	193.896
155.868	193.895



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Scale 1:500

Shadow receptor

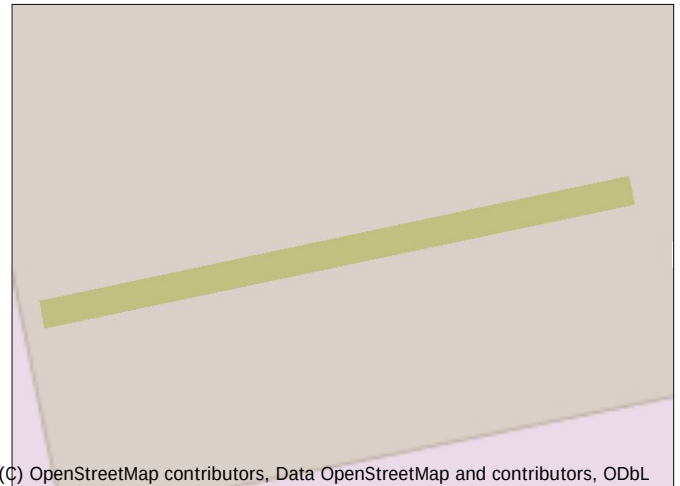
SHADOW - Detailed assumptions

Calculation: Slagschaduw Mechelen-Noord - Project_141m

21 - Zandvoortstraat 3

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.555	193.222
155.633	193.239
155.632	193.243
155.554	193.226



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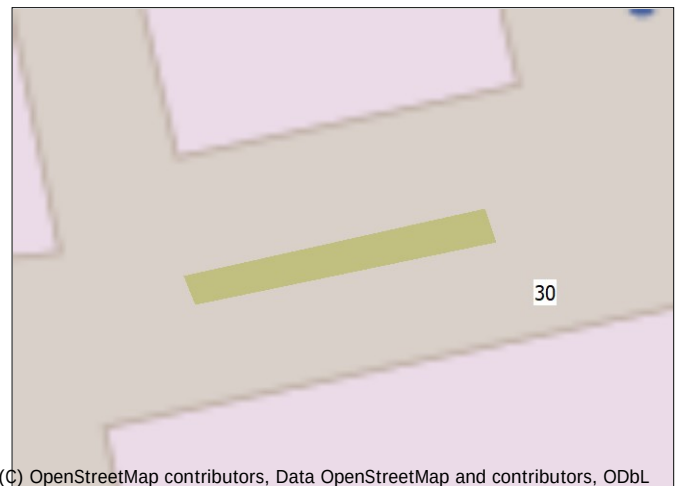
Scale 1:1.000

Shadow receptor

30 - Zandvoortstraat 1

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.538	193.454
155.539	193.452
155.559	193.456
155.558	193.458



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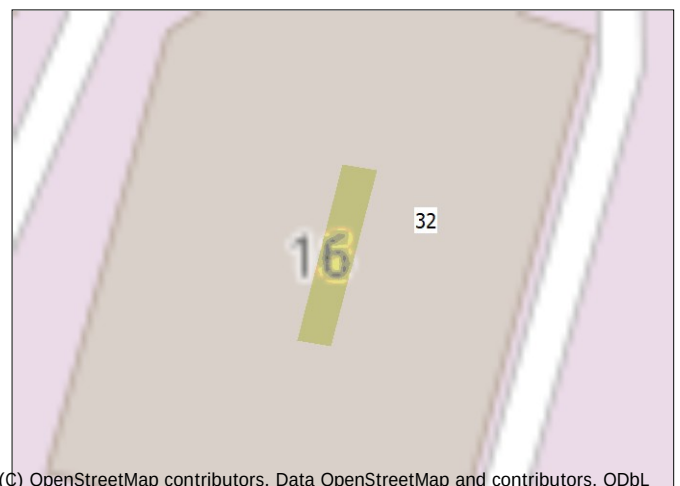
Scale 1:500

Shadow receptor

32 - Wayenborgstraat 16

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.241	193.168
155.244	193.167
155.247	193.179
155.244	193.179



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Scale 1:500

Shadow receptor

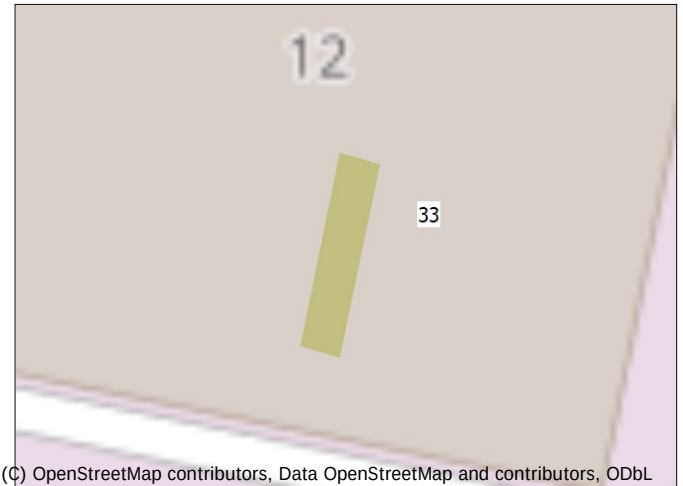
SHADOW - Detailed assumptions

Calculation: Slagschaduw Mechelen-Noord - Project_141m

33 - Zandvoortstraat 12

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.325	193.462
155.328	193.461
155.330	193.474
155.327	193.474

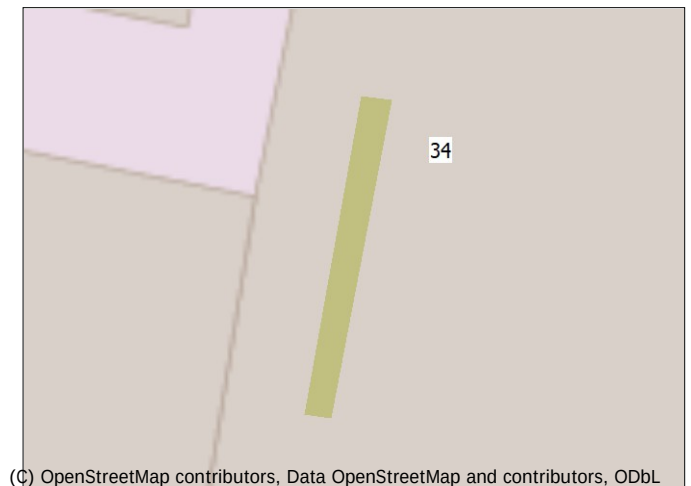


Shadow receptor

34 - Zandvoortstraat 16

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.404	193.617
155.407	193.617
155.413	193.648
155.410	193.649

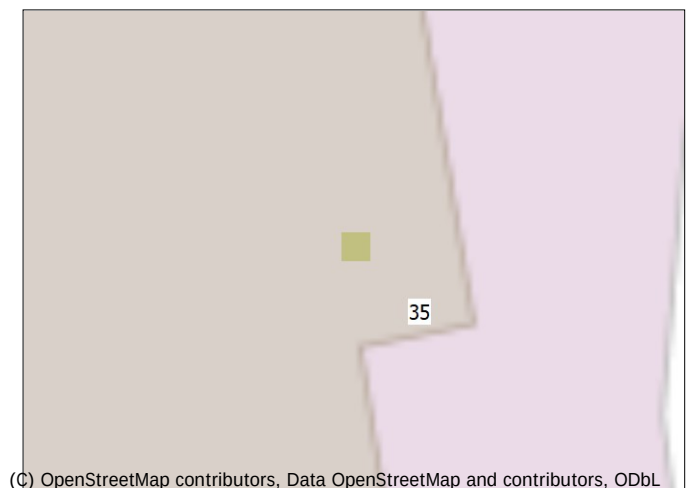


Shadow receptor

35 - Zandvoortstraat 15B

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.242	193.425
155.240	193.425
155.240	193.423
155.242	193.423



Shadow receptor

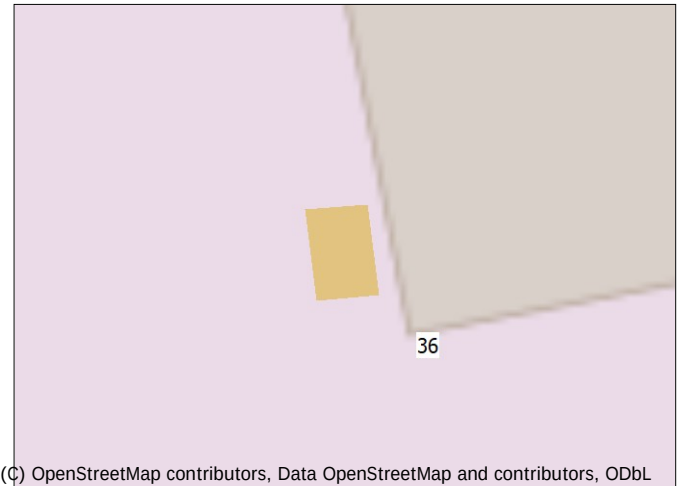
SHADOW - Detailed assumptions

Calculation: Slagschaduw Mechelen-Noord - Project_141m

36 - Blarenberglaan 2A

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.667	193.665
155.671	193.666
155.670	193.672
155.666	193.671



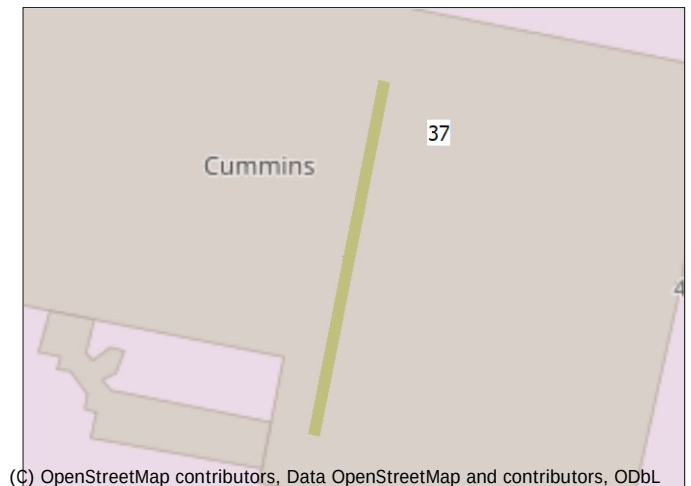
Scale 1:500

Shadow receptor

37 - Zandvoortstraat 53

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.536	193.836
155.534	193.836
155.522	193.777
155.523	193.777



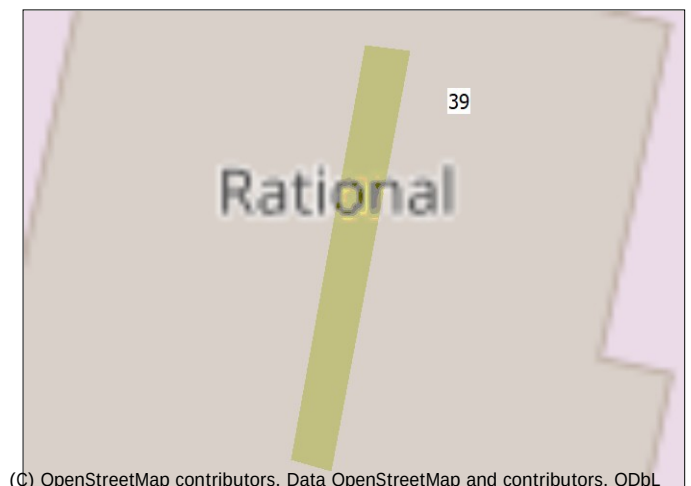
Scale 1:1.250

Shadow receptor

39 - Zandvoortstraat 21

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.275	193.699
155.278	193.698
155.283	193.726
155.280	193.727



Scale 1:500

Shadow receptor

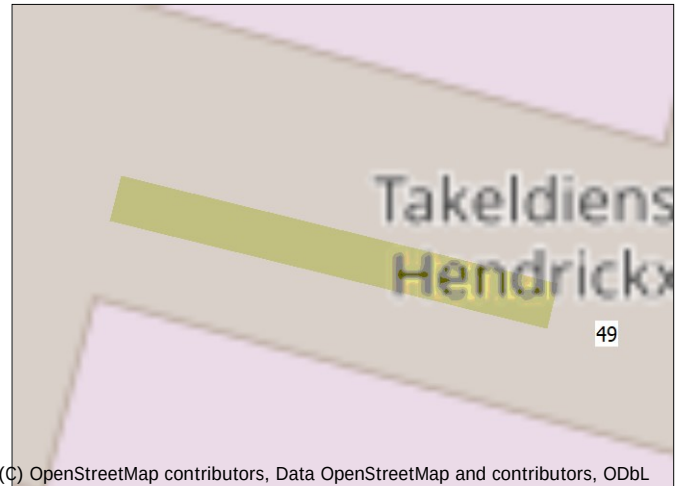
SHADOW - Detailed assumptions

Calculation: Slagschaduw Mechelen-Noord - Project_141m

49 - Steenhoevestraat 7

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.394	193.239
155.365	193.246
155.364	193.244
155.393	193.236



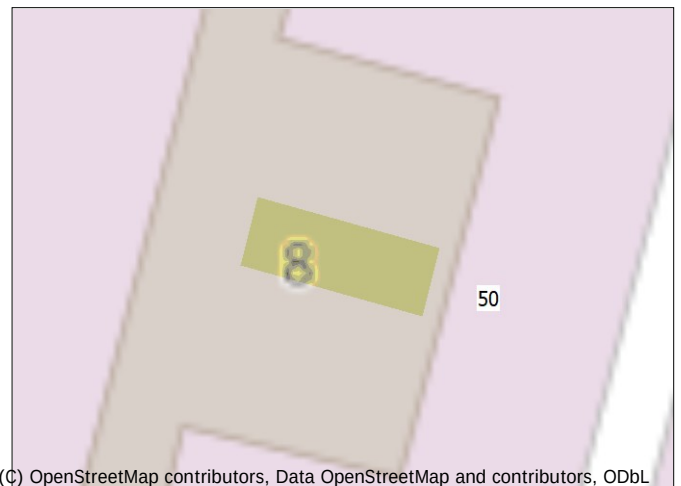
Scale 1:500

Shadow receptor

50 - Steenhoevestraat 4

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
155.308	193.244
155.320	193.240
155.321	193.245
155.309	193.248



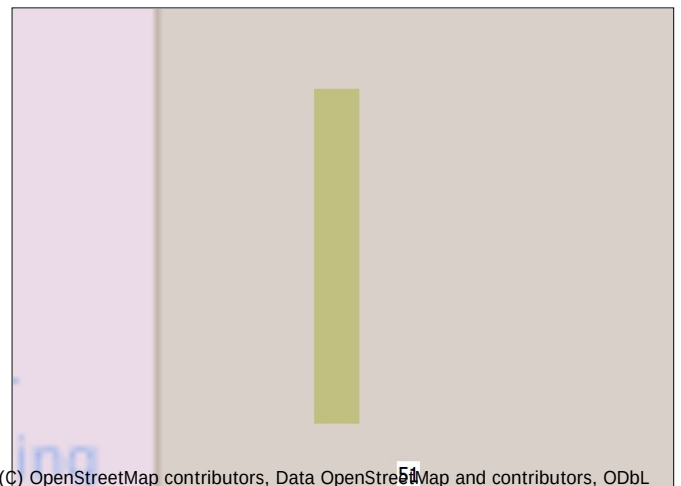
Scale 1:500

Shadow receptor

51 - Blokhuisstraat 49

Belgian Lambert72-BD72 (BE 2001 < ±1m)

X	Y
156.113	193.271
156.116	193.271
156.116	193.293
156.113	193.293



Scale 1:500

Shadow receptor

Project:

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Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 1 - Gentsesteenweg 161
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

		January	February	March	April	May		June		July		August	September	October	November	December
1	08:46	08:21	07:29	07:21	06:18	05:34		06:12 (WT01_141m)	05:32		06:18 (WT01_141m)	06:07	06:55	07:42	07:34	08:23
	16:46	17:32	18:22	20:14	21:03	21:47	25	06:37 (WT01_141m)	22:01	24	06:42 (WT01_141m)	21:30	20:30	19:23	17:19	16:40
2	08:46	08:19	07:27	07:18	06:16	05:34		06:12 (WT01_141m)	05:32		06:18 (WT01_141m)	06:08	06:56	07:43	07:35	08:24
	16:47	17:34	18:24	20:16	21:05	21:48	25	06:37 (WT01_141m)	22:01	25	06:43 (WT01_141m)	21:29	20:28	19:21	17:17	16:39
3	08:46	08:18	07:25	07:16	06:14	05:33		06:12 (WT01_141m)	05:33		06:19 (WT01_141m)	06:10	06:58	07:45	07:37	08:26
	16:48	17:36	18:26	20:18	21:06	21:49	26	06:38 (WT01_141m)	22:00	25	06:44 (WT01_141m)	21:27	20:26	19:18	17:15	16:39
4	08:46	08:16	07:23	07:14	06:12	05:32		06:12 (WT01_141m)	05:34		06:19 (WT01_141m)	06:11	06:59	07:47	07:39	08:27
	16:49	17:38	18:27	20:19	21:08	21:50	26	06:38 (WT01_141m)	22:00	25	06:44 (WT01_141m)	21:26	20:24	19:16	17:13	16:38
5	08:46	08:15	07:21	07:12	06:11	05:31		06:13 (WT01_141m)	05:35		06:19 (WT01_141m)	06:13	07:01	07:48	07:41	08:28
	16:50	17:39	18:29	20:21	21:10	21:51	25	06:38 (WT01_141m)	21:59	25	06:44 (WT01_141m)	21:24	20:22	19:14	17:12	16:38
6	08:45	08:13	07:19	07:10	06:09	05:31		06:13 (WT01_141m)	05:35		06:19 (WT01_141m)	06:14	07:02	07:50	07:42	08:29
	16:52	17:41	18:31	20:22	21:11	21:52	25	06:38 (WT01_141m)	21:59	25	06:44 (WT01_141m)	21:22	20:19	19:12	17:10	16:37
7	08:45	08:12	07:17	07:07	06:07	05:30		06:13 (WT01_141m)	05:36		06:19 (WT01_141m)	06:16	07:04	07:51	07:44	08:31
	16:53	17:43	18:33	20:24	21:13	21:53	25	06:38 (WT01_141m)	21:58	26	06:45 (WT01_141m)	21:20	20:17	19:09	17:08	16:37
8	08:45	08:10	07:14	07:05	06:05	05:30		06:13 (WT01_141m)	05:37		06:19 (WT01_141m)	06:17	07:06	07:53	07:46	08:32
	16:54	17:45	18:34	20:26	21:14	21:54	25	06:38 (WT01_141m)	21:58	26	06:45 (WT01_141m)	21:19	20:15	19:07	17:07	16:37
9	08:44	08:08	07:12	07:03	06:04	05:29		06:13 (WT01_141m)	05:38		06:20 (WT01_141m)	06:19	07:07	07:55	07:47	08:33
	16:55	17:47	18:36	20:27	21:16	21:55	25	06:38 (WT01_141m)	21:57	25	06:45 (WT01_141m)	21:17	20:13	19:05	17:05	16:36
10	08:44	08:06	07:10	07:01	06:02	05:29		06:14 (WT01_141m)	05:39		06:20 (WT01_141m)	06:20	07:09	07:56	07:49	08:34
	16:57	17:48	18:38	20:29	21:17	21:56	25	06:39 (WT01_141m)	21:56	25	06:45 (WT01_141m)	21:15	20:10	19:03	17:04	16:36
11	08:43	08:05	07:08	06:59	06:00	05:29		06:14 (WT01_141m)	05:40		06:20 (WT01_141m)	06:22	07:10	07:58	07:51	08:35
	16:58	17:50	18:39	20:31	21:19	21:56	24	06:38 (WT01_141m)	21:56	26	06:46 (WT01_141m)	21:13	20:08	19:01	17:02	16:36
12	08:43	08:03	07:06	06:56	05:59	05:28		06:14 (WT01_141m)	05:41		06:20 (WT01_141m)	06:23	07:12	08:00	07:53	08:36
	17:00	17:52	18:41	20:32	21:21	21:57	25	06:39 (WT01_141m)	21:55	25	06:45 (WT01_141m)	21:11	20:06	18:59	17:01	16:36
13	08:42	08:01	07:03	06:54	05:57	05:28		06:14 (WT01_141m)	05:42		06:21 (WT01_141m)	06:25	07:13	08:01	07:54	08:37
	17:01	17:54	18:43	20:34	21:22	21:58	25	06:39 (WT01_141m)	21:54	25	06:46 (WT01_141m)	21:10	20:04	18:56	16:59	16:36
14	08:41	07:59	07:01	06:52	05:56	05:28		06:15 (WT01_141m)	05:43		06:21 (WT01_141m)	06:27	07:15	08:03	07:56	08:38
	17:02	17:56	18:44	20:36	21:24	21:58	24	06:39 (WT01_141m)	21:53	25	06:46 (WT01_141m)	21:08	20:01	18:54	16:58	16:36
15	08:41	07:57	06:59	06:50	05:54	05:28		06:15 (WT01_141m)	05:44		06:21 (WT01_141m)	06:28	07:16	08:05	07:58	08:39
	17:04	17:57	18:46	20:37	21:25	21:59	24	06:39 (WT01_141m)	21:52	24	06:45 (WT01_141m)	21:06	19:59	18:52	16:56	16:36
16	08:40	07:55	06:57	06:48	05:53	05:27		06:16 (WT01_141m)	05:45		06:22 (WT01_141m)	06:30	07:18	08:06	07:59	08:40
	17:05	17:59	18:48	20:39	21:27	21:59	24	06:40 (WT01_141m)	21:51	23	06:45 (WT01_141m)	21:04	19:57	18:50	16:55	16:36
17	08:39	07:54	06:54	06:46	05:51	05:27		06:16 (WT01_141m)	05:47		06:22 (WT01_141m)	06:31	07:20	08:08	08:01	08:41
	17:07	18:01	18:49	20:40	21:28	22:00	24	06:40 (WT01_141m)	21:50	23	06:45 (WT01_141m)	21:02	19:55	18:48	16:54	16:36
18	08:38	07:52	06:52	06:44	05:50	05:27		06:16 (WT01_141m)	05:48		06:22 (WT01_141m)	06:33	07:21	08:10	08:03	08:41
	17:09	18:03	18:51	20:42	21:29	4 06:26 (WT01_141m)	24	06:40 (WT01_141m)	21:48	22	06:44 (WT01_141m)	21:00	19:52	18:46	16:52	16:37
19	08:37	07:50	06:50	06:42	05:49	05:27		06:16 (WT01_141m)	05:49		06:23 (WT01_141m)	06:34	07:23	08:11	08:04	08:42
	17:10	18:05	18:53	20:44	21:31	10 06:29 (WT01_141m)	24	06:40 (WT01_141m)	21:48	21	06:44 (WT01_141m)	20:58	19:50	18:44	16:51	16:37
20	08:36	07:48	06:48	06:40	05:47	05:28		06:16 (WT01_141m)	05:50		06:23 (WT01_141m)	06:36	07:24	08:13	08:06	08:43
	17:12	18:06	18:54	20:45	21:32	13 06:30 (WT01_141m)	24	06:40 (WT01_141m)	21:47	20	06:43 (WT01_141m)	20:56	19:48	18:42	16:50	16:37
21	08:35	07:46	06:45	06:37	05:46	05:28		06:16 (WT01_141m)	05:52		06:24 (WT01_141m)	06:37	07:26	08:15	08:08	08:43
	17:13	18:08	18:56	20:47	21:34	15 06:31 (WT01_141m)	24	06:40 (WT01_141m)	21:46	19	06:43 (WT01_141m)	20:54	19:45	18:40	16:49	16:38
22	08:34	07:44	06:43	06:35	05:45	05:28		06:16 (WT01_141m)	05:53		06:26 (WT01_141m)	06:39	07:27	08:16	08:09	08:44
	17:15	18:10	18:58	20:49	21:35	18 06:33 (WT01_141m)	24	06:40 (WT01_141m)	21:45	17	06:43 (WT01_141m)	20:52	19:43	18:38	16:48	16:38
23	08:33	07:42	06:41	06:33	05:43	05:28		06:17 (WT01_141m)	05:54		06:27 (WT01_141m)	06:41	07:29	08:18	08:11	08:44
	17:17	18:12	18:59	20:50	21:36	19 06:33 (WT01_141m)	24	06:41 (WT01_141m)	21:43	14	06:41 (WT01_141m)	20:50	19:41	18:36	16:47	16:39
24	08:32	07:40	06:39	06:31	05:42	05:28		06:17 (WT01_141m)	05:56		06:28 (WT01_141m)	06:42	07:31	08:20	08:12	08:45
	17:18	18:13	19:01	20:52	21:38	21 06:34 (WT01_141m)	24	06:41 (WT01_141m)	21:42	12	06:40 (WT01_141m)	20:48	19:39	18:34	16:46	16:39
25	08:30	07:38	06:36	06:29	05:41	05:29		06:17 (WT01_141m)	05:57		06:29 (WT01_141m)	06:44	07:32	07:21	08:14	08:45
	17:20	18:15	19:03	20:54	21:39	22 06:35 (WT01_141m)	24	06:41 (WT01_141m)	21:41	9	06:38 (WT01_141m)	20:45	19:36	17:32	16:45	16:40
26	08:29	07:36	06:34	06:27	05:40	05:29		06:18 (WT01_141m)	05:58		06:45 (WT01_141m)	06:45	07:34	07:23	08:16	08:46
	17:22	18:17	19:04	20:55	21:40	22 06:35 (WT01_141m)	24	06:42 (WT01_141m)	21:39		20:43	19:34	17:30	16:44	16:41	
27	08:28	07:34	06:32	06:25	05:39	05:30		06:17 (WT01_141m)	06:00		06:47	07:35	07:25	08:17	08:46	
	17:24	18:19	19:06	20:57	21:41	24 06:36 (WT01_141m)	24	06:41 (WT01_141m)	21:38		20:41	19:32	17:28	16:43	16:41	
28	08:27	07:31	06:30	06:24	05:38	05:30		06:18 (WT01_141m)	06:01		06:48	07:37	07:27	08:19	08:46	
	17:25	18:20	19:08	20:58	21:43	24 06:36 (WT01_141m)	24	06:42 (WT01_141m)	21:37		20:39	19:30	17:26	16:42	16:42	
29	08:25		07:27	06:22	05:37	05:31		06:18 (WT01_141m)	06:02		06:50	07:39	07:28	08:20	08:46	
	17:27		20:09	21:00	21:44	24 06:36 (WT01_141m)	24	06:42 (WT01_141m)	21:35		20:37	19:27	17:24	16:41	16:43	
30	08:24		07:25	06:20	05:36	05:31		06:18 (WT01_141m)	06:04		06:51	07:40	07:30	08:21	08:46	
	17:29		20:11	21:02	21:45	25 06:37 (WT01_141m)	25	06:43 (WT01_141m)	21:34		20:35	19:25	17:22	16:41	16:44	
31	08:22		07:23		05:35	06:12 (WT01_141m)			06:05		06:53		07:32		08:46	
	17:31		20:13		21:46	25 06:37 (WT01_141m)			21:32		20:33		17:20		16:45	
Potential sun hours		263						494			498		451		380	248
Total, worst case			280	367	414	481			735		556				269	
Sun reduction						266			0,44		0,44					
Oper. time red.						0,99			0,99		0,99					
Wind dir. red.						0,72			0,72		0,72					
Total reduction						0,32			0,31		0,31					
Total, real						85			228		175					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)



Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 2 - Gentsesteenweg 149
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

		January	February	March	April	May		June		July		August	September	October	November	December		
1	08:46	08:21	07:29	07:21	06:18	06:18		05:34	06:17 (WT01_141m)	05:32		06:23 (WT01_141m)	06:07	06:55	07:42	07:34	08:23	
	16:46	17:32	18:22	20:14	21:03	21:03		21:47	28	06:45 (WT01_141m)	22:01	27	06:50 (WT01_141m)	21:30	20:30	19:23	17:19	16:40
2	08:46	08:19	07:27	07:18	06:16	06:16		05:34	06:17 (WT01_141m)	05:32		06:24 (WT01_141m)	06:08	06:56	07:43	07:35	08:24	
	16:47	17:34	18:24	20:16	21:05	21:05		21:48	28	06:45 (WT01_141m)	22:01	26	06:50 (WT01_141m)	21:29	20:28	19:21	17:17	16:39
3	08:46	08:18	07:25	07:16	06:14	06:14		05:33	06:18 (WT01_141m)	05:33		06:24 (WT01_141m)	06:10	06:58	07:45	07:37	08:26	
	16:48	17:36	18:26	20:18	21:06	21:06		21:49	27	06:45 (WT01_141m)	22:00	27	06:51 (WT01_141m)	21:27	20:26	19:18	17:15	16:39
4	08:46	08:16	07:23	07:14	06:12	06:12		05:32	06:17 (WT01_141m)	05:34		06:25 (WT01_141m)	06:11	06:59	07:47	07:39	08:27	
	16:49	17:38	18:27	20:19	21:08	21:08		21:50	28	06:45 (WT01_141m)	22:00	26	06:51 (WT01_141m)	21:26	20:24	19:16	17:13	16:38
5	08:46	08:15	07:21	07:12	06:11	06:11		05:31	06:18 (WT01_141m)	05:35		06:24 (WT01_141m)	06:13	07:01	07:48	07:41	08:28	
	16:50	17:39	18:29	20:21	21:10	21:10		21:51	28	06:46 (WT01_141m)	21:59	27	06:51 (WT01_141m)	21:24	20:22	19:14	17:12	16:38
6	08:45	08:13	07:19	07:10	06:09	06:09		05:31	06:18 (WT01_141m)	05:35		06:24 (WT01_141m)	06:14	07:02	07:50	07:42	08:29	
	16:52	17:41	18:31	20:22	21:11	21:11		21:52	27	06:45 (WT01_141m)	21:59	27	06:51 (WT01_141m)	21:22	20:19	19:12	17:10	16:37
7	08:45	08:12	07:17	07:07	06:07	06:07		05:30	06:19 (WT01_141m)	05:36		06:25 (WT01_141m)	06:16	07:04	07:51	07:44	08:31	
	16:53	17:43	18:33	20:24	21:13	21:13		21:53	27	06:46 (WT01_141m)	21:58	27	06:52 (WT01_141m)	21:20	20:17	19:09	17:08	16:37
8	08:45	08:10	07:14	07:05	06:05	06:05		05:30	06:18 (WT01_141m)	05:37		06:25 (WT01_141m)	06:17	07:06	07:53	07:46	08:32	
	16:54	17:45	18:34	20:26	21:14	21:14		21:54	27	06:45 (WT01_141m)	21:58	27	06:52 (WT01_141m)	21:19	20:15	19:07	17:07	16:37
9	08:44	08:08	07:12	07:03	06:04	06:04		05:29	06:19 (WT01_141m)	05:38		06:25 (WT01_141m)	06:19	07:07	07:55	07:47	08:33	
	16:55	17:47	18:36	20:27	21:16	21:16		21:55	27	06:46 (WT01_141m)	21:57	28	06:53 (WT01_141m)	21:17	20:13	19:05	17:05	16:36
10	08:44	08:06	07:10	07:01	06:02	06:02		05:29	06:20 (WT01_141m)	05:39		06:25 (WT01_141m)	06:20	07:09	07:56	07:49	08:34	
	16:57	17:48	18:38	20:29	21:17	21:17		21:56	26	06:46 (WT01_141m)	21:56	28	06:53 (WT01_141m)	21:15	20:10	19:03	17:04	16:36
11	08:43	08:05	07:08	06:59	06:00	06:00		05:29	06:19 (WT01_141m)	05:40		06:25 (WT01_141m)	06:22	07:10	07:58	07:51	08:35	
	16:58	17:50	18:39	20:31	21:19	21:19		21:56	26	06:45 (WT01_141m)	21:56	28	06:53 (WT01_141m)	21:13	20:08	19:01	17:02	16:36
12	08:43	08:03	07:06	06:56	05:59	05:59		05:28	06:20 (WT01_141m)	05:41		06:25 (WT01_141m)	06:23	07:12	08:00	07:53	08:36	
	17:00	17:52	18:41	20:32	21:21	21:21		21:57	26	06:46 (WT01_141m)	21:55	27	06:52 (WT01_141m)	21:11	20:06	18:59	17:01	16:36
13	08:42	08:01	07:03	06:54	05:57	05:57		05:28	06:20 (WT01_141m)	05:42		06:25 (WT01_141m)	06:25	07:13	08:01	07:54	08:37	
	17:01	17:54	18:43	20:34	21:22	21:22		21:58	26	06:46 (WT01_141m)	21:54	27	06:52 (WT01_141m)	21:10	20:04	18:56	16:59	16:36
14	08:41	07:59	07:01	06:52	05:56	05:56		05:28	06:21 (WT01_141m)	05:43		06:26 (WT01_141m)	06:27	07:15	08:03	07:56	08:38	
	17:02	17:56	18:44	20:36	21:24	21:24		21:58	25	06:46 (WT01_141m)	21:53	27	06:53 (WT01_141m)	21:08	20:01	18:54	16:58	16:36
15	08:41	07:57	06:59	06:50	05:54	05:54		05:28	06:21 (WT01_141m)	05:44		06:26 (WT01_141m)	06:28	07:16	08:05	07:58	08:39	
	17:04	17:57	18:46	20:37	21:25	21:25		21:59	25	06:46 (WT01_141m)	21:52	27	06:53 (WT01_141m)	21:06	19:59	18:52	16:56	16:36
16	08:40	07:55	06:57	06:48	05:53	05:53		05:27	06:21 (WT01_141m)	05:45		06:26 (WT01_141m)	06:30	07:18	08:06	07:59	08:40	
	17:05	17:59	18:48	20:39	21:27	10	06:35 (WT01_141m)	21:59	26	06:47 (WT01_141m)	21:51	27	06:53 (WT01_141m)	21:04	19:57	18:50	16:55	16:36
17	08:39	07:54	06:54	06:46	05:51	05:51		05:27	06:22 (WT01_141m)	05:47		06:27 (WT01_141m)	06:31	07:20	08:08	08:01	08:41	
	17:07	18:01	18:49	20:40	21:28	14	06:37 (WT01_141m)	22:00	25	06:47 (WT01_141m)	21:50	26	06:53 (WT01_141m)	21:02	19:55	18:48	16:54	16:36
18	08:38	07:52	06:52	06:44	05:50	05:50		05:27	06:22 (WT01_141m)	05:48		06:27 (WT01_141m)	06:33	07:21	08:10	08:03	08:41	
	17:09	18:03	18:51	20:42	21:29	17	06:39 (WT01_141m)	22:00	25	06:47 (WT01_141m)	21:49	26	06:53 (WT01_141m)	21:00	19:52	18:46	16:52	16:37
19	08:37	07:50	06:50	06:42	05:49	05:49		05:27	06:22 (WT01_141m)	05:49		06:27 (WT01_141m)	06:34	07:23	08:11	08:04	08:42	
	17:10	18:05	18:53	20:44	21:31	19	06:40 (WT01_141m)	22:01	25	06:47 (WT01_141m)	21:48	26	06:53 (WT01_141m)	20:58	19:47	18:41	16:51	16:37
20	08:36	07:48	06:48	06:40	05:47	05:47		05:28	06:22 (WT01_141m)	05:50		06:27 (WT01_141m)	06:36	07:24	08:13	08:06	08:43	
	17:12	18:06	18:54	20:45	21:32	21	06:40 (WT01_141m)	22:01	25	06:47 (WT01_141m)	21:47	25	06:52 (WT01_141m)	20:56	19:48	18:42	16:50	16:37
21	08:35	07:46	06:45	06:37	05:46	05:46		05:28	06:22 (WT01_141m)	05:52		06:28 (WT01_141m)	06:37	07:26	08:15	08:08	08:43	
	17:13	18:08	18:56	20:47	21:34	22	06:41 (WT01_141m)	22:01	25	06:47 (WT01_141m)	21:46	23	06:51 (WT01_141m)	20:54	19:45	18:40	16:49	16:38
22	08:34	07:44	06:43	06:35	05:45	05:45		05:28	06:22 (WT01_141m)	05:53		06:29 (WT01_141m)	06:39	07:27	08:16	08:09	08:44	
	17:15	18:10	18:58	20:49	21:35	24	06:42 (WT01_141m)	22:01	25	06:47 (WT01_141m)	21:45	23	06:52 (WT01_141m)	20:52	19:43	18:38	16:48	16:38
23	08:33	07:42	06:41	06:33	05:43	05:43		05:28	06:23 (WT01_141m)	05:54		06:30 (WT01_141m)	06:41	07:29	08:18	08:11	08:44	
	17:17	18:12	18:59	20:50	21:36	24	06:42 (WT01_141m)	22:01	25	06:48 (WT01_141m)	21:43	21	06:51 (WT01_141m)	20:50	19:41	18:36	16:47	16:39
24	08:32	07:40	06:39	06:31	05:42	05:42		05:28	06:23 (WT01_141m)	05:56		06:30 (WT01_141m)	06:42	07:31	08:20	08:12	08:45	
	17:18	18:13	19:01	20:52	21:38	25	06:43 (WT01_141m)	22:02	25	06:48 (WT01_141m)	21:42	20	06:50 (WT01_141m)	20:48	19:39	18:34	16:46	16:39
25	08:30	07:38	06:36	06:29	05:41	05:41		05:29	06:23 (WT01_141m)	05:57		06:31 (WT01_141m)	06:44	07:32	08:21	08:14	08:45	
	17:20	18:15	19:03	20:54	21:39	26	06:43 (WT01_141m)	22:02	25	06:48 (WT01_141m)	21:41	18	06:49 (WT01_141m)	20:45	19:36	18:32	16:45	16:40
26	08:29	07:36	06:34	06:27	05:40	05:40		05:29	06:23 (WT01_141m)	05:58		06:33 (WT01_141m)	06:45	07:34	08:23	08:16	08:46	
	17:22	18:17	19:04	20:55	21:40	27	06:44 (WT01_141m)	22:02	25	06:49 (WT01_141m)	21:38	15	06:47 (WT01_141m)	20:43	19:34	18:30	16:44	16:41
27	08:28	07:34	06:32	06:25	05:39	05:39		05:30	06:23 (WT01_141m)	06:00		06:34 (WT01_141m)	06:47	07:35	08:25	08:17	08:46	
	17:24	18:19	19:06	20:57	21:41	27	06:44 (WT01_141m)	22:02	26	06:49 (WT01_141m)	21:38	13	06:47 (WT01_141m)	20:41	19:32	17:28	16:43	16:41
28	08:27	07:31	06:30	06:24	05:38	05:38		05:30	06:24 (WT01_141m)	06:01		06:36 (WT01_141m)	06:48	07:37	08:27	08:19	08:46	
	17:25	18:20	19:08	20:58	21:43	27	06:44 (WT01_141m)	22:01	25	06:49 (WT01_141m)	21:37	8	06:44 (WT01_141m)	20:39	19:30	17:26	16:42	16:42
29	08:25	07:27	06:22	05:37	06:17 (WT01_141m)	05:31		06:23 (WT01_141m)	06:02			06:50	07:39	08:28	08:20	08:46		
	17:27	08:20	07:19	20:09	21:00	21:44	27	06:44 (WT01_141m)	22:01	26	06:49 (WT01_141m)	21:35	20:37	19:27	17:24	16:41	16:43	
30	08:24	07:25	06:20	05:36	06:17 (WT01_141m)	05:31		06:24 (WT01_141m)	06:04			06:51	07:40	08:30	08:21	08:46		
	17:29	08:22	07:21	21:02	21:45	28	06:45 (WT01_141m)	22:01	26	06:50 (WT01_141m)	21:34	20:35	19:25	17:22	16:41	16:44		
31	08:22	07:23	06:18	05:35	06:17 (WT01_141m)	05:31												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set		

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 3 - Hogeweg 136

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February		March		April	May	June	July	August	September	October		November	December		
1	08:46	08:21		07:29		08:31 (WT01_141m)	07:21	06:18	05:34	05:32	06:07	06:55	07:42		07:34	08:23	
	16:46	17:32		18:22	39	09:10 (WT01_141m)	20:14	21:03	21:47	22:01	21:30	20:30	19:23		17:19	16:40	
2	08:46	08:19		07:27		08:31 (WT01_141m)	07:18	06:16	05:33	05:32	06:08	06:56	07:43		07:35	08:24	
	16:47	17:34		18:24	38	09:09 (WT01_141m)	20:16	21:05	21:48	22:01	21:29	20:28	19:21	8	09:22 (WT01_141m)	17:17	16:39
3	08:46	08:18		07:25		08:31 (WT01_141m)	07:16	06:14	05:33	05:33	06:10	06:58	07:45		07:37	08:26	
	16:48	17:36		18:26	38	09:09 (WT01_141m)	20:18	21:06	21:49	22:00	21:27	20:26	19:18	16	09:34 (WT01_141m)	17:15	16:39
4	08:46	08:16		07:23		08:32 (WT01_141m)	07:14	06:12	05:32	05:34	06:11	06:59	07:47		07:39	08:27	
	16:49	17:38		18:27	36	09:08 (WT01_141m)	20:19	21:08	21:50	22:00	21:26	20:24	19:16	22	09:36 (WT01_141m)	17:13	16:38
5	08:46	08:15		07:21		08:33 (WT01_141m)	07:12	06:10	05:31	05:35	06:13	07:01	07:48		07:41	08:28	
	16:50	17:39		18:29	34	09:07 (WT01_141m)	20:21	21:10	21:51	21:59	21:24	20:22	19:14	26	09:38 (WT01_141m)	17:12	16:38
6	08:46	08:13		07:19		08:32 (WT01_141m)	07:10	06:09	05:31	05:35	06:14	07:02	07:50		07:42	08:29	
	16:52	17:41		18:31	33	09:05 (WT01_141m)	20:22	21:11	21:52	21:59	21:22	20:19	19:12	29	09:39 (WT01_141m)	17:10	16:37
7	08:45	08:12		07:16		08:33 (WT01_141m)	07:07	06:07	05:30	05:36	06:16	07:04	07:51		07:44	08:31	
	16:53	17:43		18:33	31	09:04 (WT01_141m)	20:24	21:13	21:53	21:58	21:20	20:17	19:09	32	09:41 (WT01_141m)	17:08	16:37
8	08:45	08:10		07:14		08:35 (WT01_141m)	07:05	06:05	05:30	05:37	06:17	07:06	07:53		07:46	08:32	
	16:54	17:45		18:34	27	09:02 (WT01_141m)	20:26	21:14	21:54	21:58	21:19	20:15	19:07	34	09:42 (WT01_141m)	17:07	16:37
9	08:44	08:08		07:12		08:36 (WT01_141m)	07:03	06:04	05:29	05:38	06:19	07:07	07:55		07:47	08:33	
	16:55	17:47		18:36	24	09:00 (WT01_141m)	20:27	21:16	21:55	21:57	21:17	20:13	19:05	36	09:43 (WT01_141m)	17:05	16:36
10	08:44	08:06		07:10		08:38 (WT01_141m)	07:01	06:02	05:29	05:39	06:20	07:09	07:56		07:49	08:34	
	16:57	17:48		18:38	19	08:57 (WT01_141m)	20:29	21:17	21:56	21:56	21:15	20:10	19:03	37	09:43 (WT01_141m)	17:04	16:36
11	08:43	08:05		07:08		08:41 (WT01_141m)	06:59	06:00	05:28	05:40	06:22	07:10	07:58		07:51	08:35	
	16:58	17:50		18:39	12	08:53 (WT01_141m)	20:31	21:19	21:56	21:56	21:13	20:08	19:01	38	09:43 (WT01_141m)	17:02	16:36
12	08:43	08:03		07:06			06:56	05:59	05:28	05:41	06:23	07:12	08:00		07:53	08:36	
	16:59	17:52		18:41			20:32	21:21	21:57	21:55	21:11	20:06	18:58	39	09:44 (WT01_141m)	17:00	16:36
13	08:42	08:01		07:03			06:54	05:57	05:28	05:42	06:25	07:13	08:01		07:54	08:37	
	17:01	17:54		18:43			20:34	21:22	21:58	21:54	21:10	20:04	18:56	39	09:43 (WT01_141m)	16:59	16:36
14	08:41	07:59		08:48 (WT01_141m)	07:01		06:52	05:56	05:28	05:43	06:26	07:15	08:03		07:56	08:38	
	17:02	17:56	9	08:57 (WT01_141m)	18:44		20:36	21:24	21:58	21:53	21:08	20:01	18:54	39	09:43 (WT01_141m)	16:58	16:36
15	08:41	07:57		08:44 (WT01_141m)	06:59		06:50	05:54	05:28	05:44	06:28	07:16	08:05		07:58	08:39	
	17:04	17:57	17	09:01 (WT01_141m)	18:46		20:37	21:25	21:59	21:52	21:06	19:59	18:52	39	09:43 (WT01_141m)	16:56	16:36
16	08:40	07:55		08:41 (WT01_141m)	06:57		06:48	05:53	05:27	05:45	06:30	07:18	08:06		07:59	08:40	
	17:05	17:59	22	09:03 (WT01_141m)	18:48		20:39	21:27	21:59	21:51	21:04	19:57	18:50	39	09:43 (WT01_141m)	16:55	16:36
17	08:39	07:54		08:39 (WT01_141m)	06:54		06:46	05:51	05:27	05:47	06:31	07:20	08:08		08:01	08:41	
	17:07	18:01	26	09:05 (WT01_141m)	18:49		20:40	21:28	22:00	21:50	21:02	19:55	18:48	39	09:42 (WT01_141m)	16:54	16:36
18	08:38	07:52		08:37 (WT01_141m)	06:52		06:44	05:50	05:27	05:48	06:33	07:21	08:10		08:03	08:41	
	17:09	18:03	29	09:06 (WT01_141m)	18:51		20:42	21:29	22:00	21:49	21:00	19:52	18:46	38	09:42 (WT01_141m)	16:52	16:37
19	08:37	07:50		08:36 (WT01_141m)	06:50		06:42	05:48	05:27	05:49	06:34	07:23	08:11		08:04	08:42	
	17:10	18:05	31	09:07 (WT01_141m)	18:53		20:44	21:31	22:01	21:48	20:58	19:50	18:44	37	09:41 (WT01_141m)	16:51	16:37
20	08:36	07:48		08:35 (WT01_141m)	06:48		06:39	05:47	05:27	05:50	06:36	07:24	08:13		08:06	08:43	
	17:12	18:06	33	09:08 (WT01_141m)	18:54		20:45	21:32	22:01	21:47	20:56	19:48	18:42	36	09:41 (WT01_141m)	16:50	16:37
21	08:35	07:46		08:34 (WT01_141m)	06:45		06:37	05:46	05:28	05:52	06:37	07:26	08:15		08:08	08:43	
	17:13	18:08	35	09:09 (WT01_141m)	18:56		20:47	21:34	22:01	21:46	20:54	19:45	18:40	34	09:39 (WT01_141m)	16:49	16:38
22	08:34	07:44		08:33 (WT01_141m)	06:43		06:35	05:45	05:28	05:53	06:39	07:27	08:16		08:09	08:44	
	17:15	18:10	37	09:10 (WT01_141m)	18:58		20:49	21:35	22:01	21:45	20:52	19:43	18:38	32	09:38 (WT01_141m)	16:48	16:38
23	08:33	07:42		08:33 (WT01_141m)	06:41		06:33	05:43	05:28	05:54	06:40	07:29	08:18		08:11	08:44	
	17:17	18:12	37	09:10 (WT01_141m)	18:59		20:50	21:36	22:01	21:43	20:50	19:41	18:36	30	09:37 (WT01_141m)	16:47	16:39
24	08:32	07:40		08:32 (WT01_141m)	06:39		06:31	05:42	05:28	05:55	06:42	07:31	08:20		08:12	08:45	
	17:18	18:13	39	09:11 (WT01_141m)	19:01		20:52	21:38	22:02	21:42	20:48	19:39	18:34	28	09:36 (WT01_141m)	16:46	16:39
25	08:30	07:38		08:32 (WT01_141m)	06:36		06:29	05:41	05:29	05:57	06:44	07:32	07:21		08:14	08:45	
	17:20	18:15	39	09:11 (WT01_141m)	19:03		20:54	21:39	22:02	21:41	20:45	19:36	17:32	25	08:35 (WT01_141m)	16:45	16:40
26	08:29	07:36		08:32 (WT01_141m)	06:34		06:27	05:40	05:29	05:58	06:45	07:34	07:23		08:16	08:46	
	17:22	18:17	39	09:11 (WT01_141m)	19:04		20:55	21:40	22:02	21:39	20:43	19:34	17:30	21	08:33 (WT01_141m)	16:44	16:40
27	08:28	07:34		08:31 (WT01_141m)	06:32		06:25	05:39	05:29	06:00	06:47	07:35	07:25		08:17	08:46	
	17:24	18:19	40	09:11 (WT01_141m)	19:06		20:57	21:41	22:02	21:38	20:41	19:32	17:28	15	08:29 (WT01_141m)	16:43	16:41
28	08:27	07:31		08:31 (WT01_141m)	06:30		06:23	05:38	05:30	06:01	06:48	07:37	07:27		08:19 (WT01_141m)	08:19	08:46
	17:25	18:20	40	09:11 (WT01_141m)	19:08		20:58	21:43	22:02	21:37	20:39	19:30	17:26	5	08:24 (WT01_141m)	16:42	16:42
29	08:25			07:27			06:22	05:37	05:30	06:02	06:50	07:39	07:28		08:20	08:46	
	17:27			20:09			21:00	21:44	22:01	21:35	20:37	19:27	17:24		16:41	16:43	
30	08:24			07:25			06:20	05:36	05:31	06:04	06:51	07:40	07:30		08:21	08:46	
	17:29			20:11			21:02	21:45	22:01	21:34	20:35	19:25	17:22		16:41	16:44	
31	08:22			07:23				05:35		06:05	06:53	07:32	07:32		08:46		
	17:31			20:13				21:46		21:32	20:33	17:20			16:45		
Potential sun hours	263	279		367			414	481	494	498	451	380	333		269	248	
Total, worst case		473		331										813			
Sun reduction		0.28		0.36										0.33			
Oper. time red.		0.99		0.99										0.99			
Wind dir. red.		0.54		0.54										0.54			
Total reduction		0.15		0.19										0.19			
Total, real		71		64										154			

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 4 - Steenhoevestraat 6

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46 16:46	08:21 17:32	07:29 18:22	07:21 20:14	09:12 (WT01_141m) 10:08 (WT01_141m)	08:36 (WT01_141m) 10:23 (WT01_141m)
2	08:46 16:47	08:19 17:34	07:27 18:24	07:18 20:16	09:09 (WT01_141m) 10:11 (WT01_141m)	10:23 (WT01_141m) 21:48
3	08:46 16:48	08:18 17:36	07:25 18:26	07:16 20:17	09:06 (WT01_141m) 10:12 (WT01_141m)	10:23 (WT01_141m) 21:49
4	08:46 16:49	08:16 17:38	07:23 18:27	07:14 20:19	09:04 (WT01_141m) 10:14 (WT01_141m)	10:22 (WT01_141m) 21:50
5	08:46 16:50	08:15 17:39	07:21 18:29	07:12 20:21	09:02 (WT01_141m) 10:16 (WT01_141m)	10:21 (WT01_141m) 21:51
6	08:45 16:52	08:13 17:41	07:19 18:31	07:10 20:22	09:00 (WT01_141m) 10:17 (WT01_141m)	10:21 (WT01_141m) 21:52
7	08:45 16:53	08:12 17:43	07:16 18:32	07:07 20:24	08:58 (WT01_141m) 10:19 (WT01_141m)	10:20 (WT01_141m) 21:53
8	08:45 16:54	08:10 17:45	07:14 18:34	07:05 20:26	08:56 (WT01_141m) 10:19 (WT01_141m)	10:20 (WT01_141m) 21:54
9	08:44 16:55	08:08 17:47	07:12 18:36	07:03 20:27	08:54 (WT01_141m) 10:20 (WT01_141m)	10:19 (WT01_141m) 21:55
10	08:44 16:57	08:06 17:48	07:10 18:38	07:01 20:29	08:53 (WT01_141m) 10:21 (WT01_141m)	10:19 (WT01_141m) 21:56
11	08:43 16:58	08:05 17:50	07:08 18:39	06:59 20:31	08:51 (WT01_141m) 10:22 (WT01_141m)	10:17 (WT01_141m) 21:56
12	08:43 16:59	08:03 17:52	07:05 18:41	06:56 20:32	08:50 (WT01_141m) 10:23 (WT01_141m)	10:17 (WT01_141m) 21:57
13	08:42 17:01	08:01 17:54	07:03 18:43	06:54 20:34	08:49 (WT01_141m) 10:24 (WT01_141m)	10:16 (WT01_141m) 21:58
14	08:41 17:02	07:59 17:56	07:01 18:44	06:52 20:36	08:48 (WT01_141m) 10:24 (WT01_141m)	10:16 (WT01_141m) 21:58
15	08:41 17:04	07:57 17:57	06:59 18:46	06:50 20:37	08:46 (WT01_141m) 10:25 (WT01_141m)	10:16 (WT01_141m) 21:59
16	08:40 17:05	07:55 17:59	06:57 18:48	06:48 20:39	08:44 (WT01_141m) 10:24 (WT01_141m)	10:14 (WT01_141m) 21:59
17	08:39 17:07	07:54 18:01	06:54 18:49	06:46 20:40	08:43 (WT01_141m) 10:24 (WT01_141m)	10:14 (WT01_141m) 22:00
18	08:38 17:09	07:52 18:03	06:52 18:51	06:44 20:42	08:43 (WT01_141m) 10:25 (WT01_141m)	10:14 (WT01_141m) 22:00
19	08:37 17:10	07:50 18:05	06:50 18:53	06:42 20:44	08:42 (WT01_141m) 10:25 (WT01_141m)	10:12 (WT01_141m) 22:00
20	08:36 17:12	07:48 18:06	06:48 18:54	06:39 20:45	08:41 (WT01_141m) 10:25 (WT01_141m)	10:12 (WT01_141m) 22:01
21	08:35 17:13	07:46 18:08	06:45 18:56	06:37 20:47	08:40 (WT01_141m) 10:25 (WT01_141m)	10:11 (WT01_141m) 22:01
22	08:34 17:15	07:44 18:10	06:43 18:58	06:35 20:49	08:39 (WT01_141m) 10:25 (WT01_141m)	10:11 (WT01_141m) 22:01
23	08:33 17:17	07:42 18:12	06:41 18:59	06:33 20:50	08:39 (WT01_141m) 10:25 (WT01_141m)	10:10 (WT01_141m) 22:01
24	08:32 17:18	07:40 18:13	06:39 19:01	06:31 20:52	08:38 (WT01_141m) 10:25 (WT01_141m)	10:10 (WT01_141m) 22:02
25	08:30 17:20	07:38 18:15	06:36 19:03	06:29 20:53	08:38 (WT01_141m) 10:25 (WT01_141m)	10:09 (WT01_141m) 22:02
26	08:29 17:22	07:36 18:17	06:34 19:04	06:27 20:55	08:38 (WT01_141m) 10:25 (WT01_141m)	10:09 (WT01_141m) 22:02
27	08:28 17:23	07:34 18:19	06:32 19:06	06:25 20:57	08:37 (WT01_141m) 10:25 (WT01_141m)	10:08 (WT01_141m) 22:02
28	08:27 17:25	07:31 18:20	06:30 19:08	06:23 20:58	08:36 (WT01_141m) 10:24 (WT01_141m)	10:08 (WT01_141m) 22:01
29	08:25 17:27	07:27 18:22	06:27 19:09	06:22 21:00	08:36 (WT01_141m) 10:24 (WT01_141m)	10:07 (WT01_141m) 22:01
30	08:24 17:29	07:25 18:21	06:25 19:11	06:20 21:02	08:35 (WT01_141m) 10:23 (WT01_141m)	10:06 (WT01_141m) 22:01
31	08:22 17:31	07:23 18:23	06:23 19:13	06:18 21:05	08:35 (WT01_141m) 10:23 (WT01_141m)	10:06 (WT01_141m) 22:01
Potential sun hours	263	279	367	414	481	494
Total, worst case			153	2797	3073	2398
Sun reduction			0,36	0,45	0,45	0,44
Oper. time red.			0,99	0,99	0,99	0,99
Wind dir. red.			0,57	0,57	0,57	0,57
Total reduction			0,20	0,25	0,25	0,25
Total, real			31	706	778	589

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 4 - Steenhoevestraat 6

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July			August			September			October			November			December		
1	05:32		08:47 (WT01_141m)	06:07		08:45 (WT01_141m)	06:55		08:50 (WT01_141m)	07:42		07:34			08:23		
	22:01	80	10:07 (WT01_141m)	21:30	103	10:28 (WT01_141m)	20:30	91	10:21 (WT01_141m)	19:23		17:19			16:40		
2	05:32		08:48 (WT01_141m)	06:08		08:44 (WT01_141m)	06:56		08:52 (WT01_141m)	07:43		07:35			08:24		
	22:01	80	10:08 (WT01_141m)	21:29	104	10:28 (WT01_141m)	20:28	88	10:20 (WT01_141m)	19:20		17:17			16:39		
3	05:33		08:48 (WT01_141m)	06:10		08:45 (WT01_141m)	06:58		08:52 (WT01_141m)	07:45		07:37			08:26		
	22:00	81	10:09 (WT01_141m)	21:27	104	10:29 (WT01_141m)	20:26	86	10:18 (WT01_141m)	19:18		17:15			16:39		
4	05:34		08:47 (WT01_141m)	06:11		08:44 (WT01_141m)	06:59		08:54 (WT01_141m)	07:47		07:39			08:27		
	22:00	82	10:09 (WT01_141m)	21:26	105	10:29 (WT01_141m)	20:24	83	10:17 (WT01_141m)	19:16		17:13			16:38		
5	05:34		08:48 (WT01_141m)	06:13		08:44 (WT01_141m)	07:01		08:54 (WT01_141m)	07:48		07:40			08:28		
	21:59	82	10:10 (WT01_141m)	21:24	105	10:29 (WT01_141m)	20:22	81	10:15 (WT01_141m)	19:14		17:12			16:38		
6	05:35		08:48 (WT01_141m)	06:14		08:44 (WT01_141m)	07:02		08:56 (WT01_141m)	07:50		07:42			08:29		
	21:59	82	10:10 (WT01_141m)	21:22	106	10:30 (WT01_141m)	20:19	78	10:14 (WT01_141m)	19:12		17:10			16:37		
7	05:36		08:48 (WT01_141m)	06:16		08:44 (WT01_141m)	07:04		08:57 (WT01_141m)	07:51		07:44			08:31		
	21:58	83	10:11 (WT01_141m)	21:20	106	10:30 (WT01_141m)	20:17	74	10:11 (WT01_141m)	19:09		17:08			16:37		
8	05:37		08:48 (WT01_141m)	06:17		08:44 (WT01_141m)	07:05		08:59 (WT01_141m)	07:53		07:46			08:32		
	21:58	84	10:12 (WT01_141m)	21:19	107	10:31 (WT01_141m)	20:15	70	10:09 (WT01_141m)	19:07		17:07			16:37		
9	05:38		08:48 (WT01_141m)	06:19		08:44 (WT01_141m)	07:07		09:00 (WT01_141m)	07:55		07:47			08:33		
	21:57	85	10:13 (WT01_141m)	21:17	107	10:31 (WT01_141m)	20:13	67	10:07 (WT01_141m)	19:05		17:05			16:36		
10	05:39		08:47 (WT01_141m)	06:20		08:44 (WT01_141m)	07:09		09:02 (WT01_141m)	07:56		07:49			08:34		
	21:56	85	10:12 (WT01_141m)	21:15	108	10:32 (WT01_141m)	20:10	62	10:04 (WT01_141m)	19:03		17:03			16:36		
11	05:40		08:47 (WT01_141m)	06:22		08:44 (WT01_141m)	07:10		09:04 (WT01_141m)	07:58		07:51			08:35		
	21:56	86	10:13 (WT01_141m)	21:13	107	10:31 (WT01_141m)	20:08	57	10:01 (WT01_141m)	19:01		17:02			16:36		
12	05:41		08:47 (WT01_141m)	06:23		08:43 (WT01_141m)	07:12		09:07 (WT01_141m)	08:00		07:53			08:36		
	21:55	87	10:14 (WT01_141m)	21:11	108	10:31 (WT01_141m)	20:06	51	09:58 (WT01_141m)	18:58		17:00			16:36		
13	05:42		08:47 (WT01_141m)	06:25		08:44 (WT01_141m)	07:13		09:09 (WT01_141m)	08:01		07:54			08:37		
	21:54	87	10:14 (WT01_141m)	21:09	108	10:32 (WT01_141m)	20:04	45	09:54 (WT01_141m)	18:56		16:59			16:36		
14	05:43		08:47 (WT01_141m)	06:26		08:43 (WT01_141m)	07:15		09:13 (WT01_141m)	08:03		07:56			08:38		
	21:53	88	10:15 (WT01_141m)	21:08	108	10:31 (WT01_141m)	20:01	37	09:50 (WT01_141m)	18:54		16:58			16:36		
15	05:44		08:48 (WT01_141m)	06:28		08:44 (WT01_141m)	07:16		09:17 (WT01_141m)	08:05		07:58			08:39		
	21:52	89	10:17 (WT01_141m)	21:06	108	10:32 (WT01_141m)	19:59	26	09:43 (WT01_141m)	18:52		16:56			16:36		
16	05:45		08:47 (WT01_141m)	06:30		08:44 (WT01_141m)	07:18			08:06		07:59			08:40		
	21:51	90	10:17 (WT01_141m)	21:04	107	10:31 (WT01_141m)	19:57			18:50		16:55			16:36		
17	05:47		08:47 (WT01_141m)	06:31		08:44 (WT01_141m)	07:20			08:08		08:01			08:41		
	21:50	91	10:18 (WT01_141m)	21:02	108	10:32 (WT01_141m)	19:54			18:48		16:54			16:36		
18	05:48		08:47 (WT01_141m)	06:33		08:44 (WT01_141m)	07:21			08:10		08:03			08:41		
	21:49	92	10:19 (WT01_141m)	21:00	107	10:31 (WT01_141m)	19:52			18:46		16:52			16:37		
19	05:49		08:46 (WT01_141m)	06:34		08:45 (WT01_141m)	07:23			08:11		08:04			08:42		
	21:48	93	10:19 (WT01_141m)	20:58	106	10:31 (WT01_141m)	19:50			18:44		16:51			16:37		
20	05:50		08:46 (WT01_141m)	06:36		08:44 (WT01_141m)	07:24			08:13		08:06			08:43		
	21:47	94	10:20 (WT01_141m)	20:56	106	10:30 (WT01_141m)	19:48			18:42		16:50			16:37		
21	05:52		08:46 (WT01_141m)	06:37		08:45 (WT01_141m)	07:26			08:15		08:08			08:43		
	21:46	94	10:20 (WT01_141m)	20:54	106	10:31 (WT01_141m)	19:45			18:40		16:49			16:38		
22	05:53		08:46 (WT01_141m)	06:39		08:45 (WT01_141m)	07:27			08:16		08:09			08:44		
	21:45	96	10:22 (WT01_141m)	20:52	105	10:30 (WT01_141m)	19:43			18:38		16:48			16:38		
23	05:54		08:46 (WT01_141m)	06:40		08:46 (WT01_141m)	07:29			08:18		08:11			08:44		
	21:43	96	10:22 (WT01_141m)	20:50	104	10:30 (WT01_141m)	19:41			18:36		16:47			16:39		
24	05:55		08:46 (WT01_141m)	06:42		08:46 (WT01_141m)	07:31			08:20		08:12			08:45		
	21:42	97	10:23 (WT01_141m)	20:47	103	10:29 (WT01_141m)	19:39			18:34		16:46			16:39		
25	05:57		08:45 (WT01_141m)	06:44		08:46 (WT01_141m)	07:32			07:21		08:14			08:45		
	21:41	98	10:23 (WT01_141m)	20:45	102	10:28 (WT01_141m)	19:36			17:32		16:45			16:40		
26	05:58		08:46 (WT01_141m)	06:45		08:46 (WT01_141m)	07:34			07:23		08:15			08:45		
	21:39	98	10:24 (WT01_141m)	20:43	101	10:27 (WT01_141m)	19:34			17:30		16:44			16:40		
27	06:00		08:45 (WT01_141m)	06:47		08:47 (WT01_141m)	07:35			07:25		08:17			08:46		
	21:38	100	10:25 (WT01_141m)	20:41	100	10:27 (WT01_141m)	19:32			17:28		16:43			16:41		
28	06:01		08:45 (WT01_141m)	06:48		08:47 (WT01_141m)	07:37			07:27		08:18			08:46		
	21:37	100	10:25 (WT01_141m)	20:39	99	10:26 (WT01_141m)	19:29			17:26		16:42			16:42		
29	06:02		08:45 (WT01_141m)	06:50		08:49 (WT01_141m)	07:38			07:28		08:20			08:46		
	21:35	101	10:26 (WT01_141m)	20:37	96	10:25 (WT01_141m)	19:27			17:24		16:41			16:43		
30	06:04		08:45 (WT01_141m)	06:51		08:49 (WT01_141m)	07:40			07:30		08:21			08:46		
	21:34	102	10:27 (WT01_141m)	20:35	95	10:24 (WT01_141m)	19:25			17:22		16:41			16:44		
31	06:05		08:44 (WT01_141m)	06:53		08:50 (WT01_141m)				07:32					08:46		
	21:32	103	10:27 (WT01_141m)	20:33	93	10:23 (WT01_141m)				17:20					16:45		
Potential sun hours	498			451			380			333		269			248		
Total, worst case	2806			3232			996										
Sun reduction	0,44			0,46			0,43										
Oper. time red.	0,99			0,99			0,99										
Wind dir. red.	0,57			0,57			0,57										
Total reduction	0,25			0,26			0,24										
Total, real	697			836			238										

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 5 - Blarenberglaan 23A

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March		April		May		June
1	08:46	08:21	07:29		07:21	15:22 (WT01_141m)	06:18	15:46 (WT01_141m)	05:34
	16:46	17:32	18:22		20:14	122 17:24 (WT01_141m)	21:03	87 17:13 (WT01_141m)	21:47
2	08:46	08:19	07:27		07:18	15:21 (WT01_141m)	06:16	15:47 (WT01_141m)	05:33
	16:47	17:34	18:24		20:16	124 17:25 (WT01_141m)	21:05	85 17:12 (WT01_141m)	21:48
3	08:46	08:18	07:25	15:15 (WT01_141m)	07:16	15:20 (WT01_141m)	06:14	15:49 (WT01_141m)	05:33
	16:48	17:36	18:26	26 15:41 (WT01_141m)	20:17	124 17:24 (WT01_141m)	21:06	81 17:10 (WT01_141m)	21:49
4	08:46	08:16	07:23	15:09 (WT01_141m)	07:14	15:20 (WT01_141m)	06:12	15:51 (WT01_141m)	05:32
	16:49	17:38	18:27	39 15:48 (WT01_141m)	20:19	124 17:24 (WT01_141m)	21:08	78 17:09 (WT01_141m)	21:50
5	08:46	08:15	07:21	15:05 (WT01_141m)	07:12	15:20 (WT01_141m)	06:10	15:53 (WT01_141m)	05:31
	16:50	17:39	18:29	49 15:54 (WT01_141m)	20:21	124 17:24 (WT01_141m)	21:10	76 17:09 (WT01_141m)	21:51
6	08:45	08:13	07:19	15:00 (WT01_141m)	07:09	15:21 (WT01_141m)	06:09	15:55 (WT01_141m)	05:31
	16:51	17:41	18:31	57 15:57 (WT01_141m)	20:22	123 17:24 (WT01_141m)	21:11	73 17:08 (WT01_141m)	21:52
7	08:45	08:11	07:16	14:57 (WT01_141m)	07:07	15:21 (WT01_141m)	06:07	15:57 (WT01_141m)	05:30
	16:53	17:43	18:32	63 16:00 (WT01_141m)	20:24	123 17:24 (WT01_141m)	21:13	69 17:06 (WT01_141m)	21:53
8	08:45	08:10	07:14	14:54 (WT01_141m)	07:05	15:20 (WT01_141m)	06:05	15:59 (WT01_141m)	05:30
	16:54	17:45	18:34	69 16:03 (WT01_141m)	20:26	123 17:23 (WT01_141m)	21:14	67 17:06 (WT01_141m)	21:54
9	08:44	08:08	07:12	14:52 (WT01_141m)	07:03	15:20 (WT01_141m)	06:04	16:01 (WT01_141m)	05:29
	16:55	17:47	18:36	74 16:06 (WT01_141m)	20:27	123 17:23 (WT01_141m)	21:16	63 17:04 (WT01_141m)	21:55
10	08:44	08:06	07:10	14:49 (WT01_141m)	07:01	15:21 (WT01_141m)	06:02	16:04 (WT01_141m)	05:29
	16:57	17:48	18:38	78 16:07 (WT01_141m)	20:29	122 17:23 (WT01_141m)	21:17	60 17:04 (WT01_141m)	21:56
11	08:43	08:05	07:08	14:47 (WT01_141m)	06:59	15:21 (WT01_141m)	06:00	16:06 (WT01_141m)	05:28
	16:58	17:50	18:39	82 16:09 (WT01_141m)	20:31	122 17:23 (WT01_141m)	21:19	56 17:02 (WT01_141m)	21:56
12	08:43	08:03	07:05	14:45 (WT01_141m)	06:56	15:22 (WT01_141m)	05:59	16:09 (WT01_141m)	05:28
	16:59	17:52	18:41	86 16:11 (WT01_141m)	20:32	121 17:23 (WT01_141m)	21:20	52 17:01 (WT01_141m)	21:57
13	08:42	08:01	07:03	14:43 (WT01_141m)	06:54	15:23 (WT01_141m)	05:57	16:11 (WT01_141m)	05:28
	17:01	17:54	18:43	90 16:13 (WT01_141m)	20:34	120 17:23 (WT01_141m)	21:22	48 16:59 (WT01_141m)	21:58
14	08:41	07:59	07:01	14:40 (WT01_141m)	06:52	15:23 (WT01_141m)	05:56	16:14 (WT01_141m)	05:28
	17:02	17:56	18:44	94 16:14 (WT01_141m)	20:35	119 17:22 (WT01_141m)	21:24	44 16:58 (WT01_141m)	21:58
15	08:41	07:57	06:59	14:39 (WT01_141m)	06:50	15:23 (WT01_141m)	05:54	16:17 (WT01_141m)	05:27
	17:04	17:57	18:46	96 16:15 (WT01_141m)	20:37	118 17:21 (WT01_141m)	21:25	39 16:56 (WT01_141m)	21:59
16	08:40	07:55	06:57	14:38 (WT01_141m)	06:48	15:24 (WT01_141m)	05:53	16:20 (WT01_141m)	05:27
	17:05	17:59	18:48	98 16:16 (WT01_141m)	20:39	117 17:21 (WT01_141m)	21:26	34 16:54 (WT01_141m)	21:59
17	08:39	07:54	06:54	14:36 (WT01_141m)	06:46	15:25 (WT01_141m)	05:51	16:24 (WT01_141m)	05:27
	17:07	18:01	18:49	102 16:18 (WT01_141m)	20:40	115 17:20 (WT01_141m)	21:28	28 16:52 (WT01_141m)	22:00
18	08:38	07:52	06:52	14:34 (WT01_141m)	06:44	15:26 (WT01_141m)	05:50	16:30 (WT01_141m)	05:27
	17:08	18:03	18:51	104 16:18 (WT01_141m)	20:42	114 17:20 (WT01_141m)	21:29	19 16:49 (WT01_141m)	22:00
19	08:37	07:50	06:50	14:33 (WT01_141m)	06:41	15:27 (WT01_141m)	05:48		05:27
	17:10	18:05	18:53	106 16:19 (WT01_141m)	20:44	113 17:20 (WT01_141m)	21:31		22:00
20	08:36	07:48	06:48	14:32 (WT01_141m)	06:39	15:28 (WT01_141m)	05:47		05:27
	17:12	18:06	18:54	108 16:20 (WT01_141m)	20:45	111 17:19 (WT01_141m)	21:32		22:01
21	08:35	07:46	06:45	14:31 (WT01_141m)	06:37	15:29 (WT01_141m)	05:46		05:28
	17:13	18:08	18:56	110 16:21 (WT01_141m)	20:47	110 17:19 (WT01_141m)	21:34		22:01
22	08:34	07:44	06:43	14:29 (WT01_141m)	06:35	15:31 (WT01_141m)	05:45		05:28
	17:15	18:10	18:58	112 16:21 (WT01_141m)	20:49	107 17:18 (WT01_141m)	21:35		22:01
23	08:33	07:42	06:41	14:28 (WT01_141m)	06:33	15:32 (WT01_141m)	05:43		05:28
	17:17	18:12	18:59	114 16:22 (WT01_141m)	20:50	105 17:17 (WT01_141m)	21:36		22:01
24	08:32	07:40	06:39	14:27 (WT01_141m)	06:31	15:33 (WT01_141m)	05:42		05:28
	17:18	18:13	19:01	115 16:22 (WT01_141m)	20:52	104 17:17 (WT01_141m)	21:38		22:02
25	08:30	07:38	06:36	14:27 (WT01_141m)	06:29	15:36 (WT01_141m)	05:41		05:29
	17:20	18:15	19:03	116 16:23 (WT01_141m)	20:53	101 17:17 (WT01_141m)	21:39		22:02
26	08:29	07:36	06:34	14:25 (WT01_141m)	06:27	15:37 (WT01_141m)	05:40		05:29
	17:22	18:17	19:04	118 16:23 (WT01_141m)	20:55	99 17:16 (WT01_141m)	21:40		22:02
27	08:28	07:33	06:32	14:24 (WT01_141m)	06:25	15:39 (WT01_141m)	05:39		05:29
	17:23	18:19	19:06	119 16:23 (WT01_141m)	20:57	96 17:15 (WT01_141m)	21:41		22:02
28	08:27	07:31	06:30	14:24 (WT01_141m)	06:23	15:40 (WT01_141m)	05:38		05:30
	17:25	18:20	19:08	120 16:24 (WT01_141m)	20:58	94 17:14 (WT01_141m)	21:43		22:01
29	08:25		07:27	15:22 (WT01_141m)	06:21	15:42 (WT01_141m)	05:37		05:30
	17:27		20:09	121 17:23 (WT01_141m)	21:00	92 17:14 (WT01_141m)	21:44		22:01
30	08:24		07:25	15:22 (WT01_141m)	06:20	15:43 (WT01_141m)	05:36		05:31
	17:29		20:11	122 17:24 (WT01_141m)	21:02	90 17:13 (WT01_141m)	21:45		22:01
31	08:22		07:23	15:22 (WT01_141m)			05:35		
	17:30		20:13	122 17:24 (WT01_141m)			21:46		
Potential sun hours	263	279	367		414		481		494
Total, worst case			2710		3400		1059		
Sun reduction			0,36		0,45		0,45		
Oper. time red.			0,99		0,99		0,99		
Wind dir. red.			0,73		0,73		0,73		
Total reduction			0,26		0,32		0,33		
Total, real			710		1102		345		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 5 - Blarenberglaan 23A

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

		July		August		September		October		November		December		
	1	05:32 22:01		06:07 21:30		16:18 (WT01_141m) 17:12 (WT01_141m)	06:55 20:30	122	15:20 (WT01_141m) 17:22 (WT01_141m)	07:42 19:23	88	15:23 (WT01_141m) 16:51 (WT01_141m)	07:33 17:18	08:23 16:40
	2	05:32 22:01		06:08 21:29	54	16:15 (WT01_141m) 17:13 (WT01_141m)	06:56 20:28		15:20 (WT01_141m) 17:22 (WT01_141m)	07:43 19:20		15:25 (WT01_141m) 16:49 (WT01_141m)	07:35 17:17	08:24 16:39
	3	05:33 22:00		06:10 21:27	58	16:14 (WT01_141m) 17:14 (WT01_141m)	06:58 20:26	122	15:18 (WT01_141m) 17:21 (WT01_141m)	07:45 19:18	84	15:26 (WT01_141m) 16:46 (WT01_141m)	07:37 17:15	08:26 16:39
	4	05:34 22:00		06:11 21:26	60	16:11 (WT01_141m) 17:15 (WT01_141m)	06:59 20:24	123	15:18 (WT01_141m) 17:21 (WT01_141m)	07:46 19:16	80	15:28 (WT01_141m) 16:44 (WT01_141m)	07:39 17:13	08:27 16:38
	5	05:34 21:59		06:13 21:24	64	16:08 (WT01_141m) 17:16 (WT01_141m)	07:01 20:22	123	15:17 (WT01_141m) 17:20 (WT01_141m)	07:48 19:14	76	15:30 (WT01_141m) 16:41 (WT01_141m)	07:40 17:12	08:28 16:38
	6	05:35 21:59		06:14 21:22	68	16:06 (WT01_141m) 17:17 (WT01_141m)	07:02 20:19	123	15:17 (WT01_141m) 17:20 (WT01_141m)	07:50 19:12	71	15:32 (WT01_141m) 16:38 (WT01_141m)	07:42 17:10	08:29 16:37
	7	05:36 21:58		06:16 21:20	71	16:04 (WT01_141m) 17:17 (WT01_141m)	07:04 20:17	123	15:16 (WT01_141m) 17:19 (WT01_141m)	07:51 19:09	66	15:35 (WT01_141m) 16:35 (WT01_141m)	07:44 17:08	08:31 16:37
	8	05:37 21:58		06:17 21:19	73	16:02 (WT01_141m) 17:19 (WT01_141m)	07:05 20:15	123	15:16 (WT01_141m) 17:19 (WT01_141m)	07:53 19:07	60	15:38 (WT01_141m) 16:31 (WT01_141m)	07:46 17:07	08:32 16:37
	9	05:38 21:57		06:19 21:17	77	16:00 (WT01_141m) 17:19 (WT01_141m)	07:07 20:13	123	15:15 (WT01_141m) 17:18 (WT01_141m)	07:55 19:05	53	15:41 (WT01_141m) 16:25 (WT01_141m)	07:47 17:05	08:33 16:36
	10	05:39 21:56		06:20 21:15	79	15:58 (WT01_141m) 17:20 (WT01_141m)	07:09 20:10	123	15:15 (WT01_141m) 17:18 (WT01_141m)	07:56 19:03	44	15:45 (WT01_141m) 16:19 (WT01_141m)	07:49 17:03	08:34 16:36
	11	05:40 21:56		06:22 21:13	82	15:55 (WT01_141m) 17:20 (WT01_141m)	07:10 20:08	123	15:14 (WT01_141m) 17:17 (WT01_141m)	07:58 19:01	34	15:52 (WT01_141m) 16:12 (WT01_141m)	07:51 17:02	08:35 16:36
	12	05:41 21:55		06:23 21:11	85	15:53 (WT01_141m) 17:20 (WT01_141m)	07:12 20:06	123	15:14 (WT01_141m) 17:16 (WT01_141m)	08:00 18:58	20	15:53 (WT01_141m) 16:38 (WT01_141m)	07:53 17:00	08:36 16:36
	13	05:42 21:54		06:25 21:09	87	15:51 (WT01_141m) 17:21 (WT01_141m)	07:13 20:04	122	15:13 (WT01_141m) 17:15 (WT01_141m)	08:01 18:56		15:54 (WT01_141m) 16:39 (WT01_141m)	07:54 16:59	08:37 16:36
	14	05:43 21:53		06:26 21:08	90	15:49 (WT01_141m) 17:21 (WT01_141m)	07:15 20:01	122	15:14 (WT01_141m) 17:15 (WT01_141m)	08:03 18:54		15:54 (WT01_141m) 16:40 (WT01_141m)	08:03 16:58	08:38 16:36
	15	05:44 21:52		06:28 21:06	92	15:47 (WT01_141m) 17:22 (WT01_141m)	07:16 19:59	121	15:13 (WT01_141m) 17:13 (WT01_141m)	08:05 18:52		15:54 (WT01_141m) 16:41 (WT01_141m)	08:05 16:56	08:39 16:36
	16	05:45 21:51		06:30 21:04	95	15:45 (WT01_141m) 17:22 (WT01_141m)	07:18 19:57	120	15:14 (WT01_141m) 17:13 (WT01_141m)	08:06 18:50		15:54 (WT01_141m) 16:42 (WT01_141m)	08:06 16:55	08:40 16:36
	17	05:47 21:50		06:31 21:02	97	15:43 (WT01_141m) 17:23 (WT01_141m)	07:20 19:54	119	15:13 (WT01_141m) 17:11 (WT01_141m)	08:08 18:48		15:54 (WT01_141m) 16:43 (WT01_141m)	08:08 16:54	08:41 16:36
	18	05:48 21:49		06:33 21:00	100	15:41 (WT01_141m) 17:23 (WT01_141m)	07:21 19:52	118	15:14 (WT01_141m) 17:11 (WT01_141m)	08:10 18:46		15:54 (WT01_141m) 16:44 (WT01_141m)	08:10 16:52	08:41 16:36
	19	05:49 21:48		06:34 20:58	102	15:40 (WT01_141m) 17:23 (WT01_141m)	07:23 19:50	117	15:14 (WT01_141m) 17:09 (WT01_141m)	08:11 18:44		15:54 (WT01_141m) 16:45 (WT01_141m)	08:11 16:51	08:42 16:37
	20	05:50 21:47		06:36 20:56	103	15:37 (WT01_141m) 17:23 (WT01_141m)	07:24 19:48	115	15:14 (WT01_141m) 17:08 (WT01_141m)	08:13 18:42		15:54 (WT01_141m) 16:46 (WT01_141m)	08:13 16:50	08:43 16:37
	21	05:51 21:46		06:37 20:54	106	15:36 (WT01_141m) 17:24 (WT01_141m)	07:26 19:45	114	15:14 (WT01_141m) 17:07 (WT01_141m)	08:15 18:40		15:54 (WT01_141m) 16:47 (WT01_141m)	08:15 16:49	08:43 16:38
	22	05:53 21:45		06:39 20:52	108	15:34 (WT01_141m) 17:23 (WT01_141m)	07:27 19:43	113	15:15 (WT01_141m) 17:06 (WT01_141m)	08:16 18:38		15:54 (WT01_141m) 16:48 (WT01_141m)	08:16 16:48	08:44 16:38
	23	05:54 21:43		06:40 20:50	109	15:33 (WT01_141m) 17:24 (WT01_141m)	07:29 19:41	111	15:16 (WT01_141m) 17:05 (WT01_141m)	08:18 18:36		15:54 (WT01_141m) 16:49 (WT01_141m)	08:18 16:47	08:44 16:39
	24	05:55 21:42		06:42 20:47	111	15:31 (WT01_141m) 17:23 (WT01_141m)	07:31 19:39	109	15:16 (WT01_141m) 17:03 (WT01_141m)	08:20 18:34		15:54 (WT01_141m) 16:50 (WT01_141m)	08:19 16:46	08:45 16:39
	25	05:57 21:41	16:45 (WT01_141m)	06:44 20:45	112	15:30 (WT01_141m) 17:24 (WT01_141m)	07:32 19:36	107	15:17 (WT01_141m) 17:02 (WT01_141m)	07:21 17:32		15:54 (WT01_141m) 16:51 (WT01_141m)	07:21 16:45	08:45 16:40
	26	05:58 21:39	16:55 (WT01_141m) 16:37 (WT01_141m)	06:45 20:43	114	15:28 (WT01_141m) 17:23 (WT01_141m)	07:34 19:34	105	15:17 (WT01_141m) 17:00 (WT01_141m)	07:23 17:30		15:54 (WT01_141m) 16:52 (WT01_141m)	07:23 16:44	08:45 16:40
	27	06:00 21:38	17:01 (WT01_141m) 16:33 (WT01_141m)	24	20:43	115	17:23 (WT01_141m)	103	17:00 (WT01_141m)	17:30		15:54 (WT01_141m) 16:53 (WT01_141m)	17:30 16:43	08:46 16:41
	28	06:01 21:37	17:03 (WT01_141m) 16:29 (WT01_141m)	30	20:41	117	17:24 (WT01_141m)	100	16:59 (WT01_141m)	17:28		15:54 (WT01_141m) 16:54 (WT01_141m)	17:28 16:42	08:46 16:42
	29	06:02 21:35	17:05 (WT01_141m) 16:26 (WT01_141m)	36	20:39	118	17:23 (WT01_141m)	97	16:56 (WT01_141m)	17:26		15:54 (WT01_141m) 16:55 (WT01_141m)	17:26 16:41	08:46 16:43
	30	06:04 21:34	17:08 (WT01_141m) 16:23 (WT01_141m)	42	20:37	119	17:23 (WT01_141m)	94	16:55 (WT01_141m)	17:24		15:54 (WT01_141m) 16:56 (WT01_141m)	17:24 16:40	08:46 16:44
	31	06:05 21:32	17:09 (WT01_141m) 16:20 (WT01_141m)	46	20:35	121	17:23 (WT01_141m)	91	16:53 (WT01_141m)	17:22		15:54 (WT01_141m) 16:57 (WT01_141m)	17:22 16:40	08:46 16:44

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 6 - Blarenberglaan 13

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

January		February		March	April	May	June
1	08:46	08:21	15:24 (WT01_141m)	07:29	07:21	06:18	05:34
	16:46	17:32	49 16:13 (WT01_141m)	18:22	20:14	21:03	21:47
2	08:46	08:19	15:24 (WT01_141m)	07:27	07:18	06:16	05:33
	16:47	17:34	51 16:15 (WT01_141m)	18:24	20:16	21:05	21:48
3	08:46	08:18	15:24 (WT01_141m)	07:25	07:16	06:14	05:33
	16:48	17:36	51 16:15 (WT01_141m)	18:26	20:17	21:06	21:49
4	08:46	08:16	15:23 (WT01_141m)	07:23	07:14	06:12	05:32
	16:49	17:38	52 16:15 (WT01_141m)	18:27	20:19	21:08	21:50
5	08:46	08:15	15:24 (WT01_141m)	07:21	07:12	06:10	05:31
	16:50	17:39	52 16:16 (WT01_141m)	18:29	20:21	21:10	21:51
6	08:45	08:13	15:24 (WT01_141m)	07:19	07:09	06:09	05:31
	16:51	17:41	52 16:16 (WT01_141m)	18:31	20:22	21:11	21:52
7	08:45	08:11	15:23 (WT01_141m)	07:16	07:07	06:07	05:30
	16:53	17:43	53 16:16 (WT01_141m)	18:32	20:24	21:13	21:53
8	08:45	08:10	15:23 (WT01_141m)	07:14	07:05	06:05	05:30
	16:54	17:45	53 16:16 (WT01_141m)	18:34	20:26	21:14	21:54
9	08:44	08:08	15:24 (WT01_141m)	07:12	07:03	06:04	05:29
	16:55	17:47	53 16:17 (WT01_141m)	18:36	20:27	21:16	21:55
10	08:44	08:06	15:24 (WT01_141m)	07:10	07:01	06:02	05:29
	16:57	17:48	53 16:17 (WT01_141m)	18:38	20:29	21:17	21:56
11	08:43	08:05	15:25 (WT01_141m)	07:08	06:59	06:00	05:28
	16:58	17:50	51 16:16 (WT01_141m)	18:39	20:31	21:19	21:56
12	08:43	08:03	15:25 (WT01_141m)	07:05	06:56	05:59	05:28
	16:59	17:52	51 16:16 (WT01_141m)	18:41	20:32	21:20	21:57
13	08:42	08:01	15:25 (WT01_141m)	07:03	06:54	05:57	05:28
	17:01	17:54	51 16:16 (WT01_141m)	18:43	20:34	21:22	21:58
14	08:41	07:59	15:26 (WT01_141m)	07:01	06:52	05:56	05:28
	17:02	17:56	49 16:15 (WT01_141m)	18:44	20:35	21:23	21:58
15	08:41	07:57	15:26 (WT01_141m)	06:59	06:50	05:54	05:27
	17:04	5 15:47 (WT01_141m)	17:57	49 16:15 (WT01_141m)	18:46	20:37	21:25
16	08:40	07:55	15:27 (WT01_141m)	06:57	06:48	05:53	05:27
	17:05	13 15:51 (WT01_141m)	17:59	47 16:14 (WT01_141m)	18:48	20:39	21:26
17	08:39	07:54	15:28 (WT01_141m)	06:54	06:46	05:51	05:27
	17:07	18 15:54 (WT01_141m)	18:01	45 16:13 (WT01_141m)	18:49	20:40	21:28
18	08:38	07:52	15:29 (WT01_141m)	06:52	06:44	05:50	05:27
	17:08	23 15:57 (WT01_141m)	18:03	43 16:12 (WT01_141m)	18:51	20:42	21:29
19	08:37	07:50	15:30 (WT01_141m)	06:50	06:41	05:48	05:27
	17:10	26 15:58 (WT01_141m)	18:05	42 16:12 (WT01_141m)	18:53	20:44	21:31
20	08:36	07:48	15:31 (WT01_141m)	06:48	06:39	05:47	05:27
	17:12	29 16:00 (WT01_141m)	18:06	39 16:10 (WT01_141m)	18:54	20:45	21:32
21	08:35	07:46	15:33 (WT01_141m)	06:45	06:37	05:46	05:28
	17:13	32 16:02 (WT01_141m)	18:08	36 16:09 (WT01_141m)	18:56	20:47	21:34
22	08:34	07:44	15:35 (WT01_141m)	06:43	06:35	05:44	05:28
	17:15	34 16:04 (WT01_141m)	18:10	32 16:07 (WT01_141m)	18:58	20:49	21:35
23	08:33	07:42	15:37 (WT01_141m)	06:41	06:33	05:43	05:28
	17:17	36 16:05 (WT01_141m)	18:12	29 16:06 (WT01_141m)	18:59	20:50	21:36
24	08:32	07:40	15:40 (WT01_141m)	06:39	06:31	05:42	05:28
	17:18	38 16:06 (WT01_141m)	18:13	23 16:03 (WT01_141m)	19:01	20:52	21:38
25	08:30	07:38	15:44 (WT01_141m)	06:36	06:29	05:41	05:29
	17:20	41 16:08 (WT01_141m)	18:15	15 15:59 (WT01_141m)	19:03	20:53	21:39
26	08:29	07:36	15:27 (WT01_141m)	06:34	06:27	05:40	05:29
	17:22	42 16:09 (WT01_141m)	18:17	19:04	20:55	21:40	22:02
27	08:28	07:33	15:26 (WT01_141m)	06:32	06:25	05:39	05:29
	17:23	44 16:10 (WT01_141m)	18:19	19:06	20:57	21:41	22:02
28	08:27	07:31	15:26 (WT01_141m)	06:30	06:23	05:38	05:30
	17:25	45 16:11 (WT01_141m)	18:20	19:08	20:58	21:43	22:01
29	08:25	07:27	15:25 (WT01_141m)	06:27	06:21	05:37	05:30
	17:27	46 16:11 (WT01_141m)	18:21	20:09	21:00	21:44	22:01
30	08:24	07:25	15:25 (WT01_141m)	06:25	06:20	05:36	05:31
	17:29	48 16:13 (WT01_141m)	18:22	20:11	21:02	21:45	22:01
31	08:22	07:23	15:25 (WT01_141m)	06:23	06:18	05:35	05:30
	17:30	48 16:13 (WT01_141m)	18:23	20:13	21:04	21:46	05:31
Potential sun hours	263	279		367	414	481	494
Total, worst case	568	1121					
Sun reduction	0,24	0,28					
Oper. time red.	0,99	0,99					
Wind dir. red.	0,74	0,74					
Total reduction	0,17	0,20					
Total, real	97	228					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 6 - Blarenberglaan 13

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October		November	December
1	05:32	06:07	06:55	07:42		07:33	14:54 (WT01_141m) 08:23
	22:01	21:30	20:30	19:23		17:18	52 15:46 (WT01_141m) 16:40
2	05:32	06:08	06:56	07:43		07:35	14:53 (WT01_141m) 08:24
	22:01	21:29	20:28	19:20		17:17	53 15:46 (WT01_141m) 16:39
3	05:33	06:10	06:58	07:45		07:37	14:53 (WT01_141m) 08:26
	22:00	21:27	20:26	19:18		17:15	53 15:46 (WT01_141m) 16:39
4	05:34	06:11	06:59	07:46		07:39	14:53 (WT01_141m) 08:27
	22:00	21:26	20:24	19:16		17:13	53 15:46 (WT01_141m) 16:38
5	05:34	06:13	07:01	07:48		07:40	14:53 (WT01_141m) 08:28
	21:59	21:24	20:21	19:14		17:12	53 15:46 (WT01_141m) 16:38
6	05:35	06:14	07:02	07:50		07:42	14:54 (WT01_141m) 08:29
	21:59	21:22	20:19	19:12		17:10	52 15:46 (WT01_141m) 16:37
7	05:36	06:16	07:04	07:51		07:44	14:54 (WT01_141m) 08:31
	21:58	21:20	20:17	19:09		17:08	52 15:46 (WT01_141m) 16:37
8	05:37	06:17	07:05	07:53		07:46	14:55 (WT01_141m) 08:32
	21:58	21:19	20:15	19:07		17:07	51 15:46 (WT01_141m) 16:37
9	05:38	06:19	07:07	07:55		07:47	14:55 (WT01_141m) 08:33
	21:57	21:17	20:13	19:05		17:05	50 15:45 (WT01_141m) 16:36
10	05:39	06:20	07:09	07:56		07:49	14:55 (WT01_141m) 08:34
	21:56	21:15	20:10	19:03		17:03	49 15:44 (WT01_141m) 16:36
11	05:40	06:22	07:10	07:58		07:51	14:56 (WT01_141m) 08:35
	21:56	21:13	20:08	19:01		17:02	48 15:44 (WT01_141m) 16:36
12	05:41	06:23	07:12	08:00		07:53	14:56 (WT01_141m) 08:36
	21:55	21:11	20:06	18:58		17:00	48 15:44 (WT01_141m) 16:36
13	05:42	06:25	07:13	08:01		07:54	14:57 (WT01_141m) 08:37
	21:54	21:09	20:04	18:56		16:59	46 15:43 (WT01_141m) 16:36
14	05:43	06:26	07:15	08:03		07:56	14:58 (WT01_141m) 08:38
	21:53	21:08	20:01	18:54		16:58	45 15:43 (WT01_141m) 16:36
15	05:44	06:28	07:16	08:04		07:58	14:59 (WT01_141m) 08:39
	21:52	21:06	19:59	18:52		16:56	44 15:43 (WT01_141m) 16:36
16	05:45	06:30	07:18	08:06		07:59	15:00 (WT01_141m) 08:40
	21:51	21:04	19:57	18:50	7	16:27 (WT01_141m)	42 15:42 (WT01_141m) 16:36
17	05:47	06:31	07:19	08:08		16:14 (WT01_141m)	08:01 15:00 (WT01_141m) 08:41
	21:50	21:02	19:54	18:48	18	16:32 (WT01_141m)	41 15:41 (WT01_141m) 16:36
18	05:48	06:33	07:21	08:10		16:10 (WT01_141m)	08:03 15:02 (WT01_141m) 08:41
	21:49	21:00	19:52	18:46	25	16:35 (WT01_141m)	38 15:40 (WT01_141m) 16:36
19	05:49	06:34	07:23	08:11		16:08 (WT01_141m)	08:04 15:03 (WT01_141m) 08:42
	21:48	20:58	19:50	18:44	30	16:38 (WT01_141m)	36 15:39 (WT01_141m) 16:37
20	05:50	06:36	07:24	08:13		16:05 (WT01_141m)	08:06 15:05 (WT01_141m) 08:43
	21:47	20:56	19:48	18:42	34	16:39 (WT01_141m)	34 15:39 (WT01_141m) 16:37
21	05:51	06:37	07:26	08:15		16:03 (WT01_141m)	08:08 15:06 (WT01_141m) 08:43
	21:46	20:54	19:45	18:40	37	16:40 (WT01_141m)	32 15:38 (WT01_141m) 16:38
22	05:53	06:39	07:27	08:16		16:01 (WT01_141m)	08:09 15:07 (WT01_141m) 08:44
	21:45	20:52	19:43	18:38	40	16:41 (WT01_141m)	29 15:36 (WT01_141m) 16:38
23	05:54	06:40	07:29	08:18		16:00 (WT01_141m)	08:11 15:09 (WT01_141m) 08:44
	21:43	20:50	19:41	18:36	42	16:42 (WT01_141m)	26 15:35 (WT01_141m) 16:39
24	05:55	06:42	07:30	08:20		15:59 (WT01_141m)	08:12 15:11 (WT01_141m) 08:45
	21:42	20:47	19:39	18:34	44	16:43 (WT01_141m)	23 15:34 (WT01_141m) 16:39
25	05:57	06:44	07:32	07:21		14:58 (WT01_141m)	08:14 15:13 (WT01_141m) 08:45
	21:41	20:45	19:36	17:32	46	15:44 (WT01_141m)	18 15:31 (WT01_141m) 16:40
26	05:58	06:45	07:34	07:23		14:56 (WT01_141m)	08:15 15:16 (WT01_141m) 08:45
	21:39	20:43	19:34	17:30	48	15:44 (WT01_141m)	14 15:30 (WT01_141m) 16:40
27	06:00	06:47	07:35	07:25		14:56 (WT01_141m)	08:17 15:21 (WT01_141m) 08:46
	21:38	20:41	19:32	17:28	48	15:44 (WT01_141m)	5 15:26 (WT01_141m) 16:41
28	06:01	06:48	07:37	07:27		14:55 (WT01_141m)	08:18 15:22 (WT01_141m) 08:46
	21:37	20:39	19:29	17:26	50	15:45 (WT01_141m)	16:42 15:23 (WT01_141m) 08:46
29	06:02	06:50	07:38	07:28		14:55 (WT01_141m)	08:20 15:24 (WT01_141m) 08:46
	21:35	20:37	19:27	17:24	50	15:45 (WT01_141m)	16:41 15:25 (WT01_141m) 08:46
30	06:04	06:51	07:40	07:30		14:54 (WT01_141m)	08:21 15:26 (WT01_141m) 08:46
	21:34	20:35	19:25	17:22	52	15:46 (WT01_141m)	16:40 15:27 (WT01_141m) 08:46
31	06:05	06:53		07:32		14:54 (WT01_141m)	08:17 15:28 (WT01_141m) 08:46
	21:32	20:32		17:20	52	15:46 (WT01_141m)	16:45 15:29 (WT01_141m) 08:46
Potential sun hours	498	451	380	333		269	248
Total, worst case				623		1087	
Sun reduction				0,35		0,26	
Oper. time red.				0,99		0,99	
Wind dir. red.				0,74		0,74	
Total reduction				0,26		0,19	
Total, real				160		202	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 7 - Oude Antwerpsebaan 287
Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:46	08:21	07:29	07:21	06:18	05:34	19:56 (WT01_141m) 05:32	19:59 (WT01_141m) 06:07	06:55	07:42	07:33	08:23
	16:46	17:32	18:22	20:14	21:03	21:47	20:40 (WT01_141m) 22:01	20:49 (WT01_141m) 21:30	20:30	19:23	17:18	16:40
2	08:46	08:19	07:27	07:18	06:16	05:33	19:56 (WT01_141m) 05:32	20:00 (WT01_141m) 06:08	06:56	07:43	07:35	08:24
	16:47	17:34	18:24	20:16	21:05	21:48	20:41 (WT01_141m) 22:01	20:50 (WT01_141m) 21:29	20:28	19:20	17:17	16:39
3	08:46	08:18	07:25	07:16	06:14	05:33	19:56 (WT01_141m) 05:33	20:00 (WT01_141m) 06:10	06:58	07:45	07:37	08:26
	16:48	17:36	18:26	20:17	21:06	21:49	20:42 (WT01_141m) 22:00	20:50 (WT01_141m) 21:27	20:26	19:18	17:15	16:39
4	08:46	08:16	07:23	07:14	06:12	05:32	19:56 (WT01_141m) 05:34	20:00 (WT01_141m) 06:11	06:59	07:46	07:39	08:27
	16:49	17:38	18:27	20:19	21:08	21:50	20:42 (WT01_141m) 22:00	20:49 (WT01_141m) 21:26	20:24	19:16	17:13	16:38
5	08:46	08:15	07:21	07:12	06:10	05:31	19:56 (WT01_141m) 05:34	20:01 (WT01_141m) 06:13	07:01	07:48	07:40	08:28
	16:50	17:39	18:29	20:21	21:10	21:51	20:43 (WT01_141m) 21:59	20:49 (WT01_141m) 21:24	20:21	19:14	17:12	16:38
6	08:45	08:13	07:19	07:09	06:09	05:31	19:55 (WT01_141m) 05:35	20:01 (WT01_141m) 06:14	07:02	07:50	07:42	08:29
	16:51	17:41	18:31	20:22	21:11	21:52	20:43 (WT01_141m) 21:59	20:50 (WT01_141m) 21:22	20:19	19:12	17:10	16:37
7	08:45	08:11	07:16	07:07	06:07	05:30	19:56 (WT01_141m) 05:36	20:02 (WT01_141m) 06:16	07:04	07:51	07:44	08:31
	16:53	17:43	18:32	20:24	21:13	21:53	20:44 (WT01_141m) 21:58	20:50 (WT01_141m) 21:20	20:17	19:09	17:08	16:37
8	08:45	08:10	07:14	07:05	06:05	05:30	19:55 (WT01_141m) 05:37	20:03 (WT01_141m) 06:17	07:05	07:53	07:46	08:32
	16:54	17:45	18:34	20:26	21:14	21:54	20:44 (WT01_141m) 21:58	20:50 (WT01_141m) 21:19	20:15	19:07	17:07	16:37
9	08:44	08:08	07:12	07:03	06:04	05:29	19:55 (WT01_141m) 05:38	20:03 (WT01_141m) 06:19	07:07	07:55	07:47	08:33
	16:55	17:47	18:36	20:27	21:16	21:55	20:45 (WT01_141m) 21:57	20:49 (WT01_141m) 21:17	20:13	19:05	17:05	16:36
10	08:44	08:06	07:10	07:01	06:02	05:29	19:56 (WT01_141m) 05:39	20:03 (WT01_141m) 06:20	07:09	07:56	07:49	08:34
	16:57	17:48	18:38	20:29	21:17	21:56	20:45 (WT01_141m) 21:56	20:48 (WT01_141m) 21:15	20:10	19:03	17:03	16:36
11	08:43	08:05	07:08	06:59	06:00	05:28	19:55 (WT01_141m) 05:40	20:04 (WT01_141m) 06:22	07:10	07:58	07:51	08:35
	16:58	17:50	18:39	20:31	21:19	21:56	20:45 (WT01_141m) 21:56	20:48 (WT01_141m) 21:13	20:08	19:01	17:02	16:36
12	08:43	08:03	07:05	06:56	05:59	05:28	19:55 (WT01_141m) 05:41	20:04 (WT01_141m) 06:23	07:12	08:00	07:52	08:36
	16:59	17:52	18:41	20:32	21:20	21:57	20:46 (WT01_141m) 21:55	20:48 (WT01_141m) 21:11	20:06	18:58	17:00	16:36
13	08:42	08:01	07:03	06:54	05:57	05:28	19:55 (WT01_141m) 05:42	20:05 (WT01_141m) 06:25	07:13	08:01	07:54	08:37
	17:01	17:54	18:43	20:34	21:22	21:58	20:46 (WT01_141m) 21:54	20:47 (WT01_141m) 21:09	20:04	18:56	16:59	16:36
14	08:41	07:59	07:01	06:52	05:56	05:28	19:56 (WT01_141m) 05:43	20:06 (WT01_141m) 06:26	07:15	08:03	07:56	08:38
	17:02	17:56	18:44	20:35	21:23	21:58	20:47 (WT01_141m) 21:53	20:47 (WT01_141m) 21:08	20:01	18:54	16:58	16:36
15	08:40	07:57	06:59	06:50	05:54	05:27	19:56 (WT01_141m) 05:44	20:06 (WT01_141m) 06:28	07:16	08:04	07:58	08:39
	17:04	17:57	18:46	20:37	21:25	21:59	20:47 (WT01_141m) 21:52	20:46 (WT01_141m) 21:06	19:59	18:52	16:56	16:36
16	08:40	07:55	06:57	06:48	05:53	05:27	19:56 (WT01_141m) 05:45	20:08 (WT01_141m) 06:30	07:18	08:06	07:59	08:40
	17:05	17:59	18:48	20:39	21:26	21:59	20:47 (WT01_141m) 21:51	20:46 (WT01_141m) 21:04	19:57	18:50	16:55	16:36
17	08:39	07:53	06:54	06:46	05:51	05:27	19:56 (WT01_141m) 05:47	20:09 (WT01_141m) 06:31	07:19	08:08	08:01	08:41
	17:07	18:01	18:49	20:40	21:28	22:00	20:48 (WT01_141m) 21:50	20:45 (WT01_141m) 21:02	19:54	18:48	16:54	16:36
18	08:38	07:52	06:52	06:44	05:50	05:27	19:56 (WT01_141m) 05:48	20:10 (WT01_141m) 06:33	07:21	08:09	08:03	08:41
	17:08	18:03	18:51	20:42	21:29	22:00	20:48 (WT01_141m) 21:49	20:44 (WT01_141m) 21:00	19:52	18:46	16:52	16:36
19	08:37	07:50	06:50	06:41	05:48	05:27	19:56 (WT01_141m) 05:49	20:11 (WT01_141m) 06:34	07:23	08:11	08:04	08:42
	17:10	18:05	18:53	20:44	21:31	11	20:22 (WT01_141m) 22:00	20:43 (WT01_141m) 20:58	19:50	18:44	16:51	16:37
20	08:36	07:48	06:48	06:39	05:47	05:27	19:56 (WT01_141m) 05:50	20:12 (WT01_141m) 06:36	07:24	08:13	08:06	08:43
	17:12	18:06	18:54	20:45	21:32	18	20:26 (WT01_141m) 22:01	20:42 (WT01_141m) 20:56	19:48	18:42	16:50	16:37
21	08:35	07:46	06:45	06:37	05:46	05:28	19:56 (WT01_141m) 05:51	20:13 (WT01_141m) 06:37	07:26	08:15	08:08	08:43
	17:13	18:08	18:56	20:47	21:34	22	20:28 (WT01_141m) 22:01	20:48 (WT01_141m) 21:46	28	20:41 (WT01_141m) 20:54	19:45	16:49
22	08:34	07:44	06:43	06:35	05:45	05:28	19:56 (WT01_141m) 05:53	20:15 (WT01_141m) 06:39	07:27	08:16	08:09	08:44
	17:15	18:10	18:58	20:49	21:35	26	20:30 (WT01_141m) 22:01	20:48 (WT01_141m) 21:45	25	20:40 (WT01_141m) 20:52	19:43	16:48
23	08:33	07:42	06:41	06:33	05:43	05:28	19:57 (WT01_141m) 05:54	20:17 (WT01_141m) 06:40	07:29	08:18	08:11	08:44
	17:17	18:12	18:59	20:50	21:36	29	20:32 (WT01_141m) 22:01	20:49 (WT01_141m) 21:43	21	20:38 (WT01_141m) 20:50	19:41	16:47
24	08:32	07:40	06:39	06:31	05:42	05:28	19:57 (WT01_141m) 05:55	20:19 (WT01_141m) 06:42	07:30	08:20	08:12	08:45
	17:18	18:13	19:01	20:52	21:38	31	20:33 (WT01_141m) 22:01	20:49 (WT01_141m) 21:42	16	20:35 (WT01_141m) 20:47	19:39	16:46
25	08:30	07:38	06:36	06:29	05:41	05:29	19:57 (WT01_141m) 05:57	20:23 (WT01_141m) 06:44	07:32	07:21	08:14	08:45
	17:20	18:15	19:03	20:53	21:39	33	20:34 (WT01_141m) 22:02	20:49 (WT01_141m) 21:41	7	20:30 (WT01_141m) 20:45	19:36	16:45
26	08:29	07:36	06:34	06:27	05:40	05:29	19:58 (WT01_141m) 05:58	20:24 (WT01_141m) 06:45	07:34	07:23	08:15	08:45
	17:22	18:17	19:04	20:55	21:40	35	20:35 (WT01_141m) 22:02	20:50 (WT01_141m) 21:39	20:43	19:34	17:30	16:44
27	08:28	07:33	06:32	06:25	05:39	05:29	19:58 (WT01_141m) 06:00	20:25 (WT01_141m) 06:47	07:35	07:25	08:17	08:46
	17:23	18:19	19:06	20:57	21:41	37	20:36 (WT01_141m) 22:01	20:49 (WT01_141m) 21:38	20:41	19:32	17:28	16:43
28	08:27	07:31	06:30	06:23	05:38	05:30	19:59 (WT01_141m) 06:01	20:26 (WT01_141m) 06:48	07:37	07:27	08:18	08:46
	17:25	18:20	19:08	20:58	21:43	39	20:37 (WT01_141m) 22:01	20:50 (WT01_141m) 21:36	20:39	19:29	17:26	16:42
29	08:25	07:27	06:21	05:37	05:30	05:30	19:59 (WT01_141m) 06:02	20:27 (WT01_141m) 06:49	07:38	07:28	08:20	08:46
	17:27	07:29	06:21	21:00	21:44	41	20:38 (WT01_141m) 22:01	20:49 (WT01_141m) 21:35	20:37	19:27	17:24	16:41
30	08:24	07:25	06:20	05:36	05:36	05:31	19:57 (WT01_141m) 06:03	20:28 (WT01_141m) 06:49	07:39	07:30	08:21	08:46
	17:29	07:26	20:11	21:02	21:45	41	20:38 (WT01_141m) 22:01	20:50 (WT01_141m) 21:34	20:35	19:25	17:22	16:40
31	08:22	07:23	05:35	05:35	05:35	05:35	19:57 (WT01_141m) 06:05	20:29 (WT01_141m) 06:49	07:39	07:30	08:21	08:46
	17:30	07:24	20:12	21:02	21:46	43	20:40 (WT01_141m) 22:01	20:51 (WT01_141m) 21:35	20:36	19:26	17:23	16:41
Potential sun hours	263	280	367	414	481	494	498	451	380	333	269	248
Total, worst case					406	1500		960				
Sun reduction					0,45	0,44		0,44				
Oper. time red.					0,99	0,99		0,99				
Wind dir. red.					0,54	0,54		0,54				
Total reduction					0,24	0,23		0,24				
Total, real					98	352		228				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
 NL-1082 MS Amsterdam
 +31 (0)88 4261 261
 Margot Scheldeman /
 margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 8 - Oude Antwerpsebaan 230

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June	
1	08:46	08:21	07:29	07:21	06:18	05:34	19:58 (WT01_141m)
	16:46	17:32	18:22	20:14	21:03	21:47	41 20:39 (WT01_141m)
2	08:46	08:19	07:27	07:18	06:16	05:33	19:58 (WT01_141m)
	16:47	17:34	18:24	20:16	21:05	21:48	40 20:38 (WT01_141m)
3	08:46	08:18	07:25	07:16	06:14	05:33	19:59 (WT01_141m)
	16:48	17:36	18:26	20:17	21:06	21:49	40 20:39 (WT01_141m)
4	08:46	08:16	07:23	07:14	06:12	05:32	19:59 (WT01_141m)
	16:49	17:38	18:27	20:19	21:08	21:50	40 20:39 (WT01_141m)
5	08:46	08:15	07:21	07:12	06:10	05:31	20:00 (WT01_141m)
	16:50	17:39	18:29	20:21	21:10	21:51	39 20:39 (WT01_141m)
6	08:45	08:13	07:19	07:09	06:09	20:12 (WT01_141m)	05:31 20:00 (WT01_141m)
	16:51	17:41	18:31	20:22	21:11	9 20:21 (WT01_141m)	39 20:39 (WT01_141m)
7	08:45	08:11	07:16	07:07	06:07	20:08 (WT01_141m)	05:30 20:00 (WT01_141m)
	16:53	17:43	18:32	20:24	21:13	16 20:24 (WT01_141m)	39 20:39 (WT01_141m)
8	08:45	08:10	07:14	07:05	06:05	20:07 (WT01_141m)	05:30 20:00 (WT01_141m)
	16:54	17:45	18:34	20:26	21:14	20 20:27 (WT01_141m)	39 20:39 (WT01_141m)
9	08:44	08:08	07:12	07:03	06:04	20:04 (WT01_141m)	05:29 20:01 (WT01_141m)
	16:55	17:47	18:36	20:27	21:16	24 20:28 (WT01_141m)	38 20:39 (WT01_141m)
10	08:44	08:06	07:10	07:01	06:02	20:03 (WT01_141m)	05:29 20:02 (WT01_141m)
	16:57	17:48	18:38	20:29	21:17	27 20:30 (WT01_141m)	37 20:39 (WT01_141m)
11	08:43	08:05	07:08	06:58	06:00	20:02 (WT01_141m)	05:28 20:01 (WT01_141m)
	16:58	17:50	18:39	20:31	21:19	29 20:31 (WT01_141m)	38 20:39 (WT01_141m)
12	08:43	08:03	07:05	06:56	05:59	20:01 (WT01_141m)	05:28 20:02 (WT01_141m)
	16:59	17:52	18:41	20:32	21:20	31 20:32 (WT01_141m)	37 20:39 (WT01_141m)
13	08:42	08:01	07:03	06:54	05:57	20:00 (WT01_141m)	05:28 20:02 (WT01_141m)
	17:01	17:54	18:43	20:34	21:22	33 20:33 (WT01_141m)	37 20:39 (WT01_141m)
14	08:41	07:59	07:01	06:52	05:56	19:59 (WT01_141m)	05:28 20:03 (WT01_141m)
	17:02	17:56	18:44	20:35	21:23	35 20:34 (WT01_141m)	37 20:40 (WT01_141m)
15	08:40	07:57	06:59	06:50	05:54	19:59 (WT01_141m)	05:27 20:03 (WT01_141m)
	17:04	17:57	18:46	20:37	21:25	36 20:35 (WT01_141m)	37 20:40 (WT01_141m)
16	08:40	07:55	06:57	06:48	05:53	19:58 (WT01_141m)	05:27 20:04 (WT01_141m)
	17:05	17:58	18:48	20:39	21:26	37 20:35 (WT01_141m)	36 20:40 (WT01_141m)
17	08:39	07:53	06:54	06:46	05:51	19:58 (WT01_141m)	05:27 20:04 (WT01_141m)
	17:07	18:01	18:49	20:40	21:28	38 20:36 (WT01_141m)	36 20:40 (WT01_141m)
18	08:38	07:52	06:52	06:44	05:50	19:58 (WT01_141m)	05:27 20:04 (WT01_141m)
	17:08	18:03	18:51	20:42	21:29	38 20:36 (WT01_141m)	36 20:40 (WT01_141m)
19	08:37	07:50	06:50	06:41	05:48	19:57 (WT01_141m)	05:27 20:04 (WT01_141m)
	17:10	18:04	18:53	20:44	21:31	39 20:36 (WT01_141m)	36 20:40 (WT01_141m)
20	08:36	07:48	06:48	06:39	05:47	19:57 (WT01_141m)	05:27 20:04 (WT01_141m)
	17:12	18:06	18:54	20:45	21:32	39 20:36 (WT01_141m)	36 20:40 (WT01_141m)
21	08:35	07:46	06:45	06:37	05:46	19:57 (WT01_141m)	05:28 20:04 (WT01_141m)
	17:13	18:08	18:56	20:47	21:34	40 20:37 (WT01_141m)	36 20:40 (WT01_141m)
22	08:34	07:44	06:43	06:35	05:45	19:57 (WT01_141m)	05:28 20:04 (WT01_141m)
	17:15	18:10	18:58	20:49	21:35	40 20:37 (WT01_141m)	36 20:40 (WT01_141m)
23	08:33	07:42	06:41	06:33	05:43	19:57 (WT01_141m)	05:28 20:05 (WT01_141m)
	17:17	18:12	18:59	20:50	21:36	41 20:38 (WT01_141m)	36 20:41 (WT01_141m)
24	08:32	07:40	06:39	06:31	05:42	19:57 (WT01_141m)	05:28 20:05 (WT01_141m)
	17:18	18:13	19:01	20:52	21:38	41 20:38 (WT01_141m)	36 20:41 (WT01_141m)
25	08:30	07:38	06:36	06:29	05:41	19:57 (WT01_141m)	05:29 20:05 (WT01_141m)
	17:20	18:15	19:03	20:53	21:39	41 20:38 (WT01_141m)	36 20:41 (WT01_141m)
26	08:29	07:36	06:34	06:27	05:40	19:57 (WT01_141m)	05:29 20:06 (WT01_141m)
	17:22	18:17	19:04	20:55	21:40	41 20:38 (WT01_141m)	36 20:42 (WT01_141m)
27	08:28	07:33	06:32	06:25	05:39	19:57 (WT01_141m)	05:29 20:05 (WT01_141m)
	17:23	18:19	19:06	20:57	21:41	41 20:38 (WT01_141m)	37 20:42 (WT01_141m)
28	08:27	07:31	06:30	06:23	05:38	19:57 (WT01_141m)	05:30 20:06 (WT01_141m)
	17:25	18:20	19:08	20:58	21:43	41 20:38 (WT01_141m)	37 20:43 (WT01_141m)
29	08:25		07:27	06:21	05:37	19:57 (WT01_141m)	05:30 20:05 (WT01_141m)
	17:27		20:09	21:00	21:44	41 20:38 (WT01_141m)	37 20:42 (WT01_141m)
30	08:24		07:25	06:20	05:36	19:57 (WT01_141m)	05:31 20:06 (WT01_141m)
	17:29		20:11	21:02	21:45	41 20:38 (WT01_141m)	37 20:43 (WT01_141m)
31	08:22		07:23		05:35	19:58 (WT01_141m)	
	17:30		20:12		21:46	41 20:39 (WT01_141m)	
Potential sun hours	263	280	367	414	481	494	
Total, worst case					900		1122
Sun reduction					0,45		0,44
Oper. time red.					0,99		0,99
Wind dir. red.					0,55		0,55
Total reduction					0,24		0,23
Total, real					218		264

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 8 - Oude Antwerpsebaan 230

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July			August			September			October			November			December		
1	05:32	20:05 (WT01_141m)	06:07	20:12 (WT01_141m)	06:54	07:42	07:33	08:23									
	22:01	38 20:43 (WT01_141m)	21:30	30 20:42 (WT01_141m)	20:30	19:23	17:18	16:40									
2	05:32	20:06 (WT01_141m)	06:08	20:13 (WT01_141m)	06:56	07:43	07:35	08:24									
	22:01	38 20:44 (WT01_141m)	21:29	28 20:41 (WT01_141m)	20:28	19:20	17:17	16:39									
3	05:33	20:06 (WT01_141m)	06:10	20:14 (WT01_141m)	06:58	07:45	07:37	08:25									
	22:00	38 20:44 (WT01_141m)	21:27	26 20:40 (WT01_141m)	20:26	19:18	17:15	16:39									
4	05:34	20:06 (WT01_141m)	06:11	20:15 (WT01_141m)	06:59	07:46	07:39	08:27									
	22:00	38 20:44 (WT01_141m)	21:26	23 20:38 (WT01_141m)	20:24	19:16	17:13	16:38									
5	05:34	20:06 (WT01_141m)	06:13	20:17 (WT01_141m)	07:01	07:48	07:40	08:28									
	21:59	38 20:44 (WT01_141m)	21:24	19 20:36 (WT01_141m)	20:21	19:14	17:12	16:38									
6	05:35	20:06 (WT01_141m)	06:14	20:20 (WT01_141m)	07:02	07:50	07:42	08:29									
	21:59	39 20:45 (WT01_141m)	21:22	14 20:34 (WT01_141m)	20:19	19:12	17:10	16:37									
7	05:36	20:06 (WT01_141m)	06:16	20:24 (WT01_141m)	07:04	07:51	07:44	08:31									
	21:58	39 20:45 (WT01_141m)	21:20	4 20:28 (WT01_141m)	20:17	19:09	17:08	16:37									
8	05:37	20:06 (WT01_141m)	06:17		07:05	07:53	07:46	08:32									
	21:58	40 20:46 (WT01_141m)	21:19		20:15	19:07	17:07	16:37									
9	05:38	20:06 (WT01_141m)	06:19		07:07	07:55	07:47	08:33									
	21:57	40 20:46 (WT01_141m)	21:17		20:13	19:05	17:05	16:36									
10	05:39	20:06 (WT01_141m)	06:20		07:09	07:56	07:49	08:34									
	21:56	40 20:46 (WT01_141m)	21:15		20:10	19:03	17:03	16:36									
11	05:40	20:06 (WT01_141m)	06:22		07:10	07:58	07:51	08:35									
	21:56	40 20:46 (WT01_141m)	21:13		20:08	19:01	17:02	16:36									
12	05:41	20:06 (WT01_141m)	06:23		07:12	07:59	07:52	08:36									
	21:55	40 20:46 (WT01_141m)	21:11		20:06	18:58	17:00	16:36									
13	05:42	20:06 (WT01_141m)	06:25		07:13	08:01	07:54	08:37									
	21:54	40 20:46 (WT01_141m)	21:09		20:04	18:56	16:59	16:36									
14	05:43	20:06 (WT01_141m)	06:26		07:15	08:03	07:56	08:38									
	21:53	41 20:47 (WT01_141m)	21:08		20:01	18:54	16:58	16:36									
15	05:44	20:06 (WT01_141m)	06:28		07:16	08:04	07:58	08:39									
	21:52	41 20:47 (WT01_141m)	21:06		19:59	18:52	16:56	16:36									
16	05:45	20:07 (WT01_141m)	06:30		07:18	08:06	07:59	08:40									
	21:51	41 20:48 (WT01_141m)	21:04		19:57	18:50	16:55	16:36									
17	05:47	20:07 (WT01_141m)	06:31		07:19	08:08	08:01	08:41									
	21:50	41 20:48 (WT01_141m)	21:02		19:54	18:48	16:54	16:36									
18	05:48	20:07 (WT01_141m)	06:33		07:21	08:09	08:03	08:41									
	21:49	41 20:48 (WT01_141m)	21:00		19:52	18:46	16:52	16:36									
19	05:49	20:06 (WT01_141m)	06:34		07:23	08:11	08:04	08:42									
	21:48	41 20:47 (WT01_141m)	20:58		19:50	18:44	16:51	16:37									
20	05:50	20:06 (WT01_141m)	06:36		07:24	08:13	08:06	08:43									
	21:47	41 20:47 (WT01_141m)	20:56		19:48	18:42	16:50	16:37									
21	05:51	20:06 (WT01_141m)	06:37		07:26	08:15	08:08	08:43									
	21:46	41 20:47 (WT01_141m)	20:54		19:45	18:40	16:49	16:38									
22	05:53	20:07 (WT01_141m)	06:39		07:27	08:16	08:09	08:44									
	21:45	41 20:48 (WT01_141m)	20:52		19:43	18:38	16:48	16:38									
23	05:54	20:07 (WT01_141m)	06:40		07:29	08:18	08:11	08:44									
	21:43	40 20:47 (WT01_141m)	20:49		19:41	18:36	16:47	16:39									
24	05:55	20:07 (WT01_141m)	06:42		07:30	08:20	08:12	08:45									
	21:42	40 20:47 (WT01_141m)	20:47		19:38	18:34	16:46	16:39									
25	05:57	20:07 (WT01_141m)	06:44		07:32	07:21	08:14	08:45									
	21:41	39 20:46 (WT01_141m)	20:45		19:36	17:32	16:45	16:40									
26	05:58	20:08 (WT01_141m)	06:45		07:34	07:23	08:15	08:45									
	21:39	39 20:47 (WT01_141m)	20:43		19:34	17:30	16:44	16:40									
27	06:00	20:09 (WT01_141m)	06:47		07:35	07:25	08:17	08:46									
	21:38	37 20:46 (WT01_141m)	20:41		19:32	17:28	16:43	16:41									
28	06:01	20:09 (WT01_141m)	06:48		07:37	07:27	08:18	08:46									
	21:36	36 20:45 (WT01_141m)	20:39		19:29	17:26	16:42	16:42									
29	06:02	20:10 (WT01_141m)	06:50		07:38	07:28	08:20	08:46									
	21:35	35 20:45 (WT01_141m)	20:37		19:27	17:24	16:41	16:43									
30	06:04	20:10 (WT01_141m)	06:51		07:40	07:30	08:21	08:46									
	21:33	34 20:44 (WT01_141m)	20:35		19:25	17:22	16:40	16:44									
31	06:05	20:11 (WT01_141m)	06:53			07:32		08:46									
	21:32	32 20:43 (WT01_141m)	20:32			17:20		16:45									
Potential sun hours	498		451		380	333	269	248									
Total, worst case	1209		144														
Sun reduction	0,44		0,46														
Oper. time red.	0,99		0,99														
Wind dir. red.	0,55		0,55														
Total reduction	0,24		0,25														
Total, real	287		36														

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
 NL-1082 MS Amsterdam
 +31 (0)88 4261 261
 Margot Scheldeman /
 margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 9 - Galgestraat 91

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46 16:46	08:21 17:32	07:29 18:22	07:21 20:14	06:18 21:03	05:34 21:47
2	08:46 16:47	08:19 17:34	07:27 18:24	07:18 20:16	06:16 21:05	05:33 21:48
3	08:46 16:48	08:18 17:36	07:25 18:26	07:16 20:17	06:14 21:06	05:33 21:49
4	08:46 16:49	08:16 17:38	07:23 18:27	07:14 20:19	06:12 21:08	05:32 21:50
5	08:46 16:50	08:15 17:39	07:21 18:29	07:12 20:21	06:10 21:10	05:31 21:51
6	08:45 16:51	08:13 17:41	07:19 18:31	07:09 20:22	06:09 21:11	05:31 21:52
7	08:45 16:53	08:11 17:43	07:16 18:32	07:07 20:24	06:07 21:13	05:30 21:53
8	08:45 16:54	08:10 17:45	07:14 18:34	07:05 20:26	06:05 21:14	05:30 21:54
9	08:44 16:55	08:08 17:47	07:12 18:36	07:03 20:27	06:04 21:16	05:29 21:55
10	08:44 16:57	08:06 17:48	07:10 18:38	07:01 20:29	06:02 21:17	05:29 21:55
11	08:43 16:58	08:05 17:50	07:08 18:39	06:58 20:31	06:00 21:19	05:28 21:56
12	08:43 16:59	08:03 17:52	07:05 18:41	06:56 20:32	05:59 21:20	05:28 21:57
13	08:42 17:01	08:01 17:54	07:03 18:43	06:54 20:34	05:57 21:22	05:28 21:58
14	08:41 17:02	07:59 17:56	07:01 18:44	06:52 20:35	05:56 21:23	05:28 21:58
15	08:40 17:04	07:57 17:57	06:59 18:46	06:50 20:37	05:54 21:25	05:27 21:59
16	08:40 17:05	07:55 17:59	06:57 18:48	06:48 20:39	05:53 21:26	05:27 21:59
17	08:39 17:07	07:53 18:01	06:54 18:49	06:46 20:40	05:51 21:28	05:27 22:00
18	08:38 17:08	07:52 18:03	06:52 18:51	06:44 20:42	05:50 21:29	05:27 22:00
19	08:37 17:10	07:50 18:04	06:50 18:53	06:41 20:44	05:48 21:31	05:27 22:00
20	08:36 17:12	07:48 18:06	06:48 18:54	06:39 20:45	05:47 21:32	05:27 22:01
21	08:35 17:13	07:46 18:08	06:45 18:56	06:37 20:47	05:46 21:34	05:28 22:01
22	08:34 17:15	07:44 18:10	06:43 18:58	06:35 20:49	05:45 21:35	05:28 22:01
23	08:33 17:17	07:42 18:12	06:41 18:59	06:33 20:50	05:43 21:36	05:28 22:01
24	08:32 17:18	07:40 18:13	06:39 19:01	06:31 20:52	05:42 21:38	05:28 22:01
25	08:30 17:20	07:38 18:15	06:36 19:03	06:29 20:53	05:41 21:39	05:29 22:01
26	08:29 17:22	07:36 18:17	06:34 19:04	06:27 20:55	05:40 21:40	05:29 22:02
27	08:28 17:23	07:33 18:19	06:32 19:06	06:25 20:57	05:39 21:41	05:29 22:01
28	08:27 17:25	07:31 18:20	06:30 19:08	06:23 20:58	05:38 21:43	05:30 22:01
29	08:25 17:27		07:27 20:09	06:21 21:00	05:37 21:44	05:30 22:01
30	08:24 17:29		07:25 20:11	06:20 21:02	05:36 21:45	05:31 22:01
31	08:22 17:30		07:23 20:12		05:35 21:46	05:31 22:01
Potential sun hours	263	280	367	414	481	494
Total, worst case					572	811
Sun reduction					0,45	0,44
Oper. time red.					0,99	0,99
Wind dir. red.					0,54	0,54
Total reduction					0,24	0,23
Total, real					138	190

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 9 - Galgestraat 91

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July			August			September			October			November			December		
1	05:32	20:28 (WT01_141m)	06:07	14	20:38 (WT01_141m)	06:54	07:42	07:33	08:23								
	22:01	27 20:55 (WT01_141m)	21:30		20:52 (WT01_141m)	20:30	19:23	17:18	16:40								
2	05:32	20:28 (WT01_141m)	06:08		20:40 (WT01_141m)	06:56	07:43	07:35	08:24								
	22:00	28 20:56 (WT01_141m)	21:29	9	20:49 (WT01_141m)	20:28	19:20	17:17	16:39								
3	05:33	20:29 (WT01_141m)	06:10			06:58	07:45	07:37	08:25								
	22:00	28 20:57 (WT01_141m)	21:27			20:26	19:18	17:15	16:39								
4	05:34	20:28 (WT01_141m)	06:11			06:59	07:46	07:39	08:27								
	22:00	28 20:56 (WT01_141m)	21:25			20:24	19:16	17:13	16:38								
5	05:34	20:28 (WT01_141m)	06:13			07:01	07:48	07:40	08:28								
	21:59	29 20:57 (WT01_141m)	21:24			20:21	19:14	17:11	16:38								
6	05:35	20:28 (WT01_141m)	06:14			07:02	07:50	07:42	08:29								
	21:59	29 20:57 (WT01_141m)	21:22			20:19	19:12	17:10	16:37								
7	05:36	20:29 (WT01_141m)	06:16			07:04	07:51	07:44	08:31								
	21:58	29 20:58 (WT01_141m)	21:20			20:17	19:09	17:08	16:37								
8	05:37	20:29 (WT01_141m)	06:17			07:05	07:53	07:46	08:32								
	21:58	29 20:58 (WT01_141m)	21:19			20:15	19:07	17:07	16:37								
9	05:38	20:29 (WT01_141m)	06:19			07:07	07:55	07:47	08:33								
	21:57	30 20:59 (WT01_141m)	21:17			20:13	19:05	17:05	16:36								
10	05:39	20:28 (WT01_141m)	06:20			07:09	07:56	07:49	08:34								
	21:56	30 20:58 (WT01_141m)	21:15			20:10	19:03	17:03	16:36								
11	05:40	20:28 (WT01_141m)	06:22			07:10	07:58	07:51	08:35								
	21:56	31 20:59 (WT01_141m)	21:13			20:08	19:01	17:02	16:36								
12	05:41	20:28 (WT01_141m)	06:23			07:12	07:59	07:52	08:36								
	21:55	31 20:59 (WT01_141m)	21:11			20:06	18:58	17:00	16:36								
13	05:42	20:28 (WT01_141m)	06:25			07:13	08:01	07:54	08:37								
	21:54	31 20:59 (WT01_141m)	21:09			20:03	18:56	16:59	16:36								
14	05:43	20:28 (WT01_141m)	06:26			07:15	08:03	07:56	08:38								
	21:53	31 20:59 (WT01_141m)	21:07			20:01	18:54	16:58	16:36								
15	05:44	20:28 (WT01_141m)	06:28			07:16	08:04	07:58	08:39								
	21:52	31 20:59 (WT01_141m)	21:06			19:59	18:52	16:56	16:36								
16	05:45	20:29 (WT01_141m)	06:29			07:18	08:06	07:59	08:40								
	21:51	31 21:00 (WT01_141m)	21:04			19:57	18:50	16:55	16:36								
17	05:47	20:29 (WT01_141m)	06:31			07:19	08:08	08:01	08:41								
	21:50	31 21:00 (WT01_141m)	21:02			19:54	18:48	16:54	16:36								
18	05:48	20:29 (WT01_141m)	06:33			07:21	08:09	08:03	08:41								
	21:49	31 21:00 (WT01_141m)	21:00			19:52	18:46	16:52	16:36								
19	05:49	20:29 (WT01_141m)	06:34			07:23	08:11	08:04	08:42								
	21:48	31 21:00 (WT01_141m)	20:58			19:50	18:44	16:51	16:37								
20	05:50	20:29 (WT01_141m)	06:36			07:24	08:13	08:06	08:43								
	21:47	31 21:00 (WT01_141m)	20:56			19:48	18:42	16:50	16:37								
21	05:51	20:29 (WT01_141m)	06:37			07:26	08:15	08:08	08:43								
	21:46	31 21:00 (WT01_141m)	20:54			19:45	18:40	16:49	16:38								
22	05:53	20:30 (WT01_141m)	06:39			07:27	08:16	08:09	08:44								
	21:45	30 21:00 (WT01_141m)	20:52			19:43	18:38	16:48	16:38								
23	05:54	20:30 (WT01_141m)	06:40			07:29	08:18	08:11	08:44								
	21:43	30 21:00 (WT01_141m)	20:49			19:41	18:36	16:47	16:39								
24	05:55	20:30 (WT01_141m)	06:42			07:30	08:20	08:12	08:45								
	21:42	29 20:59 (WT01_141m)	20:47			19:38	18:34	16:46	16:39								
25	05:57	20:30 (WT01_141m)	06:44			07:32	07:21	08:14	08:45								
	21:41	28 20:58 (WT01_141m)	20:45			19:36	17:32	16:45	16:40								
26	05:58	20:32 (WT01_141m)	06:45			07:34	07:23	08:15	08:45								
	21:39	27 20:59 (WT01_141m)	20:43			19:34	17:30	16:44	16:40								
27	06:00	20:32 (WT01_141m)	06:47			07:35	07:25	08:17	08:46								
	21:38	26 20:58 (WT01_141m)	20:41			19:32	17:28	16:43	16:41								
28	06:01	20:32 (WT01_141m)	06:48			07:37	07:27	08:18	08:46								
	21:36	25 20:57 (WT01_141m)	20:39			19:29	17:26	16:42	16:42								
29	06:02	20:34 (WT01_141m)	06:50			07:38	07:28	08:20	08:46								
	21:35	22 20:56 (WT01_141m)	20:37			19:27	17:24	16:41	16:43								
30	06:04	20:34 (WT01_141m)	06:51			07:40	07:30	08:21	08:46								
	21:33	21 20:55 (WT01_141m)	20:35			19:25	17:22	16:40	16:44								
31	06:05	20:35 (WT01_141m)	06:53				07:32		08:46								
	21:32	18 20:53 (WT01_141m)	20:32				17:20		16:45								
Potential sun hours	498		451			380	333	269	248								
Total, worst case	884		23														
Sun reduction	0,44		0,46														
Oper. time red.	0,99		0,99														
Wind dir. red.	0,54		0,54														
Total reduction	0,24		0,25														
Total, real	210		6														

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 10 - Molenbergstraat 26

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

		January	February	March	April	May		June		July		August	September	October	November	December
1	08:46	08:21	07:29	07:21	06:18	06:18		05:34	20:39 (WT01_141m)	05:32	20:47 (WT01_141m)	06:07	06:54	07:42	07:33	08:23
	16:46	17:32	18:22	20:14	21:03	21:03	22	21:01 (WT01_141m)	22:01	17	21:04 (WT01_141m)	21:30	20:30	19:23	17:18	16:40
2	08:46	08:19	07:27	07:18	06:16	06:16		05:33	20:39 (WT01_141m)	05:32	20:47 (WT01_141m)	06:08	06:56	07:43	07:35	08:24
	16:47	17:34	18:24	20:16	21:05	21:05	22	21:01 (WT01_141m)	22:00	18	21:05 (WT01_141m)	21:29	20:28	19:20	17:17	16:39
3	08:46	08:18	07:25	07:16	06:14	06:14		05:33	20:40 (WT01_141m)	05:33	20:48 (WT01_141m)	06:10	06:58	07:45	07:37	08:25
	16:48	17:36	18:26	20:17	21:06	21:06	21	21:01 (WT01_141m)	22:00	18	21:06 (WT01_141m)	21:27	20:26	19:18	17:15	16:39
4	08:46	08:16	07:23	07:14	06:12	06:12		05:32	20:40 (WT01_141m)	05:34	20:47 (WT01_141m)	06:11	06:59	07:46	07:39	08:27
	16:49	17:38	18:27	20:19	21:08	21:08	21	21:01 (WT01_141m)	22:00	19	21:06 (WT01_141m)	21:25	20:24	19:16	17:13	16:38
5	08:46	08:15	07:21	07:12	06:10	06:10		05:31	20:41 (WT01_141m)	05:34	20:47 (WT01_141m)	06:13	07:01	07:48	07:40	08:28
	16:50	17:39	18:29	20:21	21:09	21:09	20	21:01 (WT01_141m)	21:59	19	21:06 (WT01_141m)	21:24	20:21	19:14	17:11	16:38
6	08:45	08:13	07:19	07:09	06:09	06:09		05:31	20:41 (WT01_141m)	05:35	20:47 (WT01_141m)	06:14	07:02	07:50	07:42	08:29
	16:51	17:41	18:31	20:22	21:11	21:11	20	21:01 (WT01_141m)	21:59	20	21:07 (WT01_141m)	21:22	20:19	19:11	17:10	16:37
7	08:45	08:11	07:16	07:07	06:07	06:07		05:30	20:42 (WT01_141m)	05:36	20:47 (WT01_141m)	06:16	07:04	07:51	07:44	08:31
	16:53	17:43	18:32	20:24	21:13	21:13	19	21:01 (WT01_141m)	21:58	21	21:08 (WT01_141m)	21:20	20:17	19:09	17:08	16:37
8	08:45	08:10	07:14	07:05	06:05	06:05		05:30	20:41 (WT01_141m)	05:37	20:47 (WT01_141m)	06:17	07:05	07:53	07:46	08:32
	16:54	17:45	18:34	20:26	21:14	21:14	20	21:01 (WT01_141m)	21:58	21	21:08 (WT01_141m)	21:19	20:15	19:07	17:07	16:37
9	08:44	08:08	07:12	07:03	06:04	06:04		05:29	20:42 (WT01_141m)	05:38	20:46 (WT01_141m)	06:19	07:07	07:55	07:47	08:33
	16:55	17:47	18:36	20:27	21:16	21:16	19	21:01 (WT01_141m)	21:57	22	21:08 (WT01_141m)	21:17	20:12	19:05	17:05	16:36
10	08:44	08:06	07:10	07:01	06:02	06:02		05:29	20:43 (WT01_141m)	05:39	20:46 (WT01_141m)	06:20	07:09	07:56	07:49	08:34
	16:57	17:48	18:38	20:29	21:17	21:17	18	21:01 (WT01_141m)	21:56	22	21:08 (WT01_141m)	21:15	20:10	19:03	17:03	16:36
11	08:43	08:05	07:08	06:58	06:00	06:00		05:28	20:43 (WT01_141m)	05:40	20:46 (WT01_141m)	06:22	07:10	07:58	07:51	08:35
	16:58	17:50	18:39	20:31	21:19	21:19	17	21:00 (WT01_141m)	21:56	23	21:09 (WT01_141m)	21:13	20:08	19:01	17:02	16:36
12	08:43	08:03	07:05	06:56	05:59	05:59		05:28	20:44 (WT01_141m)	05:41	20:46 (WT01_141m)	06:23	07:12	07:59	07:52	08:36
	16:59	17:52	18:41	20:32	21:21	21:21	16	21:00 (WT01_141m)	21:55	23	21:09 (WT01_141m)	21:11	20:06	18:58	17:00	16:36
13	08:42	08:01	07:03	06:54	05:57	05:57		05:28	20:44 (WT01_141m)	05:42	20:46 (WT01_141m)	06:25	07:13	08:01	07:54	08:37
	17:01	17:54	18:43	20:34	21:22	21:22	17	21:01 (WT01_141m)	21:54	23	21:09 (WT01_141m)	21:09	20:03	18:56	16:59	16:36
14	08:41	07:59	07:01	06:52	05:56	20:45 (WT01_141m)	05:28	20:45 (WT01_141m)	05:43	20:46 (WT01_141m)	06:26	07:15	08:03	07:56	08:38	
	17:02	17:56	18:44	20:35	21:23	21:23	6	21:01 (WT01_141m)	21:53	23	21:09 (WT01_141m)	21:07	20:01	18:54	16:58	16:36
15	08:40	07:57	06:59	06:50	05:54	20:43 (WT01_141m)	05:27	20:45 (WT01_141m)	05:44	20:46 (WT01_141m)	06:28	07:16	08:04	07:58	08:39	
	17:04	17:57	18:46	20:37	21:25	21:25	11	21:01 (WT01_141m)	21:52	23	21:09 (WT01_141m)	21:06	19:59	18:52	16:56	16:36
16	08:40	07:55	06:56	06:48	05:53	20:41 (WT01_141m)	05:27	20:46 (WT01_141m)	05:45	20:47 (WT01_141m)	06:29	07:18	08:06	07:59	08:40	
	17:05	17:59	18:48	20:39	21:26	21:26	14	21:01 (WT01_141m)	21:51	24	21:11 (WT01_141m)	21:04	19:57	18:50	16:55	16:36
17	08:39	07:53	06:54	06:46	05:51	20:40 (WT01_141m)	05:27	20:46 (WT01_141m)	05:47	20:47 (WT01_141m)	06:31	07:19	08:08	08:01	08:40	
	17:07	18:01	18:49	20:40	21:28	21:28	17	21:01 (WT01_141m)	22:00	15	21:01 (WT01_141m)	21:50	21:02	19:54	18:48	16:54
18	08:38	07:52	06:52	06:44	05:50	20:40 (WT01_141m)	05:27	20:47 (WT01_141m)	05:48	20:47 (WT01_141m)	06:33	07:21	08:09	08:03	08:41	
	17:08	18:03	18:51	20:42	21:29	21:29	18	21:01 (WT01_141m)	22:00	14	21:01 (WT01_141m)	21:49	21:00	19:52	18:46	16:52
19	08:37	07:50	06:50	06:41	05:48	20:38 (WT01_141m)	05:27	20:47 (WT01_141m)	05:49	20:47 (WT01_141m)	06:34	07:23	08:11	08:04	08:42	
	17:10	18:04	18:53	20:44	21:31	21:31	20	21:01 (WT01_141m)	22:00	14	21:01 (WT01_141m)	21:48	21:00	19:50	18:44	16:51
20	08:36	07:48	06:48	06:39	05:47	20:38 (WT01_141m)	05:27	20:47 (WT01_141m)	05:50	20:47 (WT01_141m)	06:36	07:24	08:13	08:06	08:43	
	17:12	18:06	18:54	20:45	21:32	21:32	21	21:01 (WT01_141m)	22:01	14	21:01 (WT01_141m)	21:47	21:00	19:48	18:42	16:50
21	08:35	07:46	06:45	06:37	05:46	20:38 (WT01_141m)	05:28	20:47 (WT01_141m)	05:51	20:47 (WT01_141m)	06:37	07:26	08:15	08:07	08:43	
	17:13	18:08	18:56	20:47	21:33	21:33	21	21:01 (WT01_141m)	22:01	14	21:01 (WT01_141m)	21:46	21:00	19:48	18:40	16:49
22	08:34	07:44	06:43	06:35	05:44	20:38 (WT01_141m)	05:28	20:47 (WT01_141m)	05:53	20:48 (WT01_141m)	06:39	07:27	08:16	08:09	08:44	
	17:15	18:10	18:58	20:48	21:35	21:35	22	21:00 (WT01_141m)	22:01	14	21:01 (WT01_141m)	21:44	21:00	19:43	18:38	16:48
23	08:33	07:42	06:41	06:33	05:43	20:38 (WT01_141m)	05:28	20:48 (WT01_141m)	05:54	20:48 (WT01_141m)	06:40	07:29	08:18	08:11	08:44	
	17:17	18:12	18:59	20:50	21:36	21:36	22	21:00 (WT01_141m)	22:01	14	21:02 (WT01_141m)	21:43	22	21:10 (WT01_141m)	20:49	19:41
24	08:32	07:40	06:39	06:31	05:42	20:37 (WT01_141m)	05:28	20:48 (WT01_141m)	05:55	20:49 (WT01_141m)	06:42	07:30	08:20	08:12	08:45	
	17:18	18:13	19:01	20:52	21:38	21:38	24	21:01 (WT01_141m)	22:01	14	21:02 (WT01_141m)	21:42	20	21:09 (WT01_141m)	20:47	19:38
25	08:30	07:38	06:36	06:29	05:41	20:37 (WT01_141m)	05:29	20:47 (WT01_141m)	05:57	20:49 (WT01_141m)	06:44	07:32	07:21	08:14	08:45	
	17:20	18:15	19:03	20:53	21:39	21:39	24	21:01 (WT01_141m)	22:01	15	21:02 (WT01_141m)	21:41	19	21:08 (WT01_141m)	20:45	19:36
26	08:29	07:35	06:34	06:27	05:40	20:37 (WT01_141m)	05:29	20:48 (WT01_141m)	05:58	20:51 (WT01_141m)	06:45	07:34	07:23	08:15	08:45	
	17:22	18:17	19:04	20:55	21:41	21:41	24	21:01 (WT01_141m)	22:01	15	21:03 (WT01_141m)	21:39	21	21:04 (WT01_141m)	20:44	19:34
27	08:28	07:33	06:32	06:25	05:39	20:37 (WT01_141m)	05:29	20:48 (WT01_141m)	06:00	20:51 (WT01_141m)	06:47	07:35	07:25	08:17	08:46	
	17:23	18:19	19:06	20:57	21:41	21:41	24	21:01 (WT01_141m)	22:01	15	21:03 (WT01_141m)	21:38	16	21:07 (WT01_141m)	20:41	19:32
28	08:26	07:31	06:30	06:23	05:38	20:38 (WT01_141m)	05:30	20:48 (WT01_141m)	06:01	20:52 (WT01_141m)	06:48	07:37	07:26	08:18	08:46	
	17:25	18:20	19:08	20:58	21:43	21:43	23	21:01 (WT01_141m)	22:01	16	21:04 (WT01_141m)	21:36	13	21:05 (WT01_141m)	20:39	19:29
29	08:25	07:27	06:21	05:37	05:30	20:38 (WT01_141m)	05:30	20:48 (WT01_141m)	06:02	20:54 (WT01_141m)	06:50	07:38	07:28	08:20	08:46	
	17:27	07:29	21:00	21:44	23	21:01 (WT01_141m)	22:01	21:04 (WT01_141m)	21:35	10	21:04 (WT01_141m)	20:37	19:27	17:24	16:41	16:43
30	08:24	07:25	06:20	05:36	05:30	20:38 (WT01_141m)	05:31	20:48 (WT01_141m)	06:04	20:58 (WT01_141m)	06:51	07:40	07:30	08:21	08:46	
	17:29	07:21	21:01	21:45	23	21:01 (WT01_141m)	22:01	21:04 (WT01_141m)	21:33	1	20:59 (WT01_141m)	20:35	19:25	17:22	16:40	16:44
31	08:22	07:23	05:35	20:39 (WT01_141m)	22:01	06:05					06:05	05:53	07:32	08:21	08:46	
	17:30	20:12	21:46	23	21:02 (WT01_141m)	21:32					21:32	20:32	17:20	16:40	16:45	
Potential sun hours		263	280	367	414	481		494		498		451	380	333	269	248
Total, worst case						360		505		592						
Sun reduction						0,45		0,44		0,44						
Oper. time red.						0,99		0,99		0,99						
Wind dir. red.						0,54		0,54		0,54						
Total reduction						0,24		0,23		0,24					</	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 11 - Oude Antwerpsebaan 22

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

		January	February	March	April	May		June		July		August	September	October	November	December		
1	08:46	08:21	07:29	07:21	06:18	06:18		05:34	20:49 (WT01_141m)	05:32	20:56 (WT01_141m)	06:07	06:54	07:42	07:33	08:23		
	16:46	17:32	18:22	20:14	21:03	21:03		21:47	21	21:10 (WT01_141m)	22:01	18	21:14 (WT01_141m)	21:30	19:23	17:18	16:40	
2	08:46	08:19	07:27	07:18	06:16	06:16		05:33	20:49 (WT01_141m)	05:32	20:56 (WT01_141m)	06:08	06:56	07:43	07:35	08:24		
	16:47	17:34	18:24	20:16	21:05	21:05		21:48	20	21:09 (WT01_141m)	22:00	19	21:15 (WT01_141m)	21:29	19:20	17:17	16:39	
3	08:46	08:18	07:25	07:16	06:14	06:14		05:33	20:49 (WT01_141m)	05:33	20:56 (WT01_141m)	06:10	06:58	07:45	07:37	08:25		
	16:48	17:36	18:26	20:17	21:06	21:06		21:49	21	21:10 (WT01_141m)	22:00	19	21:15 (WT01_141m)	21:27	19:18	17:15	16:39	
4	08:46	08:16	07:23	07:14	06:12	06:12		05:32	20:49 (WT01_141m)	05:34	20:56 (WT01_141m)	06:11	06:59	07:46	07:39	08:27		
	16:49	17:38	18:27	20:19	21:08	21:08		21:50	21	21:10 (WT01_141m)	22:00	19	21:15 (WT01_141m)	21:25	19:16	17:13	16:38	
5	08:46	08:15	07:21	07:12	06:10	06:10		05:31	20:50 (WT01_141m)	05:34	20:56 (WT01_141m)	06:13	07:01	07:48	07:40	08:28		
	16:50	17:39	18:29	20:21	21:09	21:09		21:51	20	21:10 (WT01_141m)	21:59	20	21:16 (WT01_141m)	21:24	19:14	17:11	16:38	
6	08:45	08:13	07:19	07:09	06:09	06:09		05:31	20:50 (WT01_141m)	05:35	20:56 (WT01_141m)	06:14	07:02	07:50	07:42	08:29		
	16:51	17:41	18:31	20:22	21:11	21:11		21:52	20	21:10 (WT01_141m)	21:59	20	21:16 (WT01_141m)	21:22	19:19	17:10	16:37	
7	08:45	08:11	07:16	07:07	06:07	06:07		05:30	20:51 (WT01_141m)	05:36	20:56 (WT01_141m)	06:16	07:04	07:51	07:44	08:31		
	16:53	17:43	18:32	20:24	21:13	21:13		21:53	19	21:10 (WT01_141m)	21:58	21	21:17 (WT01_141m)	21:20	19:17	17:09	16:37	
8	08:45	08:10	07:14	07:05	06:05	06:05		05:30	20:50 (WT01_141m)	05:37	20:57 (WT01_141m)	06:17	07:05	07:53	07:46	08:32		
	16:54	17:45	18:34	20:26	21:14	21:14		21:54	20	21:10 (WT01_141m)	21:58	20	21:17 (WT01_141m)	21:19	19:15	17:07	16:37	
9	08:44	08:08	07:12	07:03	06:04	06:04		05:29	20:51 (WT01_141m)	05:38	20:56 (WT01_141m)	06:19	07:07	07:55	07:47	08:33		
	16:55	17:47	18:36	20:27	21:16	21:16		21:55	19	21:10 (WT01_141m)	21:57	20	21:16 (WT01_141m)	21:17	19:12	17:05	16:36	
10	08:44	08:06	07:10	07:01	06:02	06:02		05:29	20:52 (WT01_141m)	05:39	20:56 (WT01_141m)	06:20	07:09	07:56	07:49	08:34		
	16:57	17:48	18:38	20:29	21:17	21:17		21:55	19	21:11 (WT01_141m)	21:56	21	21:17 (WT01_141m)	21:15	19:10	17:03	16:36	
11	08:43	08:05	07:08	06:58	06:00	06:00		05:28	20:51 (WT01_141m)	05:40	20:56 (WT01_141m)	06:22	07:10	07:58	07:51	08:35		
	16:58	17:50	18:39	20:30	21:19	21:19		21:56	19	21:10 (WT01_141m)	21:56	21	21:17 (WT01_141m)	21:13	19:08	17:02	16:36	
12	08:43	08:03	07:05	06:56	05:59	05:59		05:28	20:52 (WT01_141m)	05:41	20:56 (WT01_141m)	06:23	07:12	07:59	07:52	08:36		
	16:59	17:52	18:41	20:32	21:20	21:20		21:57	18	21:10 (WT01_141m)	21:55	21	21:17 (WT01_141m)	21:11	19:06	17:00	16:36	
13	08:42	08:01	07:03	06:54	05:57	05:57		05:28	20:53 (WT01_141m)	05:42	20:56 (WT01_141m)	06:25	07:13	08:01	07:54	08:37		
	17:01	17:54	18:43	20:34	21:22	21:22		21:57	17	21:10 (WT01_141m)	21:54	21	21:17 (WT01_141m)	21:09	19:03	16:56	16:36	
14	08:41	07:59	07:01	06:52	05:56	05:56		05:28	20:53 (WT01_141m)	05:43	20:57 (WT01_141m)	06:26	07:15	08:03	07:56	08:38		
	17:02	17:56	18:44	20:35	21:23	21:23		21:58	18	21:11 (WT01_141m)	21:53	20	21:17 (WT01_141m)	21:07	19:01	16:54	16:38	
15	08:40	07:57	06:59	06:50	05:54	05:54		05:27	20:53 (WT01_141m)	05:44	20:57 (WT01_141m)	06:28	07:16	08:04	07:58	08:39		
	17:04	17:57	18:46	20:37	21:25	21:25		21:59	18	21:11 (WT01_141m)	21:52	20	21:17 (WT01_141m)	21:06	19:59	18:52	16:56	16:36
16	08:40	07:55	06:56	06:48	05:53	05:53		05:27	20:54 (WT01_141m)	05:45	20:58 (WT01_141m)	06:29	07:18	08:06	07:59	08:40		
	17:05	17:59	18:48	20:39	21:26	21:26		21:59	17	21:11 (WT01_141m)	21:51	20	21:18 (WT01_141m)	21:04	19:57	18:50	16:55	16:36
17	08:39	07:53	06:54	06:46	05:51	05:51		05:27	20:54 (WT01_141m)	05:47	20:58 (WT01_141m)	06:31	07:19	08:08	08:01	08:40		
	17:07	18:01	18:49	20:40	21:28	21:28		22:00	17	21:11 (WT01_141m)	21:50	20	21:18 (WT01_141m)	21:02	19:54	18:48	16:54	16:36
18	08:38	07:52	06:52	06:44	05:50	05:50		05:27	20:54 (WT01_141m)	05:48	20:58 (WT01_141m)	06:33	07:21	08:09	08:03	08:41		
	17:08	18:03	18:51	20:42	21:29	21:29		22:00	17	21:11 (WT01_141m)	21:49	19	21:17 (WT01_141m)	21:00	19:52	18:46	16:52	16:36
19	08:37	07:50	06:50	06:41	05:48	05:48		05:27	20:55 (WT01_141m)	05:49	20:59 (WT01_141m)	06:34	07:23	08:11	08:04	08:42		
	17:10	18:04	18:53	20:44	21:31	7	21:00 (WT01_141m)	22:00	16	21:11 (WT01_141m)	21:48	18	21:17 (WT01_141m)	21:08	19:50	18:44	16:51	16:37
20	08:36	07:48	06:48	06:39	05:47	05:47		05:27	20:52 (WT01_141m)	05:50	20:59 (WT01_141m)	06:36	07:24	08:13	08:06	08:43		
	17:12	18:06	18:54	20:45	21:32	10	21:02 (WT01_141m)	22:01	16	21:11 (WT01_141m)	21:47	17	21:16 (WT01_141m)	21:06	19:48	18:42	16:50	16:37
21	08:35	07:46	06:45	06:37	05:46	05:46		05:28	20:51 (WT01_141m)	05:51	20:59 (WT01_141m)	06:37	07:26	08:14	08:07	08:43		
	17:13	18:08	18:56	20:47	21:33	12	21:03 (WT01_141m)	22:01	16	21:11 (WT01_141m)	21:46	16	21:15 (WT01_141m)	21:04	19:45	18:40	16:49	16:38
22	08:34	07:44	06:43	06:35	05:44	05:44		05:28	20:50 (WT01_141m)	05:53	21:01 (WT01_141m)	06:39	07:27	08:16	08:09	08:44		
	17:15	18:10	18:58	20:48	21:35	15	21:05 (WT01_141m)	22:01	16	21:11 (WT01_141m)	21:44	13	21:14 (WT01_141m)	21:02	19:43	18:38	16:48	16:38
23	08:33	07:42	06:41	06:33	05:43	05:43		05:28	20:50 (WT01_141m)	05:54	21:02 (WT01_141m)	06:40	07:29	08:18	08:11	08:44		
	17:17	18:12	18:59	20:50	21:36	16	21:06 (WT01_141m)	22:01	16	21:12 (WT01_141m)	21:43	11	21:13 (WT01_141m)	21:04	19:41	18:36	16:47	16:39
24	08:32	07:40	06:39	06:31	05:42	05:42		05:28	20:49 (WT01_141m)	05:55	21:02 (WT01_141m)	06:42	07:30	08:20	08:12	08:45		
	17:18	18:13	19:01	20:52	21:37	18	21:07 (WT01_141m)	22:01	16	21:12 (WT01_141m)	21:42	9	21:12 (WT01_141m)	21:04	19:38	18:34	16:46	16:39
25	08:30	07:38	06:36	06:29	05:41	05:41		05:29	20:49 (WT01_141m)	05:57	21:05 (WT01_141m)	06:44	07:32	07:21	08:14	08:45		
	17:20	18:15	19:03	20:53	21:39	19	21:08 (WT01_141m)	22:01	17	21:12 (WT01_141m)	21:41	5	21:10 (WT01_141m)	21:04	19:36	17:32	16:45	16:40
26	08:29	07:35	06:34	06:27	05:40	05:40		05:29	20:49 (WT01_141m)	05:58	21:06 (WT01_141m)	06:45	07:34	07:23	08:15	08:45		
	17:22	18:17	19:04	20:55	21:40	19	21:08 (WT01_141m)	22:01	17	21:13 (WT01_141m)	21:39		21:10 (WT01_141m)	21:04	19:34	17:30	16:44	16:40
27	08:28	07:33	06:32	06:25	05:39	05:39		05:29	20:48 (WT01_141m)	06:00	20:56 (WT01_141m)	06:47	07:35	07:25	08:17	08:46		
	17:23	18:19	19:06	20:57	21:41	20	21:08 (WT01_141m)	22:01	17	21:13 (WT01_141m)	21:38		20:41	19:32	17:28	16:43	16:41	
28	08:26	07:31	06:30	06:23	05:38	05:38		05:30	20:48 (WT01_141m)	06:01	20:56 (WT01_141m)	06:48	07:37	07:26	08:18	08:46		
	17:25	18:20	19:08	20:58	21:43	21	21:09 (WT01_141m)	22:01	18	21:14 (WT01_141m)	21:36		20:39	19:29	17:26	16:42	16:42	
29	08:25	07:27	06:21	05:37	05:30	05:30		05:30	20:48 (WT01_141m)	06:02	20:56 (WT01_141m)	06:50	07:38	07:28	08:20	08:46		
	17:27	07:29	06:23	21:00	21:44	21	21:09 (WT01_141m)	22:01	17	21:13 (WT01_141m)	21:35		20:37	19:27	17:24	16:41	16:43	
30	08:24	07:25	06:20	05:36	05:30	05:31		05:31	20:48 (WT01_141m)	06:03	20:56 (WT01_141m)	06:51	07:40	07:30	08:21	08:46		
	17:29	07:28	06:21	21:01	21:45	21	21:09 (WT01_141m)	22:01	18	21:14 (WT01_141m)	21:33		20:35	19:25	17:22	16:40	16:44	
31	08:22	07:23	06:18	05:35	05:30	05:31		05:31	20:49 (WT01_141m)	06:05	20:57 (WT01_141m)	06:53	07:42	07:32	08:22	08:46		
	17:30	07:24	06:19	21:02	21:46	21	21:10 (WT01_141m)	22:01		21:32	21:32		20:32	19:20	17:20	16:45		
Potential sun hours	263	280	367	414	481	494		494		498		451	380	333	269	248		
Total, worst case					220	541		541		448								
Sun reduction					0,45	td												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
 NL-1082 MS Amsterdam
 +31 (0)88 4261 261
 Margot Scheldeman /
 margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 12 - Slachthuislaan 34

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46 16:46	08:21 17:32	07:29 18:22	07:21 20:14	06:18 21:03	19:58 (WT01_141m) 05:34 20:24 (WT01_141m) 21:47
2	08:46 16:47	08:19 17:34	07:27 18:24	07:18 20:16	06:16 21:05	19:58 (WT01_141m) 05:33 20:25 (WT01_141m) 21:48
3	08:46 16:48	08:18 17:36	07:25 18:26	07:16 20:17	06:14 21:06	19:57 (WT01_141m) 05:33 20:26 (WT01_141m) 21:49
4	08:46 16:49	08:16 17:38	07:23 18:27	07:14 20:19	06:12 21:08	19:56 (WT01_141m) 05:32 20:26 (WT01_141m) 21:50
5	08:46 16:50	08:15 17:39	07:21 18:29	07:12 20:21	06:10 21:10	19:56 (WT01_141m) 05:31 20:27 (WT01_141m) 21:51
6	08:45 16:51	08:13 17:41	07:19 18:31	07:09 20:22	06:09 21:11	19:55 (WT01_141m) 05:31 20:27 (WT01_141m) 21:52
7	08:45 16:53	08:11 17:43	07:16 18:32	07:07 20:24	06:07 21:13	19:55 (WT01_141m) 05:30 20:26 (WT01_141m) 21:53
8	08:45 16:54	08:10 17:45	07:14 18:34	07:05 20:26	06:05 21:14	19:55 (WT01_141m) 05:30 20:27 (WT01_141m) 21:54
9	08:44 16:55	08:08 17:47	07:12 18:36	07:03 20:27	06:04 21:16	19:55 (WT01_141m) 05:29 20:27 (WT01_141m) 21:55
10	08:44 16:57	08:06 17:48	07:10 18:38	07:01 20:29	06:02 21:17	19:55 (WT01_141m) 05:29 20:27 (WT01_141m) 21:55
11	08:43 16:58	08:05 17:50	07:08 18:39	06:58 20:31	06:00 21:19	19:55 (WT01_141m) 05:28 20:27 (WT01_141m) 21:56
12	08:43 16:59	08:03 17:52	07:05 18:41	06:56 20:32	05:59 21:20	19:55 (WT01_141m) 05:28 20:27 (WT01_141m) 21:57
13	08:42 17:01	08:01 17:54	07:03 18:43	06:54 20:34	05:57 21:22	19:55 (WT01_141m) 05:28 20:26 (WT01_141m) 21:58
14	08:41 17:02	07:59 17:56	07:01 18:44	06:52 20:35	05:56 21:23	19:56 (WT01_141m) 05:28 20:26 (WT01_141m) 21:58
15	08:40 17:04	07:57 17:57	06:59 18:46	06:50 20:37	05:54 21:25	19:57 (WT01_141m) 05:27 20:26 (WT01_141m) 21:59
16	08:40 17:05	07:55 17:59	06:57 18:48	06:48 20:39	05:53 21:26	19:57 (WT01_141m) 05:27 20:25 (WT01_141m) 21:59
17	08:39 17:07	07:53 18:01	06:54 18:49	06:46 20:40	05:51 21:28	19:58 (WT01_141m) 05:27 20:25 (WT01_141m) 22:00
18	08:38 17:08	07:52 18:03	06:52 18:51	06:44 20:42	05:50 21:29	19:59 (WT01_141m) 05:27 20:24 (WT01_141m) 22:00
19	08:37 17:10	07:50 18:04	06:50 18:53	06:41 20:44	05:48 21:31	19:59 (WT01_141m) 05:27 20:23 (WT01_141m) 22:00
20	08:36 17:12	07:48 18:06	06:48 18:54	06:39 20:45	05:47 21:32	20:00 (WT01_141m) 05:27 20:22 (WT01_141m) 22:01
21	08:35 17:13	07:46 18:08	06:45 18:56	06:37 20:47	05:46 21:34	20:01 (WT01_141m) 05:28 20:22 (WT01_141m) 22:01
22	08:34 17:15	07:44 18:10	06:43 18:58	06:35 20:49	05:44 21:35	20:02 (WT01_141m) 05:28 20:21 (WT01_141m) 22:01
23	08:33 17:17	07:42 18:12	06:41 18:59	06:33 20:50	05:43 21:36	20:04 (WT01_141m) 05:28 20:20 (WT01_141m) 22:01
24	08:32 17:18	07:40 18:13	06:39 19:01	06:31 20:52	05:42 21:38	20:05 (WT01_141m) 05:28 20:18 (WT01_141m) 22:01
25	08:30 17:20	07:38 18:15	06:36 19:03	06:29 20:53	05:41 21:39	20:07 (WT01_141m) 05:29 20:17 (WT01_141m) 22:02
26	08:29 17:22	07:36 18:17	06:34 19:04	06:27 20:55	05:40 21:40	20:10 (WT01_141m) 05:40 20:14 (WT01_141m) 22:02
27	08:28 17:23	07:33 18:19	06:32 19:06	06:25 20:57	05:39 21:41	20:06 (WT01_141m) 05:39 20:19 (WT01_141m) 22:01
28	08:27 17:25	07:31 18:20	06:30 19:08	06:23 20:58	05:38 21:43	20:03 (WT01_141m) 05:38 20:21 (WT01_141m) 22:01
29	08:25 17:27		06:27 20:09	06:21 21:00	05:37 21:44	20:01 (WT01_141m) 05:37 20:22 (WT01_141m) 22:01
30	08:24 17:29		07:25 20:11	06:20 21:02	05:36 21:45	19:59 (WT01_141m) 05:36 20:23 (WT01_141m) 22:01
31	08:22 17:30		07:23 20:12		05:35 21:46	
Potential sun hours	263	280	367	414	481	494
Total, worst case				80		661
Sun reduction				0,45		0,45
Oper. time red.				0,99		0,99
Wind dir. red.				0,54		0,54
Total reduction				0,24		0,24
Total, real				19		160

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 12 - Slachthuislaan 34

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July		August		September		October		November		December	
1	05:32	06:07	20:06 (WT01_141m)	06:54	07:42	07:33	08:23				
	22:01	21:30	31 20:37 (WT01_141m)	20:30	19:23	17:18	16:40				
2	05:32	06:08	20:05 (WT01_141m)	06:56	07:43	07:35	08:24				
	22:01	21:29	32 20:37 (WT01_141m)	20:28	19:20	17:17	16:39				
3	05:33	06:10	20:05 (WT01_141m)	06:58	07:45	07:37	08:25				
	22:00	21:27	32 20:37 (WT01_141m)	20:26	19:18	17:15	16:39				
4	05:34	06:11	20:05 (WT01_141m)	06:59	07:46	07:39	08:27				
	22:00	21:25	32 20:37 (WT01_141m)	20:24	19:16	17:13	16:38				
5	05:34	06:13	20:05 (WT01_141m)	07:01	07:48	07:40	08:28				
	21:59	21:24	32 20:37 (WT01_141m)	20:21	19:14	17:11	16:38				
6	05:35	06:14	20:05 (WT01_141m)	07:02	07:50	07:42	08:29				
	21:59	21:22	32 20:37 (WT01_141m)	20:19	19:12	17:10	16:37				
7	05:36	06:16	20:05 (WT01_141m)	07:04	07:51	07:44	08:31				
	21:58	21:20	31 20:36 (WT01_141m)	20:17	19:09	17:08	16:37				
8	05:37	06:17	20:06 (WT01_141m)	07:05	07:53	07:46	08:32				
	21:58	21:19	30 20:36 (WT01_141m)	20:15	19:07	17:07	16:37				
9	05:38	06:19	20:05 (WT01_141m)	07:07	07:55	07:47	08:33				
	21:57	21:17	30 20:35 (WT01_141m)	20:13	19:05	17:05	16:36				
10	05:39	06:20	20:05 (WT01_141m)	07:09	07:56	07:49	08:34				
	21:56	21:15	29 20:34 (WT01_141m)	20:10	19:03	17:03	16:36				
11	05:40	06:22	20:07 (WT01_141m)	07:10	07:58	07:51	08:35				
	21:56	21:13	27 20:34 (WT01_141m)	20:08	19:01	17:02	16:36				
12	05:41	06:23	20:07 (WT01_141m)	07:12	07:59	07:52	08:36				
	21:55	21:11	25 20:32 (WT01_141m)	20:06	18:58	17:00	16:36				
13	05:42	06:25	20:08 (WT01_141m)	07:13	08:01	07:54	08:37				
	21:54	21:09	23 20:31 (WT01_141m)	20:03	18:56	16:59	16:36				
14	05:43	06:26	20:09 (WT01_141m)	07:15	08:03	07:56	08:38				
	21:53	21:07	20 20:29 (WT01_141m)	20:01	18:54	16:58	16:36				
15	05:44	06:28	20:11 (WT01_141m)	07:16	08:04	07:58	08:39				
	21:52	21:06	17 20:28 (WT01_141m)	19:59	18:52	16:56	16:36				
16	05:45	06:29	20:13 (WT01_141m)	07:18	08:06	07:59	08:40				
	21:51	21:04	12 20:25 (WT01_141m)	19:57	18:50	16:55	16:36				
17	05:47	06:31		07:19	08:08	08:01	08:41				
	21:50	21:02		19:54	18:48	16:54	16:36				
18	05:48	20:18 (WT01_141m)	06:33	07:21	08:09	08:03	08:41				
	21:49	7 20:25 (WT01_141m)	21:00	19:52	18:46	16:52	16:36				
19	05:49	20:16 (WT01_141m)	06:34	07:23	08:11	08:04	08:42				
	21:48	11 20:27 (WT01_141m)	20:58	19:50	18:44	16:51	16:37				
20	05:50	20:14 (WT01_141m)	06:36	07:24	08:13	08:06	08:43				
	21:47	15 20:29 (WT01_141m)	20:56	19:48	18:42	16:50	16:37				
21	05:51	20:13 (WT01_141m)	06:37	07:26	08:15	08:08	08:43				
	21:46	17 20:30 (WT01_141m)	20:54	19:45	18:40	16:49	16:38				
22	05:53	20:12 (WT01_141m)	06:39	07:27	08:16	08:09	08:44				
	21:45	20 20:32 (WT01_141m)	20:52	19:43	18:38	16:48	16:38				
23	05:54	20:11 (WT01_141m)	06:40	07:29	08:18	08:11	08:44				
	21:43	22 20:33 (WT01_141m)	20:49	19:41	18:36	16:47	16:39				
24	05:55	20:10 (WT01_141m)	06:42	07:30	08:20	08:12	08:45				
	21:42	23 20:33 (WT01_141m)	20:47	19:38	18:34	16:46	16:39				
25	05:57	20:09 (WT01_141m)	06:44	07:32	07:21	08:14	08:45				
	21:41	25 20:34 (WT01_141m)	20:45	19:36	17:32	16:45	16:40				
26	05:58	20:09 (WT01_141m)	06:45	07:34	07:23	08:15	08:45				
	21:39	26 20:35 (WT01_141m)	20:43	19:34	17:30	16:44	16:40				
27	06:00	20:08 (WT01_141m)	06:47	07:35	07:25	08:17	08:46				
	21:38	27 20:35 (WT01_141m)	20:41	19:32	17:28	16:43	16:41				
28	06:01	20:07 (WT01_141m)	06:48	07:37	07:27	08:18	08:46				
	21:36	28 20:35 (WT01_141m)	20:39	19:29	17:26	16:42	16:42				
29	06:02	20:07 (WT01_141m)	06:50	07:38	07:28	08:20	08:46				
	21:35	30 20:37 (WT01_141m)	20:37	19:27	17:24	16:41	16:43				
30	06:04	20:06 (WT01_141m)	06:51	07:40	07:30	08:21	08:46				
	21:33	31 20:37 (WT01_141m)	20:35	19:25	17:22	16:40	16:44				
31	06:05	20:05 (WT01_141m)	06:53		07:32		08:46				
	21:32	31 20:36 (WT01_141m)	20:32		17:20		16:45				
Potential sun hours	498	451		380	333	269	248				
Total, worst case	313	435									
Sun reduction	0,44	0,46									
Oper. time red.	0,99	0,99									
Wind dir. red.	0,54	0,54									
Total reduction	0,24	0,25									
Total, real	74	107									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 13 - Blokhuisstraat 45

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	[January	[February	[March		[April	[May	[June	[July	[August	[September		[October		[November	[December		
1	08:46	08:21	07:29		07:21	06:18	05:34	05:32	06:07	06:54		07:42		17:50 (WT01_141m)	07:33	08:23	
	16:46	17:32	18:22		20:14	21:03	21:47	22:01	21:30	20:30		19:23	40	18:30 (WT01_141m)	17:18	16:40	
2	08:46	08:19	07:27		07:18	06:16	05:33	05:32	06:08	06:56		07:43		17:51 (WT01_141m)	07:35	08:24	
	16:47	17:34	18:24		20:16	21:05	21:48	22:01	21:29	20:28		19:20	38	18:29 (WT01_141m)	17:17	16:39	
3	08:46	08:18	07:25		07:16	06:14	05:33	05:33	06:10	06:58		07:45		17:51 (WT01_141m)	07:37	08:26	
	16:48	17:36	18:26	4	17:35 (WT01_141m)	20:17	21:06	21:49	22:00	21:27	20:26	19:18	37	18:28 (WT01_141m)	17:15	16:39	
4	08:46	08:16	07:23		07:14	06:12	05:32	05:34	06:11	06:59		07:46		17:51 (WT01_141m)	07:39	08:27	
	16:49	17:38	18:27	16	17:41 (WT01_141m)	20:19	21:08	21:50	22:00	21:26	20:24	19:16	36	18:27 (WT01_141m)	17:13	16:38	
5	08:46	08:15	07:21		07:12	06:10	05:31	05:34	06:13	07:01		07:48		17:52 (WT01_141m)	07:40	08:28	
	16:50	17:39	18:29	22	17:44 (WT01_141m)	20:21	21:10	21:51	21:59	21:24	20:21	19:14	34	18:26 (WT01_141m)	17:11	16:38	
6	08:45	08:13	07:19		07:19	06:09	05:31	05:35	06:14	07:02		07:50		17:53 (WT01_141m)	07:42	08:29	
	16:51	17:41	18:31	26	17:45 (WT01_141m)	20:22	21:11	21:52	21:59	21:22	20:19	19:12	30	18:23 (WT01_141m)	17:10	16:37	
7	08:45	08:11	07:16		07:17	06:07	05:30	05:36	06:16	07:04		07:51		17:54 (WT01_141m)	07:44	08:31	
	16:53	17:43	18:32	30	17:47 (WT01_141m)	20:24	21:13	21:53	21:58	21:20	20:17	19:09	28	18:22 (WT01_141m)	17:08	16:37	
8	08:45	08:10	07:14		07:16	06:05	05:30	05:37	06:17	07:05		07:53		17:56 (WT01_141m)	07:46	08:32	
	16:54	17:45	18:34	32	17:48 (WT01_141m)	20:26	21:14	21:54	21:58	21:19	20:15	19:07	24	18:20 (WT01_141m)	17:07	16:36	
9	08:44	08:08	07:12		07:15	06:04	05:29	05:38	06:19	07:07		07:55		17:57 (WT01_141m)	07:47	08:33	
	16:55	17:47	18:36	34	17:49 (WT01_141m)	20:27	21:16	21:55	21:57	21:17	20:13	19:05	20	18:17 (WT01_141m)	17:05	16:36	
10	08:44	08:06	07:10		07:13	06:02	05:29	05:39	06:20	07:09		07:56		18:01 (WT01_141m)	07:49	08:34	
	16:57	17:48	18:38	36	17:49 (WT01_141m)	20:29	21:17	21:56	21:56	21:15	20:10	19:03	12	18:13 (WT01_141m)	17:03	16:36	
11	08:43	08:05	07:08		07:12	06:00	05:28	05:40	06:22	07:10		07:58		17:53 (WT01_141m)	07:51	08:35	
	16:58	17:50	18:39	38	17:50 (WT01_141m)	20:31	21:19	21:56	21:56	21:13	20:08	19:01			17:02	16:36	
12	08:43	08:03	07:05		07:12	06:01	05:28	05:41	06:23	07:12		07:59		17:54 (WT01_141m)	07:53	08:36	
	16:59	17:52	18:41	39	17:51 (WT01_141m)	20:32	21:20	21:57	21:55	21:11	20:06	19:01			17:00	16:36	
13	08:42	08:01	07:03		07:11	06:01	05:28	05:42	06:25	07:13		08:01		17:55 (WT01_141m)	07:54	08:37	
	17:01	17:54	18:43	40	17:51 (WT01_141m)	20:34	21:22	21:58	21:54	21:09	20:04	18:56			16:59	16:36	
14	08:41	07:59	07:01		07:10	06:01	05:28	05:43	06:26	07:15		08:03		17:56 (WT01_141m)	07:56	08:38	
	17:02	17:56	18:44	40	17:50 (WT01_141m)	20:35	21:23	21:58	21:53	21:08	20:01	18:54			16:58	16:36	
15	08:40	07:57	06:59		07:10	06:01	05:54	05:27	05:44	06:28	07:16		18:12 (WT01_141m)	08:04	07:58	08:39	
	17:04	17:57	18:46	41	17:51 (WT01_141m)	20:37	21:25	21:59	21:52	21:06	19:59	18:52			16:56	16:36	
16	08:40	07:55	06:57		07:10	06:01	05:53	05:27	05:45	06:29	07:18		18:08 (WT01_141m)	08:06	07:59	08:40	
	17:05	17:59	18:48	41	17:51 (WT01_141m)	20:39	21:26	21:59	21:51	21:04	19:57	18:50			16:55	16:36	
17	08:39	07:53	06:54		07:10	06:01	05:51	05:27	05:47	06:31	07:19		18:05 (WT01_141m)	08:08	08:01	08:41	
	17:07	18:01	18:49	41	17:51 (WT01_141m)	20:40	21:28	22:00	21:50	21:02	19:54	18:48	23	18:28 (WT01_141m)	18:48	16:54	16:36
18	08:38	07:52	06:52		07:09	06:01	05:50	05:27	05:48	06:33	07:21		18:03 (WT01_141m)	08:09	08:03	08:41	
	17:08	18:03	18:51	40	17:49 (WT01_141m)	20:42	21:29	22:00	21:49	21:00	19:52	18:46	27	18:30 (WT01_141m)	18:46	16:52	16:36
19	08:37	07:50	06:50		07:10	06:01	05:48	05:27	05:49	06:34	07:23		18:00 (WT01_141m)	08:11	08:04	08:42	
	17:10	18:04	18:53	39	17:49 (WT01_141m)	20:44	21:31	22:00	21:48	20:58	19:50	18:44	30	18:30 (WT01_141m)	18:44	16:51	16:37
20	08:36	07:48	06:48		07:10	06:01	05:39	05:47	05:50	06:36	07:24		17:59 (WT01_141m)	08:13	08:06	08:43	
	17:12	18:06	18:54	39	17:49 (WT01_141m)	20:45	21:32	22:01	21:47	20:56	19:48	18:42	32	18:31 (WT01_141m)	18:42	16:50	16:37
21	08:35	07:46	06:45		07:11	06:01	05:37	05:46	05:51	06:37	07:26		17:57 (WT01_141m)	08:15	08:08	08:43	
	17:13	18:08	18:56	37	17:48 (WT01_141m)	20:47	21:34	22:01	21:46	20:54	19:45	18:40	34	18:31 (WT01_141m)	18:40	16:49	16:38
22	08:34	07:44	06:43		07:11	06:01	05:35	05:44	05:53	06:39	07:27		17:56 (WT01_141m)	08:16	08:09	08:44	
	17:15	18:10	18:58	35	17:46 (WT01_141m)	20:49	21:35	22:01	21:45	20:52	19:43	18:38	36	18:32 (WT01_141m)	18:38	16:48	16:38
23	08:33	07:42	06:41		07:12	06:01	05:43	05:28	05:54	06:40	07:29		17:54 (WT01_141m)	08:18	08:11	08:44	
	17:17	18:12	18:59	33	17:45 (WT01_141m)	20:50	21:36	22:01	21:43	20:50	19:41	18:36	38	18:32 (WT01_141m)	18:36	16:47	16:39
24	08:32	07:40	06:39		07:13	06:01	05:42	05:28	05:55	06:42	07:30		17:54 (WT01_141m)	08:20	08:12	08:45	
	17:18	18:13	19:01	31	17:44 (WT01_141m)	20:52	21:38	22:01	21:42	20:47	19:38	18:33	39	18:33 (WT01_141m)	18:34	16:46	16:39
25	08:30	07:38	06:36		07:14	06:01	05:42	05:29	05:57	06:44	07:32		17:53 (WT01_141m)	07:21	08:14	08:44	
	17:20	18:15	19:03	27	17:41 (WT01_141m)	20:53	21:39	22:02	21:41	20:45	19:36	18:32	40	18:33 (WT01_141m)	18:36	16:45	16:40
26	08:29	07:36	06:34		07:16	06:01	05:27	05:40	05:58	06:45	07:34		17:52 (WT01_141m)	07:23	08:15	08:45	
	17:22	18:17	19:04	24	17:40 (WT01_141m)	20:55	21:40	22:02	21:39	20:43	19:34	18:30	40	18:32 (WT01_141m)	17:30	16:44	16:40
27	08:28	07:33	06:32		07:18	06:01	05:29	05:40	06:00	06:47	07:35		17:52 (WT01_141m)	07:25	08:17	08:46	
	17:23	18:19	19:06	19	17:37 (WT01_141m)	20:57	21:41	22:02	21:38	20:41	19:32	18:28	40	18:32 (WT01_141m)	17:28	16:43	16:41
28	08:27	07:31	06:30		07:22	06:01	05:30	06:01	06:48	07:37		17:51 (WT01_141m)	07:27		08:18	08:46	
	17:25	18:20	19:08	12	17:34 (WT01_141m)	20:58	21:43	22:01	21:36	20:39	19:29	18:24	40	18:31 (WT01_141m)	17:26	16:42	16:42
29	08:25	07:27	06:27		06:21	05:37	05:30	06:02	06:50	07:38		17:51 (WT01_141m)	07:28		08:20	08:46	
	17:27	18:22	19:10		21:00	21:44	22:01	21:35	20:37	19:27	18:20	17:14	40	18:31 (WT01_141m)	17:24	16:41	16:43
30	08:24	07:25	06:25		06:20	05:36	05:31	06:04	06:51	07:40		17:51 (WT01_141m)	07:30		08:21	08:46	
	17:29	18:24	19:11		21:02	21:45	22:01	21:34	20:35	19:25	18:18	17:12	40	18:31 (WT01_141m)	17:22	16:40	16:44
31	08:22	07:23	06:23		06:15	05:35		06:05	06:53			08:27		17:51 (WT01_141m)	08:22	08:46	
	17:30	18:25	19:12		21:06	21:46		21:32	20:32			17:20			16:45	16:45	
Potential sun hours	263	279	367		414	481	494	498	451	380		333		269	248		
Total, worst case				816							527		299				
Sun reduction				0,36							0,43		0,35				
Oper. time red.				0,99							0,99		0,99				
Wind dir. red.				0,68							0,68		0,68				
Total reduction				0,24							0,29		0,24				
Total, real				199							151		71				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 14 - Oude Baan 20

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46 16:46	08:21 17:32	16:24 (WT01_141m) 18:22	07:29 20:14	06:18 21:03	05:34 21:47
2	08:46 16:47	08:19 17:34	16:24 (WT01_141m) 18:24	07:27 20:16	06:16 21:05	05:33 21:48
3	08:46 16:48	08:18 17:36	16:23 (WT01_141m) 18:26	07:25 20:17	06:14 21:06	05:33 21:49
4	08:46 16:49	08:16 17:38	16:22 (WT01_141m) 18:27	07:23 20:19	06:12 21:08	05:32 21:50
5	08:46 16:50	08:15 17:39	16:22 (WT01_141m) 18:29	07:21 20:21	06:10 21:10	05:31 21:51
6	08:45 16:51	08:13 17:41	16:22 (WT01_141m) 18:31	07:19 20:22	06:09 21:11	05:31 21:52
7	08:45 16:53	08:11 17:43	16:21 (WT01_141m) 18:32	07:16 20:24	06:07 21:13	05:30 21:53
8	08:45 16:54	08:10 17:45	16:21 (WT01_141m) 18:34	07:14 20:26	06:05 21:14	05:30 21:54
9	08:44 16:55	08:08 17:47	16:22 (WT01_141m) 18:36	07:12 20:27	06:04 21:16	05:29 21:55
10	08:44 16:57	08:06 17:48	16:22 (WT01_141m) 18:38	07:10 20:29	06:02 21:17	05:29 21:56
11	08:43 16:58	08:05 17:50	16:22 (WT01_141m) 18:39	07:08 20:31	06:00 21:19	05:28 21:56
12	08:43 16:59	08:03 17:52	16:22 (WT01_141m) 18:41	07:05 20:32	05:59 21:20	05:28 21:57
13	08:42 17:01	08:01 17:54	16:22 (WT01_141m) 18:43	07:03 20:34	05:57 21:22	05:28 21:58
14	08:41 17:02	07:59 17:56	16:22 (WT01_141m) 18:44	07:01 20:35	05:56 21:23	05:28 21:58
15	08:40 17:04	07:57 17:57	16:23 (WT01_141m) 18:46	06:59 20:37	05:54 21:25	05:27 21:59
16	08:40 17:05	07:55 17:59	16:24 (WT01_141m) 18:48	06:57 20:39	05:53 21:26	05:27 21:59
17	08:39 17:07	07:53 18:01	16:25 (WT01_141m) 18:49	06:54 20:40	05:51 21:28	05:27 22:00
18	08:38 17:08	07:52 18:03	16:26 (WT01_141m) 18:51	06:52 20:42	05:50 21:29	05:27 22:00
19	08:37 17:10	07:50 18:04	16:28 (WT01_141m) 18:53	06:50 20:44	05:48 21:31	05:27 22:00
20	08:36 17:12	07:48 18:06	16:30 (WT01_141m) 18:54	06:48 20:45	05:47 21:32	05:27 22:01
21	08:35 17:13	07:46 18:08	16:34 (WT01_141m) 18:56	06:45 20:47	05:46 21:34	05:28 22:01
22	08:34 17:15	07:44 18:10	16:43 (WT01_141m) 18:58	06:43 20:49	05:44 21:35	05:28 22:01
23	08:33 17:17	07:42 18:12		06:41 20:50	05:43 21:36	05:28 22:01
24	08:32 17:18	07:40 18:13		06:39 20:52	05:42 21:38	05:28 22:01
25	08:30 17:20	07:38 18:15		06:36 20:53	05:41 21:39	05:29 22:02
26	08:29 17:22	07:36 18:17		06:34 20:55	05:40 21:40	05:29 22:02
27	08:28 17:23	07:33 18:19		06:32 20:57	05:39 21:41	05:29 22:02
28	08:27 17:25	16:32 (WT01_141m) 18:20	07:31	06:30 20:58	05:38 21:43	05:30 22:01
29	08:25 17:27	16:29 (WT01_141m) 16:43 (WT01_141m)	07:27	06:27 21:00	05:37 21:44	05:30 22:01
30	08:24 17:29	16:27 (WT01_141m) 16:46 (WT01_141m)	07:25	06:20 21:02	05:36 21:45	05:31 22:01
31	08:22 17:30	16:26 (WT01_141m) 16:47 (WT01_141m)	07:23		05:35	
Potential sun hours	263	279	367	414	481	494
Total, worst case	62	582				
Sun reduction	0,24	0,28				
Oper. time red.	0,99	0,99				
Wind dir. red.	0,73	0,73				
Total reduction	0,17	0,20				
Total, real	11	118				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 14 - Oude Baan 20

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October		November	December
1	05:32 22:01	06:07 21:30	06:54 20:30	07:42 19:23		07:33 17:18	15:51 (WT01_141m) 16:24 (WT01_141m)
2	05:32 22:01	06:08 21:29	06:56 20:28	07:43 19:20		33 17:17	15:50 (WT01_141m) 16:23 (WT01_141m)
3	05:33 22:00	06:10 21:27	06:58 20:26	07:45 19:18		32 17:15	15:51 (WT01_141m) 16:23 (WT01_141m)
4	05:34 22:00	06:11 21:26	06:59 20:24	07:46 19:16		32 17:13	15:51 (WT01_141m) 16:23 (WT01_141m)
5	05:34 21:59	06:13 21:24	07:01 20:21	07:48 19:14		31 17:11	15:52 (WT01_141m) 16:23 (WT01_141m)
6	05:35 21:59	06:14 21:22	07:02 20:19	07:50 19:12		31 17:10	15:52 (WT01_141m) 16:23 (WT01_141m)
7	05:36 21:58	06:16 21:20	07:04 20:17	07:51 19:09		29 17:08	15:53 (WT01_141m) 16:22 (WT01_141m)
8	05:37 21:58	06:17 21:19	07:05 20:15	07:53 19:07		28 17:07	15:54 (WT01_141m) 16:22 (WT01_141m)
9	05:38 21:57	06:19 21:17	07:07 20:13	07:55 19:05		26 17:05	15:55 (WT01_141m) 16:21 (WT01_141m)
10	05:39 21:56	06:20 21:15	07:09 20:10	07:56 19:03		24 17:03	15:55 (WT01_141m) 16:19 (WT01_141m)
11	05:40 21:56	06:22 21:13	07:10 20:08	07:58 19:01		21 17:02	15:57 (WT01_141m) 16:18 (WT01_141m)
12	05:41 21:55	06:23 21:11	07:12 20:06	07:59 18:58		19 17:00	15:58 (WT01_141m) 16:17 (WT01_141m)
13	05:42 21:54	06:25 21:09	07:13 20:04	08:01 18:56		14 16:59	16:01 (WT01_141m) 16:15 (WT01_141m)
14	05:43 21:53	06:26 21:08	07:15 20:01	08:03 18:54		8 16:58	16:04 (WT01_141m) 16:12 (WT01_141m)
15	05:44 21:52	06:28 21:06	07:16 19:59	08:04 18:52			08:39 16:36
16	05:45 21:51	06:29 21:04	07:18 19:57	08:06 18:50			08:40 16:36
17	05:46 21:50	06:31 21:02	07:19 19:54	08:08 18:48			08:41 16:36
18	05:48 21:49	06:33 21:00	07:21 19:52	08:09 18:46			08:41 16:36
19	05:49 21:48	06:34 20:58	07:23 19:50	08:11 18:44			08:42 16:37
20	05:50 21:47	06:36 20:56	07:24 19:48	08:13 18:42			08:43 16:37
21	05:51 21:46	06:37 20:54	07:26 19:45	08:15 18:40	11	17:03 (WT01_141m) 17:14 (WT01_141m)	08:08 16:49
22	05:53 21:45	06:39 20:52	07:27 19:43	08:16 18:38	17	17:00 (WT01_141m) 17:17 (WT01_141m)	08:09 16:48
23	05:54 21:43	06:40 20:50	07:29 19:41	08:18 18:36	21	16:58 (WT01_141m) 17:19 (WT01_141m)	08:11 16:47
24	05:55 21:42	06:42 20:47	07:30 19:38	08:20 18:34	25	16:56 (WT01_141m) 17:21 (WT01_141m)	08:12 16:46
25	05:57 21:41	06:44 20:45	07:32 19:36	07:21 17:32	27	15:55 (WT01_141m) 16:22 (WT01_141m)	08:14 16:45
26	05:58 21:39	06:45 20:43	07:34 19:34	07:23 17:30	29	15:53 (WT01_141m) 16:22 (WT01_141m)	08:15 16:44
27	05:59 21:38	06:47 20:41	07:35 19:32	07:25 17:28	31	15:52 (WT01_141m) 16:23 (WT01_141m)	08:17 16:43
28	06:01 21:36	06:48 20:39	07:37 19:29	07:27 17:26	31	15:52 (WT01_141m) 16:23 (WT01_141m)	08:18 16:42
29	06:02 21:35	06:50 20:37	07:38 19:27	07:28 17:24	33	15:51 (WT01_141m) 16:24 (WT01_141m)	08:20 16:41
30	06:04 21:34	06:51 20:35	07:40 19:25	07:30 17:22	33	15:51 (WT01_141m) 16:24 (WT01_141m)	08:21 16:40
31	06:05 21:32	06:53 20:32		07:32 17:20	33	15:51 (WT01_141m) 16:24 (WT01_141m)	08:46 16:45
Potential sun hours	498	451	380	333		269	248
Total, worst case				291		361	
Sun reduction				0,35		0,26	
Oper. time red.				0,99		0,99	
Wind dir. red.				0,73		0,73	
Total reduction				0,26		0,18	
Total, real				74		67	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 15 - Schaliënhoevedreef 7

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

January			February			March			April			May			June		
1	08:46	15:14 (WT01_141m)	08:21	15:26 (WT01_141m)	07:29	07:21	06:18	05:34									
	16:46	38 15:52 (WT01_141m)	17:32	37 16:03 (WT01_141m)	18:22	20:14	21:03	21:47									
2	08:46	15:14 (WT01_141m)	08:19	15:28 (WT01_141m)	07:27	07:18	06:16	05:33									
	16:47	38 15:52 (WT01_141m)	17:34	34 16:02 (WT01_141m)	18:24	20:16	21:05	21:48									
3	08:46	15:14 (WT01_141m)	08:18	15:30 (WT01_141m)	07:25	07:16	06:14	05:33									
	16:48	39 15:53 (WT01_141m)	17:36	31 16:01 (WT01_141m)	18:26	20:17	21:06	21:49									
4	08:46	15:15 (WT01_141m)	08:16	15:31 (WT01_141m)	07:23	07:14	06:12	05:32									
	16:49	39 15:54 (WT01_141m)	17:38	28 15:59 (WT01_141m)	18:27	20:19	21:08	21:50									
5	08:46	15:14 (WT01_141m)	08:15	15:35 (WT01_141m)	07:21	07:12	06:10	05:31									
	16:50	41 15:55 (WT01_141m)	17:39	22 15:57 (WT01_141m)	18:29	20:21	21:10	21:51									
6	08:45	15:15 (WT01_141m)	08:13	15:39 (WT01_141m)	07:19	07:09	06:09	05:31									
	16:51	41 15:56 (WT01_141m)	17:41	13 15:52 (WT01_141m)	18:31	20:22	21:11	21:52									
7	08:45	15:14 (WT01_141m)	08:11		07:16	07:07	06:07	05:30									
	16:53	42 15:56 (WT01_141m)	17:43		18:32	20:24	21:13	21:53									
8	08:45	15:15 (WT01_141m)	08:10		07:14	07:05	06:05	05:30									
	16:54	42 15:57 (WT01_141m)	17:45		18:34	20:26	21:14	21:54									
9	08:44	15:15 (WT01_141m)	08:08		07:12	07:03	06:04	05:29									
	16:55	43 15:58 (WT01_141m)	17:47		18:36	20:27	21:16	21:55									
10	08:44	15:16 (WT01_141m)	08:06		07:10	07:01	06:02	05:29									
	16:57	43 15:59 (WT01_141m)	17:48		18:38	20:29	21:17	21:56									
11	08:43	15:15 (WT01_141m)	08:05		07:08	06:58	06:00	05:28									
	16:58	45 16:00 (WT01_141m)	17:50		18:39	20:31	21:19	21:56									
12	08:43	15:15 (WT01_141m)	08:03		07:05	06:56	05:59	05:28									
	16:59	45 16:00 (WT01_141m)	17:52		18:41	20:32	21:20	21:57									
13	08:42	15:15 (WT01_141m)	08:01		07:03	06:54	05:57	05:28									
	17:01	46 16:01 (WT01_141m)	17:54		18:43	20:34	21:22	21:58									
14	08:41	15:15 (WT01_141m)	07:59		07:01	06:52	05:56	05:28									
	17:02	46 16:01 (WT01_141m)	17:56		18:44	20:35	21:23	21:58									
15	08:41	15:17 (WT01_141m)	07:57		06:59	06:50	05:54	05:27									
	17:04	46 16:03 (WT01_141m)	17:57		18:46	20:37	21:25	21:59									
16	08:40	15:17 (WT01_141m)	07:55		06:57	06:48	05:53	05:27									
	17:05	46 16:03 (WT01_141m)	17:59		18:48	20:39	21:26	21:59									
17	08:39	15:17 (WT01_141m)	07:54		06:54	06:46	05:51	05:27									
	17:07	47 16:04 (WT01_141m)	18:01		18:49	20:40	21:28	22:00									
18	08:38	15:17 (WT01_141m)	07:52		06:52	06:44	05:50	05:27									
	17:08	47 16:04 (WT01_141m)	18:03		18:51	20:42	21:29	22:00									
19	08:37	15:17 (WT01_141m)	07:50		06:50	06:41	05:48	05:27									
	17:10	47 16:04 (WT01_141m)	18:04		18:53	20:44	21:31	22:00									
20	08:36	15:17 (WT01_141m)	07:48		06:48	06:39	05:47	05:27									
	17:12	47 16:04 (WT01_141m)	18:06		18:54	20:45	21:32	22:01									
21	08:35	15:18 (WT01_141m)	07:46		06:45	06:37	05:46	05:28									
	17:13	47 16:05 (WT01_141m)	18:08		18:56	20:47	21:34	22:01									
22	08:34	15:19 (WT01_141m)	07:44		06:43	06:35	05:44	05:28									
	17:15	46 16:05 (WT01_141m)	18:10		18:58	20:49	21:35	22:01									
23	08:33	15:19 (WT01_141m)	07:42		06:41	06:33	05:43	05:28									
	17:17	47 16:06 (WT01_141m)	18:12		18:59	20:50	21:36	22:01									
24	08:32	15:19 (WT01_141m)	07:40		06:39	06:31	05:42	05:28									
	17:18	46 16:05 (WT01_141m)	18:13		19:01	20:52	21:38	22:02									
25	08:30	15:20 (WT01_141m)	07:38		06:36	06:29	05:41	05:29									
	17:20	45 16:05 (WT01_141m)	18:15		19:03	20:53	21:39	22:02									
26	08:29	15:21 (WT01_141m)	07:36		06:34	06:27	05:40	05:29									
	17:22	45 16:06 (WT01_141m)	18:17		19:04	20:55	21:40	22:02									
27	08:28	15:21 (WT01_141m)	07:33		06:32	06:25	05:39	05:29									
	17:23	44 16:05 (WT01_141m)	18:19		19:06	20:57	21:41	22:02									
28	08:27	15:23 (WT01_141m)	07:31		06:30	06:23	05:38	05:30									
	17:25	42 16:05 (WT01_141m)	18:20		19:08	20:58	21:43	22:01									
29	08:25	15:23 (WT01_141m)			07:27	06:21	05:37	05:30									
	17:27	42 16:05 (WT01_141m)			20:09	21:00	21:44	22:01									
30	08:24	15:24 (WT01_141m)			07:25	06:20	05:36	05:31									
	17:29	41 16:05 (WT01_141m)			20:11	21:02	21:45	22:01									
31	08:22	15:25 (WT01_141m)			07:23		05:35										
	17:30	39 16:04 (WT01_141m)			20:12		21:46										
Potential sun hours	263		279		367		414		481		494						
Total, worst case	1352		165														
Sun reduction	0,24		0,28														
Oper. time red.	0,99		0,99														
Wind dir. red.	0,74		0,74														
Total reduction	0,17		0,20														
Total, real	233		34														

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker
			(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 15 - Schaliënhoeverdreef 7

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December
1	05:32 22:01	06:07 21:30	06:54 20:30	07:42 19:23	07:33 17:18	08:23 16:40
2	05:32 22:01	06:08 21:29	06:56 20:28	07:43 19:20	07:35 17:17	44 15:42 (WT01_141m)
3	05:33 22:00	06:10 21:27	06:58 20:26	07:45 19:18	07:37 17:15	43 15:41 (WT01_141m)
4	05:34 22:00	06:11 21:26	06:59 20:24	07:46 19:16	07:39 17:13	43 15:42 (WT01_141m)
5	05:34 21:59	06:13 21:24	07:01 20:21	07:48 19:14	07:40 17:11	15:08 (WT01_141m) 42 15:00 (WT01_141m)
6	05:35 21:59	06:14 21:22	07:02 20:19	07:50 19:12	07:42 17:10	15:23 (WT01_141m) 41 15:04 (WT01_141m)
7	05:36 21:58	06:16 21:20	07:04 20:17	07:51 19:09	07:44 17:08	23 15:27 (WT01_141m) 41 15:02 (WT01_141m)
8	05:37 21:58	06:17 21:19	07:05 20:15	07:53 19:07	07:46 17:07	28 15:30 (WT01_141m) 40 15:03 (WT01_141m)
9	05:38 21:57	06:19 21:17	07:07 20:13	07:55 19:05	07:47 17:05	34 15:33 (WT01_141m) 39 15:04 (WT01_141m)
10	05:39 21:56	06:20 21:15	07:09 20:10	07:56 19:03	07:49 17:03	36 15:33 (WT01_141m) 38 15:04 (WT01_141m)
11	05:40 21:56	06:22 21:13	07:10 20:08	07:58 19:01	07:51 17:02	39 15:36 (WT01_141m) 38 15:05 (WT01_141m)
12	05:41 21:55	06:23 21:11	07:12 20:06	08:00 18:58	07:53 17:00	41 14:55 (WT01_141m) 37 15:06 (WT01_141m)
13	05:42 21:54	06:25 21:09	07:13 20:04	08:01 18:56	07:54 16:59	42 14:55 (WT01_141m) 37 15:06 (WT01_141m)
14	05:43 21:53	06:26 21:08	07:15 20:01	08:03 18:54	07:56 16:58	43 14:54 (WT01_141m) 37 15:07 (WT01_141m)
15	05:44 21:52	06:28 21:06	07:16 19:59	08:04 18:52	07:58 16:56	44 14:54 (WT01_141m) 36 15:07 (WT01_141m)
16	05:45 21:51	06:29 21:04	07:18 19:57	08:06 18:50	07:59 16:55	45 14:54 (WT01_141m) 35 15:08 (WT01_141m)
17	05:46 21:50	06:31 21:02	07:19 19:54	08:08 18:48	08:01 16:54	45 14:53 (WT01_141m) 35 15:09 (WT01_141m)
18	05:48 21:49	06:33 21:00	07:21 19:52	08:10 18:46	08:03 16:52	46 14:53 (WT01_141m) 34 15:10 (WT01_141m)
19	05:49 21:48	06:34 20:58	07:23 19:50	08:11 18:44	08:04 16:51	47 14:53 (WT01_141m) 34 15:11 (WT01_141m)
20	05:50 21:47	06:36 20:56	07:24 19:48	08:13 18:42	08:06 16:50	47 14:54 (WT01_141m) 35 15:12 (WT01_141m)
21	05:51 21:46	06:37 20:54	07:26 19:45	08:15 18:40	08:08 16:49	47 14:54 (WT01_141m) 35 15:13 (WT01_141m)
22	05:53 21:45	06:39 20:52	07:27 19:43	08:16 18:38	08:09 16:48	47 14:53 (WT01_141m) 35 15:14 (WT01_141m)
23	05:54 21:43	06:40 20:50	07:29 19:41	08:18 18:36	08:11 16:47	47 14:54 (WT01_141m) 35 15:15 (WT01_141m)
24	05:55 21:42	06:42 20:47	07:30 19:39	08:20 18:34	08:12 16:46	47 14:54 (WT01_141m) 34 15:16 (WT01_141m)
25	05:57 21:41	06:44 20:45	07:32 19:36	08:21 17:32	08:14 16:45	47 14:54 (WT01_141m) 34 15:17 (WT01_141m)
26	05:58 21:39	06:45 20:43	07:34 19:34	08:23 17:30	08:15 16:44	46 14:55 (WT01_141m) 35 15:18 (WT01_141m)
27	06:00 21:38	06:47 20:41	07:35 19:32	08:25 17:28	08:17 16:43	46 14:56 (WT01_141m) 35 15:19 (WT01_141m)
28	06:01 21:37	06:48 20:39	07:37 19:29	08:27 17:26	08:18 16:42	45 14:56 (WT01_141m) 36 15:20 (WT01_141m)
29	06:02 21:35	06:50 20:37	07:38 19:27	08:28 17:24	08:20 16:41	46 14:56 (WT01_141m) 36 15:21 (WT01_141m)
30	06:04 21:34	06:51 20:35	07:40 19:25	08:30 17:22	08:21 16:40	45 14:56 (WT01_141m) 36 15:22 (WT01_141m)
31	06:05 21:32	06:53 20:32		07:32 17:20		37 15:14 (WT01_141m)
Potential sun hours	498	451	380	333	269	248
Total, worst case					1069	1160
Sun reduction					0,26	0,21
Oper. time red.					0,99	0,99
Wind dir. red.					0,74	0,74
Total reduction					0,19	0,15
Total, real					200	180

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 16 - Generaal De Wittelaan 9
Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	January		February		March	April	May	June	July	August	September	October	November	December	
1	08:46	13:50 (WT01_141m)	08:21	07:29	07:21	06:18	05:34	05:32	06:07	06:55	07:42	07:34	08:23	13:44 (WT01_141m)	
2	16:46	34 14:24 (WT01_141m)	17:32	18:22	20:14	21:03	21:47	22:01	21:30	20:30	19:23	17:18	16:40	19 14:03 (WT01_141m)	
3	08:46	13:50 (WT01_141m)	08:19	07:27	07:18	06:16	05:33	05:32	06:08	06:56	07:43	07:35	08:24	13:43 (WT01_141m)	
4	16:47	34 14:24 (WT01_141m)	17:34	18:24	20:16	21:05	21:48	22:01	21:29	20:28	19:20	17:17	16:39	21 14:04 (WT01_141m)	
5	08:46	13:51 (WT01_141m)	08:18	07:25	07:16	06:14	05:33	05:33	06:10	06:58	07:45	07:37	08:26	13:43 (WT01_141m)	
6	16:48	33 14:24 (WT01_141m)	17:36	18:26	20:17	21:06	21:49	22:00	21:27	20:26	19:18	17:15	16:39	23 14:06 (WT01_141m)	
7	08:46	13:52 (WT01_141m)	08:16	07:23	07:14	06:12	05:32	05:34	06:11	06:59	07:46	07:39	08:27	13:41 (WT01_141m)	
8	16:49	32 14:24 (WT01_141m)	17:38	18:27	20:19	21:08	21:50	22:00	21:26	20:24	19:16	17:13	16:38	26 14:07 (WT01_141m)	
9	08:46	13:53 (WT01_141m)	08:15	07:21	07:12	06:10	05:31	05:34	06:13	07:01	07:48	07:40	08:28	13:41 (WT01_141m)	
10	16:50	31 14:24 (WT01_141m)	17:39	18:29	20:21	21:10	21:51	21:59	21:24	20:22	19:14	17:12	16:38	28 14:09 (WT01_141m)	
11	08:45	13:54 (WT01_141m)	08:13	07:19	07:09	06:09	05:31	05:35	06:14	07:02	07:50	07:42	08:29	13:41 (WT01_141m)	
12	16:51	30 14:24 (WT01_141m)	17:41	18:31	20:22	21:11	21:52	21:59	21:22	20:19	19:12	17:10	16:37	29 14:10 (WT01_141m)	
13	08:45	13:56 (WT01_141m)	08:11	07:16	07:07	06:07	05:30	05:36	06:16	07:04	07:51	07:44	08:31	13:40 (WT01_141m)	
14	16:53	28 14:24 (WT01_141m)	17:43	18:32	20:24	21:13	21:53	21:58	21:20	20:17	19:09	17:08	16:37	31 14:11 (WT01_141m)	
15	08:45	13:57 (WT01_141m)	08:10	07:14	07:05	06:05	05:30	05:37	06:17	07:05	07:53	07:46	08:32	13:40 (WT01_141m)	
16	16:54	26 14:23 (WT01_141m)	17:45	18:34	20:26	21:14	21:54	21:58	21:19	20:15	19:07	17:07	16:37	31 14:11 (WT01_141m)	
17	08:44	13:58 (WT01_141m)	08:08	07:12	07:03	06:04	05:29	05:38	06:19	07:07	07:55	07:47	08:33	13:40 (WT01_141m)	
18	16:55	24 14:22 (WT01_141m)	17:47	18:36	20:27	21:16	21:55	21:57	21:17	20:13	19:05	17:05	16:36	33 14:13 (WT01_141m)	
19	08:44	14:01 (WT01_141m)	08:06	07:10	07:01	06:02	05:29	05:39	06:20	07:09	07:56	07:49	08:34	13:40 (WT01_141m)	
20	16:57	21 14:22 (WT01_141m)	17:48	18:38	20:29	21:17	21:56	21:56	21:15	20:10	19:03	17:03	16:36	34 14:14 (WT01_141m)	
21	08:43	14:02 (WT01_141m)	08:05	07:08	06:59	06:00	05:28	05:40	06:22	07:10	07:58	07:51	08:35	13:40 (WT01_141m)	
22	16:58	19 14:21 (WT01_141m)	17:50	18:39	20:31	21:19	21:56	21:56	21:13	20:08	19:01	17:02	16:36	34 14:14 (WT01_141m)	
23	08:43	14:04 (WT01_141m)	08:03	07:05	06:56	05:59	05:28	05:41	06:23	07:12	08:00	07:53	08:36	13:40 (WT01_141m)	
24	16:59	16 14:20 (WT01_141m)	17:52	18:41	20:32	21:21	21:57	21:55	21:11	20:06	18:58	17:00	16:36	35 14:15 (WT01_141m)	
25	08:42	14:07 (WT01_141m)	08:01	07:03	06:54	05:57	05:28	05:42	06:25	07:13	08:01	07:54	08:37	13:40 (WT01_141m)	
26	17:01	10 14:17 (WT01_141m)	17:54	18:43	20:34	21:22	21:58	21:54	21:09	20:04	18:56	16:59	16:36	36 14:16 (WT01_141m)	
27	08:41	14:17 (WT01_141m)	07:59	07:01	06:52	05:56	05:28	05:43	06:26	07:15	08:03	07:56	08:38	13:40 (WT01_141m)	
28	17:02	17:56	18:44	20:36	21:24	21:58	21:53	21:08	20:01	18:54	16:58	16:36	37 14:17 (WT01_141m)		
29	08:41	17:57	18:46	20:37	21:25	21:59	21:52	21:06	19:59	18:52	16:56	16:36	36 14:17 (WT01_141m)		
30	17:04	17:57	18:46	20:37	21:25	21:59	21:52	21:06	19:59	18:52	16:56	16:36	36 14:17 (WT01_141m)		
31	08:40	17:55	18:45	20:38	21:26	21:59	21:51	21:04	19:57	18:50	16:55	16:36	37 14:18 (WT01_141m)		
32	17:05	17:59	18:48	20:39	21:26	21:59	21:51	21:04	19:57	18:50	16:55	16:36	37 14:18 (WT01_141m)		
33	08:39	17:54	18:44	20:36	21:24	21:57	21:49	21:03	19:56	18:49	16:54	16:36	37 14:18 (WT01_141m)		
34	17:07	18:01	18:49	20:40	21:28	22:00	21:50	21:02	19:54	18:48	16:54	16:36	37 14:18 (WT01_141m)		
35	08:38	17:52	18:43	20:35	21:23	21:56	21:48	21:01	19:53	18:47	16:53	16:36	38 14:19 (WT01_141m)		
36	17:08	18:03	18:51	20:42	21:29	22:00	21:49	21:00	19:52	18:46	16:52	16:36	38 14:19 (WT01_141m)		
37	08:37	17:50	18:41	20:34	21:21	21:54	21:46	20:59	19:51	18:45	16:51	16:36	38 14:20 (WT01_141m)		
38	17:10	18:05	18:53	20:44	21:31	22:00	21:48	20:58	19:50	18:44	16:51	16:37	38 14:20 (WT01_141m)		
39	08:36	17:48	18:39	20:31	21:13	21:46	21:38	20:50	19:42	18:36	16:46	16:36	38 14:21 (WT01_141m)		
40	17:12	18:06	18:54	20:45	21:32	22:01	21:47	20:56	19:48	18:42	16:50	16:37	38 14:20 (WT01_141m)		
41	08:35	17:46	18:37	20:29	21:11	21:44	21:36	20:48	19:40	18:34	16:46	16:36	38 14:21 (WT01_141m)		
42	17:13	18:08	18:56	20:47	21:34	22:01	21:46	20:54	19:45	18:40	16:49	16:38	38 14:21 (WT01_141m)		
43	08:34	17:44	18:35	20:27	21:09	21:42	21:34	20:46	19:38	18:32	16:46	16:38	38 14:22 (WT01_141m)		
44	17:15	18:10	18:58	20:49	21:35	22:01	21:45	20:52	19:43	18:38	16:48	16:38	38 14:21 (WT01_141m)		
45	08:33	17:42	18:33	20:25	21:07	21:40	21:32	20:44	19:36	18:30	16:46	16:38	38 14:22 (WT01_141m)		
46	17:17	18:12	18:59	20:50	21:36	22:01	21:43	20:50	19:41	18:36	16:47	16:39	38 14:22 (WT01_141m)		
47	08:32	17:40	18:31	20:21	21:03	21:36	21:28	20:40	19:32	18:26	16:46	16:39	38 14:22 (WT01_141m)		
48	17:18	18:13	19:01	20:52	21:38	22:02	21:42	20:47	19:39	18:34	16:46	16:39	38 14:22 (WT01_141m)		
49	08:30	17:38	18:29	20:20	21:01	21:34	21:26	20:38	19:30	18:24	16:45	16:39	38 14:22 (WT01_141m)		
50	17:20	18:15	19:03	20:53	21:39	22:02	21:41	20:45	19:36	18:32	16:45	16:40	38 14:22 (WT01_141m)		
51	08:29	17:36	18:27	20:18	20:59	21:32	21:24	20:36	19:28	18:22	16:44	16:39	38 14:22 (WT01_141m)		
52	17:22	18:17	19:04	20:55	21:40	22:02	21:39	20:43	19:34	18:30	16:44	16:40	37 14:23 (WT01_141m)		
53	08:28	17:33	18:24	20:15	20:56	21:29	21:21	20:33	19:25	18:19	16:43	16:39	37 14:23 (WT01_141m)		
54	17:23	18:19	19:06	20:57	21:41	22:02	21:38	20:41	19:32	18:28	16:43	16:41	37 14:23 (WT01_141m)		
55	08:27	17:31	18:22	20:03	20:44	21:17	21:09	20:21	19:13	18:07	16:42	16:39	37 14:23 (WT01_141m)		
56	17:25	18:20	19:07	20:58	21:43	22:01	21:37	20:39	19:29	18:23	16:42	16:42	36 14:23 (WT01_141m)		
57	08:25	17:27	18:18	20:05	20:46	21:19	21:11	20:23	19:15	18:09	16:41	16:39	36 14:23 (WT01_141m)		
58	17:27	18:22	19:09	20:59	21:44	22:01	21:35	20:37	19:27	18:21	16:41	16:40	36 14:23 (WT01_141m)		
59	08:24	17:25	18:16	20:03	20:44	21:17	21:09	20:21	19:13	18:07	16:41	16:39	36 14:23 (WT01_141m)		
60	17:29	18:24	19:11	21:02	21:45	22:01	21:34	20:35	19:25	18:19	16:40	16:40	36 14:24 (WT01_141m)		
61	08:22	17:23	18:14	20:01	20:42	21:15	21:07	20:19	19:11	18:05	16:40	16:39	36 14:24 (WT01_141m)		
62	17:30	18:25	19:12	21:03	21:46	22:01	21:32	20:33	19:23	18:17	16:40	16:40	35 14:24 (WT01_141m)		
Potential sun hours	263		279	367	414	481	494	498	451	380	333	269	248	1048	
Total, worst case	338											26		0,21	
Sun reduction	0,24											0,26		0,21	
Oper. time red.	0,99											0,99		0,99	
Wind dir. red.	0,71											0,71		0,71	
Total reduction	0,17											0,18		0,15	
Total, real	56											5		156	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 17 - Hogeweg 181

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46	08:21	07:29	07:21	06:18	07:30 (WT01_141m)
	16:46	17:32	18:22	20:14	21:03	08:21 (WT01_141m)
2	08:46	08:19	07:27	07:18	06:16	07:28 (WT01_141m)
	16:47	17:34	18:24	20:16	21:05	08:22 (WT01_141m)
3	08:46	08:18	07:25	07:16	06:14	07:27 (WT01_141m)
	16:48	17:36	18:26	20:17	21:06	08:22 (WT01_141m)
4	08:46	08:16	07:23	07:14	06:12	07:25 (WT01_141m)
	16:49	17:38	18:27	20:19	21:08	08:23 (WT01_141m)
5	08:46	08:15	07:21	07:12	06:10	07:25 (WT01_141m)
	16:50	17:39	18:29	20:21	21:10	08:24 (WT01_141m)
6	08:45	08:13	07:19	07:10	06:09	07:24 (WT01_141m)
	16:52	17:41	18:31	20:22	21:11	08:24 (WT01_141m)
7	08:45	08:12	07:16	07:07	06:07	07:22 (WT01_141m)
	16:53	17:43	18:33	20:24	21:13	08:24 (WT01_141m)
8	08:45	08:10	07:14	07:05	06:05	07:22 (WT01_141m)
	16:54	17:45	18:34	20:26	21:14	08:26 (WT01_141m)
9	08:44	08:08	07:12	07:03	06:04	07:21 (WT01_141m)
	16:55	17:47	18:36	20:27	21:16	08:26 (WT01_141m)
10	08:44	08:06	07:10	07:01	06:02	07:21 (WT01_141m)
	16:57	17:48	18:38	20:29	21:17	08:26 (WT01_141m)
11	08:43	08:05	07:08	06:59	06:00	07:20 (WT01_141m)
	16:58	17:50	18:39	20:31	21:19	08:26 (WT01_141m)
12	08:43	08:03	07:05	06:56	05:59	07:20 (WT01_141m)
	16:59	17:52	18:41	20:32	21:21	08:27 (WT01_141m)
13	08:42	08:01	07:03	06:54	05:57	07:19 (WT01_141m)
	17:01	17:54	18:43	20:34	21:22	08:27 (WT01_141m)
14	08:41	07:59	07:01	06:52	05:56	07:19 (WT01_141m)
	17:02	17:56	18:44	20:36	21:24	08:27 (WT01_141m)
15	08:41	07:57	06:59	06:50	05:54	07:19 (WT01_141m)
	17:04	17:57	18:46	20:37	21:25	08:28 (WT01_141m)
16	08:40	07:55	06:57	06:48	05:53	07:19 (WT01_141m)
	17:05	17:59	18:48	20:39	21:26	08:27 (WT01_141m)
17	08:39	07:54	06:54	06:46	05:51	07:19 (WT01_141m)
	17:07	18:01	18:49	20:40	21:28	08:28 (WT01_141m)
18	08:38	07:52	06:52	06:44	05:50	07:19 (WT01_141m)
	17:09	18:03	18:51	20:42	21:29	08:28 (WT01_141m)
19	08:37	07:50	06:50	06:42	05:48	07:18 (WT01_141m)
	17:10	18:05	18:53	20:44	21:31	08:27 (WT01_141m)
20	08:36	07:48	06:48	06:39	05:47	07:18 (WT01_141m)
	17:12	18:06	18:54	20:45	21:32	08:27 (WT01_141m)
21	08:35	07:46	06:45	06:37	05:46	07:18 (WT01_141m)
	17:13	18:08	18:56	20:47	21:34	08:28 (WT01_141m)
22	08:34	07:44	06:43	06:35	05:45	07:18 (WT01_141m)
	17:15	18:10	18:58	20:49	21:35	08:28 (WT01_141m)
23	08:33	07:42	06:41	06:33	05:43	07:18 (WT01_141m)
	17:17	18:12	18:59	20:50	21:36	08:28 (WT01_141m)
24	08:32	07:40	06:39	06:31	05:42	07:18 (WT01_141m)
	17:18	18:13	19:01	20:52	21:38	08:28 (WT01_141m)
25	08:30	07:38	06:36	06:29	05:41	07:18 (WT01_141m)
	17:20	18:15	19:03	20:53	21:39	08:28 (WT01_141m)
26	08:29	07:36	06:34	06:27	05:40	07:19 (WT01_141m)
	17:22	18:17	19:04	20:55	21:40	08:28 (WT01_141m)
27	08:28	07:34	06:32	06:25	05:39	07:19 (WT01_141m)
	17:24	18:19	19:06	20:57	21:41	08:28 (WT01_141m)
28	08:27	07:31	06:30	06:23	05:38	07:19 (WT01_141m)
	17:25	18:20	19:08	20:58	21:43	08:28 (WT01_141m)
29	08:25		07:27	06:22	05:37	07:19 (WT01_141m)
	17:27		20:09	21:00	21:44	08:27 (WT01_141m)
30	08:24		07:25	06:20	05:36	07:19 (WT01_141m)
	17:29		20:11	21:02	21:45	08:27 (WT01_141m)
31	08:22		07:23		05:35	07:20 (WT01_141m)
	17:31		20:13		21:46	08:28 (WT01_141m)
Potential sun hours	263	280	367	414	481	494
Total, worst case				285	2036	1957
Sun reduction				0,45	0,45	0,44
Oper. time red.				0,99	0,99	0,99
Wind dir. red.				0,66	0,66	0,66
Total reduction				0,29	0,29	0,28
Total, real				83	597	557

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 17 - Hogeweg 181

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July			August			September			October			November			December		
1	05:32		07:26 (WT01_141m)	06:07		07:31 (WT01_141m)	06:55		07:42		07:34	08:23					
	22:01	65	08:31 (WT01_141m)	21:30	66	08:37 (WT01_141m)	20:30		19:23		17:19	16:40					
2	05:32		07:27 (WT01_141m)	06:08		07:31 (WT01_141m)	06:56		07:43		07:35	08:24					
	22:01	65	08:32 (WT01_141m)	21:29	66	08:37 (WT01_141m)	20:28		19:20		17:17	16:39					
3	05:33		07:27 (WT01_141m)	06:10		07:32 (WT01_141m)	06:58		07:45		07:37	08:26					
	22:00	66	08:33 (WT01_141m)	21:27	65	08:37 (WT01_141m)	20:26		19:18		17:15	16:39					
4	05:34		07:26 (WT01_141m)	06:11		07:32 (WT01_141m)	06:59		07:47		07:39	08:27					
	22:00	66	08:32 (WT01_141m)	21:26	64	08:36 (WT01_141m)	20:24		19:16		17:13	16:38					
5	05:35		07:27 (WT01_141m)	06:13		07:32 (WT01_141m)	07:01		07:48		07:40	08:28					
	21:59	66	08:33 (WT01_141m)	21:24	63	08:35 (WT01_141m)	20:22		19:14		17:12	16:38					
6	05:35		07:27 (WT01_141m)	06:14		07:33 (WT01_141m)	07:02		07:50		07:42	08:29					
	21:59	66	08:33 (WT01_141m)	21:22	62	08:35 (WT01_141m)	20:19		19:12		17:10	16:37					
7	05:36		07:27 (WT01_141m)	06:16		07:33 (WT01_141m)	07:04		07:51		07:44	08:31					
	21:58	67	08:34 (WT01_141m)	21:20	61	08:34 (WT01_141m)	20:17		19:09		17:08	16:37					
8	05:37		07:27 (WT01_141m)	06:17		07:35 (WT01_141m)	07:06		07:53		07:46	08:32					
	21:58	67	08:34 (WT01_141m)	21:19	58	08:33 (WT01_141m)	20:15		19:07		17:07	16:37					
9	05:38		07:28 (WT01_141m)	06:19		07:35 (WT01_141m)	07:07		07:55		07:47	08:33					
	21:57	67	08:35 (WT01_141m)	21:17	57	08:32 (WT01_141m)	20:13		19:05		17:05	16:36					
10	05:39		07:27 (WT01_141m)	06:20		07:36 (WT01_141m)	07:09		07:56		07:49	08:34					
	21:56	67	08:34 (WT01_141m)	21:15	56	08:32 (WT01_141m)	20:10		19:03		17:03	16:36					
11	05:40		07:27 (WT01_141m)	06:22		07:37 (WT01_141m)	07:10		07:58		07:51	08:35					
	21:56	68	08:35 (WT01_141m)	21:13	53	08:30 (WT01_141m)	20:08		19:01		17:02	16:36					
12	05:41		07:27 (WT01_141m)	06:23		07:37 (WT01_141m)	07:12		08:00		07:53	08:36					
	21:55	68	08:35 (WT01_141m)	21:11	51	08:28 (WT01_141m)	20:06		18:58		17:00	16:36					
13	05:42		07:27 (WT01_141m)	06:25		07:39 (WT01_141m)	07:13		08:01		07:54	08:37					
	21:54	68	08:35 (WT01_141m)	21:09	49	08:28 (WT01_141m)	20:04		18:56		16:59	16:36					
14	05:43		07:27 (WT01_141m)	06:26		07:40 (WT01_141m)	07:15		08:03		07:56	08:38					
	21:53	69	08:36 (WT01_141m)	21:08	46	08:26 (WT01_141m)	20:01		18:54		16:58	16:36					
15	05:44		07:28 (WT01_141m)	06:28		07:42 (WT01_141m)	07:16		08:05		07:58	08:39					
	21:52	69	08:37 (WT01_141m)	21:06	42	08:24 (WT01_141m)	19:59		18:52		16:56	16:36					
16	05:45		07:28 (WT01_141m)	06:30		07:43 (WT01_141m)	07:18		08:06		07:59	08:40					
	21:51	69	08:37 (WT01_141m)	21:04	39	08:22 (WT01_141m)	19:57		18:50		16:55	16:36					
17	05:47		07:28 (WT01_141m)	06:31		07:46 (WT01_141m)	07:20		08:08		08:01	08:41					
	21:50	69	08:37 (WT01_141m)	21:02	34	08:20 (WT01_141m)	19:54		18:48		16:54	16:36					
18	05:48		07:28 (WT01_141m)	06:33		07:47 (WT01_141m)	07:21		08:10		08:03	08:41					
	21:49	69	08:37 (WT01_141m)	21:00	30	08:17 (WT01_141m)	19:52		18:46		16:52	16:37					
19	05:49		07:28 (WT01_141m)	06:34		07:51 (WT01_141m)	07:23		08:11		08:04	08:42					
	21:48	69	08:37 (WT01_141m)	20:58	23	08:14 (WT01_141m)	19:50		18:44		16:51	16:37					
20	05:50		07:28 (WT01_141m)	06:36		07:55 (WT01_141m)	07:24		08:13		08:06	08:43					
	21:47	69	08:37 (WT01_141m)	20:56	13	08:08 (WT01_141m)	19:48		18:42		16:50	16:37					
21	05:52		07:28 (WT01_141m)	06:37			07:26		08:15		08:08	08:43					
	21:46	69	08:37 (WT01_141m)	20:54			19:45		18:40		16:49	16:38					
22	05:53		07:29 (WT01_141m)	06:39			07:27		08:16		08:09	08:44					
	21:45	69	08:38 (WT01_141m)	20:52			19:43		18:38		16:48	16:38					
23	05:54		07:29 (WT01_141m)	06:40			07:29		08:18		08:11	08:44					
	21:43	69	08:38 (WT01_141m)	20:50			19:41		18:36		16:47	16:39					
24	05:55		07:28 (WT01_141m)	06:42			07:31		08:20		08:12	08:45					
	21:42	70	08:38 (WT01_141m)	20:47			19:39		18:34		16:46	16:39					
25	05:57		07:28 (WT01_141m)	06:44			07:32		07:21		08:14	08:45					
	21:41	70	08:38 (WT01_141m)	20:45			19:36		17:32		16:45	16:40					
26	05:58		07:29 (WT01_141m)	06:45			07:34		07:23		08:15	08:45					
	21:39	69	08:38 (WT01_141m)	20:43			19:34		17:30		16:44	16:41					
27	06:00		07:29 (WT01_141m)	06:47			07:35		07:25		08:17	08:46					
	21:38	69	08:38 (WT01_141m)	20:41			19:32		17:28		16:43	16:41					
28	06:01		07:29 (WT01_141m)	06:48			07:37		07:27		08:19	08:46					
	21:37	69	08:38 (WT01_141m)	20:39			19:29		17:26		16:42	16:42					
29	06:02		07:30 (WT01_141m)	06:50			07:38		07:28		08:20	08:46					
	21:35	68	08:38 (WT01_141m)	20:37			19:27		17:24		16:41	16:43					
30	06:04		07:30 (WT01_141m)	06:51			07:40		07:30		08:21	08:46					
	21:34	68	08:38 (WT01_141m)	20:35			19:25		17:22		16:41	16:44					
31	06:05		07:30 (WT01_141m)	06:53					07:32			08:46					
	21:32	67	08:37 (WT01_141m)	20:33					17:20			16:45					
Potential sun hours	498			451			380		333		269	248					
Total, worst case	2106			998													
Sun reduction	0,44			0,46													
Oper. time red.	0,99			0,99													
Wind dir. red.	0,66			0,66													
Total reduction	0,29			0,30													
Total, real	606			299													

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 18 - Hogeweg 211

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March		April		May	June
1	08:46 16:46	08:21 17:32	07:29 18:22		07:21 20:14	51	08:24 (WT01_141m) 09:15 (WT01_141m)	06:18 21:03
2	08:46 16:47	08:19 17:34	07:27 18:24		07:18 20:16	52	08:23 (WT01_141m) 09:15 (WT01_141m)	06:16 21:05
3	08:46 16:48	08:18 17:36	07:25 18:26		07:16 20:17	52	08:22 (WT01_141m) 09:14 (WT01_141m)	06:14 21:06
4	08:46 16:49	08:16 17:38	07:23 18:27		07:14 20:19	52	08:22 (WT01_141m) 09:14 (WT01_141m)	06:12 21:08
5	08:46 16:50	08:15 17:39	07:21 18:29		07:12 20:21	53	08:21 (WT01_141m) 09:14 (WT01_141m)	06:10 21:10
6	08:45 16:52	08:13 17:41	07:19 18:31		07:10 20:22	53	08:21 (WT01_141m) 09:14 (WT01_141m)	06:09 21:11
7	08:45 16:53	08:12 17:43	07:16 18:33		07:07 20:24	52	08:21 (WT01_141m) 09:13 (WT01_141m)	06:07 21:13
8	08:45 16:54	08:10 17:45	07:14 18:34		07:05 20:26	52	08:20 (WT01_141m) 09:12 (WT01_141m)	06:05 21:14
9	08:44 16:55	08:08 17:47	07:12 18:36		07:03 20:27	50	08:21 (WT01_141m) 09:11 (WT01_141m)	06:04 21:16
10	08:44 16:57	08:06 17:48	07:10 18:38		07:01 20:29	49	08:21 (WT01_141m) 09:10 (WT01_141m)	06:02 21:17
11	08:43 16:58	08:05 17:50	07:08 18:39		06:59 20:31	49	08:21 (WT01_141m) 09:10 (WT01_141m)	06:00 21:19
12	08:43 16:59	08:03 17:52	07:06 18:41		06:56 20:32	47	08:22 (WT01_141m) 09:09 (WT01_141m)	05:59 21:21
13	08:42 17:01	08:01 17:54	07:03 18:43		06:54 20:34	45	08:22 (WT01_141m) 09:07 (WT01_141m)	05:57 21:22
14	08:41 17:02	07:59 17:56	07:01 18:44		06:52 20:36	43	08:23 (WT01_141m) 09:06 (WT01_141m)	05:56 21:24
15	08:41 17:04	07:57 17:57	06:59 18:46		06:50 20:37	41	08:24 (WT01_141m) 09:05 (WT01_141m)	05:54 21:25
16	08:40 17:05	07:55 17:59	06:57 18:48		06:48 20:39	38	08:24 (WT01_141m) 09:02 (WT01_141m)	05:53 21:27
17	08:39 17:07	07:54 18:01	06:54 18:49		06:46 20:40	35	08:25 (WT01_141m) 09:00 (WT01_141m)	05:51 21:28
18	08:38 17:09	07:52 18:03	06:52 18:51		06:44 20:42	32	08:26 (WT01_141m) 08:58 (WT01_141m)	05:50 21:29
19	08:37 17:10	07:50 18:05	06:50 18:53	8	07:50 (WT01_141m) 07:58 (WT01_141m)	29	08:27 (WT01_141m) 08:56 (WT01_141m)	05:48 21:31
20	08:36 17:12	07:48 18:06	06:48 18:54	20	07:44 (WT01_141m) 08:04 (WT01_141m)	25	08:29 (WT01_141m) 08:54 (WT01_141m)	05:47 21:32
21	08:35 17:13	07:46 18:08	06:45 18:56	26	07:41 (WT01_141m) 08:07 (WT01_141m)	19	08:32 (WT01_141m) 08:51 (WT01_141m)	05:46 21:34
22	08:34 17:15	07:44 18:10	06:43 18:58	31	07:37 (WT01_141m) 08:08 (WT01_141m)	10	08:36 (WT01_141m) 08:46 (WT01_141m)	05:45 21:35
23	08:33 17:17	07:42 18:12	06:41 18:59	35	07:35 (WT01_141m) 08:10 (WT01_141m)			05:43 21:36
24	08:32 17:18	07:40 18:13	06:39 19:01	38	07:33 (WT01_141m) 08:11 (WT01_141m)			05:42 21:38
25	08:30 17:20	07:38 18:15	06:36 19:03	41	07:32 (WT01_141m) 08:13 (WT01_141m)			05:41 21:39
26	08:29 17:22	07:36 18:17	06:34 19:04	44	07:29 (WT01_141m) 08:13 (WT01_141m)			05:40 21:40
27	08:28 17:24	07:34 18:19	06:32 19:06	46	07:28 (WT01_141m) 08:14 (WT01_141m)			05:39 21:41
28	08:27 17:25	07:31 18:20	06:30 19:08	48	07:27 (WT01_141m) 08:15 (WT01_141m)			05:38 21:43
29	08:25 17:27		07:27 20:09	49	08:26 (WT01_141m) 09:15 (WT01_141m)			05:37 21:44
30	08:24 17:29		07:25 20:11	50	08:25 (WT01_141m) 09:15 (WT01_141m)			05:36 21:45
31	08:22 17:31		07:23 20:13	51	08:24 (WT01_141m) 09:15 (WT01_141m)			05:35 21:46
Potential sun hours	263	279	367		414		481	494
Total, worst case			487					
Sun reduction			0,36					
Oper. time red.			0,99					
Wind dir. red.			0,59					
Total reduction			0,21					
Total, real			103		242			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 18 - Hogeweg 211

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December
1	05:32	06:07	06:55	08:20 (WT01_141m)	07:42	07:34
	22:01	21:30	20:30	09:09 (WT01_141m)	19:23	17:19
2	05:32	06:08	06:56	08:20 (WT01_141m)	07:43	07:35
	22:01	21:29	20:28	09:09 (WT01_141m)	19:21	17:17
3	05:33	06:10	06:58	08:19 (WT01_141m)	07:45	07:37
	22:00	21:27	20:26	09:09 (WT01_141m)	19:18	17:15
4	05:34	06:11	06:59	08:19 (WT01_141m)	07:47	07:39
	22:00	21:26	20:24	09:10 (WT01_141m)	19:16	17:13
5	05:35	06:13	07:01	08:17 (WT01_141m)	07:48	07:40
	21:59	21:24	20:22	09:09 (WT01_141m)	19:14	17:12
6	05:35	06:14	07:02	08:17 (WT01_141m)	07:50	07:42
	21:59	21:22	20:19	09:10 (WT01_141m)	19:12	17:10
7	05:36	06:16	07:04	08:17 (WT01_141m)	07:51	07:44
	21:58	21:20	20:17	09:09 (WT01_141m)	19:09	17:08
8	05:37	06:17	07:06	08:17 (WT01_141m)	07:53	07:46
	21:58	21:19	20:15	09:09 (WT01_141m)	19:07	17:07
9	05:38	06:19	07:07	08:16 (WT01_141m)	07:55	07:47
	21:57	21:17	20:13	09:09 (WT01_141m)	19:05	17:05
10	05:39	06:20	07:09	08:16 (WT01_141m)	07:56	07:49
	21:56	21:15	20:10	09:09 (WT01_141m)	19:03	17:04
11	05:40	06:22	07:10	08:16 (WT01_141m)	07:58	07:51
	21:56	21:13	20:08	09:08 (WT01_141m)	19:01	17:02
12	05:41	06:23	07:12	08:16 (WT01_141m)	08:00	07:53
	21:55	21:11	20:06	09:07 (WT01_141m)	18:58	17:00
13	05:42	06:25	07:13	08:16 (WT01_141m)	08:01	07:54
	21:54	21:10	20:04	09:06 (WT01_141m)	18:56	16:59
14	05:43	06:26	07:15	08:17 (WT01_141m)	08:03	07:56
	21:53	21:08	20:01	09:06 (WT01_141m)	18:54	16:58
15	05:44	06:28	07:16	08:17 (WT01_141m)	08:05	07:58
	21:52	21:06	19:59	09:04 (WT01_141m)	18:52	16:56
16	05:45	06:30	07:18	08:18 (WT01_141m)	08:06	07:59
	21:51	21:04	19:57	09:03 (WT01_141m)	18:50	16:55
17	05:47	06:31	07:20	08:18 (WT01_141m)	08:08	08:01
	21:50	21:02	19:55	09:01 (WT01_141m)	18:48	16:54
18	05:48	06:33	07:21	08:19 (WT01_141m)	08:10	08:03
	21:49	21:00	19:52	09:00 (WT01_141m)	18:46	16:52
19	05:49	06:34	07:23	08:19 (WT01_141m)	08:11	08:04
	21:48	20:58	19:50	08:58 (WT01_141m)	18:44	16:51
20	05:50	06:36	07:24	08:21 (WT01_141m)	08:13	08:06
	21:47	20:56	19:48	08:57 (WT01_141m)	18:42	16:50
21	05:52	06:37	08:41 (WT01_141m)	08:22 (WT01_141m)	08:15	08:08
	21:46	20:54	19:45	08:54 (WT01_141m)	18:40	16:49
22	05:53	06:39	08:36 (WT01_141m)	08:25 (WT01_141m)	08:16	08:09
	21:45	20:52	19:43	08:52 (WT01_141m)	18:38	16:48
23	05:54	06:40	08:34 (WT01_141m)	08:27 (WT01_141m)	08:18	08:11
	21:43	20:50	19:41	08:49 (WT01_141m)	18:36	16:47
24	05:55	06:42	08:31 (WT01_141m)	08:31 (WT01_141m)	08:20	08:12
	21:42	20:48	19:39	08:44 (WT01_141m)	18:34	16:46
25	05:57	06:44	08:30 (WT01_141m)		07:21	08:14
	21:41	20:45	19:36		17:32	16:45
26	05:58	06:45	08:27 (WT01_141m)		07:23	08:16
	21:39	20:43	19:34		17:30	16:44
27	06:00	06:47	08:26 (WT01_141m)		07:25	08:17
	21:38	20:41	19:32		17:28	16:43
28	06:01	06:48	08:25 (WT01_141m)		07:27	08:19
	21:37	20:39	19:30		17:26	16:42
29	06:02	06:50	08:24 (WT01_141m)		07:28	08:20
	21:35	20:37	19:27		17:24	16:41
30	06:04	06:51	08:22 (WT01_141m)		07:30	08:21
	21:34	20:35	19:25		17:22	16:41
31	06:05	06:53	08:22 (WT01_141m)		07:32	08:46
	21:32	20:33	09:09 (WT01_141m)		17:20	16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case		368	1061			
Sun reduction		0,46	0,43			
Oper. time red.		0,99	0,99			
Wind dir. red.		0,59	0,59			
Total reduction		0,27	0,25			
Total, real		98	262			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 19 - Hogeweg 124

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46	08:21	07:29	08:28 (WT01_141m)	07:21	06:18
	16:46	17:32	18:22	45 09:13 (WT01_141m)	20:14	21:03
2	08:46	08:19	07:27	08:27 (WT01_141m)	07:18	06:16
	16:47	17:34	18:24	46 09:13 (WT01_141m)	20:16	21:05
3	08:46	08:18	07:25	08:27 (WT01_141m)	07:16	06:14
	16:48	17:36	18:26	46 09:13 (WT01_141m)	20:17	21:06
4	08:46	08:16	07:23	08:27 (WT01_141m)	07:14	06:12
	16:49	17:38	18:27	46 09:13 (WT01_141m)	20:19	21:08
5	08:46	08:15	07:21	08:27 (WT01_141m)	07:12	06:10
	16:50	17:39	18:29	46 09:13 (WT01_141m)	20:21	21:10
6	08:46	08:13	07:19	08:26 (WT01_141m)	07:10	06:09
	16:52	17:41	18:31	45 09:11 (WT01_141m)	20:22	21:11
7	08:45	08:12	07:16	08:27 (WT01_141m)	07:07	06:07
	16:53	17:43	18:33	44 09:11 (WT01_141m)	20:24	21:13
8	08:45	08:10	07:14	08:27 (WT01_141m)	07:05	06:05
	16:54	17:45	18:34	44 09:11 (WT01_141m)	20:26	21:14
9	08:44	08:08	07:12	08:27 (WT01_141m)	07:03	06:04
	16:55	17:47	18:36	43 09:10 (WT01_141m)	20:27	21:16
10	08:44	08:06	07:10	08:27 (WT01_141m)	07:01	06:02
	16:57	17:48	18:38	41 09:08 (WT01_141m)	20:29	21:17
11	08:43	08:05	07:08	08:28 (WT01_141m)	06:59	06:00
	16:58	17:50	18:39	39 09:07 (WT01_141m)	20:31	21:19
12	08:43	08:03	07:06	08:29 (WT01_141m)	06:56	05:59
	16:59	17:52	18:41	37 09:06 (WT01_141m)	20:32	21:21
13	08:42	08:01	07:03	08:30 (WT01_141m)	06:54	05:57
	17:01	17:54	18:43	35 09:05 (WT01_141m)	20:34	21:22
14	08:41	07:59	07:01	08:30 (WT01_141m)	06:52	05:56
	17:02	17:56	18:44	32 09:02 (WT01_141m)	20:36	21:24
15	08:41	07:57	06:59	08:32 (WT01_141m)	06:50	05:54
	17:04	17:57	18:46	28 09:00 (WT01_141m)	20:37	21:25
16	08:40	07:55	06:57	08:34 (WT01_141m)	06:48	05:53
	17:05	17:59	18:48	24 08:58 (WT01_141m)	20:39	21:27
17	08:39	07:54	08:49 (WT01_141m)	06:54	06:46	05:51
	17:07	18:01	6 08:55 (WT01_141m)	18:49	19 08:55 (WT01_141m)	20:40
18	08:38	07:52	08:44 (WT01_141m)	06:52	08:40 (WT01_141m)	06:44
	17:09	18:03	16 09:00 (WT01_141m)	18:51	8 08:48 (WT01_141m)	20:42
19	08:37	07:50	08:41 (WT01_141m)	06:50		06:42
	17:10	18:05	22 09:03 (WT01_141m)	18:53		20:44
20	08:36	07:48	08:38 (WT01_141m)	06:48		06:39
	17:12	18:06	27 09:05 (WT01_141m)	18:54		20:45
21	08:35	07:46	08:36 (WT01_141m)	06:45		06:37
	17:13	18:08	31 09:07 (WT01_141m)	18:56		20:47
22	08:34	07:44	08:35 (WT01_141m)	06:43		06:35
	17:15	18:10	33 09:08 (WT01_141m)	18:58		20:49
23	08:33	07:42	08:33 (WT01_141m)	06:41		06:33
	17:17	18:12	37 09:10 (WT01_141m)	18:59		20:50
24	08:32	07:40	08:32 (WT01_141m)	06:39		06:31
	17:18	18:13	39 09:11 (WT01_141m)	19:01		20:52
25	08:30	07:38	08:31 (WT01_141m)	06:36		06:29
	17:20	18:15	40 09:11 (WT01_141m)	19:03		20:54
26	08:29	07:36	08:30 (WT01_141m)	06:34		06:27
	17:22	18:17	42 09:12 (WT01_141m)	19:04		20:55
27	08:28	07:34	08:30 (WT01_141m)	06:32		06:25
	17:24	18:19	43 09:13 (WT01_141m)	19:06		20:57
28	08:27	07:31	08:28 (WT01_141m)	06:30		06:23
	17:25	18:20	44 09:12 (WT01_141m)	19:08		20:58
29	08:25			07:27		06:22
	17:27			20:09		21:00
30	08:24			07:25		06:20
	17:29			20:11		21:02
31	08:22			07:23		06:18
	17:31			20:13		21:04
Potential sun hours	263	279	367	414	481	494
Total, worst case		380	668			
Sun reduction		0,28	0,36			
Oper. time red.		0,99	0,99			
Wind dir. red.		0,54	0,54			
Total reduction		0,15	0,19			
Total, real		57	130			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 19 - Hogeweg 124

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December
1	05:32	06:07	06:55	07:42	09:08 (WT01_141m)	07:34
	22:01	21:30	20:30	19:23	09:44 (WT01_141m)	17:19
2	05:32	06:08	06:56	07:43	09:07 (WT01_141m)	07:35
	22:01	21:29	20:28	19:21	09:46 (WT01_141m)	17:17
3	05:33	06:10	06:58	07:45	09:06 (WT01_141m)	07:37
	22:00	21:27	20:26	19:18	09:47 (WT01_141m)	17:15
4	05:34	06:11	06:59	07:47	09:04 (WT01_141m)	07:39
	22:00	21:26	20:24	19:16	09:46 (WT01_141m)	17:13
5	05:35	06:13	07:01	07:48	09:04 (WT01_141m)	07:40
	21:59	21:24	20:22	19:14	09:47 (WT01_141m)	17:12
6	05:35	06:14	07:02	07:50	09:03 (WT01_141m)	07:42
	21:59	21:22	20:19	19:12	09:47 (WT01_141m)	17:10
7	05:36	06:16	07:04	07:51	09:02 (WT01_141m)	07:44
	21:58	21:20	20:17	19:09	09:47 (WT01_141m)	17:08
8	05:37	06:17	07:06	07:53	09:02 (WT01_141m)	07:46
	21:58	21:19	20:15	19:07	09:48 (WT01_141m)	17:07
9	05:38	06:19	07:07	07:55	09:02 (WT01_141m)	07:47
	21:57	21:17	20:13	19:05	09:48 (WT01_141m)	17:05
10	05:39	06:20	07:09	07:56	09:01 (WT01_141m)	07:49
	21:56	21:15	20:10	19:03	09:47 (WT01_141m)	17:03
11	05:40	06:22	07:10	07:58	09:01 (WT01_141m)	07:51
	21:56	21:13	20:08	19:01	09:47 (WT01_141m)	17:02
12	05:41	06:23	07:12	08:00	09:02 (WT01_141m)	07:53
	21:55	21:11	20:06	18:58	09:47 (WT01_141m)	17:00
13	05:42	06:25	07:13	08:01	09:01 (WT01_141m)	07:54
	21:54	21:10	20:04	18:56	09:46 (WT01_141m)	16:59
14	05:43	06:26	07:15	08:03	09:02 (WT01_141m)	07:56
	21:53	21:08	20:01	18:54	09:45 (WT01_141m)	16:58
15	05:44	06:28	07:16	08:05	09:02 (WT01_141m)	07:58
	21:52	21:06	19:59	18:52	09:45 (WT01_141m)	16:56
16	05:45	06:30	07:18	08:06	09:03 (WT01_141m)	07:59
	21:51	21:04	19:57	18:50	09:44 (WT01_141m)	16:55
17	05:47	06:31	07:20	08:08	09:03 (WT01_141m)	08:01
	21:50	21:02	19:55	18:48	09:42 (WT01_141m)	16:54
18	05:48	06:33	07:21	08:10	09:04 (WT01_141m)	08:03
	21:49	21:00	19:52	18:46	09:41 (WT01_141m)	16:52
19	05:49	06:34	07:23	08:11	09:05 (WT01_141m)	08:04
	21:48	20:58	19:50	18:44	09:40 (WT01_141m)	16:51
20	05:50	06:36	07:24	08:13	09:07 (WT01_141m)	08:06
	21:47	20:56	19:48	18:42	09:39 (WT01_141m)	16:50
21	05:52	06:37	07:26	08:15	09:07 (WT01_141m)	08:08
	21:46	20:54	19:45	18:40	09:37 (WT01_141m)	16:49
22	05:53	06:39	07:27	08:16	09:09 (WT01_141m)	08:09
	21:45	20:52	19:43	18:38	09:35 (WT01_141m)	16:48
23	05:54	06:40	07:29	08:18	09:12 (WT01_141m)	08:11
	21:43	20:50	19:41	18:36	09:33 (WT01_141m)	16:47
24	05:55	06:42	07:31	08:20	09:15 (WT01_141m)	08:12
	21:42	20:48	19:39	18:34	09:30 (WT01_141m)	16:46
25	05:57	06:44	07:32	07:21		08:14
	21:41	20:45	19:36	17:32		16:45
26	05:58	06:45	07:34	09:19 (WT01_141m)	07:23	08:16
	21:39	20:43	19:34	17:30		16:44
27	06:00	06:47	07:35	09:16 (WT01_141m)	07:25	08:17
	21:38	20:41	19:32	17:28		16:43
28	06:01	06:48	07:37	09:13 (WT01_141m)	07:27	08:19
	21:37	20:39	19:30	17:26		16:42
29	06:02	06:50	07:38	09:11 (WT01_141m)	07:28	08:20
	21:35	20:37	19:27	17:24		16:41
30	06:04	06:51	07:40	09:10 (WT01_141m)	07:30	08:21
	21:34	20:35	19:25	17:22		16:41
31	06:05	06:53		07:32		08:46
	21:32	20:33		17:20		16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case			130			
Sun reduction			0,43			
Oper. time red.			0,99			
Wind dir. red.			0,54			
Total reduction			0,23			
Total, real			30			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 20 - Hogeweg 116

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:46	08:21	07:29	07:21	06:18	05:34	07:08 (WT01_141m) 05:32	07:08 (WT01_141m) 06:07	06:55	07:42	07:34	08:23
	16:46	17:32	18:22	20:14	21:03	21:47	07:54 (WT01_141m) 22:01	08:06 (WT01_141m) 21:30	20:30	19:23	17:19	16:40
2	08:46	08:19	07:27	07:18	06:16	05:33	07:07 (WT01_141m) 05:32	07:09 (WT01_141m) 06:08	06:56	07:43	07:35	08:24
	16:47	17:34	18:24	20:16	21:05	21:48	07:54 (WT01_141m) 22:01	08:06 (WT01_141m) 21:29	20:28	19:20	17:17	16:39
3	08:46	08:18	07:25	07:16	06:14	05:33	07:07 (WT01_141m) 05:33	07:10 (WT01_141m) 06:10	06:58	07:45	07:37	08:26
	16:48	17:36	18:26	20:17	21:06	21:49	07:56 (WT01_141m) 22:00	08:06 (WT01_141m) 21:27	20:26	19:18	17:15	16:39
4	08:46	08:16	07:23	07:14	06:12	05:32	07:06 (WT01_141m) 05:34	07:09 (WT01_141m) 06:11	06:59	07:47	07:39	08:27
	16:49	17:38	18:27	20:19	21:08	21:50	07:57 (WT01_141m) 22:00	08:05 (WT01_141m) 21:26	20:24	19:16	17:13	16:38
5	08:46	08:15	07:21	07:12	06:10	05:31	07:06 (WT01_141m) 05:35	07:10 (WT01_141m) 06:13	07:01	07:48	07:40	08:28
	16:50	17:39	18:29	20:21	21:10	21:51	07:58 (WT01_141m) 21:59	08:05 (WT01_141m) 21:24	20:22	19:14	17:12	16:38
6	08:45	08:13	07:19	07:10	06:09	05:31	07:05 (WT01_141m) 05:35	07:11 (WT01_141m) 06:14	07:02	07:50	07:42	08:29
	16:52	17:41	18:31	20:22	21:11	21:52	07:58 (WT01_141m) 21:59	08:05 (WT01_141m) 21:22	20:19	19:12	17:10	16:37
7	08:45	08:12	07:16	07:07	06:07	05:30	07:05 (WT01_141m) 05:36	07:12 (WT01_141m) 06:16	07:04	07:51	07:44	08:31
	16:53	17:43	18:33	20:24	21:13	21:53	07:59 (WT01_141m) 21:58	08:05 (WT01_141m) 21:20	20:17	19:09	17:08	16:37
8	08:45	08:10	07:14	07:05	06:05	05:30	07:04 (WT01_141m) 05:37	07:13 (WT01_141m) 06:17	07:05	07:53	07:46	08:32
	16:54	17:45	18:34	20:26	21:14	21:54	07:59 (WT01_141m) 21:58	08:04 (WT01_141m) 21:19	20:15	19:07	17:07	16:37
9	08:44	08:08	07:12	07:03	06:04	05:29	07:05 (WT01_141m) 05:38	07:14 (WT01_141m) 06:19	07:07	07:55	07:47	08:33
	16:55	17:47	18:36	20:27	21:16	21:55	08:00 (WT01_141m) 21:57	08:04 (WT01_141m) 21:17	20:13	19:05	17:05	16:36
10	08:44	08:06	07:10	07:01	06:02	05:29	07:05 (WT01_141m) 05:39	07:14 (WT01_141m) 06:20	07:09	07:56	07:49	08:34
	16:57	17:48	18:38	20:29	21:17	21:56	08:01 (WT01_141m) 21:56	08:02 (WT01_141m) 21:15	20:10	19:03	17:03	16:36
11	08:43	08:05	07:08	06:59	06:00	05:28	07:04 (WT01_141m) 05:40	07:15 (WT01_141m) 06:22	07:10	07:58	07:51	08:35
	16:58	17:50	18:39	20:31	21:19	21:56	08:01 (WT01_141m) 21:56	08:02 (WT01_141m) 21:13	20:08	19:01	17:02	16:36
12	08:43	08:03	07:05	06:56	05:59	05:28	07:04 (WT01_141m) 05:41	07:16 (WT01_141m) 06:23	07:12	08:00	07:53	08:36
	16:59	17:52	18:41	20:32	21:21	21:57	08:02 (WT01_141m) 21:55	08:01 (WT01_141m) 21:11	20:06	18:58	17:00	16:36
13	08:42	08:01	07:03	06:54	05:57	05:28	07:04 (WT01_141m) 05:42	07:18 (WT01_141m) 06:25	07:13	08:01	07:54	08:37
	17:01	17:54	18:43	20:34	21:22	21:58	08:03 (WT01_141m) 21:54	08:00 (WT01_141m) 21:09	20:04	18:56	16:59	16:36
14	08:41	07:59	07:01	06:52	05:56	05:28	07:04 (WT01_141m) 05:43	07:19 (WT01_141m) 06:26	07:15	08:03	07:56	08:38
	17:02	17:56	18:44	20:36	21:24	21:58	08:03 (WT01_141m) 21:53	08:03 (WT01_141m) 21:08	20:01	18:54	16:58	16:36
15	08:41	07:57	06:59	06:50	05:54	05:28	07:04 (WT01_141m) 05:44	07:21 (WT01_141m) 06:28	07:16	08:05	07:58	08:39
	17:04	17:57	18:46	20:37	21:25	21:59	08:04 (WT01_141m) 21:52	07:58 (WT01_141m) 21:06	19:59	18:52	16:56	16:36
16	08:40	07:55	06:57	06:48	05:53	05:27	07:04 (WT01_141m) 05:45	07:23 (WT01_141m) 06:30	07:18	08:06	07:59	08:40
	17:05	17:59	18:48	20:39	21:26	21:59	08:04 (WT01_141m) 21:51	07:57 (WT01_141m) 21:04	19:57	18:50	16:55	16:36
17	08:39	07:54	06:54	06:46	05:51	05:27	07:04 (WT01_141m) 05:47	07:25 (WT01_141m) 06:31	07:20	08:08	08:01	08:41
	17:07	18:01	18:49	20:40	21:28	22:00	08:04 (WT01_141m) 21:50	07:55 (WT01_141m) 21:02	19:54	18:48	16:54	16:36
18	08:38	07:52	06:52	06:44	05:50	05:27	07:04 (WT01_141m) 05:48	07:27 (WT01_141m) 06:33	07:21	08:10	08:03	08:41
	17:09	18:03	18:51	20:42	21:29	22:00	08:05 (WT01_141m) 21:49	07:53 (WT01_141m) 21:00	19:52	18:46	16:52	16:37
19	08:37	07:50	06:50	06:42	05:48	05:27	07:04 (WT01_141m) 05:49	07:30 (WT01_141m) 06:34	07:23	08:11	08:04	08:42
	17:10	18:05	18:53	20:44	21:31	22:00	08:05 (WT01_141m) 21:48	07:50 (WT01_141m) 20:58	19:50	18:44	16:51	16:37
20	08:36	07:48	06:48	06:39	05:47	05:27	07:04 (WT01_141m) 05:50	07:34 (WT01_141m) 06:36	07:24	08:13	08:06	08:43
	17:12	18:06	18:54	20:45	21:32	22:01	08:05 (WT01_141m) 21:47	07:45 (WT01_141m) 20:56	19:48	18:42	16:50	16:37
21	08:35	07:46	06:45	06:37	05:46	05:28	07:04 (WT01_141m) 05:52	07:37 (WT01_141m) 06:37	07:26	08:15	08:08	08:43
	17:13	18:08	18:56	20:47	21:34	22:01	08:05 (WT01_141m) 21:46	07:54 (WT01_141m) 20:54	19:45	18:40	16:49	16:38
22	08:34	07:44	06:43	06:35	05:45	05:28	07:04 (WT01_141m) 05:53	07:39 (WT01_141m) 06:39	07:27	08:16	08:09	08:44
	17:15	18:10	18:58	20:49	21:35	22:01	08:05 (WT01_141m) 21:45	07:52 (WT01_141m) 20:52	19:43	18:38	16:48	16:38
23	08:33	07:42	06:41	06:33	05:43	05:28	07:05 (WT01_141m) 05:54	07:40 (WT01_141m) 06:40	07:29	08:18	08:11	08:44
	17:17	18:12	18:59	20:50	21:36	22:01	08:06 (WT01_141m) 21:43	07:50 (WT01_141m) 20:50	19:41	18:36	16:47	16:39
24	08:32	07:40	06:39	06:31	05:42	05:28	07:05 (WT01_141m) 05:55	07:42 (WT01_141m) 06:42	07:31	08:20	08:12	08:45
	17:18	18:13	19:01	20:52	21:38	22:02	08:06 (WT01_141m) 21:42	07:51 (WT01_141m) 20:47	19:39	18:34	16:46	16:39
25	08:30	07:38	06:36	06:29	05:41	05:29	07:05 (WT01_141m) 05:57	07:44 (WT01_141m) 06:44	07:32	08:21	08:14	08:45
	17:20	18:15	19:03	20:53	21:39	22:02	08:06 (WT01_141m) 21:41	07:52 (WT01_141m) 20:45	19:36	18:31	16:45	16:40
26	08:29	07:36	06:34	06:27	05:40	05:29	07:06 (WT01_141m) 05:58	07:45 (WT01_141m) 06:45	07:34	08:23	08:15	08:45
	17:22	18:17	19:04	20:55	21:40	22:02	08:06 (WT01_141m) 21:39	07:53 (WT01_141m) 20:43	19:34	18:29	16:44	16:40
27	08:28	07:34	06:32	06:25	05:39	05:29	07:06 (WT01_141m) 06:00	07:47 (WT01_141m) 06:47	07:35	08:25	08:17	08:46
	17:24	18:19	19:06	20:57	21:41	32	08:06 (WT01_141m) 21:38	07:54 (WT01_141m) 20:41	19:32	18:27	16:43	16:41
28	08:27	07:31	06:30	06:23	05:38	05:30	07:07 (WT01_141m) 06:01	07:48 (WT01_141m) 06:48	07:37	08:27	08:19	08:46
	17:25	18:20	19:08	20:58	21:43	35	07:48 (WT01_141m) 22:01	07:59 (WT01_141m) 20:39	19:29	18:24	16:42	16:42
29	08:25	07:27	06:22	05:37	05:30	05:30	07:11 (WT01_141m) 06:02	07:50 (WT01_141m) 06:50	07:38	08:28	08:20	08:46
	17:27	07:29	06:24	21:00	21:44	39	07:50 (WT01_141m) 22:01	08:06 (WT01_141m) 21:35	20:37	19:27	17:24	16:41
30	08:24	07:25	06:20	05:36	05:30	05:31	07:08 (WT01_141m) 06:04	07:51 (WT01_141m) 20:35	07:40	08:30	08:21	08:46
	17:29	07:27	06:21	21:02	21:45	41	07:51 (WT01_141m) 22:01	08:06 (WT01_141m) 21:34	20:35	19:25	17:22	16:41
31	08:22	07:23	05:35	05:35	05:35	05:35	07:10 (WT01_141m) 06:05	07:52 (WT01_141m) 20:33	07:32	08:22	08:13	08:46
	17:31	07:25	20:13	21:46	43	07:53 (WT01_141m) 21:32	08:07 (WT01_141m) 21:32	08:08 (WT01_141m) 20:33	07:32	08:22	08:13	08:46
Potential sun hours	263	279	367	414	481	494	498	451	380	333	269	248
Total, worst case					257	1715						
Sun reduction					0,45	0,44						
Oper. time red.					0,99	0,99						
Wind dir. red.					0,70	0,70						
Total reduction					0,31	0,30						
Total, real					80	518						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
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Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 21 - Zandvoortstraat 3

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January		February		March		April		May		June					
1	08:46	08:21			07:29	12:43 (WT01_141m)	07:21	11:20 (WT01_141m)	06:18	10:58 (WT01_141m)	05:34	10:57 (WT01_141m)				
	16:46	17:32			18:22	57	13:40 (WT01_141m)	20:14	243	15:23 (WT01_141m)	21:03	269	15:27 (WT01_141m)	21:47	266	15:23 (WT01_141m)
2	08:46	08:19			07:27	12:32 (WT01_141m)	07:18	11:19 (WT01_141m)	06:16	10:57 (WT01_141m)	05:33	10:57 (WT01_141m)				
	16:47	17:34			18:24	72	13:44 (WT01_141m)	20:16	245	15:24 (WT01_141m)	21:05	270	15:27 (WT01_141m)	21:48	266	15:23 (WT01_141m)
3	08:46	08:18			07:25	12:21 (WT01_141m)	07:16	11:17 (WT01_141m)	06:14	10:57 (WT01_141m)	05:33	10:58 (WT01_141m)				
	16:48	17:36			18:26	87	13:48 (WT01_141m)	20:17	247	15:24 (WT01_141m)	21:06	270	15:27 (WT01_141m)	21:49	266	15:24 (WT01_141m)
4	08:46	08:16			07:23	12:09 (WT01_141m)	07:14	11:16 (WT01_141m)	06:12	10:56 (WT01_141m)	05:32	10:58 (WT01_141m)				
	16:49	17:38			18:27	102	13:51 (WT01_141m)	20:19	248	15:24 (WT01_141m)	21:08	270	15:26 (WT01_141m)	21:50	265	15:23 (WT01_141m)
5	08:46	08:15			07:21	11:57 (WT01_141m)	07:12	11:15 (WT01_141m)	06:10	10:57 (WT01_141m)	05:31	10:59 (WT01_141m)				
	16:50	17:39			18:29	117	13:54 (WT01_141m)	20:21	250	15:25 (WT01_141m)	21:10	270	15:27 (WT01_141m)	21:51	265	15:24 (WT01_141m)
6	08:45	08:13			07:19	11:43 (WT01_141m)	07:10	11:14 (WT01_141m)	06:09	10:56 (WT01_141m)	05:31	10:59 (WT01_141m)				
	16:51	17:41			18:31	132	13:55 (WT01_141m)	20:22	251	15:25 (WT01_141m)	21:11	270	15:26 (WT01_141m)	21:52	264	15:23 (WT01_141m)
7	08:45	08:11			07:16	11:30 (WT01_141m)	07:07	11:13 (WT01_141m)	06:07	10:55 (WT01_141m)	05:30	10:59 (WT01_141m)				
	16:53	17:43			18:32	148	13:58 (WT01_141m)	20:24	253	15:26 (WT01_141m)	21:13	271	15:26 (WT01_141m)	21:53	264	15:23 (WT01_141m)
8	08:45	08:10			07:14	11:19 (WT01_141m)	07:05	11:11 (WT01_141m)	06:05	10:56 (WT01_141m)	05:30	10:59 (WT01_141m)				
	16:54	17:45			18:34	161	14:00 (WT01_141m)	20:26	254	15:25 (WT01_141m)	21:14	270	15:26 (WT01_141m)	21:54	264	15:23 (WT01_141m)
9	08:44	08:08			07:12	11:13 (WT01_141m)	07:03	11:11 (WT01_141m)	06:04	10:55 (WT01_141m)	05:29	10:59 (WT01_141m)				
	16:55	17:47			18:36	169	14:02 (WT01_141m)	20:27	255	15:26 (WT01_141m)	21:16	271	15:26 (WT01_141m)	21:55	264	15:23 (WT01_141m)
10	08:44	08:06			07:10	11:07 (WT01_141m)	07:01	11:10 (WT01_141m)	06:02	10:56 (WT01_141m)	05:29	11:00 (WT01_141m)				
	16:57	17:48			18:38	176	14:03 (WT01_141m)	20:29	256	15:26 (WT01_141m)	21:17	270	15:26 (WT01_141m)	21:56	264	15:24 (WT01_141m)
11	08:43	08:05			07:08	11:03 (WT01_141m)	06:59	11:09 (WT01_141m)	06:00	10:55 (WT01_141m)	05:28	11:00 (WT01_141m)				
	16:58	17:50			18:39	182	14:05 (WT01_141m)	20:31	257	15:26 (WT01_141m)	21:19	271	15:26 (WT01_141m)	21:56	263	15:23 (WT01_141m)
12	08:43	08:03			07:05	11:00 (WT01_141m)	06:56	11:08 (WT01_141m)	05:59	10:56 (WT01_141m)	05:28	11:00 (WT01_141m)				
	16:59	17:52			18:41	187	14:07 (WT01_141m)	20:32	259	15:27 (WT01_141m)	21:20	270	15:26 (WT01_141m)	21:57	263	15:23 (WT01_141m)
13	08:42	08:01			07:03	10:57 (WT01_141m)	06:54	11:08 (WT01_141m)	05:57	10:55 (WT01_141m)	05:28	11:00 (WT01_141m)				
	17:01	17:54			18:43	191	14:08 (WT01_141m)	20:34	259	15:27 (WT01_141m)	21:22	270	15:25 (WT01_141m)	21:58	263	15:23 (WT01_141m)
14	08:41	07:59			07:01	10:53 (WT01_141m)	06:52	11:07 (WT01_141m)	05:56	10:55 (WT01_141m)	05:28	11:01 (WT01_141m)				
	17:02	17:56			18:44	196	14:09 (WT01_141m)	20:36	260	15:27 (WT01_141m)	21:24	271	15:26 (WT01_141m)	21:58	263	15:24 (WT01_141m)
15	08:41	07:57			06:59	10:50 (WT01_141m)	06:50	11:05 (WT01_141m)	05:54	10:56 (WT01_141m)	05:27	11:01 (WT01_141m)				
	17:04	17:57			18:46	200	14:10 (WT01_141m)	20:37	261	15:26 (WT01_141m)	21:25	270	15:26 (WT01_141m)	21:59	263	15:24 (WT01_141m)
16	08:40	07:55			06:57	10:48 (WT01_141m)	06:48	11:05 (WT01_141m)	05:53	10:55 (WT01_141m)	05:27	11:01 (WT01_141m)				
	17:05	17:59			18:48	204	14:12 (WT01_141m)	20:39	262	15:27 (WT01_141m)	21:26	270	15:25 (WT01_141m)	21:59	263	15:24 (WT01_141m)
17	08:39	07:54			06:54	10:46 (WT01_141m)	06:46	11:04 (WT01_141m)	05:51	10:55 (WT01_141m)	05:27	11:02 (WT01_141m)				
	17:07	18:01			18:49	207	14:13 (WT01_141m)	20:40	263	15:27 (WT01_141m)	21:28	270	15:25 (WT01_141m)	22:00	262	15:24 (WT01_141m)
18	08:38	07:52			06:52	10:43 (WT01_141m)	06:44	11:03 (WT01_141m)	05:50	10:56 (WT01_141m)	05:27	11:02 (WT01_141m)				
	17:09	18:03			18:51	211	14:14 (WT01_141m)	20:42	264	15:27 (WT01_141m)	21:29	269	15:25 (WT01_141m)	22:00	251	15:24 (WT01_141m)
19	08:37	07:50			06:50	10:41 (WT01_141m)	06:42	11:03 (WT01_141m)	05:48	10:55 (WT01_141m)	05:27	11:02 (WT01_141m)				
	17:10	18:05			18:53	214	14:15 (WT01_141m)	20:44	264	15:27 (WT01_141m)	21:31	269	15:24 (WT01_141m)	22:00	247	15:24 (WT01_141m)
20	08:36	07:48			06:48	10:39 (WT01_141m)	06:39	11:02 (WT01_141m)	05:47	10:55 (WT01_141m)	05:27	11:02 (WT01_141m)				
	17:12	18:06			18:54	217	14:16 (WT01_141m)	20:45	265	15:27 (WT01_141m)	21:32	269	15:24 (WT01_141m)	22:01	245	15:24 (WT01_141m)
21	08:35	07:46			06:45	10:37 (WT01_141m)	06:37	11:02 (WT01_141m)	05:46	10:55 (WT01_141m)	05:28	11:02 (WT01_141m)				
	17:13	18:08			18:56	220	14:17 (WT01_141m)	20:47	265	15:27 (WT01_141m)	21:34	269	15:24 (WT01_141m)	22:01	244	15:24 (WT01_141m)
22	08:34	07:44			06:43	10:35 (WT01_141m)	06:35	11:01 (WT01_141m)	05:45	10:56 (WT01_141m)	05:28	11:02 (WT01_141m)				
	17:15	18:10			18:58	222	14:17 (WT01_141m)	20:49	266	15:27 (WT01_141m)	21:35	268	15:24 (WT01_141m)	22:01	245	15:24 (WT01_141m)
23	08:33	07:42			06:41	10:33 (WT01_141m)	06:33	11:00 (WT01_141m)	05:43	10:56 (WT01_141m)	05:28	11:03 (WT01_141m)				
	17:17	18:12			18:59	225	14:18 (WT01_141m)	20:50	267	15:27 (WT01_141m)	21:36	268	15:24 (WT01_141m)	22:01	246	15:25 (WT01_141m)
24	08:32	07:40			06:39	10:32 (WT01_141m)	06:31	11:00 (WT01_141m)	05:42	10:56 (WT01_141m)	05:28	11:03 (WT01_141m)				
	17:18	18:13			19:01	227	14:19 (WT01_141m)	20:52	267	15:27 (WT01_141m)	21:38	268	15:24 (WT01_141m)	22:02	249	15:25 (WT01_141m)
25	08:30	07:38			06:36	10:30 (WT01_141m)	06:29	11:00 (WT01_141m)	05:41	10:56 (WT01_141m)	05:29	11:03 (WT01_141m)				
	17:20	18:15			19:03	230	14:20 (WT01_141m)	20:53	268	15:28 (WT01_141m)	21:39	268	15:24 (WT01_141m)	22:02	255	15:25 (WT01_141m)
26	08:29	07:36			06:34	10:28 (WT01_141m)	06:27	11:00 (WT01_141m)	05:40	10:56 (WT01_141m)	05:29	11:04 (WT01_141m)				
	17:22	18:17			19:04	232	14:20 (WT01_141m)	20:55	268	15:28 (WT01_141m)	21:40	268	15:24 (WT01_141m)	22:02	262	15:26 (WT01_141m)
27	08:28	07:33		13:05 (WT01_141m)	06:32	10:27 (WT01_141m)	06:25	10:59 (WT01_141m)	05:39	10:56 (WT01_141m)	05:29	11:03 (WT01_141m)				
	17:23	18:19	24	13:29 (WT01_141m)	19:06	234	14:21 (WT01_141m)	20:57	268	15:27 (WT01_141m)	21:41	268	15:24 (WT01_141m)	22:02	263	15:26 (WT01_141m)
28	08:27	07:31		12:53 (WT01_141m)	06:30	10:25 (WT01_141m)	06:23	10:58 (WT01_141m)	05:38	10:57 (WT01_141m)	05:30	11:04 (WT01_141m)				
	17:25	18:20	42	13:35 (WT01_141m)	19:08	236	14:21 (WT01_141m)	20:58	269	15:27 (WT01_141m)	21:43	267	15:24 (WT01_141m)	22:01	263	15:27 (WT01_141m)
29	08:25				07:27	11:24 (WT01_141m)	06:22	10:58 (WT01_141m)	05:37	10:57 (WT01_141m)	05:30	11:04 (WT01_141m)				
	17:27				20:09	238	15:22 (WT01_141m)	21:00	269	15:27 (WT01_141m)	21:44	266	15:23 (WT01_141m)	22:01	262	15:26 (WT01_141m)
30	08:24				07:25	11:22 (WT01_141m)	06:20	10:57 (WT01_141m)	05:36	10:57 (WT01_141m)	05:31	11:04 (WT01_141m)				
	17:29				20:11	240	15:22 (WT01_141m)	21:02	270	15:27 (WT01_141m)	21:45	266	15:23 (WT01_141m)	22:01	263	15:27 (WT01_141m)
31	08:22				07:23	11:21 (WT01_141m)			05:35	10:58 (WT01_141m)						
	17:30				20:13	242	15:23 (WT01_141m)		21:46	266	15:24 (WT01_141m)					
Potential sun hours	263	279			367			414		481			494			
Total, worst case		66			5776			7793		8342			7783			
Sun reduction		0,28			0,36			0,45		0,45			0,44			
Oper. time red.		0,99			0,99			0,99		0,99			0,99			
Wind dir. red.		0,61			0,61			0,61		0,61			0,61			
Total reduction		0,17			0,22			0,27		0,27			0,26			
Total, real		11			1268			2117		2275			2059			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

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NL-1082 MS Amsterdam
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Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 21 - Zandvoortstraat 3

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July			August			September			October			November			December		
1	05:32		11:04 (WT01_141m)	06:07		11:06 (WT01_141m)	06:55		11:08 (WT01_141m)	07:42		11:37 (WT01_141m)	07:34		08:23		
	22:01	263	15:27 (WT01_141m)	21:30	270	15:36 (WT01_141m)	20:30	257	15:25 (WT01_141m)	19:23	189	14:46 (WT01_141m)	17:19		16:40		
2	05:32		11:04 (WT01_141m)	06:08		11:06 (WT01_141m)	06:56		11:09 (WT01_141m)	07:43		11:41 (WT01_141m)	07:35		08:24		
	22:01	264	15:28 (WT01_141m)	21:29	270	15:36 (WT01_141m)	20:28	256	15:25 (WT01_141m)	19:20	184	14:45 (WT01_141m)	17:17		16:39		
3	05:33		11:05 (WT01_141m)	06:10		11:06 (WT01_141m)	06:58		11:09 (WT01_141m)	07:45		11:44 (WT01_141m)	07:37		08:26		
	22:00	263	15:28 (WT01_141m)	21:27	271	15:37 (WT01_141m)	20:26	255	15:24 (WT01_141m)	19:18	179	14:43 (WT01_141m)	17:15		16:39		
4	05:34		11:04 (WT01_141m)	06:11		11:06 (WT01_141m)	06:59		11:09 (WT01_141m)	07:46		11:47 (WT01_141m)	07:39		08:27		
	22:00	264	15:28 (WT01_141m)	21:26	270	15:36 (WT01_141m)	20:24	254	15:23 (WT01_141m)	19:16	173	14:40 (WT01_141m)	17:13		16:38		
5	05:34		11:04 (WT01_141m)	06:13		11:05 (WT01_141m)	07:01		11:09 (WT01_141m)	07:48		11:53 (WT01_141m)	07:40		08:28		
	21:59	265	15:29 (WT01_141m)	21:24	271	15:36 (WT01_141m)	20:22	253	15:22 (WT01_141m)	19:14	165	14:38 (WT01_141m)	17:12		16:38		
6	05:35		11:05 (WT01_141m)	06:14		11:06 (WT01_141m)	07:02		11:10 (WT01_141m)	07:50		12:00 (WT01_141m)	07:42		08:29		
	21:59	264	15:29 (WT01_141m)	21:22	270	15:36 (WT01_141m)	20:19	251	15:21 (WT01_141m)	19:12	155	14:35 (WT01_141m)	17:10		16:37		
7	05:36		11:05 (WT01_141m)	06:16		11:06 (WT01_141m)	07:04		11:10 (WT01_141m)	07:51		12:13 (WT01_141m)	07:44		08:31		
	21:58	265	15:30 (WT01_141m)	21:20	270	15:36 (WT01_141m)	20:17	250	15:20 (WT01_141m)	19:09	140	14:33 (WT01_141m)	17:08		16:37		
8	05:37		11:05 (WT01_141m)	06:17		11:06 (WT01_141m)	07:05		11:11 (WT01_141m)	07:53		12:26 (WT01_141m)	07:46		08:32		
	21:58	265	15:30 (WT01_141m)	21:19	270	15:36 (WT01_141m)	20:15	249	15:20 (WT01_141m)	19:07	124	14:30 (WT01_141m)	17:07		16:37		
9	05:38		11:06 (WT01_141m)	06:19		11:06 (WT01_141m)	07:07		11:11 (WT01_141m)	07:55		12:37 (WT01_141m)	07:47		08:33		
	21:57	265	15:31 (WT01_141m)	21:17	270	15:36 (WT01_141m)	20:13	247	15:18 (WT01_141m)	19:05	109	14:26 (WT01_141m)	17:05		16:36		
10	05:39		11:05 (WT01_141m)	06:20		11:06 (WT01_141m)	07:09		11:12 (WT01_141m)	07:56		12:49 (WT01_141m)	07:49		08:34		
	21:56	265	15:30 (WT01_141m)	21:15	270	15:36 (WT01_141m)	20:10	245	15:17 (WT01_141m)	19:03	95	14:24 (WT01_141m)	17:03		16:36		
11	05:40		11:05 (WT01_141m)	06:22		11:06 (WT01_141m)	07:10		11:12 (WT01_141m)	07:58		13:00 (WT01_141m)	07:51		08:35		
	21:56	266	15:31 (WT01_141m)	21:13	270	15:36 (WT01_141m)	20:08	244	15:16 (WT01_141m)	19:01	80	14:20 (WT01_141m)	17:02		16:36		
12	05:41		11:05 (WT01_141m)	06:23		11:05 (WT01_141m)	07:12		11:13 (WT01_141m)	08:00		13:11 (WT01_141m)	07:53		08:36		
	21:55	266	15:31 (WT01_141m)	21:11	270	15:35 (WT01_141m)	20:06	242	15:15 (WT01_141m)	18:58	66	14:17 (WT01_141m)	17:00		16:36		
13	05:42		11:05 (WT01_141m)	06:25		11:06 (WT01_141m)	07:13		11:13 (WT01_141m)	08:01		13:20 (WT01_141m)	07:54		08:37		
	21:54	266	15:31 (WT01_141m)	21:09	269	15:35 (WT01_141m)	20:04	240	15:13 (WT01_141m)	18:56	51	14:11 (WT01_141m)	16:59		16:36		
14	05:43		11:05 (WT01_141m)	06:26		11:06 (WT01_141m)	07:15		11:14 (WT01_141m)	08:03		13:31 (WT01_141m)	07:56		08:38		
	21:53	267	15:32 (WT01_141m)	21:08	268	15:34 (WT01_141m)	20:01	239	15:13 (WT01_141m)	18:54	34	14:05 (WT01_141m)	16:58		16:36		
15	05:44		11:06 (WT01_141m)	06:28		11:06 (WT01_141m)	07:16		11:14 (WT01_141m)	08:05		13:42 (WT01_141m)	07:58		08:39		
	21:52	267	15:33 (WT01_141m)	21:06	269	15:35 (WT01_141m)	19:59	237	15:11 (WT01_141m)	18:52	14	13:56 (WT01_141m)	16:56		16:36		
16	05:45		11:06 (WT01_141m)	06:30		11:06 (WT01_141m)	07:18		11:16 (WT01_141m)	08:06			07:59		08:40		
	21:51	267	15:33 (WT01_141m)	21:04	268	15:34 (WT01_141m)	19:57	234	15:10 (WT01_141m)	18:50			16:55		16:36		
17	05:47		11:06 (WT01_141m)	06:31		11:06 (WT01_141m)	07:20		11:16 (WT01_141m)	08:08			08:01		08:41		
	21:50	267	15:33 (WT01_141m)	21:02	268	15:34 (WT01_141m)	19:54	232	15:08 (WT01_141m)	18:48			16:54		16:36		
18	05:48		11:06 (WT01_141m)	06:33		11:06 (WT01_141m)	07:21		11:17 (WT01_141m)	08:10			08:03		08:41		
	21:49	268	15:34 (WT01_141m)	21:00	267	15:33 (WT01_141m)	19:52	231	15:08 (WT01_141m)	18:46			16:52		16:37		
19	05:49		11:06 (WT01_141m)	06:34		11:07 (WT01_141m)	07:23		11:18 (WT01_141m)	08:11			08:04		08:42		
	21:48	268	15:34 (WT01_141m)	20:58	266	15:33 (WT01_141m)	19:50	228	15:06 (WT01_141m)	18:44			16:51		16:37		
20	05:50		11:06 (WT01_141m)	06:36		11:06 (WT01_141m)	07:24		11:19 (WT01_141m)	08:13			08:06		08:43		
	21:47	268	15:34 (WT01_141m)	20:56	267	15:33 (WT01_141m)	19:48	226	15:05 (WT01_141m)	18:42			16:50		16:37		
21	05:52		11:05 (WT01_141m)	06:37		11:07 (WT01_141m)	07:26		11:20 (WT01_141m)	08:15			08:08		08:43		
	21:46	269	15:34 (WT01_141m)	20:54	266	15:33 (WT01_141m)	19:45	223	15:03 (WT01_141m)	18:40			16:49		16:38		
22	05:53		11:06 (WT01_141m)	06:39		11:06 (WT01_141m)	07:27		11:21 (WT01_141m)	08:16			08:09		08:44		
	21:45	269	15:35 (WT01_141m)	20:52	266	15:32 (WT01_141m)	19:43	221	15:02 (WT01_141m)	18:38			16:48		16:38		
23	05:54		11:06 (WT01_141m)	06:40		11:07 (WT01_141m)	07:29		11:23 (WT01_141m)	08:18			08:11		08:44		
	21:43	269	15:35 (WT01_141m)	20:50	265	15:32 (WT01_141m)	19:41	218	15:01 (WT01_141m)	18:36			16:47		16:39		
24	05:55		11:06 (WT01_141m)	06:42		11:07 (WT01_141m)	07:31		11:24 (WT01_141m)	08:20			08:12		08:45		
	21:42	269	15:35 (WT01_141m)	20:47	264	15:31 (WT01_141m)	19:39	215	14:59 (WT01_141m)	18:34			16:46		16:39		
25	05:57		11:05 (WT01_141m)	06:44		11:07 (WT01_141m)	07:32		11:26 (WT01_141m)	07:21			08:14		08:45		
	21:41	270	15:35 (WT01_141m)	20:45	264	15:31 (WT01_141m)	19:36	212	14:58 (WT01_141m)	17:32			16:45		16:40		
26	05:58		11:06 (WT01_141m)	06:45		11:07 (WT01_141m)	07:34		11:27 (WT01_141m)	07:23			08:15		08:45		
	21:39	270	15:36 (WT01_141m)	20:43	262	15:29 (WT01_141m)	19:34	208	14:55 (WT01_141m)	17:30			16:44		16:40		
27	06:00		11:06 (WT01_141m)	06:47		11:07 (WT01_141m)	07:35		11:29 (WT01_141m)	07:25			08:17		08:46		
	21:38	270	15:36 (WT01_141m)	20:41	262	15:29 (WT01_141m)	19:32	205	14:54 (WT01_141m)	17:28			16:43		16:41		
28	06:01		11:05 (WT01_141m)	06:48		11:07 (WT01_141m)	07:37		11:30 (WT01_141m)	07:27			08:18		08:46		
	21:37	270	15:35 (WT01_141m)	20:39	261	15:28 (WT01_141m)	19:29	202	14:52 (WT01_141m)	17:26			16:42		16:42		
29	06:02		11:06 (WT01_141m)	06:50		11:08 (WT01_141m)	07:38		11:33 (WT01_141m)	07:28			08:20		08:46		
	21:35	270	15:36 (WT01_141m)	20:37	260	15:28 (WT01_141m)	19:27	197	14:50 (WT01_141m)	17:24			16:41		16:43		
30	06:04		11:06 (WT01_141m)	06:51		11:08 (WT01_141m)	07:40		11:35 (WT01_141m)	07:30			08:21		08:46		
	21:34	270	15:36 (WT01_141m)	20:35	259	15:27 (WT01_141m)	19:25	194	14:49 (WT01_141m)	17:22			16:41		16:44		
31	06:05		11:05 (WT01_141m)	06:53		11:08 (WT01_141m)				07:32					08:46		
	21:32	271	15:36 (WT01_141m)	20:33	259	15:27 (WT01_141m)				17:20					16:45		
Potential sun hours		498		451			380			333			269		248		
Total, worst case		8280		8272			6965			1758							
Sun reduction		0,44		0,46			0,43			0,35							
Oper. time red.		0,99		0,99			0,99			0,99							
Wind dir. red.		0,61		0,61			0,61			0,61							
Total reduction		0,27		0,28			0,26			0,21							
Total, real		2216		2304			1795			376							

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 22 - Baron Eduard Empainlaan 100
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	January	February	March	April	May	June
1	08:46 16:46	08:21 17:32	07:29 18:22	07:21 20:14	08:46 (WT01_141m) 09:08 (WT01_141m)	06:18 21:03
2	08:46 16:47	08:19 17:34	07:27 18:24	07:18 20:16	08:48 (WT01_141m) 09:05 (WT01_141m)	06:16 21:05
3	08:46 16:48	08:18 17:36	07:25 18:26	07:16 20:18	08:52 (WT01_141m) 08:59 (WT01_141m)	06:14 21:06
4	08:46 16:49	08:16 17:38	07:23 18:27	07:14 20:19		06:12 21:08
5	08:46 16:50	08:15 17:39	07:21 18:29	07:12 20:21		06:10 21:10
6	08:46 16:52	08:13 17:41	07:19 18:31	07:10 20:22		06:09 21:11
7	08:45 16:53	08:12 17:43	07:16 18:33	07:07 20:24		06:07 21:13
8	08:45 16:54	08:10 17:45	07:14 18:34	07:05 20:26		06:05 21:14
9	08:44 16:55	08:08 17:47	07:12 18:36	07:03 20:27		06:04 21:16
10	08:44 16:57	08:06 17:48	07:10 18:38	07:01 20:29		06:02 21:17
11	08:43 16:58	08:05 17:50	07:08 18:39	06:59 20:31		06:00 21:19
12	08:43 16:59	08:03 17:52	07:06 18:41	06:56 20:32		05:59 21:21
13	08:42 17:01	08:01 17:54	07:03 18:43	06:54 20:34		05:57 21:22
14	08:41 17:02	07:59 17:56	07:01 18:44	06:52 20:36		05:56 21:24
15	08:41 17:04	07:57 17:57	06:59 18:46	06:50 20:37		05:54 21:25
16	08:40 17:05	07:55 17:59	06:57 18:48	06:48 20:39		05:53 21:27
17	08:39 17:07	07:54 18:01	06:54 18:49	06:46 20:40		05:51 21:28
18	08:38 17:09	07:52 18:03	06:52 18:51	06:44 20:42		05:50 21:29
19	08:37 17:10	07:50 18:05	06:50 18:53	06:42 20:44		05:48 21:31
20	08:36 17:12	07:48 18:06	06:48 18:54	06:39 20:45		05:47 21:32
21	08:35 17:13	07:46 18:08	06:45 18:56	06:37 20:47		05:46 21:34
22	08:34 17:15	07:44 18:10	06:43 18:58	06:35 20:49		05:45 21:35
23	08:33 17:17	07:42 18:12	06:41 18:59	06:33 20:50		05:43 21:36
24	08:32 17:18	07:40 18:13	06:39 19:01	06:31 20:52		05:42 21:38
25	08:30 17:20	07:38 18:15	06:36 19:03	06:29 20:54		05:41 21:39
26	08:29 17:22	07:36 18:17	06:34 19:04	06:27 20:55		05:40 21:40
27	08:28 17:24	07:34 18:19	06:32 19:06	06:25 20:57		05:39 21:41
28	08:27 17:25	07:31 18:20	06:30 19:08	06:23 20:58		05:38 21:43
29	08:25 17:27		07:27 20:09	06:22 21:00		05:37 21:44
30	08:24 17:29		07:25 20:11	06:20 21:02		05:36 21:45
31	08:22 17:31		07:23 20:13	06:18 21:04		05:35 21:46
Potential sun hours	263	279	367	414	481	494
Total, worst case			788			
Sun reduction			0,36		46	
Oper. time red.			0,99		0,45	
Wind dir. red.			0,56		0,99	
Total reduction			0,20		0,56	
Total, real			157		0,25	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 22 - Baron Eduard Empainlaan 100
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	July	August	September	October	November	December
1	05:32 22:01	06:07 21:30	06:55 20:30	07:42 19:23	08:28 (WT01_141m) 17:19	08:23 16:40
2	05:32 22:01	06:08 21:29	06:56 20:28	07:43 19:21	08:29 (WT01_141m) 17:17	08:24 16:39
3	05:33 22:00	06:10 21:27	06:58 20:26	07:45 19:18	08:31 (WT01_141m) 17:15	08:26 16:39
4	05:34 22:00	06:11 21:26	06:59 20:24	07:47 19:16	08:33 (WT01_141m) 17:13	08:27 16:38
5	05:35 21:59	06:13 21:24	07:01 20:22	07:48 19:14	08:38 (WT01_141m) 17:12	08:28 16:38
6	05:35 21:59	06:14 21:22	07:02 20:19	07:50 19:12	08:46 (WT01_141m) 17:10	08:29 16:37
7	05:36 21:58	06:16 21:20	07:04 20:17	07:51 19:09	08:46 (WT01_141m) 17:08	08:31 16:37
8	05:37 21:58	06:17 21:19	07:06 20:15	07:53 19:07	08:46 (WT01_141m) 17:07	08:32 16:37
9	05:38 21:57	06:19 21:17	07:07 20:13	07:55 19:05	08:47 (WT01_141m) 17:05	08:33 16:36
10	05:39 21:56	06:20 21:15	07:09 20:10	07:56 19:03	08:48 (WT01_141m) 17:04	08:34 16:36
11	05:40 21:56	06:22 21:13	07:10 20:08	07:58 19:01	08:48 (WT01_141m) 17:02	08:35 16:36
12	05:41 21:55	06:23 21:11	07:12 20:06	08:00 18:58	08:49 (WT01_141m) 17:01	08:36 16:36
13	05:42 21:54	06:25 21:10	07:13 20:04	08:01 18:56	08:50 (WT01_141m) 16:59	08:37 16:36
14	05:43 21:53	06:26 21:08	07:15 20:01	08:03 18:54	08:51 (WT01_141m) 16:58	08:38 16:36
15	05:44 21:52	06:28 21:06	07:16 19:59	08:05 18:52	08:52 (WT01_141m) 16:56	08:39 16:36
16	05:45 21:51	06:30 21:04	07:18 19:57	08:06 18:50	08:53 (WT01_141m) 16:55	08:40 16:36
17	05:47 21:50	06:31 21:02	07:20 19:55	08:08 18:48	08:54 (WT01_141m) 16:54	08:41 16:36
18	05:48 21:49	06:33 21:00	07:21 19:52	08:10 18:46	08:55 (WT01_141m) 16:52	08:42 16:37
19	05:49 21:48	06:34 20:58	07:23 19:50	08:11 18:44	08:56 (WT01_141m) 16:51	08:43 16:37
20	05:50 21:47	06:36 20:56	07:24 19:48	08:13 18:42	08:57 (WT01_141m) 16:50	08:44 16:37
21	05:52 21:46	06:37 20:54	07:26 19:45	08:15 18:40	08:58 (WT01_141m) 16:49	08:45 16:38
22	05:53 21:45	06:39 20:52	07:27 19:43	08:16 18:38	08:59 (WT01_141m) 16:48	08:46 16:38
23	05:54 21:43	06:40 20:50	07:29 19:41	08:18 18:36	09:00 (WT01_141m) 16:47	08:47 16:39
24	05:55 21:42	06:42 20:48	07:31 19:39	08:20 18:34	09:01 (WT01_141m) 16:46	08:48 16:39
25	05:57 21:41	06:44 20:45	07:32 19:36	08:21 17:32	09:02 (WT01_141m) 16:45	08:49 16:40
26	05:58 21:39	06:45 20:43	07:34 19:34	08:23 17:30	09:03 (WT01_141m) 16:44	08:50 16:41
27	06:00 21:38	06:47 20:41	07:35 19:32	08:25 17:28	09:04 (WT01_141m) 16:43	08:51 16:41
28	06:01 21:37	06:48 20:39	07:37 19:30	08:27 17:26	09:05 (WT01_141m) 16:42	08:52 16:42
29	06:02 21:35	06:50 20:37	07:39 19:27	08:28 17:24	09:06 (WT01_141m) 16:41	08:53 16:43
30	06:04 21:34	06:51 20:35	07:40 19:25	08:29 17:22	09:07 (WT01_141m) 16:41	08:54 16:44
31	06:05 21:32	06:53 20:33		07:32 17:20		08:55 16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case			741			
Sun reduction			0,43	106		
Oper. time red.			0,99	0,35		
Wind dir. red.			0,56	0,99		
Total reduction			0,23	0,56		
Total, real			173	0,19		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 23 - Baron Eduard Empainlaan 60

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	January	February	March	April	May	June
1	08:46	08:21	07:29	07:21	06:18	07:17 (WT01_141m) 05:34
	16:46	17:32	18:22	20:14	21:03	14 07:31 (WT01_141m) 21:47
2	08:46	08:19	07:27	07:18	06:16	06:56 (WT01_141m) 05:33
	16:47	17:34	18:24	20:16	21:05	21 07:34 (WT01_141m) 21:48
3	08:46	08:18	07:25	07:16	06:14	06:56 (WT01_141m) 05:33
	16:48	17:36	18:26	20:17	21:06	26 07:36 (WT01_141m) 21:49
4	08:46	08:16	07:23	07:14	06:12	06:56 (WT01_141m) 05:32
	16:49	17:38	18:27	20:19	21:08	30 07:38 (WT01_141m) 21:50
5	08:46	08:15	07:21	07:12	06:10	06:57 (WT01_141m) 05:31
	16:50	17:39	18:29	20:21	21:10	33 07:40 (WT01_141m) 21:51
6	08:45	08:13	07:19	07:10	06:09	06:57 (WT01_141m) 05:31
	16:52	17:41	18:31	20:22	21:11	36 07:41 (WT01_141m) 21:52
7	08:45	08:12	07:16	07:07	06:07	06:57 (WT01_141m) 05:30
	16:53	17:43	18:33	20:24	21:13	39 07:42 (WT01_141m) 21:53
8	08:45	08:10	07:14	07:05	06:05	06:57 (WT01_141m) 05:30
	16:54	17:45	18:34	20:26	21:14	41 07:43 (WT01_141m) 21:54
9	08:44	08:08	07:12	07:03	06:04	06:58 (WT01_141m) 05:29
	16:55	17:47	18:36	20:27	21:16	43 07:44 (WT01_141m) 21:55
10	08:44	08:06	07:10	07:01	06:02	06:58 (WT01_141m) 05:29
	16:57	17:48	18:38	20:29	21:17	45 07:45 (WT01_141m) 21:56
11	08:43	08:05	07:08	06:59	06:00	06:59 (WT01_141m) 05:28
	16:58	17:50	18:39	20:31	21:19	46 07:45 (WT01_141m) 21:56
12	08:43	08:03	07:06	06:56	05:59	06:59 (WT01_141m) 05:28
	16:59	17:52	18:41	20:32	21:21	47 07:46 (WT01_141m) 21:57
13	08:42	08:01	07:03	06:54	05:57	06:59 (WT01_141m) 05:28
	17:01	17:54	18:43	20:34	21:22	49 07:46 (WT01_141m) 21:58
14	08:41	07:59	07:01	06:52	05:56	06:59 (WT01_141m) 05:28
	17:02	17:56	18:44	20:36	21:24	50 07:47 (WT01_141m) 21:58
15	08:41	07:57	06:59	06:50	05:54	06:57 (WT01_141m) 05:28
	17:04	17:57	18:46	20:37	21:25	51 07:48 (WT01_141m) 21:59
16	08:40	07:55	06:57	06:48	05:53	06:56 (WT01_141m) 05:27
	17:05	17:59	18:48	20:39	21:26	52 07:48 (WT01_141m) 21:59
17	08:39	07:54	06:54	06:46	05:51	06:56 (WT01_141m) 05:27
	17:07	18:01	18:49	20:40	21:28	52 07:48 (WT01_141m) 22:00
18	08:38	07:52	06:52	06:44	05:50	06:56 (WT01_141m) 05:27
	17:09	18:03	18:51	20:42	21:29	53 07:49 (WT01_141m) 22:00
19	08:37	07:50	06:50	06:42	05:48	06:55 (WT01_141m) 05:27
	17:10	18:05	18:53	20:44	21:31	53 07:48 (WT01_141m) 22:00
20	08:36	07:48	06:48	06:39	05:47	06:55 (WT01_141m) 05:27
	17:12	18:06	18:54	20:45	21:32	54 07:49 (WT01_141m) 22:01
21	08:35	07:46	06:45	06:37	05:46	06:55 (WT01_141m) 05:28
	17:13	18:08	18:56	20:47	21:34	54 07:49 (WT01_141m) 22:01
22	08:34	07:44	06:43	06:35	05:45	06:55 (WT01_141m) 05:28
	17:15	18:10	18:58	20:49	21:35	54 07:49 (WT01_141m) 22:01
23	08:33	07:42	06:41	06:33	05:43	06:55 (WT01_141m) 05:28
	17:17	18:12	18:59	20:50	21:36	55 07:50 (WT01_141m) 22:01
24	08:32	07:40	06:39	06:31	05:42	06:55 (WT01_141m) 05:28
	17:18	18:13	19:01	20:52	21:38	55 07:50 (WT01_141m) 22:02
25	08:30	07:38	06:36	06:29	05:41	06:55 (WT01_141m) 05:29
	17:20	18:15	19:03	20:54	21:39	55 07:50 (WT01_141m) 22:02
26	08:29	07:36	06:34	06:27	05:40	06:55 (WT01_141m) 05:29
	17:22	18:17	19:04	20:55	21:40	55 07:50 (WT01_141m) 22:02
27	08:28	07:34	06:32	06:25	05:39	06:55 (WT01_141m) 05:29
	17:24	18:19	19:06	20:57	21:41	55 07:50 (WT01_141m) 22:02
28	08:27	07:31	06:30	06:23	05:38	06:55 (WT01_141m) 05:30
	17:25	18:20	19:08	20:58	21:43	55 07:50 (WT01_141m) 22:01
29	08:25		07:27	06:22	05:37	06:55 (WT01_141m) 05:30
	17:27		20:09	21:00	21:44	55 07:50 (WT01_141m) 22:01
30	08:24		07:25	06:20	05:36	06:55 (WT01_141m) 05:31
	17:29		20:11	21:02	21:45	55 07:50 (WT01_141m) 22:01
31	08:22		07:23		05:35	06:56 (WT01_141m)
	17:31		20:13		21:46	54 07:50 (WT01_141m)
Potential sun hours	263	279	367	414	481	494
Total, worst case					1437	1570
Sun reduction					0,45	0,44
Oper. time red.					0,99	0,99
Wind dir. red.					0,68	0,68
Total reduction					0,30	0,29
Total, real					434	460

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 23 - Baron Eduard Empainlaan 60

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July			August			September			October			November			December		
1	05:32	07:02 (WT01_141m)	06:07	07:09 (WT01_141m)	06:55	07:42	07:34	08:23									
	22:01	52 07:54 (WT01_141m)	21:30	47 07:56 (WT01_141m)	20:30	19:23	17:19	16:40									
2	05:32	07:03 (WT01_141m)	06:08	07:10 (WT01_141m)	06:56	07:43	07:35	08:24									
	22:01	52 07:55 (WT01_141m)	21:29	45 07:55 (WT01_141m)	20:28	19:21	17:17	16:39									
3	05:33	07:03 (WT01_141m)	06:10	07:11 (WT01_141m)	06:58	07:45	07:37	08:26									
	22:00	53 07:56 (WT01_141m)	21:27	44 07:55 (WT01_141m)	20:26	19:18	17:15	16:39									
4	05:34	07:02 (WT01_141m)	06:11	07:12 (WT01_141m)	06:59	07:47	07:39	08:27									
	22:00	53 07:55 (WT01_141m)	21:26	42 07:54 (WT01_141m)	20:24	19:16	17:13	16:38									
5	05:35	07:03 (WT01_141m)	06:13	07:12 (WT01_141m)	07:01	07:48	07:40	08:28									
	21:59	53 07:56 (WT01_141m)	21:24	40 07:52 (WT01_141m)	20:22	19:14	17:12	16:38									
6	05:35	07:03 (WT01_141m)	06:14	07:14 (WT01_141m)	07:02	07:50	07:42	08:29									
	21:59	53 07:56 (WT01_141m)	21:22	38 07:52 (WT01_141m)	20:19	19:12	17:10	16:37									
7	05:36	07:03 (WT01_141m)	06:16	07:15 (WT01_141m)	07:04	07:51	07:44	08:31									
	21:58	54 07:57 (WT01_141m)	21:20	35 07:50 (WT01_141m)	20:17	19:09	17:08	16:37									
8	05:37	07:04 (WT01_141m)	06:17	07:17 (WT01_141m)	07:06	07:53	07:46	08:32									
	21:58	53 07:57 (WT01_141m)	21:19	32 07:49 (WT01_141m)	20:15	19:07	17:07	16:37									
9	05:38	07:04 (WT01_141m)	06:19	07:18 (WT01_141m)	07:07	07:55	07:47	08:33									
	21:57	54 07:58 (WT01_141m)	21:17	29 07:47 (WT01_141m)	20:13	19:05	17:05	16:36									
10	05:39	07:04 (WT01_141m)	06:20	07:20 (WT01_141m)	07:09	07:56	07:49	08:34									
	21:56	54 07:58 (WT01_141m)	21:15	25 07:45 (WT01_141m)	20:10	19:03	17:04	16:36									
11	05:40	07:03 (WT01_141m)	06:22	07:23 (WT01_141m)	07:10	07:58	07:51	08:35									
	21:56	54 07:57 (WT01_141m)	21:13	19 07:42 (WT01_141m)	20:08	19:01	17:02	16:36									
12	05:41	07:03 (WT01_141m)	06:23	07:26 (WT01_141m)	07:12	08:00	07:53	08:36									
	21:55	55 07:58 (WT01_141m)	21:11	11 07:37 (WT01_141m)	20:06	18:58	17:01	16:36									
13	05:42	07:03 (WT01_141m)	06:25		07:13	08:01	07:54	08:37									
	21:54	55 07:58 (WT01_141m)	21:09		20:04	18:56	16:59	16:36									
14	05:43	07:03 (WT01_141m)	06:26		07:15	08:03	07:56	08:38									
	21:53	55 07:58 (WT01_141m)	21:08		20:01	18:54	16:58	16:36									
15	05:44	07:04 (WT01_141m)	06:28		07:16	08:05	07:58	08:39									
	21:52	55 07:59 (WT01_141m)	21:06		19:59	18:52	16:56	16:36									
16	05:45	07:04 (WT01_141m)	06:30		07:18	08:06	07:59	08:40									
	21:51	55 07:59 (WT01_141m)	21:04		19:57	18:50	16:55	16:36									
17	05:47	07:05 (WT01_141m)	06:31		07:20	08:08	08:01	08:41									
	21:50	54 07:59 (WT01_141m)	21:02		19:55	18:48	16:54	16:36									
18	05:48	07:05 (WT01_141m)	06:33		07:21	08:10	08:03	08:41									
	21:49	54 07:59 (WT01_141m)	21:00		19:52	18:46	16:52	16:37									
19	05:49	07:05 (WT01_141m)	06:34		07:23	08:11	08:04	08:42									
	21:48	54 07:59 (WT01_141m)	20:58		19:50	18:44	16:51	16:37									
20	05:50	07:05 (WT01_141m)	06:36		07:24	08:13	08:06	08:43									
	21:47	54 07:59 (WT01_141m)	20:56		19:48	18:42	16:50	16:37									
21	05:52	07:05 (WT01_141m)	06:37		07:26	08:15	08:08	08:43									
	21:46	54 07:59 (WT01_141m)	20:54		19:45	18:40	16:49	16:38									
22	05:53	07:06 (WT01_141m)	06:39		07:27	08:16	08:09	08:44									
	21:45	54 08:00 (WT01_141m)	20:52		19:43	18:38	16:48	16:38									
23	05:54	07:06 (WT01_141m)	06:40		07:29	08:18	08:11	08:44									
	21:43	53 07:59 (WT01_141m)	20:50		19:41	18:36	16:47	16:39									
24	05:55	07:06 (WT01_141m)	06:42		07:31	08:20	08:12	08:45									
	21:42	53 07:59 (WT01_141m)	20:47		19:39	18:34	16:46	16:39									
25	05:57	07:06 (WT01_141m)	06:44		07:32	07:21	08:14	08:45									
	21:41	53 07:59 (WT01_141m)	20:45		19:36	17:32	16:45	16:40									
26	05:58	07:07 (WT01_141m)	06:45		07:34	07:23	08:15	08:45									
	21:39	52 07:59 (WT01_141m)	20:43		19:34	17:30	16:44	16:41									
27	06:00	07:07 (WT01_141m)	06:47		07:35	07:25	08:17	08:46									
	21:38	52 07:59 (WT01_141m)	20:41		19:32	17:28	16:43	16:41									
28	06:01	07:07 (WT01_141m)	06:48		07:37	07:27	08:19	08:46									
	21:37	51 07:58 (WT01_141m)	20:39		19:30	17:26	16:42	16:42									
29	06:02	07:08 (WT01_141m)	06:50		07:38	07:28	08:20	08:46									
	21:35	50 07:58 (WT01_141m)	20:37		19:27	17:24	16:41	16:43									
30	06:04	07:08 (WT01_141m)	06:51		07:40	07:30	08:21	08:46									
	21:34	49 07:57 (WT01_141m)	20:35		19:25	17:22	16:41	16:44									
31	06:05	07:08 (WT01_141m)	06:53			07:32		08:46									
	21:32	48 07:56 (WT01_141m)	20:33			17:20		16:45									
Potential sun hours	498		451		380	333	269	248									
Total, worst case	1645		407														
Sun reduction	0,44		0,46														
Oper. time red.	0,99		0,99														
Wind dir. red.	0,68		0,68														
Total reduction	0,30		0,31														
Total, real	488		126														

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 24 - Baron Eduard Empainlaan 50
Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	January	February	March	April	May	June	July	August	September	October	November	December			
1	08:46 16:46	08:21 17:32	07:29 18:22	07:21 20:14	06:18 21:03	05:34 21:47	06:35 (WT01_141m) 06:59 (WT01_141m)	05:32 22:01	37 21:30	06:34 (WT01_141m) 06:35 (WT01_141m)	06:07 06:08	06:55 06:56	07:42 07:43	07:34 07:35	08:23 08:24
2	08:46 16:47	08:19 17:34	07:27 18:24	07:18 20:16	06:16 21:05	05:33 21:48	06:34 (WT01_141m) 07:00 (WT01_141m)	05:32 22:01	36 21:29	06:35 (WT01_141m) 07:11 (WT01_141m)	06:08 21:29	06:56 20:28	07:43 19:21	07:35 17:17	08:24 16:39
3	08:46 16:48	08:18 17:36	07:25 18:26	07:16 20:17	06:14 21:06	05:33 21:49	06:33 (WT01_141m) 07:01 (WT01_141m)	05:33 22:00	36 21:27	06:35 (WT01_141m) 07:11 (WT01_141m)	06:10 21:27	06:58 20:26	07:45 19:18	07:37 17:15	08:26 16:39
4	08:46 16:49	08:16 17:38	07:23 18:27	07:14 20:19	06:12 21:08	05:32 21:50	06:32 (WT01_141m) 07:02 (WT01_141m)	05:34 22:00	36 21:26	06:35 (WT01_141m) 07:11 (WT01_141m)	06:11 21:26	06:59 20:24	07:47 19:16	07:39 17:13	08:27 16:38
5	08:46 16:50	08:15 17:39	07:21 18:29	07:12 20:21	06:10 21:10	05:31 21:51	06:32 (WT01_141m) 07:03 (WT01_141m)	05:35 21:59	36 21:25	06:36 (WT01_141m) 07:10 (WT01_141m)	06:13 21:24	07:01 20:22	07:40 19:14	08:28 17:12	08:29 16:38
6	08:45 16:52	08:13 17:41	07:19 18:31	07:10 20:22	06:09 21:11	05:31 21:52	06:31 (WT01_141m) 07:04 (WT01_141m)	05:35 21:59	34 21:59	06:37 (WT01_141m) 07:10 (WT01_141m)	06:14 21:22	07:02 20:19	07:50 19:12	07:42 17:10	08:29 16:37
7	08:45 16:53	08:12 17:43	07:16 18:33	07:07 20:24	06:07 21:13	05:30 21:53	06:31 (WT01_141m) 07:05 (WT01_141m)	05:36 21:58	32 21:57	06:38 (WT01_141m) 07:10 (WT01_141m)	06:16 21:20	07:04 20:17	07:51 19:09	07:44 17:08	08:31 16:37
8	08:45 16:54	08:10 17:45	07:14 18:34	07:05 20:26	06:05 21:14	05:30 21:54	06:30 (WT01_141m) 07:05 (WT01_141m)	05:37 21:58	31 21:57	06:39 (WT01_141m) 07:10 (WT01_141m)	06:17 21:19	07:06 20:15	07:53 19:07	07:46 17:07	08:32 16:37
9	08:44 16:55	08:08 17:47	07:12 18:36	07:03 20:27	06:04 21:16	05:29 21:55	06:30 (WT01_141m) 07:06 (WT01_141m)	05:38 21:57	29 21:57	06:40 (WT01_141m) 07:09 (WT01_141m)	06:19 21:17	07:07 20:13	07:55 19:05	07:47 17:05	08:33 16:36
10	08:44 16:57	08:06 17:48	07:10 18:38	07:01 20:29	06:02 21:17	05:29 21:56	06:30 (WT01_141m) 07:07 (WT01_141m)	05:39 21:56	26 21:56	06:42 (WT01_141m) 07:08 (WT01_141m)	06:20 21:15	07:09 20:10	07:56 19:03	07:49 17:04	08:34 16:36
11	08:43 16:58	08:05 17:50	07:08 18:39	06:59 20:31	06:00 21:19	05:28 21:56	06:30 (WT01_141m) 07:07 (WT01_141m)	05:40 21:56	25 21:55	06:42 (WT01_141m) 07:07 (WT01_141m)	06:22 21:13	07:10 20:08	07:58 19:01	07:51 17:02	08:35 16:36
12	08:43 17:00	08:03 17:52	07:06 18:41	06:56 20:32	06:00 21:21	05:28 21:57	06:30 (WT01_141m) 07:08 (WT01_141m)	05:41 21:55	22 21:54	06:43 (WT01_141m) 07:05 (WT01_141m)	06:23 21:11	07:01 20:06	07:59 18:58	07:53 17:01	08:35 16:36
13	08:42 17:01	08:01 17:54	07:03 18:43	06:54 20:34	05:57 21:22	05:28 21:58	06:30 (WT01_141m) 07:08 (WT01_141m)	05:42 21:54	19 21:53	06:45 (WT01_141m) 07:04 (WT01_141m)	06:25 21:09	07:13 20:04	08:01 18:56	07:54 16:59	08:37 16:36
14	08:41 17:02	07:59 17:56	07:01 18:44	06:52 20:36	05:56 21:24	05:28 21:58	06:30 (WT01_141m) 07:09 (WT01_141m)	05:43 21:53	15 21:52	06:47 (WT01_141m) 07:02 (WT01_141m)	06:26 21:08	07:15 20:01	08:03 18:54	07:56 16:58	08:38 16:36
15	08:41 17:04	07:57 17:57	06:59 18:46	06:50 20:37	05:54 21:25	05:28 21:59	06:30 (WT01_141m) 07:09 (WT01_141m)	05:44 21:52	9 21:51	06:51 (WT01_141m) 07:00 (WT01_141m)	06:28 21:06	07:16 19:59	08:05 18:52	07:58 16:56	08:39 16:36
16	08:40 17:05	07:55 17:59	06:57 18:48	06:48 20:39	05:53 21:26	05:27 21:59	06:30 (WT01_141m) 07:10 (WT01_141m)	05:45 21:51	40 21:50	06:52 (WT01_141m) 07:11 (WT01_141m)	06:29 21:04	07:18 19:57	08:06 18:50	07:59 16:55	08:40 16:36
17	08:39 17:07	07:54 18:01	06:54 18:49	06:46 20:40	05:51 21:28	05:27 22:00	06:30 (WT01_141m) 07:10 (WT01_141m)	05:47 21:50	40 21:49	06:53 (WT01_141m) 07:11 (WT01_141m)	06:30 21:02	07:19 19:54	08:08 18:48	08:01 16:54	08:41 16:36
18	08:38 17:09	07:52 18:03	06:52 18:51	06:44 20:42	05:50 21:29	05:27 22:00	06:30 (WT01_141m) 07:10 (WT01_141m)	05:48 21:49	40 21:48	06:54 (WT01_141m) 07:12 (WT01_141m)	06:31 21:00	07:20 19:52	08:10 18:46	08:03 16:52	08:41 16:37
19	08:37 17:10	07:50 18:05	06:42 18:53	06:40 20:44	05:49 21:31	05:27 22:00	06:30 (WT01_141m) 07:11 (WT01_141m)	05:49 21:48	40 21:47	06:55 (WT01_141m) 07:13 (WT01_141m)	06:32 20:58	07:21 19:50	08:11 18:44	08:04 16:51	08:42 16:37
20	08:36 17:12	07:48 18:06	06:48 18:54	06:39 20:45	05:47 21:32	05:27 22:01	06:30 (WT01_141m) 07:11 (WT01_141m)	05:50 21:47	40 21:46	06:56 (WT01_141m) 07:14 (WT01_141m)	06:33 20:56	07:22 19:48	08:12 18:42	08:05 16:50	08:43 16:37
21	08:35 17:13	07:46 18:08	06:45 18:56	06:37 20:47	05:46 21:34	05:28 22:01	06:30 (WT01_141m) 07:11 (WT01_141m)	05:52 21:46	41 21:45	06:57 (WT01_141m) 07:15 (WT01_141m)	06:34 20:54	07:23 19:45	08:13 18:40	08:06 16:49	08:43 16:38
22	08:34 17:15	07:44 18:10	06:43 18:58	06:35 20:49	05:45 21:35	05:28 22:01	06:30 (WT01_141m) 07:11 (WT01_141m)	05:53 21:45	41 21:44	06:58 (WT01_141m) 07:16 (WT01_141m)	06:35 20:52	07:24 19:43	08:14 18:38	08:07 16:48	08:44 16:38
23	08:33 17:17	07:42 18:12	06:41 18:59	06:33 20:50	05:43 21:36	05:28 22:01	06:31 (WT01_141m) 07:12 (WT01_141m)	05:54 21:43	41 21:43	06:59 (WT01_141m) 07:17 (WT01_141m)	06:40 20:50	07:25 19:41	08:15 18:36	08:11 16:47	08:44 16:39
24	08:32 17:18	07:40 18:13	06:39 19:01	06:31 20:52	05:42 21:38	05:28 22:02	06:31 (WT01_141m) 07:11 (WT01_141m)	05:55 21:42	40 21:41	07:00 (WT01_141m) 07:18 (WT01_141m)	06:42 20:47	07:26 19:39	08:16 18:34	08:12 16:46	08:45 16:39
25	08:30 17:20	07:38 18:15	06:36 19:03	06:29 20:53	05:41 21:39	05:29 22:02	06:31 (WT01_141m) 07:11 (WT01_141m)	05:57 21:41	40 21:40	07:01 (WT01_141m) 07:19 (WT01_141m)	06:44 20:45	07:27 19:36	08:17 18:32	08:13 16:45	08:45 16:40
26	08:29 17:22	07:36 18:17	06:34 19:04	06:27 20:55	05:40 21:40	05:29 22:02	06:32 (WT01_141m) 07:12 (WT01_141m)	05:58 21:39	40 21:38	07:02 (WT01_141m) 07:20 (WT01_141m)	06:45 20:43	07:28 19:34	08:18 18:30	08:14 17:30	08:45 16:41
27	08:28 17:24	07:34 18:19	06:32 19:06	06:25 20:57	05:39 21:41	05:29 22:02	06:32 (WT01_141m) 07:11 (WT01_141m)	06:00 21:38	39 21:37	07:03 (WT01_141m) 07:21 (WT01_141m)	06:46 20:41	07:29 19:32	08:19 18:28	08:15 17:28	08:46 16:41
28	08:27 17:25	07:31 18:20	06:30 19:08	06:23 20:58	05:38 21:43	05:30 22:01	06:33 (WT01_141m) 07:12 (WT01_141m)	06:01 21:37	39 21:36	07:04 (WT01_141m) 07:22 (WT01_141m)	06:47 20:39	07:30 19:30	08:20 18:26	08:16 17:26	08:46 16:42
29	08:25 17:27	07:27 20:09	06:22 21:00	06:22 21:44	05:37 21:45	05:30 22:01	06:33 (WT01_141m) 07:11 (WT01_141m)	06:02 21:35	38 21:34	07:05 (WT01_141m) 07:23 (WT01_141m)	06:48 20:37	07:31 19:27	08:21 18:24	08:17 17:24	08:46 16:43
30	08:24 17:29	07:25 20:11	06:20 21:02	06:20 21:45	05:36 21:46	05:31 22:01	06:34 (WT01_141m) 07:12 (WT01_141m)	06:04 21:34	38 21:33	07:06 (WT01_141m) 07:24 (WT01_141m)	06:49 20:35	07:32 19:25	08:22 18:22	08:18 17:22	08:46 16:44
31	08:22 17:31	07:23 20:13	06:18 21:03	06:18 21:46	05:35 21:47	06:05 21:48	06:37 (WT01_141m) 06:57 (WT01_141m)	06:05 21:32	38 21:32	07:07 (WT01_141m) 07:25 (WT01_141m)	06:50 20:33	07:33 19:25	08:23 18:21	08:19 17:20	08:46 16:45
Potential sun hours	263	280	367	414	481	494	498	451	380	333	269	248			
Total, worst case					53	1104		420							
Sun reduction					0.45	0.44		0.44							
Oper. time red.					0.99	0.99		0.99							
Wind dir. red.					0.72	0.72		0.72							
Total reduction					0.32	0.31		0.31							
Total, real					17	342		132							

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
 NL-1082 MS Amsterdam
 +31 (0)88 4261 261
 Margot Scheldeman /
 margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 25 - Hogeweg 76

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:46	08:21	07:29	07:21	06:18	05:34	05:32	06:07	06:55	07:42	07:34	08:23
	16:46	17:32	18:22	20:14	21:03	21:47	22:01	21:30	20:30	19:23	17:19	16:40
2	08:46	08:19	07:27	07:18	06:16	05:33	05:32	06:08	06:56	07:43	07:35	08:24
	16:47	17:34	18:24	20:16	21:05	21:48	22:01	21:29	20:28	19:20	17:17	16:39
3	08:46	08:18	07:25	07:16	06:14	05:33	05:33	06:10	06:58	07:45	07:37	08:26
	16:48	17:36	18:26	20:17	21:06	21:49	22:00	21:27	20:26	19:18	17:15	16:39
4	08:46	08:16	07:23	07:14	06:12	05:32	05:34	06:11	06:59	07:46	07:39	08:27
	16:49	17:38	18:27	20:19	21:08	21:50	22:00	21:26	20:24	19:16	17:13	16:38
5	08:46	08:15	07:21	07:12	06:10	05:31	05:35	06:13	07:01	07:48	07:40	08:28
	16:50	17:39	18:29	20:21	21:10	21:51	21:59	21:24	20:22	19:14	17:12	16:38
6	08:45	08:13	07:19	07:10	06:09	05:31	05:35	06:14	07:02	07:50	07:42	08:29
	16:52	17:41	18:31	20:22	21:11	21:52	21:59	21:22	20:19	19:12	17:10	16:37
7	08:45	08:11	07:16	07:07	06:07	05:30	05:36	06:16	07:04	07:51	07:44	08:31
	16:53	17:43	18:33	20:24	21:13	21:53	21:58	21:20	20:17	19:09	17:08	16:37
8	08:45	08:10	07:14	07:05	06:05	05:30	05:37	06:17	07:05	07:53	07:46	08:32
	16:54	17:45	18:34	20:26	21:14	21:54	21:58	21:19	20:15	19:07	17:07	16:37
9	08:44	08:08	07:12	07:03	06:04	05:29	05:38	06:19	07:07	07:55	07:47	08:33
	16:55	17:47	18:36	20:27	21:16	21:55	21:57	21:17	20:13	19:05	17:05	16:36
10	08:44	08:06	07:10	07:01	06:02	05:29	05:39	06:20	07:09	07:56	07:49	08:34
	16:57	17:48	18:38	20:29	21:17	21:56	21:56	21:15	20:10	19:03	17:03	16:36
11	08:43	08:05	07:08	06:59	06:00	05:28	05:40	06:22	07:10	07:58	07:51	08:35
	16:58	17:50	18:39	20:31	21:19	21:56	21:56	21:13	20:08	19:01	17:02	16:36
12	08:43	08:03	07:05	06:56	05:59	05:28	05:41	06:23	07:12	08:00	07:53	08:36
	16:59	17:52	18:41	20:32	21:20	21:57	21:55	21:11	20:06	18:58	17:00	16:36
13	08:42	08:01	07:03	06:54	05:57	05:28	05:42	06:25	07:13	08:01	07:54	08:37
	17:01	17:54	18:43	20:34	21:22	21:58	21:54	21:09	20:04	18:56	16:59	16:36
14	08:41	07:59	07:01	06:52	05:56	05:28	05:43	06:26	07:15	08:03	07:56	08:38
	17:02	17:56	18:44	20:36	21:24	21:58	21:53	21:08	20:01	18:54	16:58	16:36
15	08:41	07:57	06:59	06:50	05:54	05:28	05:44	06:28	07:16	08:05	07:58	08:39
	17:04	17:57	18:46	20:37	21:25	21:59	21:52	21:06	19:59	18:52	16:56	16:36
16	08:40	07:55	06:57	06:48	05:53	05:27	05:45	06:30	07:18	08:06	07:59	08:40
	17:05	17:59	18:48	20:39	21:26	21:59	21:51	21:04	19:57	18:50	16:55	16:36
17	08:39	07:54	06:54	06:46	05:51	05:27	05:47	06:31	07:20	08:08	08:01	08:41
	17:07	18:01	18:49	20:40	21:28	22:00	21:50	21:02	19:54	18:48	16:54	16:36
18	08:38	07:52	06:52	06:44	05:50	05:27	05:48	06:33	07:21	08:10	08:03	08:41
	17:09	18:03	18:51	20:42	21:29	22:00	21:49	21:00	19:52	18:46	16:52	16:37
19	08:37	07:50	06:50	06:42	05:48	05:27	05:49	06:34	07:23	08:11	08:04	08:42
	17:10	18:05	18:53	20:44	21:31	22:00	21:48	20:58	19:50	18:44	16:51	16:37
20	08:36	07:48	06:48	06:39	05:47	05:27	05:50	06:36	07:24	08:13	08:06	08:43
	17:12	18:06	18:54	20:45	21:32	22:01	21:47	20:56	19:48	18:42	16:50	16:37
21	08:35	07:46	06:45	06:37	05:46	05:28	05:52	06:37	07:26	08:15	08:08	08:43
	17:13	18:08	18:56	20:47	21:34	22:01	21:46	20:54	19:45	18:40	16:49	16:38
22	08:34	07:44	06:43	06:35	05:45	05:28	05:53	06:39	07:27	08:16	08:09	08:44
	17:15	18:10	18:58	20:49	21:35	22:01	21:45	20:52	19:43	18:38	16:48	16:38
23	08:33	07:42	06:41	06:33	05:43	05:28	05:54	06:40	07:29	08:18	08:11	08:44
	17:17	18:12	18:59	20:50	21:36	22:01	21:43	20:50	19:41	18:36	16:47	16:39
24	08:32	07:40	06:39	06:31	05:42	05:28	05:55	06:42	07:31	08:20	08:12	08:45
	17:18	18:13	19:01	20:52	21:38	22:02	21:42	20:47	19:39	18:34	16:46	16:39
25	08:30	07:38	06:36	06:29	05:41	05:29	05:57	06:44	07:32	08:21	08:14	08:45
	17:20	18:15	19:03	20:53	21:39	22:02	21:41	20:45	19:36	17:32	16:45	16:40
26	08:29	07:36	06:34	06:27	05:40	05:29	05:58	06:45	07:34	08:23	08:15	08:45
	17:22	18:17	19:04	20:55	21:40	22:02	21:39	20:43	19:34	17:30	16:44	16:41
27	08:28	07:34	06:32	06:25	05:39	05:29	06:00	06:47	07:35	08:25	08:17	08:46
	17:24	18:19	19:06	20:57	21:41	22:02	21:38	20:41	19:32	17:28	16:43	16:41
28	08:27	07:31	06:30	06:23	05:38	05:30	06:01	06:48	07:37	08:27	08:18	08:46
	17:25	18:20	19:08	20:58	21:43	22:01	21:37	20:39	19:29	17:26	16:42	16:42
29	08:25		07:27	06:22	05:37	05:30	06:02	06:50	07:38	08:28	08:20	08:46
	17:27		20:09	21:00	21:44	22:01	21:35	20:37	19:27	17:24	16:41	16:43
30	08:24		07:25	06:20	05:36	05:31	06:04	06:51	07:40	08:30	08:21	08:46
	17:29		20:11	21:02	21:45	22:01	21:34	20:35	19:25	17:22	16:41	16:44
31	08:22		07:23		05:35		06:05	06:53		07:32		08:46
	17:31		20:13		21:46		21:32	20:33		17:20		16:45
Potential sun hours	263	280	367	414	481	494	498	451	380	333	269	248
Total, worst case												
Sun reduction												
Oper. time red.												
Wind dir. red.												
Total reduction												
Total, real												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 26 - Karekietstraat 75

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June	July	August	September	October	November	December
1	08:46	08:21	07:29	07:21								
	16:46	17:32	18:22	20:14	17	19:05 (WT01_141m)	06:18	05:34	05:32	06:07	06:54	07:42
				20:14		19:22 (WT01_141m)	21:03	21:47	22:01	21:30	20:30	19:23
2	08:46	08:19	07:27	07:18								
	16:47	17:34	18:24	20:16	13	19:06 (WT01_141m)	06:16	05:33	05:32	06:08	06:56	07:43
				20:16		19:19 (WT01_141m)	21:05	21:48	22:01	21:29	20:28	19:20
3	08:46	08:18	07:25	07:16								
	16:48	17:36	18:26	20:17	7	19:09 (WT01_141m)	06:14	05:33	05:33	06:10	06:58	07:45
				20:17		19:16 (WT01_141m)	21:06	21:49	22:00	21:27	20:26	19:18
4	08:46	08:16	07:23	07:14								
	16:49	17:38	18:27	20:19								
				20:19								
5	08:46	08:15	07:21	07:12								
	16:50	17:39	18:20	20:21								
				20:21								
6	08:45	08:13	07:19	07:09								
	16:51	17:41	18:31	20:22								
				20:22								
7	08:45	08:11	07:16	07:07								
	16:53	17:43	18:32	20:24								
				20:24								
8	08:45	08:10	07:14	07:05								
	16:54	17:45	18:34	20:26								
				20:26								
9	08:44	08:08	07:12	07:03								
	16:55	17:47	18:36	20:27								
				20:27								
10	08:44	08:06	07:10	07:01								
	16:57	17:48	18:38	20:29								
				20:29								
11	08:43	08:05	07:08	06:58								
	16:58	17:50	18:39	20:31								
				20:31								
12	08:43	08:03	07:05	06:56								
	16:59	17:52	18:41	20:32								
				20:32								
13	08:42	08:01	07:03	06:54								
	17:01	17:54	18:43	20:34								
				20:34								
14	08:41	07:59	07:01	06:52								
	17:02	17:56	18:44	20:35								
				20:35								
15	08:40	07:57	06:59	06:50								
	17:04	17:57	18:46	20:37								
				20:37								
16	08:40	07:55	06:56	06:48								
	17:05	17:59	18:48	20:39								
				20:39								
17	08:39	07:53	06:54	06:46								
	17:07	18:01	18:49	20:40								
				20:40								
18	08:38	07:52	06:52	06:44								
	17:08	18:03	18:51	20:42								
				20:42								
19	08:37	07:50	06:50	06:41								
	17:10	18:04	18:53	12 18:11 (WT01_141m)	06:41							
				20:44								
20	08:36	07:48	06:48	18:23 (WT01_141m)	06:39							
	17:12	18:06	18:54	16 18:25 (WT01_141m)	20:45							
				20:45								
21	08:35	07:46	06:45	18:07 (WT01_141m)	06:37							
	17:13	18:08	18:56	20 18:27 (WT01_141m)	20:47							
				20:47								
22	08:34	07:44	06:43	18:05 (WT01_141m)	06:35							
	17:15	18:10	18:58	22 18:27 (WT01_141m)	20:49							
				20:49								
23	08:33	07:42	06:41	18:04 (WT01_141m)	06:33							
	17:17	18:12	18:59	24 18:28 (WT01_141m)	20:50							
				20:50								
24	08:32	07:40	06:39	18:03 (WT01_141m)	06:31							
	17:18	18:13	19:01	25 18:28 (WT01_141m)	20:52							
				20:52								
25	08:30	07:38	06:36	18:02 (WT01_141m)	06:29							
	17:20	18:15	19:03	25 18:27 (WT01_141m)	20:53							
				20:53								
26	08:29	07:35	06:34	18:02 (WT01_141m)	06:27							
	17:22	18:17	19:04	26 18:28 (WT01_141m)	20:55							
				20:55								
27	08:28	07:33	06:32	18:02 (WT01_141m)	06:25							
	17:23	18:19	19:06	25 18:27 (WT01_141m)	20:57							
				20:57								
28	08:27	07:31	06:30	18:02 (WT01_141m)	06:23							
	17:25	18:20	19:08	25 18:27 (WT01_141m)	20:58							
				20:58								
29	08:25	07:27	06:29	19:02 (WT01_141m)	06:21							
	17:27	18:23	19:11	24 19:26 (WT01_141m)	21:00							
				21:00								
30	08:24	07:25	06:28	19:02 (WT01_141m)	06:20							
	17:29	18:25	19:13	23 19:25 (WT01_141m)	21:02							
				21:02								
31	08:22	07:23	06:29	19:03 (WT01_141m)	06:19							
	17:30	18:26	19:14	21 19:24 (WT01_141m)	21:04							
				21:04								
Potential sun hours	263	279	367	414	481	494	498	451	380	333	269	248
Total, worst case			288	37						333		
Sun reduction			0,36	0,45						0,43		
Oper. time red.			0,99	0,99						0,99		
Wind dir. red.			0,65	0,65						0,65		
Total reduction			0,23	0,29						0,27		
Total, real			67	11						91		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 27 - Antwerpsesteenweg 104

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January			February			March	April	May	June
1	08:46		08:21	16:11 (WT01_141m)	07:29	07:21	06:18	05:34		
	16:46		17:32	10 16:21 (WT01_141m)	18:22	20:14	21:03	21:47		
2	08:46		08:19		07:27	07:18	06:16	05:33		
	16:47		17:34		18:24	20:16	21:05	21:48		
3	08:46	16:04 (WT01_141m)	08:18		07:25	07:16	06:14	05:33		
	16:48	3 16:07 (WT01_141m)	17:36		18:26	20:17	21:06	21:49		
4	08:46	16:03 (WT01_141m)	08:16		07:23	07:14	06:12	05:32		
	16:49	7 16:10 (WT01_141m)	17:38		18:27	20:19	21:08	21:50		
5	08:46	16:01 (WT01_141m)	08:15		07:21	07:12	06:10	05:31		
	16:50	10 16:11 (WT01_141m)	17:39		18:29	20:21	21:10	21:51		
6	08:45	16:01 (WT01_141m)	08:13		07:19	07:09	06:09	05:31		
	16:51	12 16:13 (WT01_141m)	17:41		18:31	20:22	21:11	21:52		
7	08:45	16:00 (WT01_141m)	08:11		07:16	07:07	06:07	05:30		
	16:53	14 16:14 (WT01_141m)	17:43		18:32	20:24	21:13	21:53		
8	08:45	16:00 (WT01_141m)	08:10		07:14	07:05	06:05	05:30		
	16:54	16 16:16 (WT01_141m)	17:45		18:34	20:26	21:14	21:54		
9	08:44	16:00 (WT01_141m)	08:08		07:12	07:03	06:03	05:29		
	16:55	17 16:17 (WT01_141m)	17:47		18:36	20:27	21:16	21:55		
10	08:44	16:00 (WT01_141m)	08:06		07:10	07:01	06:02	05:29		
	16:57	19 16:19 (WT01_141m)	17:48		18:38	20:29	21:17	21:56		
11	08:43	16:00 (WT01_141m)	08:05		07:08	06:58	06:00	05:28		
	16:58	19 16:19 (WT01_141m)	17:50		18:39	20:31	21:19	21:56		
12	08:43	15:59 (WT01_141m)	08:03		07:05	06:56	05:59	05:28		
	16:59	21 16:20 (WT01_141m)	17:52		18:41	20:32	21:20	21:57		
13	08:42	15:59 (WT01_141m)	08:01		07:03	06:54	05:57	05:28		
	17:01	22 16:21 (WT01_141m)	17:54		18:43	20:34	21:22	21:58		
14	08:41	15:59 (WT01_141m)	07:59		07:01	06:52	05:56	05:28		
	17:02	22 16:21 (WT01_141m)	17:56		18:44	20:35	21:23	21:58		
15	08:40	16:00 (WT01_141m)	07:57		06:59	06:50	05:54	05:27		
	17:04	23 16:23 (WT01_141m)	17:57		18:46	20:37	21:25	21:59		
16	08:40	16:00 (WT01_141m)	07:55		06:57	06:48	05:53	05:27		
	17:05	24 16:24 (WT01_141m)	17:59		18:48	20:39	21:26	21:59		
17	08:39	16:00 (WT01_141m)	07:53		06:54	06:46	05:51	05:27		
	17:07	24 16:24 (WT01_141m)	18:01		18:49	20:40	21:28	22:00		
18	08:38	16:00 (WT01_141m)	07:52		06:52	06:44	05:50	05:27		
	17:08	25 16:25 (WT01_141m)	18:03		18:51	20:42	21:29	22:00		
19	08:37	15:59 (WT01_141m)	07:50		06:50	06:41	05:48	05:27		
	17:10	26 16:25 (WT01_141m)	18:04		18:53	20:44	21:31	22:00		
20	08:36	16:00 (WT01_141m)	07:48		06:48	06:39	05:47	05:27		
	17:12	25 16:25 (WT01_141m)	18:06		18:54	20:45	21:32	22:01		
21	08:35	16:00 (WT01_141m)	07:46		06:45	06:37	05:46	05:27		
	17:13	26 16:26 (WT01_141m)	18:08		18:56	20:47	21:34	22:01		
22	08:34	16:01 (WT01_141m)	07:44		06:43	06:35	05:44	05:28		
	17:15	25 16:26 (WT01_141m)	18:10		18:58	20:49	21:35	22:01		
23	08:33	16:01 (WT01_141m)	07:42		06:41	06:33	05:43	05:28		
	17:17	26 16:27 (WT01_141m)	18:12		18:59	20:50	21:36	22:01		
24	08:32	16:01 (WT01_141m)	07:40		06:39	06:31	05:42	05:28		
	17:18	25 16:26 (WT01_141m)	18:13		19:01	20:52	21:38	22:02		
25	08:30	16:02 (WT01_141m)	07:38		06:36	06:29	05:41	05:29		
	17:20	25 16:27 (WT01_141m)	18:15		19:03	20:53	21:39	22:02		
26	08:29	16:03 (WT01_141m)	07:36		06:34	06:27	05:40	05:29		
	17:22	24 16:27 (WT01_141m)	18:17		19:04	20:55	21:40	22:02		
27	08:28	16:03 (WT01_141m)	07:33		06:32	06:25	05:39	05:29		
	17:23	23 16:26 (WT01_141m)	18:19		19:06	20:57	21:41	22:02		
28	08:27	16:05 (WT01_141m)	07:31		06:30	06:23	05:38	05:30		
	17:25	21 16:26 (WT01_141m)	18:20		19:08	20:58	21:43	22:01		
29	08:25	16:05 (WT01_141m)			07:27	06:21	05:37	05:30		
	17:27	20 16:25 (WT01_141m)			20:09	21:00	21:44	22:01		
30	08:24	16:07 (WT01_141m)			07:25	06:20	05:36	05:31		
	17:29	18 16:25 (WT01_141m)			20:11	21:02	21:45	22:01		
31	08:22	16:09 (WT01_141m)			07:23		05:35			
	17:30	14 16:23 (WT01_141m)			20:12		21:46			
Potential sun hours	263		279		367	414	481	494		
Total, worst case	576		10							
Sun reduction	0,24		0,28							
Oper. time red.	0,99		0,99							
Wind dir. red.	0,73		0,73							
Total reduction	0,17		0,20							
Total, real	98		2							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
 NL-1082 MS Amsterdam
 +31 (0)88 4261 261
 Margot Scheldeman /
 margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 27 - Antwerpsesteenweg 104

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December	
1	05:32 22:01	06:07 21:30	06:54 20:30	07:42 19:23	07:33 17:18	08:23 16:40	15:42 (WT01_141m) 16:01 (WT01_141m)
2	05:32 22:01	06:08 21:29	06:56 20:28	07:43 19:20	07:35 17:17	08:24 16:39	15:42 (WT01_141m) 16:01 (WT01_141m)
3	05:33 22:00	06:10 21:27	06:58 20:26	07:45 19:18	07:37 17:15	08:26 16:39	15:44 (WT01_141m) 16:01 (WT01_141m)
4	05:34 22:00	06:11 21:26	06:59 20:24	07:46 19:16	07:39 17:13	08:27 16:38	15:45 (WT01_141m) 16:00 (WT01_141m)
5	05:34 21:59	06:13 21:24	07:01 20:21	07:48 19:14	07:40 17:11	08:28 16:38	15:46 (WT01_141m) 16:00 (WT01_141m)
6	05:35 21:59	06:14 21:22	07:02 20:19	07:50 19:11	07:42 17:10	08:29 16:37	15:47 (WT01_141m) 15:59 (WT01_141m)
7	05:36 21:58	06:16 21:20	07:04 20:17	07:51 19:09	07:44 17:08	08:31 16:37	15:48 (WT01_141m) 15:58 (WT01_141m)
8	05:37 21:58	06:17 21:19	07:05 20:15	07:53 19:07	07:46 17:07	08:32 16:36	15:50 (WT01_141m) 15:57 (WT01_141m)
9	05:38 21:57	06:19 21:17	07:07 20:13	07:55 19:05	07:47 17:05	08:33 16:36	15:53 (WT01_141m) 15:57 (WT01_141m)
10	05:39 21:56	06:20 21:15	07:09 20:10	07:56 19:03	07:49 17:03	08:34 16:36	15:58 (WT01_141m) 15:52 (WT01_141m)
11	05:40 21:56	06:22 21:13	07:10 20:08	07:58 19:01	07:51 17:02	08:35 16:36	15:59 (WT01_141m) 15:54 (WT01_141m)
12	05:41 21:55	06:23 21:11	07:12 20:06	07:59 18:58	07:53 17:00	08:36 16:36	15:58 (WT01_141m) 15:56 (WT01_141m)
13	05:42 21:54	06:25 21:09	07:13 20:04	08:01 18:56	07:54 16:59	08:37 16:36	15:57 (WT01_141m) 15:57 (WT01_141m)
14	05:43 21:53	06:26 21:08	07:15 20:01	08:03 18:54	07:56 16:58	08:38 16:36	15:58 (WT01_141m) 15:58 (WT01_141m)
15	05:44 21:52	06:28 21:06	07:16 19:59	08:04 18:52	07:58 16:56	08:39 16:36	15:59 (WT01_141m) 15:59 (WT01_141m)
16	05:45 21:51	06:29 21:04	07:18 19:57	08:06 18:50	07:59 16:55	08:40 16:36	15:56 (WT01_141m) 16:00 (WT01_141m)
17	05:46 21:50	06:31 21:02	07:19 19:54	08:08 18:48	08:01 16:53	08:41 16:36	15:55 (WT01_141m) 16:00 (WT01_141m)
18	05:48 21:49	06:33 21:00	07:21 19:52	08:09 18:46	08:03 16:52	08:41 16:36	15:55 (WT01_141m) 16:00 (WT01_141m)
19	05:49 21:48	06:34 20:58	07:23 19:50	08:11 18:44	08:04 16:51	08:42 16:37	15:55 (WT01_141m) 16:01 (WT01_141m)
20	05:50 21:47	06:36 20:56	07:24 19:48	08:13 18:42	08:06 16:50	08:43 16:37	15:56 (WT01_141m) 16:01 (WT01_141m)
21	05:51 21:46	06:37 20:54	07:26 19:45	08:15 18:40	08:08 16:49	08:43 16:37	15:56 (WT01_141m) 16:02 (WT01_141m)
22	05:53 21:45	06:39 20:52	07:27 19:43	08:16 18:38	08:09 16:48	08:44 16:38	15:56 (WT01_141m) 16:01 (WT01_141m)
23	05:54 21:43	06:40 20:50	07:29 19:41	08:18 18:36	08:11 16:47	08:44 16:38	15:56 (WT01_141m) 16:02 (WT01_141m)
24	05:55 21:42	06:42 20:47	07:30 19:38	08:20 18:34	08:12 16:45	08:45 16:39	15:57 (WT01_141m) 16:02 (WT01_141m)
25	05:57 21:41	06:44 20:45	07:32 19:36	08:21 17:32	08:14 16:45	08:45 16:40	15:57 (WT01_141m) 16:02 (WT01_141m)
26	05:58 21:39	06:45 20:43	07:34 19:34	08:23 17:30	08:15 16:44	08:45 16:40	15:58 (WT01_141m) 16:02 (WT01_141m)
27	05:59 21:38	06:47 20:41	07:35 19:32	08:25 17:28	08:17 16:43	08:46 16:41	15:59 (WT01_141m) 16:02 (WT01_141m)
28	06:01 21:36	06:48 20:39	07:37 19:29	08:27 17:26	08:18 16:42	08:46 16:42	15:59 (WT01_141m) 16:02 (WT01_141m)
29	06:02 21:35	06:50 20:37	07:38 19:27	08:28 17:24	08:20 16:41	08:46 16:43	15:40 (WT01_141m) 16:02 (WT01_141m)
30	06:04 21:34	06:51 20:35	07:40 19:25	08:30 17:22	08:21 16:40	08:46 16:44	15:40 (WT01_141m) 16:01 (WT01_141m)
31	06:05 21:32	06:53 20:32		07:32 17:20		08:46 16:45	
Potential sun hours	498	451	380	333	269	248	
Total, worst case					473		117
Sun reduction					0,26		0,21
Oper. time red.					0,99		0,99
Wind dir. red.					0,73		0,73
Total reduction					0,18		0,15
Total, real					87		18

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 28 - Blarenberglaan 21C

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

January		February		March		April		May		June	
1	08:46	08:21	13:44 (WT01_141m)	07:29	13:26 (WT01_141m)	07:21	06:18	05:34			
	16:46	17:32	91 15:15 (WT01_141m)	18:22	128 15:34 (WT01_141m)	20:14	21:03	21:47			
2	08:46	08:19	13:44 (WT01_141m)	07:27	13:26 (WT01_141m)	07:18	06:16	05:33			
	16:47	17:34	93 15:17 (WT01_141m)	18:24	128 15:34 (WT01_141m)	20:16	21:05	21:48			
3	08:46	08:18	13:42 (WT01_141m)	07:25	13:27 (WT01_141m)	07:16	06:14	05:33			
	16:48	17:36	96 15:18 (WT01_141m)	18:26	127 15:34 (WT01_141m)	20:17	21:06	21:49			
4	08:46	08:16	13:41 (WT01_141m)	07:23	13:27 (WT01_141m)	07:14	06:12	05:32			
	16:49	17:38	99 15:20 (WT01_141m)	18:27	127 15:34 (WT01_141m)	20:19	21:08	21:50			
5	08:46	08:15	13:40 (WT01_141m)	07:21	13:27 (WT01_141m)	07:12	06:10	05:31			
	16:50	17:39	102 15:22 (WT01_141m)	18:29	127 15:34 (WT01_141m)	20:21	21:10	21:51			
6	08:45	08:13	13:39 (WT01_141m)	07:19	13:27 (WT01_141m)	07:09	06:09	05:31			
	16:51	17:41	104 15:23 (WT01_141m)	18:31	126 15:33 (WT01_141m)	20:22	21:11	21:52			
7	08:45	08:11	13:38 (WT01_141m)	07:16	13:27 (WT01_141m)	07:07	06:07	05:30			
	16:53	17:43	106 15:24 (WT01_141m)	18:32	125 15:32 (WT01_141m)	20:24	21:13	21:53			
8	08:45	08:10	13:37 (WT01_141m)	07:14	13:28 (WT01_141m)	07:05	06:05	05:30			
	16:54	17:45	108 15:25 (WT01_141m)	18:34	124 15:32 (WT01_141m)	20:26	21:14	21:54			
9	08:44	08:08	13:37 (WT01_141m)	07:12	13:29 (WT01_141m)	07:03	06:04	05:29			
	16:55	17:47	110 15:27 (WT01_141m)	18:36	123 15:32 (WT01_141m)	20:27	21:16	21:55			
10	08:44	08:06	13:36 (WT01_141m)	07:10	13:28 (WT01_141m)	07:01	06:02	05:29			
	16:57	17:48	111 15:27 (WT01_141m)	18:38	122 15:30 (WT01_141m)	20:29	21:17	21:56			
11	08:43	08:05	13:35 (WT01_141m)	07:08	13:29 (WT01_141m)	06:59	06:00	05:28			
	16:58	17:50	113 15:28 (WT01_141m)	18:39	121 15:30 (WT01_141m)	20:31	21:19	21:56			
12	08:43	08:03	13:34 (WT01_141m)	07:05	13:30 (WT01_141m)	06:56	05:59	05:28			
	16:59	17:52	115 15:29 (WT01_141m)	18:41	119 15:29 (WT01_141m)	20:32	21:20	21:57			
13	08:42	08:01	13:33 (WT01_141m)	07:03	13:31 (WT01_141m)	06:54	05:57	05:28			
	17:01	17:54	117 15:30 (WT01_141m)	18:43	117 15:28 (WT01_141m)	20:34	21:22	21:58			
14	08:41	07:59	13:32 (WT01_141m)	07:01	13:32 (WT01_141m)	06:52	05:56	05:28			
	17:02	17:56	118 15:30 (WT01_141m)	18:44	114 15:26 (WT01_141m)	20:36	21:24	21:58			
15	08:41	07:57	13:31 (WT01_141m)	06:59	13:33 (WT01_141m)	06:50	05:54	05:27			
	17:04	17:57	120 15:31 (WT01_141m)	18:46	113 15:26 (WT01_141m)	20:37	21:25	21:59			
16	08:40	07:55	13:31 (WT01_141m)	06:57	13:35 (WT01_141m)	06:48	05:53	05:27			
	17:05	17:59	121 15:32 (WT01_141m)	18:48	110 15:25 (WT01_141m)	20:39	21:26	21:59			
17	08:39	07:54	13:30 (WT01_141m)	06:54	13:36 (WT01_141m)	06:46	05:51	05:27			
	17:07	18:01	122 15:32 (WT01_141m)	18:49	107 15:23 (WT01_141m)	20:40	21:28	22:00			
18	08:38	07:52	13:30 (WT01_141m)	06:52	13:37 (WT01_141m)	06:44	05:50	05:27			
	17:08	18:03	123 15:33 (WT01_141m)	18:51	104 15:21 (WT01_141m)	20:42	21:29	22:00			
19	08:37	07:50	13:29 (WT01_141m)	06:50	13:39 (WT01_141m)	06:41	05:48	05:27			
	17:10	18:05	124 15:33 (WT01_141m)	18:53	101 15:20 (WT01_141m)	20:44	21:31	22:00			
20	08:36	07:48	13:29 (WT01_141m)	06:48	13:42 (WT01_141m)	06:39	05:47	05:27			
	17:12	18:06	124 15:33 (WT01_141m)	18:54	96 15:18 (WT01_141m)	20:45	21:32	22:01			
21	08:35	14:09 (WT01_141m)	07:46	13:28 (WT01_141m)	06:45	13:44 (WT01_141m)	06:37	05:46			
	17:13	14:24 (WT01_141m)	18:08	15:34 (WT01_141m)	18:56	15:16 (WT01_141m)	20:47	21:34			
22	08:34	14:04 (WT01_141m)	07:44	13:28 (WT01_141m)	06:43	13:46 (WT01_141m)	06:35	05:45			
	17:15	14:37 (WT01_141m)	18:10	15:34 (WT01_141m)	18:58	15:13 (WT01_141m)	20:49	21:35			
23	08:33	14:01 (WT01_141m)	07:42	13:28 (WT01_141m)	06:41	13:50 (WT01_141m)	06:33	05:43			
	17:17	14:48 (WT01_141m)	18:12	15:34 (WT01_141m)	18:59	15:10 (WT01_141m)	20:50	21:36			
24	08:32	13:58 (WT01_141m)	07:40	13:27 (WT01_141m)	06:39	13:53 (WT01_141m)	06:31	05:42			
	17:18	14:55 (WT01_141m)	18:13	15:35 (WT01_141m)	19:01	15:07 (WT01_141m)	20:52	21:38			
25	08:30	13:56 (WT01_141m)	07:38	13:27 (WT01_141m)	06:36	13:58 (WT01_141m)	06:29	05:41			
	17:20	14:59 (WT01_141m)	18:15	15:35 (WT01_141m)	19:03	15:02 (WT01_141m)	20:53	21:39			
26	08:29	13:54 (WT01_141m)	07:36	13:27 (WT01_141m)	06:34	14:02 (WT01_141m)	06:27	05:40			
	17:22	15:03 (WT01_141m)	18:17	15:35 (WT01_141m)	19:04	14:50 (WT01_141m)	20:55	21:40			
27	08:28	13:52 (WT01_141m)	07:33	13:27 (WT01_141m)	06:32	14:10 (WT01_141m)	06:25	05:39			
	17:23	15:05 (WT01_141m)	18:19	15:35 (WT01_141m)	19:06	14:37 (WT01_141m)	20:57	21:41			
28	08:27	13:51 (WT01_141m)	07:31	13:26 (WT01_141m)	06:30		06:23	05:38			
	17:25	15:08 (WT01_141m)	18:20	15:34 (WT01_141m)	19:08		20:58	21:43			
29	08:25	13:49 (WT01_141m)		07:27			06:21	05:37			
	17:27	15:10 (WT01_141m)		20:09			21:00	21:44			
30	08:24	13:48 (WT01_141m)		07:25			06:20	05:36			
	17:29	15:12 (WT01_141m)		20:11			21:02	21:45			
31	08:22	13:46 (WT01_141m)		07:23				05:35			
	17:30	15:14 (WT01_141m)		20:13				21:46			
Potential sun hours	263	279		367		414	481	494			
Total, worst case	687	3235		2831							
Sun reduction	0,24	0,28		0,36							
Oper. time red.	0,99	0,99		0,99							
Wind dir. red.	0,74	0,74		0,74							
Total reduction	0,17	0,20		0,26							
Total, real	118	659		746							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 28 - Blarenberglaan 21C

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December				
1	05:32 22:01	06:07 21:30	06:55 20:30	07:42 19:23	14:10 (WT01_141m) 16:07 (WT01_141m)	07:34 17:18	13:05 (WT01_141m) 14:57 (WT01_141m)	08:23 16:40		
2	05:32 22:01	06:08 21:29	06:56 20:28	07:43 19:20	117 119	16:07 (WT01_141m) 16:08 (WT01_141m)	17:18 17:17	112 110	14:57 (WT01_141m) 14:55 (WT01_141m)	16:40 16:39
3	05:33 22:00	06:10 21:27	06:58 20:26	07:45 19:18	121	14:07 (WT01_141m) 16:08 (WT01_141m)	07:37 17:15	107	13:07 (WT01_141m) 14:54 (WT01_141m)	08:26 16:39
4	05:34 22:00	06:11 21:26	06:59 20:24	07:46 19:16	122	14:06 (WT01_141m) 16:08 (WT01_141m)	07:39 17:13	105	13:08 (WT01_141m) 14:53 (WT01_141m)	08:27 16:38
5	05:34 21:59	06:13 21:24	07:01 20:22	07:48 19:14	124	14:05 (WT01_141m) 16:09 (WT01_141m)	07:40 17:12	103	13:09 (WT01_141m) 14:52 (WT01_141m)	08:28 16:38
6	05:35 21:59	06:14 21:22	07:02 20:19	07:50 19:12	125	14:03 (WT01_141m) 16:08 (WT01_141m)	07:42 17:10	101	13:10 (WT01_141m) 14:51 (WT01_141m)	08:29 16:37
7	05:36 21:58	06:16 21:20	07:04 20:17	07:51 19:09	126	14:03 (WT01_141m) 16:09 (WT01_141m)	07:44 17:08	98	13:12 (WT01_141m) 14:50 (WT01_141m)	08:31 16:37
8	05:37 21:58	06:17 21:19	07:05 20:15	07:53 19:07	127	14:02 (WT01_141m) 16:09 (WT01_141m)	07:46 17:07	96	13:13 (WT01_141m) 14:49 (WT01_141m)	08:32 16:37
9	05:38 21:57	06:19 21:17	07:07 20:13	07:55 19:05	127	14:01 (WT01_141m) 16:08 (WT01_141m)	07:47 17:05	93	13:15 (WT01_141m) 14:48 (WT01_141m)	08:33 16:36
10	05:39 21:56	06:20 21:15	07:09 20:10	07:56 19:03	127	14:01 (WT01_141m) 16:08 (WT01_141m)	07:49 17:03	91	13:16 (WT01_141m) 14:47 (WT01_141m)	08:34 16:36
11	05:40 21:56	06:22 21:13	07:10 20:08	07:58 19:01	127	14:01 (WT01_141m) 16:08 (WT01_141m)	07:51 17:02	87	13:17 (WT01_141m) 14:44 (WT01_141m)	08:35 16:36
12	05:41 21:55	06:23 21:11	07:12 20:06	08:00 18:58	128	14:00 (WT01_141m) 16:08 (WT01_141m)	07:53 17:00	84	13:19 (WT01_141m) 14:43 (WT01_141m)	08:36 16:36
13	05:42 21:54	06:25 21:09	07:13 20:04	08:01 18:56	128	13:59 (WT01_141m) 16:07 (WT01_141m)	07:54 16:59	80	13:21 (WT01_141m) 14:41 (WT01_141m)	08:37 16:36
14	05:43 21:53	06:26 21:08	07:15 20:01	08:03 18:54	128	13:59 (WT01_141m) 16:07 (WT01_141m)	07:56 16:58	77	13:23 (WT01_141m) 14:40 (WT01_141m)	08:38 16:36
15	05:44 21:52	06:28 21:06	07:16 19:59	08:05 18:52	128	13:59 (WT01_141m) 16:07 (WT01_141m)	07:58 16:56	73	13:25 (WT01_141m) 14:38 (WT01_141m)	08:39 16:36
16	05:45 21:51	06:30 21:04	07:18 19:57	08:06 18:50	128	13:59 (WT01_141m) 16:07 (WT01_141m)	07:59 16:55	69	13:27 (WT01_141m) 14:36 (WT01_141m)	08:40 16:36
17	05:47 21:50	06:31 21:02	07:20 19:54	08:08 18:48	127	13:59 (WT01_141m) 16:06 (WT01_141m)	08:01 16:54	63	13:29 (WT01_141m) 14:32 (WT01_141m)	08:41 16:36
18	05:48 21:49	06:33 21:00	07:21 19:52	08:10 18:46	127	13:59 (WT01_141m) 16:06 (WT01_141m)	08:03 16:52	57	13:32 (WT01_141m) 14:29 (WT01_141m)	08:41 16:36
19	05:49 21:48	06:34 20:58	07:23 19:50	08:11 18:44	127	13:59 (WT01_141m) 16:06 (WT01_141m)	08:04 16:51	47	13:35 (WT01_141m) 14:22 (WT01_141m)	08:42 16:37
20	05:50 21:47	06:36 20:56	07:24 19:48	08:13 18:42	126	13:59 (WT01_141m) 16:05 (WT01_141m)	08:06 16:50	33	13:39 (WT01_141m) 14:12 (WT01_141m)	08:43 16:37
21	05:51 21:46	06:37 20:54	07:26 19:45	08:15 18:40	125	13:59 (WT01_141m) 16:04 (WT01_141m)	08:08 16:49	15	13:45 (WT01_141m) 14:00 (WT01_141m)	08:43 16:38
22	05:53 21:45	06:39 20:52	07:27 19:43	08:16 18:38	125	13:59 (WT01_141m) 16:04 (WT01_141m)	08:09 16:48		08:44 16:38	
23	05:54 21:43	06:40 20:50	07:29 19:41	08:18 18:36	123	14:00 (WT01_141m) 16:03 (WT01_141m)	08:11 16:47		08:44 16:39	
24	05:55 21:42	06:42 20:47	07:31 19:39	08:20 18:34	123	14:00 (WT01_141m) 16:03 (WT01_141m)	08:12 16:46		08:45 16:39	
25	05:57 21:41	06:44 20:45	07:32 19:36	07:21 17:32	121	13:01 (WT01_141m) 15:02 (WT01_141m)	08:14 16:45		08:45 16:40	
26	05:58 21:39	06:45 20:43	07:34 19:34	07:23 17:30	121	13:00 (WT01_141m) 15:01 (WT01_141m)	08:15 16:44		08:45 16:40	
27	06:00 21:38	06:47 20:41	07:35 19:32	07:25 17:28	119	13:01 (WT01_141m) 15:00 (WT01_141m)	08:17 16:43		08:46 16:41	
28	06:01 21:37	06:48 20:39	07:37 19:29	07:27 17:26	118	13:02 (WT01_141m) 15:00 (WT01_141m)	08:18 16:42		08:46 16:42	
29	06:02 21:35	06:50 20:37	07:38 19:27	07:28 17:24	116	13:03 (WT01_141m) 14:59 (WT01_141m)	08:20 16:41		08:46 16:43	
30	06:04 21:34	06:51 20:35	07:40 19:25	07:30 17:22	115	13:03 (WT01_141m) 14:58 (WT01_141m)	08:21 16:40		08:46 16:44	
31	06:05 21:32	06:53 20:33		07:32 17:20	114	13:04 (WT01_141m) 14:58 (WT01_141m)			08:46 16:45	
Potential sun hours	498	451	380	333		269			248	
Total, worst case			1305	3829		1701				
Sun reduction			0,43	0,35		0,26				
Oper. time red.			0,99	0,99		0,99				
Wind dir. red.			0,74	0,74		0,74				
Total reduction			0,31	0,26		0,19				
Total, real			404	984		316				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 29 - Blarenberglaan 19

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

January			February			March			April			May			June		
1	08:46	12:38 (WT01_141m)	08:21	12:40 (WT01_141m)	07:29	07:21	06:18	05:34									
	16:46	72 13:50 (WT01_141m)	17:32	88 14:08 (WT01_141m)	18:22	20:14	21:03	21:47									
2	08:46	12:37 (WT01_141m)	08:19	12:41 (WT01_141m)	07:27	07:18	06:16	05:33									
	16:47	73 13:50 (WT01_141m)	17:34	88 14:09 (WT01_141m)	18:24	20:16	21:05	21:48									
3	08:46	12:37 (WT01_141m)	08:18	12:40 (WT01_141m)	07:25	07:16	06:14	05:33									
	16:48	74 13:51 (WT01_141m)	17:36	88 14:08 (WT01_141m)	18:26	20:17	21:06	21:49									
4	08:46	12:38 (WT01_141m)	08:16	12:40 (WT01_141m)	07:23	07:14	06:12	05:32									
	16:49	74 13:52 (WT01_141m)	17:38	88 14:08 (WT01_141m)	18:27	20:19	21:08	21:50									
5	08:46	12:37 (WT01_141m)	08:15	12:42 (WT01_141m)	07:21	07:12	06:10	05:31									
	16:50	76 13:53 (WT01_141m)	17:39	87 14:09 (WT01_141m)	18:29	20:21	21:10	21:51									
6	08:45	12:38 (WT01_141m)	08:13	12:42 (WT01_141m)	07:19	07:09	06:09	05:31									
	16:51	76 13:54 (WT01_141m)	17:41	86 14:08 (WT01_141m)	18:31	20:22	21:11	21:52									
7	08:45	12:39 (WT01_141m)	08:11	12:42 (WT01_141m)	07:16	07:07	06:07	05:30									
	16:53	76 13:55 (WT01_141m)	17:43	86 14:08 (WT01_141m)	18:32	20:24	21:13	21:53									
8	08:45	12:38 (WT01_141m)	08:10	12:42 (WT01_141m)	07:14	07:05	06:05	05:30									
	16:54	77 13:55 (WT01_141m)	17:45	86 14:08 (WT01_141m)	18:34	20:26	21:14	21:54									
9	08:44	12:38 (WT01_141m)	08:08	12:44 (WT01_141m)	07:12	07:03	06:04	05:29									
	16:55	78 13:56 (WT01_141m)	17:47	84 14:08 (WT01_141m)	18:36	20:27	21:16	21:55									
10	08:44	12:39 (WT01_141m)	08:06	12:44 (WT01_141m)	07:10	07:01	06:02	05:29									
	16:57	78 13:57 (WT01_141m)	17:48	84 14:08 (WT01_141m)	18:38	20:29	21:17	21:56									
11	08:43	12:38 (WT01_141m)	08:05	12:44 (WT01_141m)	07:08	06:59	06:00	05:28									
	16:58	80 13:58 (WT01_141m)	17:50	83 14:07 (WT01_141m)	18:39	20:31	21:19	21:56									
12	08:43	12:38 (WT01_141m)	08:03	12:45 (WT01_141m)	07:05	06:56	05:59	05:28									
	16:59	80 13:58 (WT01_141m)	17:52	81 14:06 (WT01_141m)	18:41	20:32	21:21	21:57									
13	08:42	12:38 (WT01_141m)	08:01	12:46 (WT01_141m)	07:03	06:54	05:57	05:28									
	17:01	81 13:59 (WT01_141m)	17:54	80 14:06 (WT01_141m)	18:43	20:34	21:22	21:58									
14	08:41	12:39 (WT01_141m)	07:59	12:46 (WT01_141m)	07:01	06:52	05:56	05:28									
	17:02	81 14:00 (WT01_141m)	17:56	79 14:05 (WT01_141m)	18:44	20:36	21:24	21:58									
15	08:41	12:39 (WT01_141m)	07:57	12:47 (WT01_141m)	06:59	06:50	05:54	05:27									
	17:04	82 14:01 (WT01_141m)	17:57	77 14:04 (WT01_141m)	18:46	20:37	21:25	21:59									
16	08:40	12:39 (WT01_141m)	07:55	12:48 (WT01_141m)	06:57	06:48	05:53	05:27									
	17:05	83 14:02 (WT01_141m)	17:59	75 14:03 (WT01_141m)	18:48	20:39	21:26	21:59									
17	08:39	12:39 (WT01_141m)	07:54	12:49 (WT01_141m)	06:54	06:46	05:51	05:27									
	17:07	83 14:02 (WT01_141m)	18:01	73 14:02 (WT01_141m)	18:49	20:40	21:28	22:00									
18	08:38	12:39 (WT01_141m)	07:52	12:51 (WT01_141m)	06:52	06:44	05:50	05:27									
	17:08	84 14:03 (WT01_141m)	18:03	69 14:00 (WT01_141m)	18:51	20:42	21:29	22:00									
19	08:37	12:38 (WT01_141m)	07:50	12:52 (WT01_141m)	06:50	06:41	05:48	05:27									
	17:10	85 14:03 (WT01_141m)	18:05	67 13:59 (WT01_141m)	18:53	20:44	21:31	22:00									
20	08:36	12:38 (WT01_141m)	07:48	12:54 (WT01_141m)	06:48	06:39	05:47	05:27									
	17:12	85 14:03 (WT01_141m)	18:06	63 13:57 (WT01_141m)	18:54	20:45	21:32	22:01									
21	08:35	12:39 (WT01_141m)	07:46	12:56 (WT01_141m)	06:45	06:37	05:46	05:28									
	17:13	85 14:04 (WT01_141m)	18:08	59 13:55 (WT01_141m)	18:56	20:47	21:34	22:01									
22	08:34	12:39 (WT01_141m)	07:44	12:58 (WT01_141m)	06:43	06:35	05:45	05:28									
	17:15	86 14:05 (WT01_141m)	18:10	55 13:53 (WT01_141m)	18:58	20:49	21:35	22:01									
23	08:33	12:39 (WT01_141m)	07:42	13:01 (WT01_141m)	06:41	06:33	05:43	05:28									
	17:17	87 14:06 (WT01_141m)	18:12	49 13:50 (WT01_141m)	18:59	20:50	21:36	22:01									
24	08:32	12:39 (WT01_141m)	07:40	13:05 (WT01_141m)	06:39	06:31	05:42	05:28									
	17:18	87 14:06 (WT01_141m)	18:13	42 13:47 (WT01_141m)	19:01	20:52	21:38	22:02									
25	08:30	12:39 (WT01_141m)	07:38	13:09 (WT01_141m)	06:36	06:29	05:41	05:29									
	17:20	87 14:06 (WT01_141m)	18:15	33 13:42 (WT01_141m)	19:03	20:53	21:39	22:02									
26	08:29	12:40 (WT01_141m)	07:36	13:17 (WT01_141m)	06:34	06:27	05:40	05:29									
	17:22	87 14:07 (WT01_141m)	18:17	16 13:33 (WT01_141m)	19:04	20:55	21:40	22:02									
27	08:28	12:39 (WT01_141m)	07:33		06:32	06:25	05:39	05:29									
	17:23	88 14:07 (WT01_141m)	18:19		19:06	20:57	21:41	22:02									
28	08:27	12:40 (WT01_141m)	07:31		06:30	06:23	05:38	05:30									
	17:25	88 14:08 (WT01_141m)	18:20		19:08	20:58	21:43	22:01									
29	08:25	12:39 (WT01_141m)			07:27	06:21	05:37	05:30									
	17:27	89 14:08 (WT01_141m)			20:09	21:00	21:44	22:01									
30	08:24	12:40 (WT01_141m)			07:25	06:20	05:36	05:31									
	17:29	88 14:08 (WT01_141m)			20:11	21:02	21:45	22:01									
31	08:22	12:40 (WT01_141m)			07:23		05:35										
	17:30	88 14:08 (WT01_141m)			20:13		21:46										
Potential sun hours	263		279		367		414		481		494						
Total, worst case	2538		1866														
Sun reduction	0,24		0,28														
Oper. time red.	0,99		0,99														
Wind dir. red.	0,69		0,69														
Total reduction	0,16		0,19														
Total, real	408		356														

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 29 - Blarenberglaan 19

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October		November		December	
1	05:32 22:01	06:07 21:30	06:55 20:30	07:42 19:23		07:34 17:18	12:13 (WT01_141m) 84 13:37 (WT01_141m)	08:23 16:40 80	12:20 (WT01_141m) 13:40 (WT01_141m)
2	05:32 22:01	06:08 21:29	06:56 20:28	07:43 19:20		07:35 17:17	12:13 (WT01_141m) 85 13:38 (WT01_141m)	08:24 16:39 78	12:21 (WT01_141m) 13:39 (WT01_141m)
3	05:33 22:00	06:10 21:27	06:58 20:26	07:45 19:18		07:37 17:15	12:12 (WT01_141m) 85 13:37 (WT01_141m)	08:26 16:39 78	12:22 (WT01_141m) 13:40 (WT01_141m)
4	05:34 22:00	06:11 21:26	06:59 20:24	07:46 19:16		07:39 17:13	12:12 (WT01_141m) 86 13:38 (WT01_141m)	08:27 16:38 77	12:22 (WT01_141m) 13:39 (WT01_141m)
5	05:34 21:59	06:13 21:24	07:01 20:22	07:48 19:14		07:40 17:12	12:11 (WT01_141m) 87 13:38 (WT01_141m)	08:28 16:38 76	12:24 (WT01_141m) 13:40 (WT01_141m)
6	05:35 21:59	06:14 21:22	07:02 20:19	07:50 19:12		07:42 17:10	12:11 (WT01_141m) 88 13:39 (WT01_141m)	08:29 16:37 76	12:24 (WT01_141m) 13:40 (WT01_141m)
7	05:36 21:58	06:16 21:20	07:04 20:17	07:51 19:09		07:44 17:08	12:11 (WT01_141m) 88 13:39 (WT01_141m)	08:31 16:37 75	12:25 (WT01_141m) 13:40 (WT01_141m)
8	05:37 21:58	06:17 21:19	07:05 20:15	07:53 19:07		07:46 17:07	12:11 (WT01_141m) 88 13:39 (WT01_141m)	08:32 16:37 75	12:25 (WT01_141m) 13:40 (WT01_141m)
9	05:38 21:57	06:19 21:17	07:07 20:13	07:55 19:05		07:47 17:05	12:11 (WT01_141m) 89 13:40 (WT01_141m)	08:33 16:36 74	12:27 (WT01_141m) 13:41 (WT01_141m)
10	05:39 21:56	06:20 21:15	07:09 20:10	07:56 19:03		07:49 17:03	12:11 (WT01_141m) 89 13:40 (WT01_141m)	08:34 16:36 74	12:27 (WT01_141m) 13:41 (WT01_141m)
11	05:40 21:56	06:22 21:13	07:10 20:08	07:58 19:01		07:51 17:02	12:11 (WT01_141m) 88 13:39 (WT01_141m)	08:35 16:36 73	12:28 (WT01_141m) 13:41 (WT01_141m)
12	05:41 21:55	06:23 21:11	07:12 20:06	08:00 18:58		07:53 17:00	12:11 (WT01_141m) 88 13:39 (WT01_141m)	08:36 16:36 73	12:28 (WT01_141m) 13:41 (WT01_141m)
13	05:42 21:54	06:25 21:09	07:13 20:04	08:01 18:56		07:54 16:59	12:11 (WT01_141m) 89 13:40 (WT01_141m)	08:37 16:36 72	12:29 (WT01_141m) 13:41 (WT01_141m)
14	05:43 21:53	06:26 21:08	07:15 20:01	08:03 18:54		07:56 16:58	12:12 (WT01_141m) 88 13:40 (WT01_141m)	08:38 16:36 71	12:30 (WT01_141m) 13:41 (WT01_141m)
15	05:44 21:52	06:28 21:06	07:16 19:59	08:05 18:52		07:58 16:56	12:12 (WT01_141m) 88 13:40 (WT01_141m)	08:39 16:36 72	12:30 (WT01_141m) 13:42 (WT01_141m)
16	05:45 21:51	06:30 21:04	07:18 19:57	08:06 18:50	24	07:59 16:55	12:13 (WT01_141m) 87 13:40 (WT01_141m)	08:40 16:36 71	12:31 (WT01_141m) 13:42 (WT01_141m)
17	05:47 21:50	06:31 21:02	07:20 19:54	08:08 18:48	37	08:01 16:54	12:12 (WT01_141m) 87 13:39 (WT01_141m)	08:41 16:36 71	12:31 (WT01_141m) 13:42 (WT01_141m)
18	05:48 21:49	06:33 21:00	07:21 19:52	08:10 18:46	45	08:03 16:52	12:13 (WT01_141m) 87 13:40 (WT01_141m)	08:41 16:36 70	12:32 (WT01_141m) 13:42 (WT01_141m)
19	05:49 21:48	06:34 20:58	07:23 19:50	08:11 18:44	51	08:04 16:51	12:13 (WT01_141m) 87 13:40 (WT01_141m)	08:42 16:37 70	12:33 (WT01_141m) 13:43 (WT01_141m)
20	05:50 21:47	06:36 20:56	07:24 19:48	08:13 18:42	56	08:06 16:50	12:14 (WT01_141m) 86 13:40 (WT01_141m)	08:43 16:37 70	12:33 (WT01_141m) 13:43 (WT01_141m)
21	05:51 21:46	06:37 20:54	07:26 19:45	08:15 18:40	60	08:08 16:49	12:15 (WT01_141m) 85 13:40 (WT01_141m)	08:43 16:38 70	12:34 (WT01_141m) 13:44 (WT01_141m)
22	05:53 21:45	06:39 20:52	07:27 19:43	08:16 18:38	64	08:09 16:48	12:14 (WT01_141m) 85 13:39 (WT01_141m)	08:44 16:38 70	12:34 (WT01_141m) 13:44 (WT01_141m)
23	05:54 21:43	06:40 20:50	07:29 19:41	08:18 18:36	68	08:11 16:47	12:15 (WT01_141m) 85 13:40 (WT01_141m)	08:44 16:39 70	12:35 (WT01_141m) 13:45 (WT01_141m)
24	05:55 21:42	06:42 20:47	07:31 19:39	08:20 18:34	70	08:12 16:46	12:16 (WT01_141m) 84 13:40 (WT01_141m)	08:45 16:39 70	12:35 (WT01_141m) 13:45 (WT01_141m)
25	05:57 21:41	06:44 20:45	07:32 19:36	07:21 17:32	72	08:14 16:45	12:16 (WT01_141m) 83 13:39 (WT01_141m)	08:45 16:40 70	12:35 (WT01_141m) 13:45 (WT01_141m)
26	05:58 21:39	06:45 20:43	07:34 19:34	07:23 17:30	75	08:15 16:44	12:17 (WT01_141m) 83 13:40 (WT01_141m)	08:45 16:40 70	12:36 (WT01_141m) 13:46 (WT01_141m)
27	06:00 21:38	06:47 20:41	07:35 19:32	07:25 17:28	77	08:17 16:43	12:18 (WT01_141m) 82 13:40 (WT01_141m)	08:46 16:41 71	12:36 (WT01_141m) 13:47 (WT01_141m)
28	06:01 21:37	06:48 20:39	07:37 19:29	07:27 17:26	78	08:18 16:42	12:18 (WT01_141m) 81 13:39 (WT01_141m)	08:46 16:42 71	12:36 (WT01_141m) 13:47 (WT01_141m)
29	06:02 21:35	06:50 20:37	07:38 19:27	07:28 17:24	80	08:20 16:41	12:19 (WT01_141m) 81 13:40 (WT01_141m)	08:46 16:43 71	12:37 (WT01_141m) 13:48 (WT01_141m)
30	06:04 21:34	06:51 20:35	07:40 19:25	07:30 17:22	82	08:21 16:40	12:19 (WT01_141m) 80 13:39 (WT01_141m)	08:46 16:44 72	12:37 (WT01_141m) 13:49 (WT01_141m)
31	06:05 21:32	06:53 20:33		07:32 17:20	83	12:14 (WT01_141m) 13:37 (WT01_141m)		08:46 16:45 72	12:37 (WT01_141m) 13:49 (WT01_141m)
Potential sun hours	498	451	380	333		269		248	
Total, worst case				1022		2573		2253	
Sun reduction				0,35		0,26		0,21	
Oper. time red.				0,99		0,99		0,99	
Wind dir. red.				0,69		0,69		0,69	
Total reduction				0,24		0,17		0,14	
Total, real				246		448		326	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 30 - Zandvoortstraat 1

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

January			February			March			April			May			June		
1	08:46		11:33 (WT01_141m)	08:21		11:23 (WT01_141m)	07:29		11:31 (WT01_141m)	07:21		06:18			05:34		
	16:46	63	12:36 (WT01_141m)	17:32	99	13:02 (WT01_141m)	18:22	78	12:49 (WT01_141m)	20:14		21:03			21:47		
2	08:46		11:32 (WT01_141m)	08:19		11:24 (WT01_141m)	07:27		11:32 (WT01_141m)	07:18		06:16			05:33		
	16:47	64	12:36 (WT01_141m)	17:34	100	13:04 (WT01_141m)	18:24	75	12:47 (WT01_141m)	20:16		21:05			21:48		
3	08:46		11:32 (WT01_141m)	08:18		11:23 (WT01_141m)	07:25		11:34 (WT01_141m)	07:16		06:14			05:33		
	16:48	65	12:37 (WT01_141m)	17:36	101	13:04 (WT01_141m)	18:26	70	12:44 (WT01_141m)	20:17		21:06			21:49		
4	08:46		11:32 (WT01_141m)	08:16		11:24 (WT01_141m)	07:23		11:36 (WT01_141m)	07:14		06:12			05:32		
	16:49	67	12:39 (WT01_141m)	17:38	101	13:05 (WT01_141m)	18:27	65	12:41 (WT01_141m)	20:19		21:08			21:50		
5	08:46		11:31 (WT01_141m)	08:15		11:23 (WT01_141m)	07:21		11:39 (WT01_141m)	07:12		06:10			05:31		
	16:50	68	12:39 (WT01_141m)	17:39	102	13:05 (WT01_141m)	18:29	58	12:37 (WT01_141m)	20:21		21:10			21:51		
6	08:45		11:31 (WT01_141m)	08:13		11:23 (WT01_141m)	07:19		11:41 (WT01_141m)	07:10		06:09			05:31		
	16:51	69	12:40 (WT01_141m)	17:41	102	13:05 (WT01_141m)	18:31	50	12:31 (WT01_141m)	20:22		21:11			21:52		
7	08:45		11:32 (WT01_141m)	08:12		11:23 (WT01_141m)	07:16		11:45 (WT01_141m)	07:07		06:07			05:30		
	16:53	70	12:42 (WT01_141m)	17:43	102	13:05 (WT01_141m)	18:32	37	12:22 (WT01_141m)	20:24		21:13			21:53		
8	08:45		11:31 (WT01_141m)	08:10		11:22 (WT01_141m)	07:14		11:52 (WT01_141m)	07:05		06:05			05:30		
	16:54	71	12:42 (WT01_141m)	17:45	103	13:05 (WT01_141m)	18:34	18	12:10 (WT01_141m)	20:26		21:14			21:54		
9	08:44		11:30 (WT01_141m)	08:08		11:23 (WT01_141m)	07:12			07:03		06:04			05:29		
	16:55	73	12:43 (WT01_141m)	17:47	103	13:06 (WT01_141m)	18:36			20:27		21:16			21:55		
10	08:44		11:31 (WT01_141m)	08:06		11:23 (WT01_141m)	07:10			07:01		06:02			05:29		
	16:57	74	12:45 (WT01_141m)	17:48	103	13:06 (WT01_141m)	18:38			20:29		21:17			21:56		
11	08:43		11:30 (WT01_141m)	08:05		11:23 (WT01_141m)	07:08			06:59		06:00			05:28		
	16:58	76	12:46 (WT01_141m)	17:50	102	13:05 (WT01_141m)	18:39			20:31		21:19			21:56		
12	08:43		11:29 (WT01_141m)	08:03		11:23 (WT01_141m)	07:05			06:56		05:59			05:28		
	16:59	77	12:46 (WT01_141m)	17:52	102	13:05 (WT01_141m)	18:41			20:32		21:21			21:57		
13	08:42		11:29 (WT01_141m)	08:01		11:23 (WT01_141m)	07:03			06:54		05:57			05:28		
	17:01	78	12:47 (WT01_141m)	17:54	102	13:05 (WT01_141m)	18:43			20:34		21:22			21:58		
14	08:41		11:29 (WT01_141m)	07:59		11:23 (WT01_141m)	07:01			06:52		05:56			05:28		
	17:02	80	12:49 (WT01_141m)	17:56	102	13:05 (WT01_141m)	18:44			20:36		21:24			21:58		
15	08:41		11:29 (WT01_141m)	07:57		11:23 (WT01_141m)	06:59			06:50		05:54			05:27		
	17:04	81	12:50 (WT01_141m)	17:57	101	13:04 (WT01_141m)	18:46			20:37		21:25			21:59		
16	08:40		11:29 (WT01_141m)	07:55		11:23 (WT01_141m)	06:57			06:48		05:53			05:27		
	17:05	82	12:51 (WT01_141m)	17:59	101	13:04 (WT01_141m)	18:48			20:39		21:26			21:59		
17	08:39		11:28 (WT01_141m)	07:54		11:23 (WT01_141m)	06:54			06:46		05:51			05:27		
	17:07	84	12:52 (WT01_141m)	18:01	100	13:03 (WT01_141m)	18:49			20:40		21:28			22:00		
18	08:38		11:28 (WT01_141m)	07:52		11:23 (WT01_141m)	06:52			06:44		05:50			05:27		
	17:08	85	12:53 (WT01_141m)	18:03	100	13:03 (WT01_141m)	18:51			20:42		21:29			22:00		
19	08:37		11:27 (WT01_141m)	07:50		11:24 (WT01_141m)	06:50			06:42		05:48			05:27		
	17:10	86	12:53 (WT01_141m)	18:05	98	13:02 (WT01_141m)	18:53			20:44		21:31			22:00		
20	08:36		11:27 (WT01_141m)	07:48		11:24 (WT01_141m)	06:48			06:39		05:47			05:27		
	17:12	87	12:54 (WT01_141m)	18:06	98	13:02 (WT01_141m)	18:54			20:45		21:32			22:01		
21	08:35		11:27 (WT01_141m)	07:46		11:24 (WT01_141m)	06:45			06:37		05:46			05:28		
	17:13	88	12:55 (WT01_141m)	18:08	97	13:01 (WT01_141m)	18:56			20:47		21:34			22:01		
22	08:34		11:26 (WT01_141m)	07:44		11:25 (WT01_141m)	06:43			06:35		05:45			05:28		
	17:15	90	12:56 (WT01_141m)	18:10	95	13:00 (WT01_141m)	18:58			20:49		21:35			22:01		
23	08:33		11:26 (WT01_141m)	07:42		11:26 (WT01_141m)	06:41			06:33		05:43			05:28		
	17:17	91	12:57 (WT01_141m)	18:12	93	12:59 (WT01_141m)	18:59			20:50		21:36			22:01		
24	08:32		11:25 (WT01_141m)	07:40		11:26 (WT01_141m)	06:39			06:31		05:42			05:28		
	17:18	92	12:57 (WT01_141m)	18:13	92	12:58 (WT01_141m)	19:01			20:52		21:38			22:02		
25	08:30		11:25 (WT01_141m)	07:38		11:27 (WT01_141m)	06:36			06:29		05:41			05:29		
	17:20	94	12:59 (WT01_141m)	18:15	90	12:57 (WT01_141m)	19:03			20:53		21:39			22:02		
26	08:29		11:26 (WT01_141m)	07:36		11:28 (WT01_141m)	06:34			06:27		05:40			05:29		
	17:22	94	13:00 (WT01_141m)	18:17	87	12:55 (WT01_141m)	19:04			20:55		21:40			22:02		
27	08:28		11:25 (WT01_141m)	07:34		11:29 (WT01_141m)	06:32			06:25		05:39			05:29		
	17:23	95	13:00 (WT01_141m)	18:19	85	12:54 (WT01_141m)	19:06			20:57		21:41			22:02		
28	08:27		11:25 (WT01_141m)	07:31		11:29 (WT01_141m)	06:30			06:23		05:38			05:30		
	17:25	96	13:01 (WT01_141m)	18:20	82	12:51 (WT01_141m)	19:08			20:58		21:43			22:01		
29	08:25		11:24 (WT01_141m)				07:27			06:22		05:37			05:30		
	17:27	97	13:01 (WT01_141m)				20:09			21:00		21:44			22:01		
30	08:24		11:24 (WT01_141m)				07:25			06:20		05:36			05:31		
	17:29	98	13:02 (WT01_141m)				20:11			21:02		21:45			22:01		
31	08:22		11:24 (WT01_141m)				07:23					05:35					
	17:30	98	13:02 (WT01_141m)				20:13					21:46					
Potential sun hours	263			279			367			414		481			494		
Total, worst case	2533			2743			451										
Sun reduction	0,24			0,28			0,36										
Oper. time red.	0,99			0,99			0,99										
Wind dir. red.	0,61			0,61			0,61										
Total reduction	0,14			0,17			0,22										
Total, real	361			464			99										

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 30 - Zandvoortstraat 1

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October		November		December
1	05:32	06:07	06:55	07:42		07:34	10:52 (WT01_141m)	08:23
	22:01	21:30	20:30	19:23		17:19	12:35 (WT01_141m)	16:40
2	05:32	06:08	06:56	07:43		07:35	10:53 (WT01_141m)	08:24
	22:01	21:29	20:28	19:20		17:17	12:35 (WT01_141m)	16:39
3	05:33	06:10	06:58	07:45		07:37	10:52 (WT01_141m)	08:26
	22:00	21:27	20:26	19:18		17:15	12:34 (WT01_141m)	16:39
4	05:34	06:11	06:59	07:46		07:39	10:52 (WT01_141m)	08:27
	22:00	21:26	20:24	19:16		17:13	12:34 (WT01_141m)	16:38
5	05:34	06:13	07:01	07:48		07:40	10:53 (WT01_141m)	08:28
	21:59	21:24	20:22	19:14		17:12	12:34 (WT01_141m)	16:38
6	05:35	06:14	07:02	07:50		07:42	10:53 (WT01_141m)	08:29
	21:59	21:22	20:19	19:12	28	12:52 (WT01_141m)	12:34 (WT01_141m)	16:37
7	05:36	06:16	07:04	07:51		07:44	10:53 (WT01_141m)	08:31
	21:58	21:20	20:17	19:09	44	12:34 (WT01_141m)	12:34 (WT01_141m)	16:37
8	05:37	06:17	07:05	07:53		07:46	10:54 (WT01_141m)	08:32
	21:58	21:19	20:15	19:07	55	12:34 (WT01_141m)	12:34 (WT01_141m)	16:37
9	05:38	06:19	07:07	07:55		07:47	10:55 (WT01_141m)	08:33
	21:57	21:17	20:13	19:05	61	12:34 (WT01_141m)	12:34 (WT01_141m)	16:36
10	05:39	06:20	07:09	07:56		07:49	10:55 (WT01_141m)	08:34
	21:56	21:15	20:10	19:03	68	12:34 (WT01_141m)	12:34 (WT01_141m)	16:36
11	05:40	06:22	07:10	07:58		07:51	10:55 (WT01_141m)	08:35
	21:56	21:13	20:08	19:01	72	12:33 (WT01_141m)	12:33 (WT01_141m)	16:36
12	05:41	06:23	07:12	08:00		07:53	10:55 (WT01_141m)	08:36
	21:55	21:11	20:06	18:58	76	12:33 (WT01_141m)	12:33 (WT01_141m)	16:36
13	05:42	06:25	07:13	08:01		07:54	10:56 (WT01_141m)	08:37
	21:54	21:09	20:04	18:56	80	12:33 (WT01_141m)	12:33 (WT01_141m)	16:36
14	05:43	06:26	07:15	08:03		07:56	10:57 (WT01_141m)	08:38
	21:53	21:08	20:01	18:54	83	12:33 (WT01_141m)	12:33 (WT01_141m)	16:36
15	05:44	06:28	07:16	08:05		07:58	10:58 (WT01_141m)	08:39
	21:52	21:06	19:59	18:52	86	12:33 (WT01_141m)	12:33 (WT01_141m)	16:36
16	05:45	06:30	07:18	08:06		07:59	10:59 (WT01_141m)	08:40
	21:51	21:04	19:57	18:50	88	12:33 (WT01_141m)	12:33 (WT01_141m)	16:36
17	05:47	06:31	07:20	08:08		08:01	10:58 (WT01_141m)	08:41
	21:50	21:02	19:54	18:48	91	12:32 (WT01_141m)	12:32 (WT01_141m)	16:36
18	05:48	06:33	07:21	08:10		08:03	10:59 (WT01_141m)	08:41
	21:49	21:00	19:52	18:46	93	12:31 (WT01_141m)	12:31 (WT01_141m)	16:37
19	05:49	06:34	07:23	08:11		08:04	11:00 (WT01_141m)	08:42
	21:48	20:58	19:50	18:44	94	12:31 (WT01_141m)	12:31 (WT01_141m)	16:37
20	05:50	06:36	07:24	08:13		08:06	11:01 (WT01_141m)	08:43
	21:47	20:56	19:48	18:42	96	12:31 (WT01_141m)	12:31 (WT01_141m)	16:37
21	05:51	06:37	07:26	08:15		08:08	11:03 (WT01_141m)	08:43
	21:46	20:54	19:45	18:40	97	12:31 (WT01_141m)	12:31 (WT01_141m)	16:38
22	05:53	06:39	07:27	08:16		08:09	11:03 (WT01_141m)	08:44
	21:45	20:52	19:43	18:38	98	12:30 (WT01_141m)	12:30 (WT01_141m)	16:38
23	05:54	06:40	07:29	08:18		08:11	11:04 (WT01_141m)	08:44
	21:43	20:50	19:41	18:36	99	12:30 (WT01_141m)	12:30 (WT01_141m)	16:39
24	05:55	06:42	07:31	08:20		08:12	11:05 (WT01_141m)	08:45
	21:42	20:47	19:39	18:34	100	12:30 (WT01_141m)	12:30 (WT01_141m)	16:39
25	05:57	06:44	07:32	07:21		08:14	11:05 (WT01_141m)	08:45
	21:41	20:45	19:36	17:32	101	12:34 (WT01_141m)	12:29 (WT01_141m)	16:40
26	05:58	06:45	07:34	07:23		08:15	11:07 (WT01_141m)	08:45
	21:39	20:43	19:34	17:30	102	12:34 (WT01_141m)	12:29 (WT01_141m)	16:40
27	06:00	06:47	07:35	07:25		08:17	11:08 (WT01_141m)	08:46
	21:38	20:41	19:32	17:28	102	12:34 (WT01_141m)	12:29 (WT01_141m)	16:41
28	06:01	06:48	07:37	07:27		08:18	11:08 (WT01_141m)	08:46
	21:37	20:39	19:29	17:26	102	12:34 (WT01_141m)	12:28 (WT01_141m)	16:42
29	06:02	06:50	07:38	07:28		08:20	11:10 (WT01_141m)	08:46
	21:35	20:37	19:27	17:24	103	12:35 (WT01_141m)	12:28 (WT01_141m)	16:43
30	06:04	06:51	07:40	07:30		08:21	11:10 (WT01_141m)	08:46
	21:34	20:35	19:25	17:22	103	12:35 (WT01_141m)	12:28 (WT01_141m)	16:44
31	06:05	06:53		07:32		08:22		08:46
	21:32	20:33		17:20	103	12:35 (WT01_141m)		16:45
Potential sun hours	498	451	380	333		269		248
Total, worst case				2225		2784		1952
Sun reduction				0,35		0,26		0,21
Oper. time red.				0,99		0,99		0,99
Wind dir. red.				0,61		0,61		0,61
Total reduction				0,21		0,15		0,13
Total, real				475		430		250

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 31 - Wayenborgstraat 22

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46 16:46	08:21 17:32	07:29 18:22	07:21 20:14	09:16 (WT01_141m) 06:18 10:13 (WT01_141m) 21:03	09:42 (WT01_141m) 05:34 09:54 (WT01_141m) 21:47
2	08:46 16:47	08:19 17:34	07:27 18:24	07:18 20:16	09:17 (WT01_141m) 06:16 10:13 (WT01_141m) 21:05	09:43 (WT01_141m) 05:33 09:52 (WT01_141m) 21:48
3	08:46 16:48	08:18 17:36	07:25 18:26	07:16 20:17	09:17 (WT01_141m) 06:14 10:13 (WT01_141m) 21:06	09:43 (WT01_141m) 05:33 09:50 (WT01_141m) 21:49
4	08:46 16:49	08:16 17:38	07:23 18:27	07:14 20:19	09:18 (WT01_141m) 06:12 10:13 (WT01_141m) 21:08	09:44 (WT01_141m) 05:32 09:48 (WT01_141m) 21:50
5	08:46 16:50	08:15 17:39	07:21 18:29	07:12 20:21	09:19 (WT01_141m) 06:10 10:13 (WT01_141m) 21:10	09:46 (WT01_141m) 05:31 09:47 (WT01_141m) 21:51
6	08:45 16:52	08:13 17:41	07:19 18:31	07:10 20:22	09:20 (WT01_141m) 06:09 10:14 (WT01_141m) 21:11	09:50 (WT01_141m) 05:31 10:14 (WT01_141m) 21:52
7	08:45 16:53	08:12 17:43	07:16 18:32	07:07 20:24	09:21 (WT01_141m) 06:07 10:14 (WT01_141m) 21:13	10:14 (WT01_141m) 05:30 10:14 (WT01_141m) 21:53
8	08:45 16:54	08:10 17:45	07:14 18:34	07:05 20:26	09:21 (WT01_141m) 06:05 10:13 (WT01_141m) 21:14	10:14 (WT01_141m) 05:30 10:13 (WT01_141m) 21:54
9	08:44 16:55	08:08 17:47	07:12 18:36	07:03 20:27	09:22 (WT01_141m) 06:04 10:13 (WT01_141m) 21:16	10:13 (WT01_141m) 05:29 10:13 (WT01_141m) 21:55
10	08:44 16:57	08:06 17:48	07:10 18:38	07:01 20:29	09:23 (WT01_141m) 06:02 10:12 (WT01_141m) 21:17	10:12 (WT01_141m) 05:29 10:12 (WT01_141m) 21:56
11	08:43 16:58	08:05 17:50	07:08 18:39	06:59 20:31	09:24 (WT01_141m) 06:00 10:12 (WT01_141m) 21:19	10:12 (WT01_141m) 05:28 10:12 (WT01_141m) 21:56
12	08:43 16:59	08:03 17:52	07:05 18:41	06:56 20:32	09:25 (WT01_141m) 05:59 10:12 (WT01_141m) 21:21	10:12 (WT01_141m) 05:28 10:12 (WT01_141m) 21:57
13	08:42 17:01	08:01 17:54	07:03 18:43	06:54 20:34	09:26 (WT01_141m) 05:57 10:11 (WT01_141m) 21:22	10:11 (WT01_141m) 05:28 10:11 (WT01_141m) 21:58
14	08:41 17:02	07:59 17:56	07:01 18:44	06:52 20:36	09:27 (WT01_141m) 05:56 10:11 (WT01_141m) 21:24	10:11 (WT01_141m) 05:28 10:11 (WT01_141m) 21:58
15	08:41 17:04	07:57 17:57	06:59 18:46	06:50 20:37	09:28 (WT01_141m) 05:54 10:10 (WT01_141m) 21:25	10:10 (WT01_141m) 05:28 10:10 (WT01_141m) 21:59
16	08:40 17:05	07:55 17:59	06:57 18:48	06:48 20:39	09:28 (WT01_141m) 05:53 10:09 (WT01_141m) 21:26	10:09 (WT01_141m) 05:27 10:09 (WT01_141m) 21:59
17	08:39 17:07	07:54 18:01	06:54 18:49	06:46 20:40	09:29 (WT01_141m) 05:51 10:08 (WT01_141m) 21:28	10:08 (WT01_141m) 05:27 10:08 (WT01_141m) 22:00
18	08:38 17:09	07:52 18:03	06:52 18:51	06:44 20:42	09:30 (WT01_141m) 05:50 10:07 (WT01_141m) 21:29	10:07 (WT01_141m) 05:27 10:07 (WT01_141m) 22:01
19	08:37 17:10	07:50 18:05	06:50 18:53	06:42 20:44	09:31 (WT01_141m) 05:48 10:07 (WT01_141m) 21:31	10:07 (WT01_141m) 05:27 10:07 (WT01_141m) 22:02
20	08:36 17:12	07:48 18:06	06:48 18:54	06:39 20:45	09:32 (WT01_141m) 05:47 10:06 (WT01_141m) 21:32	10:06 (WT01_141m) 05:27 10:06 (WT01_141m) 22:01
21	08:35 17:13	07:46 18:08	06:45 18:56	06:37 20:47	09:33 (WT01_141m) 05:46 10:05 (WT01_141m) 21:34	10:05 (WT01_141m) 05:28 10:05 (WT01_141m) 22:01
22	08:34 17:15	07:44 18:10	06:43 18:58	06:35 20:49	09:33 (WT01_141m) 05:45 10:04 (WT01_141m) 21:35	10:04 (WT01_141m) 05:28 10:04 (WT01_141m) 22:01
23	08:33 17:17	07:42 18:12	06:41 18:59	06:33 20:50	09:34 (WT01_141m) 05:43 10:03 (WT01_141m) 21:36	10:03 (WT01_141m) 05:28 10:03 (WT01_141m) 22:01
24	08:32 17:18	07:40 18:13	06:39 19:01	06:31 20:52	09:35 (WT01_141m) 05:42 10:02 (WT01_141m) 21:38	10:02 (WT01_141m) 05:28 10:02 (WT01_141m) 22:02
25	08:30 17:20	07:38 18:15	06:36 19:03	06:29 20:53	09:37 (WT01_141m) 05:41 10:01 (WT01_141m) 21:39	10:01 (WT01_141m) 05:29 10:01 (WT01_141m) 22:02
26	08:29 17:22	07:36 18:17	06:34 19:04	06:27 20:55	09:38 (WT01_141m) 05:40 10:00 (WT01_141m) 21:40	10:00 (WT01_141m) 05:29 10:00 (WT01_141m) 22:02
27	08:28 17:23	07:34 18:19	06:32 19:06	06:25 20:57	09:38 (WT01_141m) 05:39 09:59 (WT01_141m) 21:41	09:59 (WT01_141m) 05:29 09:59 (WT01_141m) 22:02
28	08:27 17:25	07:31 18:20	06:30 19:08	06:23 20:58	09:39 (WT01_141m) 05:38 09:57 (WT01_141m) 21:43	09:57 (WT01_141m) 05:30 09:57 (WT01_141m) 22:01
29	08:25 17:27	07:27 18:20	06:27 19:09	06:22 21:00	09:40 (WT01_141m) 05:37 09:56 (WT01_141m) 21:44	09:56 (WT01_141m) 05:30 09:56 (WT01_141m) 22:01
30	08:24 17:29	07:25 18:21	06:25 19:11	06:20 21:02	09:40 (WT01_141m) 05:36 09:54 (WT01_141m) 21:45	09:54 (WT01_141m) 05:31 09:54 (WT01_141m) 22:01
31	08:22 17:31	07:23 18:20	06:23 19:13	06:18 21:04	09:40 (WT01_141m) 05:35 09:54 (WT01_141m) 21:46	09:54 (WT01_141m) 05:31 09:54 (WT01_141m) 22:01
Potential sun hours	263	279	367	414	481	494
Total, worst case			742	1184		33
Sun reduction			0,36	0,45		0,45
Oper. time red.			0,99	0,99		0,99
Wind dir. red.			0,54	0,54		0,54
Total reduction			0,19	0,24		0,24
Total, real			144	285		8

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 31 - Wayenborgstraat 22

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December
1	05:32	06:07	06:55	09:23 (WT01_141m)	07:42	07:34
	22:01	21:30	20:30	10:11 (WT01_141m)	19:23	17:19
2	05:32	06:08	06:56	09:22 (WT01_141m)	07:43	07:35
	22:01	21:29	20:28	10:11 (WT01_141m)	19:20	17:17
3	05:33	06:10	06:58	09:20 (WT01_141m)	07:45	07:37
	22:00	21:27	20:26	10:11 (WT01_141m)	19:18	17:15
4	05:34	06:11	06:59	09:19 (WT01_141m)	07:47	07:39
	22:00	21:26	20:24	10:11 (WT01_141m)	19:16	17:13
5	05:34	06:13	07:01	09:17 (WT01_141m)	07:48	07:40
	21:59	21:24	20:22	10:10 (WT01_141m)	19:14	17:12
6	05:35	06:14	07:02	09:16 (WT01_141m)	07:50	07:42
	21:59	21:22	20:19	10:10 (WT01_141m)	19:12	17:10
7	05:36	06:16	07:04	09:14 (WT01_141m)	07:51	07:44
	21:58	21:20	20:17	10:08 (WT01_141m)	19:09	17:08
8	05:37	06:17	09:55 (WT01_141m)	07:05	09:13 (WT01_141m)	07:53
	21:58	21:19	20:15	55	10:08 (WT01_141m)	19:07
9	05:38	06:19	09:53 (WT01_141m)	07:07	09:11 (WT01_141m)	07:55
	21:57	21:17	5	09:58 (WT01_141m)	20:13	56
10	05:39	06:20	09:53 (WT01_141m)	07:09	09:10 (WT01_141m)	07:56
	21:56	21:15	7	10:00 (WT01_141m)	20:10	57
11	05:40	06:22	09:51 (WT01_141m)	07:10	09:08 (WT01_141m)	07:58
	21:56	21:13	10	10:01 (WT01_141m)	20:08	57
12	05:41	06:23	09:49 (WT01_141m)	07:12	09:07 (WT01_141m)	08:00
	21:55	21:11	12	10:01 (WT01_141m)	20:06	57
13	05:42	06:25	09:49 (WT01_141m)	07:13	09:05 (WT01_141m)	08:01
	21:54	21:09	14	10:03 (WT01_141m)	20:04	58
14	05:43	06:26	09:47 (WT01_141m)	07:15	09:04 (WT01_141m)	08:03
	21:53	21:08	17	10:04 (WT01_141m)	20:01	58
15	05:44	06:28	09:46 (WT01_141m)	07:16	09:02 (WT01_141m)	08:05
	21:52	21:06	19	10:05 (WT01_141m)	19:59	58
16	05:45	06:30	09:45 (WT01_141m)	07:18	09:01 (WT01_141m)	08:06
	21:51	21:04	21	10:06 (WT01_141m)	19:57	58
17	05:47	06:31	09:44 (WT01_141m)	07:20	08:59 (WT01_141m)	08:08
	21:50	21:02	23	10:07 (WT01_141m)	19:54	58
18	05:48	06:33	09:42 (WT01_141m)	07:21	08:57 (WT01_141m)	08:10
	21:49	21:00	25	10:07 (WT01_141m)	19:52	59
19	05:49	06:34	09:42 (WT01_141m)	07:23	08:55 (WT01_141m)	08:11
	21:48	20:58	26	10:08 (WT01_141m)	19:50	58
20	05:50	06:36	09:40 (WT01_141m)	07:24	08:55 (WT01_141m)	08:13
	21:47	20:56	29	10:09 (WT01_141m)	19:48	56
21	05:52	06:37	09:39 (WT01_141m)	07:26	08:55 (WT01_141m)	08:15
	21:46	20:54	31	10:10 (WT01_141m)	19:45	53
22	05:53	06:39	09:37 (WT01_141m)	07:27	08:57 (WT01_141m)	08:16
	21:45	20:52	33	10:10 (WT01_141m)	19:43	49
23	05:54	06:40	09:36 (WT01_141m)	07:29	09:00 (WT01_141m)	08:18
	21:43	20:50	35	10:11 (WT01_141m)	19:41	44
24	05:55	06:42	09:34 (WT01_141m)	07:31	09:02 (WT01_141m)	08:20
	21:42	20:47	37	10:11 (WT01_141m)	19:39	38
25	05:57	06:44	09:34 (WT01_141m)	07:32	09:05 (WT01_141m)	07:21
	21:41	20:45	37	10:11 (WT01_141m)	19:36	31
26	05:58	06:45	09:32 (WT01_141m)	07:34	09:08 (WT01_141m)	07:23
	21:39	20:43	39	10:11 (WT01_141m)	19:34	23
27	06:00	06:47	09:31 (WT01_141m)	07:35	09:31 (WT01_141m)	17:30
	21:38	20:41	41	10:12 (WT01_141m)	19:32	
28	06:01	06:48	09:29 (WT01_141m)	07:37		17:28
	21:37	20:39	42	10:11 (WT01_141m)	19:29	
29	06:02	06:50	09:28 (WT01_141m)	07:38		17:26
	21:35	20:37	44	10:12 (WT01_141m)	19:27	
30	06:04	06:51	09:26 (WT01_141m)	07:40		17:24
	21:34	20:35	45	10:11 (WT01_141m)	19:25	
31	06:05	06:53	09:25 (WT01_141m)			17:22
	21:32	20:33	47	10:12 (WT01_141m)		17:20
Potential sun hours	498	451	380	333	269	248
Total, worst case		641	1344			
Sun reduction		0,46	0,43			
Oper. time red.		0,99	0,99			
Wind dir. red.		0,54	0,54			
Total reduction		0,25	0,23			
Total, real		158	307			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 32 - Wayenborgstraat 16

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46 16:46	08:21 17:32	07:29 18:22	07:21 20:14	08:42 (WT01_141m) 09:38 (WT01_141m)	05:34 21:47
2	08:46 16:47	08:19 17:34	07:27 18:24	07:18 20:16	08:40 (WT01_141m) 09:40 (WT01_141m)	05:33 21:48
3	08:46 16:48	08:18 17:36	07:25 18:26	07:16 20:17	08:37 (WT01_141m) 09:40 (WT01_141m)	05:33 21:49
4	08:46 16:49	08:16 17:38	07:23 18:27	07:14 20:19	08:35 (WT01_141m) 09:41 (WT01_141m)	05:32 21:50
5	08:46 16:50	08:15 17:39	07:21 18:29	07:12 20:21	08:34 (WT01_141m) 09:42 (WT01_141m)	05:31 21:51
6	08:45 16:52	08:13 17:41	07:19 18:31	07:10 20:22	08:32 (WT01_141m) 09:43 (WT01_141m)	05:31 21:52
7	08:45 16:53	08:12 17:43	07:16 18:33	07:07 20:24	08:31 (WT01_141m) 09:44 (WT01_141m)	05:30 21:53
8	08:45 16:54	08:10 17:45	07:14 18:34	07:05 20:26	08:29 (WT01_141m) 09:44 (WT01_141m)	05:30 21:54
9	08:44 16:55	08:08 17:47	07:12 18:36	07:03 20:27	08:27 (WT01_141m) 09:44 (WT01_141m)	05:29 21:55
10	08:44 16:57	08:06 17:48	07:10 18:38	07:01 20:29	08:26 (WT01_141m) 09:45 (WT01_141m)	05:29 21:56
11	08:43 16:58	08:05 17:50	07:08 18:39	06:59 20:31	08:25 (WT01_141m) 09:45 (WT01_141m)	05:28 21:56
12	08:43 16:59	08:03 17:52	07:05 18:41	06:56 20:32	08:25 (WT01_141m) 09:45 (WT01_141m)	05:28 21:57
13	08:42 17:01	08:01 17:54	07:03 18:43	06:54 20:34	08:24 (WT01_141m) 09:45 (WT01_141m)	05:28 21:58
14	08:41 17:02	07:59 17:56	07:01 18:44	06:52 20:36	08:23 (WT01_141m) 09:46 (WT01_141m)	05:28 21:58
15	08:41 17:04	07:57 17:57	06:59 18:46	06:50 20:37	08:22 (WT01_141m) 09:46 (WT01_141m)	05:28 21:59
16	08:40 17:05	07:55 17:59	06:57 18:48	06:48 20:39	08:21 (WT01_141m) 09:44 (WT01_141m)	05:27 21:59
17	08:39 17:07	07:54 18:01	06:54 18:49	06:46 20:40	08:20 (WT01_141m) 09:44 (WT01_141m)	05:27 22:00
18	08:38 17:09	07:52 18:03	06:52 18:51	06:44 20:42	08:19 (WT01_141m) 09:44 (WT01_141m)	05:27 22:00
19	08:37 17:10	07:50 18:05	06:50 18:53	06:42 20:44	08:19 (WT01_141m) 09:44 (WT01_141m)	05:27 22:00
20	08:36 17:12	07:48 18:06	06:48 18:54	06:39 20:45	08:19 (WT01_141m) 09:43 (WT01_141m)	05:27 22:01
21	08:35 17:13	07:46 18:08	06:45 18:56	06:37 20:47	08:18 (WT01_141m) 09:43 (WT01_141m)	05:28 22:01
22	08:34 17:15	07:44 18:10	06:43 18:58	06:35 20:49	08:18 (WT01_141m) 09:43 (WT01_141m)	05:28 22:01
23	08:33 17:17	07:42 18:12	06:41 18:59	06:33 20:50	08:17 (WT01_141m) 09:42 (WT01_141m)	05:28 22:01
24	08:32 17:18	07:40 18:13	06:39 19:01	06:31 20:52	08:17 (WT01_141m) 09:41 (WT01_141m)	05:28 22:02
25	08:30 17:20	07:38 18:15	06:36 19:03	06:29 20:53	08:18 (WT01_141m) 09:42 (WT01_141m)	05:29 22:02
26	08:29 17:22	07:36 18:17	06:34 19:04	06:27 20:55	08:17 (WT01_141m) 09:41 (WT01_141m)	05:29 22:02
27	08:28 17:24	07:34 18:19	06:32 19:06	06:25 20:57	08:17 (WT01_141m) 09:40 (WT01_141m)	05:29 22:02
28	08:27 17:25	07:31 18:20	06:30 19:08	06:23 20:58	08:17 (WT01_141m) 09:39 (WT01_141m)	05:30 22:01
29	08:25 17:27	07:27 18:20	06:27 19:08	06:22 21:00	08:17 (WT01_141m) 09:38 (WT01_141m)	05:30 22:01
30	08:24 17:29	07:25 18:21	06:25 19:09	06:20 21:02	08:17 (WT01_141m) 09:37 (WT01_141m)	05:31 22:01
31	08:22 17:31	07:23 18:23	06:23 19:13	06:18 21:04	08:17 (WT01_141m) 09:37 (WT01_141m)	05:31 22:01
Potential sun hours	263	279	367	414	481	494
Total, worst case			243	2350	1708	17
Sun reduction			0,36	0,45		0,44
Oper. time red.			0,99	0,99		0,99
Wind dir. red.			0,59	0,59		0,59
Total reduction			0,21	0,26		0,26
Total, real			51	616	449	4

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 32 - Wayenborgstraat 16

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July		August		September		October		November		December	
1	05:32	06:07	08:31 (WT01_141m)	06:55	08:24 (WT01_141m)	07:42	07:34	08:23			
	22:01	21:30	66 09:37 (WT01_141m)	20:30	80 09:44 (WT01_141m)	19:23	17:19	16:40			
2	05:32	06:08	08:30 (WT01_141m)	06:56	08:25 (WT01_141m)	07:43	07:35	08:24			
	22:01	21:29	68 09:38 (WT01_141m)	20:28	79 09:44 (WT01_141m)	19:20	17:17	16:39			
3	05:33	06:10	08:30 (WT01_141m)	06:58	08:25 (WT01_141m)	07:45	07:37	08:26			
	22:00	21:27	69 09:39 (WT01_141m)	20:26	77 09:42 (WT01_141m)	19:18	17:15	16:39			
4	05:34	06:11	08:29 (WT01_141m)	06:59	08:27 (WT01_141m)	07:47	07:39	08:27			
	22:00	21:26	71 09:40 (WT01_141m)	20:24	75 09:42 (WT01_141m)	19:16	17:13	16:38			
5	05:35	06:13	08:28 (WT01_141m)	07:01	08:27 (WT01_141m)	07:48	07:40	08:28			
	21:59	21:24	72 09:40 (WT01_141m)	20:22	73 09:40 (WT01_141m)	19:14	17:12	16:38			
6	05:35	06:14	08:28 (WT01_141m)	07:02	08:28 (WT01_141m)	07:50	07:42	08:29			
	21:59	21:22	74 09:42 (WT01_141m)	20:19	71 09:39 (WT01_141m)	19:12	17:10	16:37			
7	05:36	06:16	08:27 (WT01_141m)	07:04	08:29 (WT01_141m)	07:51	07:44	08:31			
	21:58	21:20	75 09:42 (WT01_141m)	20:17	69 09:38 (WT01_141m)	19:09	17:08	16:37			
8	05:37	06:17	08:27 (WT01_141m)	07:05	08:30 (WT01_141m)	07:53	07:46	08:32			
	21:58	21:19	76 09:43 (WT01_141m)	20:15	67 09:37 (WT01_141m)	19:07	17:07	16:37			
9	05:38	06:19	08:27 (WT01_141m)	07:07	08:31 (WT01_141m)	07:55	07:47	08:33			
	21:57	21:17	77 09:44 (WT01_141m)	20:13	64 09:35 (WT01_141m)	19:05	17:05	16:36			
10	05:39	06:20	08:27 (WT01_141m)	07:09	08:33 (WT01_141m)	07:56	07:49	08:34			
	21:56	21:15	78 09:45 (WT01_141m)	20:10	60 09:33 (WT01_141m)	19:03	17:03	16:36			
11	05:40	06:22	08:26 (WT01_141m)	07:10	08:34 (WT01_141m)	07:58	07:51	08:35			
	21:56	11 09:04 (WT01_141m)	21:13	79 09:45 (WT01_141m)	20:08	57 09:31 (WT01_141m)	19:01	17:02	16:36		
12	05:41	06:23	08:25 (WT01_141m)	07:12	08:36 (WT01_141m)	08:00	07:53	08:36			
	21:55	16 09:07 (WT01_141m)	21:11	80 09:45 (WT01_141m)	20:06	53 09:29 (WT01_141m)	18:58	17:00	16:36		
13	05:42	06:25	08:25 (WT01_141m)	07:13	08:37 (WT01_141m)	08:01	07:54	08:37			
	21:54	20 09:09 (WT01_141m)	21:09	81 09:46 (WT01_141m)	20:04	49 09:26 (WT01_141m)	18:56	16:59	16:36		
14	05:43	06:26	08:24 (WT01_141m)	07:15	08:40 (WT01_141m)	08:03	07:56	08:38			
	21:53	24 09:11 (WT01_141m)	21:08	82 09:46 (WT01_141m)	20:01	44 09:24 (WT01_141m)	18:54	16:58	16:36		
15	05:44	06:28	08:25 (WT01_141m)	07:16	08:41 (WT01_141m)	08:05	07:58	08:39			
	21:52	28 09:14 (WT01_141m)	21:06	82 09:47 (WT01_141m)	19:59	40 09:21 (WT01_141m)	18:52	16:56	16:36		
16	05:45	06:30	08:24 (WT01_141m)	07:18	08:45 (WT01_141m)	08:06	07:59	08:40			
	21:51	31 09:16 (WT01_141m)	21:04	83 09:47 (WT01_141m)	19:57	33 09:18 (WT01_141m)	18:50	16:55	16:36		
17	05:47	06:31	08:24 (WT01_141m)	07:20	08:48 (WT01_141m)	08:08	08:01	08:41			
	21:50	34 09:18 (WT01_141m)	21:02	84 09:48 (WT01_141m)	19:54	25 09:13 (WT01_141m)	18:48	16:54	16:36		
18	05:48	06:33	08:23 (WT01_141m)	07:21	08:55 (WT01_141m)	08:10	08:03	08:41			
	21:49	37 09:19 (WT01_141m)	21:00	84 09:47 (WT01_141m)	19:52	11 09:06 (WT01_141m)	18:46	16:52	16:37		
19	05:49	06:34	08:24 (WT01_141m)	07:23	08:11	08:11	08:04	08:42			
	21:48	39 09:20 (WT01_141m)	20:58	84 09:48 (WT01_141m)	19:50		18:44	16:51	16:37		
20	05:50	06:36	08:23 (WT01_141m)	07:24	08:13	08:13	08:06	08:43			
	21:47	42 09:22 (WT01_141m)	20:56	85 09:48 (WT01_141m)	19:48		18:42	16:50	16:37		
21	05:52	06:37	08:23 (WT01_141m)	07:26	08:15	08:15	08:08	08:43			
	21:46	44 09:23 (WT01_141m)	20:54	85 09:48 (WT01_141m)	19:45		18:40	16:49	16:38		
22	05:53	06:39	08:23 (WT01_141m)	07:27	08:16	08:16	08:09	08:44			
	21:45	46 09:25 (WT01_141m)	20:52	85 09:48 (WT01_141m)	19:43		18:38	16:48	16:38		
23	05:54	06:40	08:23 (WT01_141m)	07:29	08:18	08:18	08:11	08:44			
	21:43	48 09:26 (WT01_141m)	20:50	85 09:48 (WT01_141m)	19:41		18:36	16:47	16:39		
24	05:55	06:42	08:23 (WT01_141m)	07:31	08:20	08:20	08:12	08:45			
	21:42	50 09:27 (WT01_141m)	20:47	85 09:48 (WT01_141m)	19:39		18:34	16:46	16:39		
25	05:57	06:44	08:23 (WT01_141m)	07:32	07:21	07:21	08:14	08:45			
	21:41	53 09:28 (WT01_141m)	20:45	85 09:48 (WT01_141m)	19:36		17:32	16:45	16:40		
26	05:58	06:45	08:23 (WT01_141m)	07:34	07:23	07:23	08:15	08:45			
	21:39	55 09:30 (WT01_141m)	20:43	84 09:47 (WT01_141m)	19:34		17:30	16:44	16:40		
27	06:00	06:47	08:24 (WT01_141m)	07:35	07:25	07:25	08:17	08:46			
	21:38	57 09:31 (WT01_141m)	20:41	83 09:47 (WT01_141m)	19:32		17:28	16:43	16:41		
28	06:01	06:48	08:23 (WT01_141m)	07:37	07:27	07:27	08:19	08:46			
	21:37	58 09:31 (WT01_141m)	20:39	83 09:46 (WT01_141m)	19:29		17:26	16:42	16:42		
29	06:02	06:50	08:24 (WT01_141m)	07:38	07:28	07:28	08:20	08:46			
	21:35	60 09:33 (WT01_141m)	20:37	82 09:46 (WT01_141m)	19:27		17:24	16:41	16:43		
30	06:04	06:51	08:24 (WT01_141m)	07:40	07:30	07:30	08:21	08:46			
	21:34	62 09:34 (WT01_141m)	20:35	81 09:45 (WT01_141m)	19:25		17:22	16:41	16:44		
31	06:05	06:53	08:25 (WT01_141m)		07:32	07:32		08:46			
	21:32	64 09:35 (WT01_141m)	20:33	80 09:45 (WT01_141m)		17:20		16:45			
Potential sun hours	498	451		380		333	269	248			
Total, worst case	879	2468		1027							
Sun reduction	0,44	0,46		0,43							
Oper. time red.	0,99	0,99		0,99							
Wind dir. red.	0,59	0,59		0,59							
Total reduction	0,26	0,27		0,25							
Total, real	227	663		255							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 33 - Zandvoortstraat 12

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

January		February		March		April		May		June	
1	08:46	08:21	09:52 (WT01_141m)	07:29	09:49 (WT01_141m)	07:21	06:18	05:34			
	16:46	17:32	62 10:54 (WT01_141m)	18:22	60 10:49 (WT01_141m)	20:14	21:03	21:47			
2	08:46	08:19	09:52 (WT01_141m)	07:27	09:50 (WT01_141m)	07:18	06:16	05:33			
	16:47	17:34	63 10:55 (WT01_141m)	18:24	57 10:47 (WT01_141m)	20:16	21:05	21:48			
3	08:46	08:18	09:51 (WT01_141m)	07:25	09:51 (WT01_141m)	07:16	06:14	05:33			
	16:48	17:36	65 10:56 (WT01_141m)	18:26	54 10:45 (WT01_141m)	20:17	21:06	21:49			
4	08:46	08:16	09:51 (WT01_141m)	07:23	09:52 (WT01_141m)	07:14	06:12	05:32			
	16:49	17:38	66 10:57 (WT01_141m)	18:27	52 10:44 (WT01_141m)	20:19	21:08	21:50			
5	08:46	08:15	09:50 (WT01_141m)	07:21	09:53 (WT01_141m)	07:12	06:10	05:31			
	16:50	17:39	68 10:58 (WT01_141m)	18:29	49 10:42 (WT01_141m)	20:21	21:10	21:51			
6	08:45	08:13	09:49 (WT01_141m)	07:19	09:54 (WT01_141m)	07:10	06:09	05:31			
	16:51	17:41	69 10:58 (WT01_141m)	18:31	44 10:38 (WT01_141m)	20:22	21:11	21:52			
7	08:45	08:12	09:48 (WT01_141m)	07:16	09:56 (WT01_141m)	07:07	06:07	05:30			
	16:53	17:43	70 10:58 (WT01_141m)	18:32	40 10:36 (WT01_141m)	20:24	21:13	21:53			
8	08:45	08:10	09:49 (WT01_141m)	07:14	09:58 (WT01_141m)	07:05	06:05	05:30			
	16:54	17:45	71 11:00 (WT01_141m)	18:34	35 10:33 (WT01_141m)	20:26	21:14	21:54			
9	08:44	08:08	09:48 (WT01_141m)	07:12	10:01 (WT01_141m)	07:03	06:04	05:29			
	16:55	17:47	72 11:00 (WT01_141m)	18:36	28 10:29 (WT01_141m)	20:27	21:16	21:55			
10	08:44	08:06	09:48 (WT01_141m)	07:10	10:05 (WT01_141m)	07:01	06:02	05:29			
	16:57	17:48	72 11:00 (WT01_141m)	18:38	18 10:23 (WT01_141m)	20:29	21:17	21:56			
11	08:43	08:05	09:47 (WT01_141m)	07:08		06:59	06:00	05:28			
	16:58	17:50	73 11:00 (WT01_141m)	18:39		20:31	21:19	21:56			
12	08:43	08:03	09:47 (WT01_141m)	07:05		06:56	05:59	05:28			
	16:59	17:52	73 11:00 (WT01_141m)	18:41		20:32	21:21	21:57			
13	08:42	08:01	09:46 (WT01_141m)	07:03		06:54	05:57	05:28			
	17:01	17:54	74 11:00 (WT01_141m)	18:43		20:34	21:22	21:58			
14	08:41	07:59	09:46 (WT01_141m)	07:01		06:52	05:56	05:28			
	17:02	17:56	74 11:00 (WT01_141m)	18:44		20:36	21:24	21:58			
15	08:41	07:57	09:46 (WT01_141m)	06:59		06:50	05:54	05:28			
	17:04	17:57	74 11:00 (WT01_141m)	18:46		20:37	21:25	21:59			
16	08:40	10:20 (WT01_141m)	07:55	09:46 (WT01_141m)	06:57		06:48	05:53	05:27		
	17:05	2 10:22 (WT01_141m)	17:59	74 11:00 (WT01_141m)	18:48		20:39	21:26	21:59		
17	08:39	10:14 (WT01_141m)	07:54	09:46 (WT01_141m)	06:54		06:46	05:51	05:27		
	17:07	15 10:29 (WT01_141m)	18:01	74 11:00 (WT01_141m)	18:49		20:40	21:28	22:00		
18	08:38	10:11 (WT01_141m)	07:52	09:45 (WT01_141m)	06:52		06:44	05:50	05:27		
	17:09	21 10:32 (WT01_141m)	18:03	74 10:59 (WT01_141m)	18:51		20:42	21:29	22:00		
19	08:37	10:08 (WT01_141m)	07:50	09:45 (WT01_141m)	06:50		06:42	05:48	05:27		
	17:10	26 10:34 (WT01_141m)	18:05	74 10:59 (WT01_141m)	18:53		20:44	21:31	22:01		
20	08:36	10:06 (WT01_141m)	07:48	09:46 (WT01_141m)	06:48		06:39	05:47	05:27		
	17:12	31 10:37 (WT01_141m)	18:06	72 10:58 (WT01_141m)	18:54		20:45	21:32	22:01		
21	08:35	10:05 (WT01_141m)	07:46	09:46 (WT01_141m)	06:45		06:37	05:46	05:28		
	17:13	34 10:39 (WT01_141m)	18:08	72 10:58 (WT01_141m)	18:56		20:47	21:34	22:01		
22	08:34	10:04 (WT01_141m)	07:44	09:46 (WT01_141m)	06:43		06:35	05:45	05:28		
	17:15	37 10:41 (WT01_141m)	18:10	71 10:57 (WT01_141m)	18:58		20:49	21:35	22:01		
23	08:33	10:03 (WT01_141m)	07:42	09:46 (WT01_141m)	06:41		06:33	05:43	05:28		
	17:17	40 10:43 (WT01_141m)	18:12	71 10:57 (WT01_141m)	18:59		20:50	21:36	22:01		
24	08:32	10:01 (WT01_141m)	07:40	09:47 (WT01_141m)	06:39		06:31	05:42	05:28		
	17:18	43 10:44 (WT01_141m)	18:13	69 10:56 (WT01_141m)	19:01		20:52	21:38	22:02		
25	08:30	10:00 (WT01_141m)	07:38	09:47 (WT01_141m)	06:36		06:29	05:41	05:29		
	17:20	46 10:46 (WT01_141m)	18:15	68 10:55 (WT01_141m)	19:03		20:53	21:39	22:02		
26	08:29	09:59 (WT01_141m)	07:36	09:48 (WT01_141m)	06:34		06:27	05:40	05:29		
	17:22	49 10:48 (WT01_141m)	18:17	66 10:54 (WT01_141m)	19:04		20:55	21:40	22:02		
27	08:28	09:57 (WT01_141m)	07:34	09:48 (WT01_141m)	06:32		06:25	05:39	05:29		
	17:23	52 10:49 (WT01_141m)	18:19	64 10:52 (WT01_141m)	19:06		20:57	21:41	22:02		
28	08:27	09:56 (WT01_141m)	07:31	09:48 (WT01_141m)	06:30		06:23	05:38	05:30		
	17:25	54 10:50 (WT01_141m)	18:20	62 10:50 (WT01_141m)	19:08		20:58	21:43	22:01		
29	08:25	09:55 (WT01_141m)		07:27			06:22	05:37	05:30		
	17:27	56 10:51 (WT01_141m)		20:09			21:00	21:44	22:01		
30	08:24	09:55 (WT01_141m)		07:25			06:20	05:36	05:31		
	17:29	58 10:53 (WT01_141m)		20:11			21:02	21:45	22:01		
31	08:22	09:53 (WT01_141m)		07:23				05:35			
	17:30	60 10:53 (WT01_141m)		20:13				21:46			
Potential sun hours	263		279		367		414	481		494	
Total, worst case	624		1957		437						
Sun reduction	0,24		0,28		0,36						
Oper. time red.	0,99		0,99		0,99						
Wind dir. red.	0,52		0,52		0,52						
Total reduction	0,12		0,14		0,19						
Total, real	75		281		81						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 33 - Zandvoortstraat 12

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October		November		December
1	05:32	06:07	06:55	07:42		07:34	09:17 (WT01_141m)	08:23
	22:01	21:30	20:30	19:23		17:19	73 10:30 (WT01_141m)	16:40
2	05:32	06:08	06:56	07:43		07:35	09:18 (WT01_141m)	08:24
	22:01	21:29	20:28	19:20		17:17	71 10:29 (WT01_141m)	16:39
3	05:33	06:10	06:58	07:45	10 10:48 (WT01_141m)	07:37	09:18 (WT01_141m)	08:26
	22:00	21:27	20:26	19:18	10 10:58 (WT01_141m)	17:15	70 10:28 (WT01_141m)	16:39
4	05:34	06:11	06:59	07:47		07:39	09:18 (WT01_141m)	08:27
	22:00	21:26	20:24	19:16	24 11:04 (WT01_141m)	17:13	70 10:28 (WT01_141m)	16:38
5	05:34	06:13	07:01	07:48		07:40	09:19 (WT01_141m)	08:28
	21:59	21:24	20:22	19:14	31 11:08 (WT01_141m)	17:12	69 10:28 (WT01_141m)	16:38
6	05:35	06:14	07:02	07:50		07:42	09:20 (WT01_141m)	08:29
	21:59	21:22	20:19	19:12	38 11:11 (WT01_141m)	17:10	67 10:27 (WT01_141m)	16:37
7	05:36	06:16	07:04	07:51		07:44	09:21 (WT01_141m)	08:31
	21:58	21:20	20:17	19:09	42 11:13 (WT01_141m)	17:08	66 10:27 (WT01_141m)	16:37
8	05:37	06:17	07:05	07:53		07:46	09:22 (WT01_141m)	08:32
	21:58	21:19	20:15	19:07	47 11:16 (WT01_141m)	17:07	65 10:27 (WT01_141m)	16:37
9	05:38	06:19	07:07	07:55		07:47	09:23 (WT01_141m)	08:33
	21:57	21:17	20:13	19:05	50 11:17 (WT01_141m)	17:05	63 10:26 (WT01_141m)	16:36
10	05:39	06:20	07:09	07:56		07:49	09:24 (WT01_141m)	08:34
	21:56	21:15	20:10	19:03	53 11:18 (WT01_141m)	17:03	62 10:26 (WT01_141m)	16:36
11	05:40	06:22	07:10	07:58		07:51	09:24 (WT01_141m)	08:35
	21:56	21:13	20:08	19:01	56 11:20 (WT01_141m)	17:02	60 10:24 (WT01_141m)	16:36
12	05:41	06:23	07:12	08:00		07:53	09:25 (WT01_141m)	08:36
	21:55	21:11	20:06	18:58	59 11:22 (WT01_141m)	17:00	59 10:24 (WT01_141m)	16:36
13	05:42	06:25	07:13	08:01		07:54	09:27 (WT01_141m)	08:37
	21:54	21:09	20:04	18:56	61 11:22 (WT01_141m)	16:59	56 10:23 (WT01_141m)	16:36
14	05:43	06:26	07:15	08:03		07:56	09:28 (WT01_141m)	08:38
	21:53	21:08	20:01	18:54	63 11:24 (WT01_141m)	16:58	54 10:22 (WT01_141m)	16:36
15	05:44	06:28	07:16	08:05		07:58	09:30 (WT01_141m)	08:39
	21:52	21:06	19:59	18:52	65 11:25 (WT01_141m)	16:56	52 10:22 (WT01_141m)	16:36
16	05:45	06:30	07:18	08:06		07:59	09:32 (WT01_141m)	08:40
	21:51	21:04	19:57	18:50	66 11:26 (WT01_141m)	16:55	49 10:21 (WT01_141m)	16:36
17	05:47	06:31	07:20	08:08		08:01	09:33 (WT01_141m)	08:41
	21:50	21:02	19:54	18:48	68 11:26 (WT01_141m)	16:54	46 10:19 (WT01_141m)	16:36
18	05:48	06:33	07:21	08:10		08:03	09:35 (WT01_141m)	08:41
	21:49	21:00	19:52	18:46	69 11:27 (WT01_141m)	16:52	43 10:18 (WT01_141m)	16:37
19	05:49	06:34	07:23	08:11		08:04	09:37 (WT01_141m)	08:42
	21:48	20:58	19:50	18:44	71 11:28 (WT01_141m)	16:51	40 10:17 (WT01_141m)	16:37
20	05:50	06:36	07:24	08:13		08:06	09:39 (WT01_141m)	08:43
	21:47	20:56	19:48	18:42	72 11:29 (WT01_141m)	16:50	37 10:16 (WT01_141m)	16:37
21	05:52	06:37	07:26	08:15		08:08	09:41 (WT01_141m)	08:43
	21:46	20:54	19:45	18:40	72 11:28 (WT01_141m)	16:49	34 10:15 (WT01_141m)	16:38
22	05:53	06:39	07:27	08:16		08:09	09:42 (WT01_141m)	08:44
	21:45	20:52	19:43	18:38	73 11:29 (WT01_141m)	16:48	31 10:13 (WT01_141m)	16:38
23	05:54	06:40	07:29	08:18		08:11	09:45 (WT01_141m)	08:44
	21:43	20:50	19:41	18:36	73 11:29 (WT01_141m)	16:47	26 10:11 (WT01_141m)	16:39
24	05:55	06:42	07:31	08:20		08:12	09:48 (WT01_141m)	08:45
	21:42	20:47	19:39	18:34	74 11:30 (WT01_141m)	16:46	22 10:10 (WT01_141m)	16:39
25	05:57	06:44	07:32	07:21		08:14	09:51 (WT01_141m)	08:45
	21:41	20:45	19:36	17:32	74 10:30 (WT01_141m)	16:45	15 10:06 (WT01_141m)	16:40
26	05:58	06:45	07:34	07:23		08:15	09:57 (WT01_141m)	08:45
	21:39	20:43	19:34	17:30	74 10:30 (WT01_141m)	16:44	4 10:01 (WT01_141m)	16:40
27	06:00	06:47	07:35	07:25		08:17		08:46
	21:38	20:41	19:32	17:28	75 10:30 (WT01_141m)	16:43		16:41
28	06:01	06:48	07:37	07:27		08:19		08:46
	21:37	20:39	19:29	17:26	74 10:30 (WT01_141m)	16:42		16:42
29	06:02	06:50	07:38	07:28		08:20		08:46
	21:35	20:37	19:27	17:24	74 10:30 (WT01_141m)	16:41		16:43
30	06:04	06:51	07:40	07:30		08:21		08:46
	21:34	20:35	19:25	17:22	74 10:30 (WT01_141m)	16:41		16:44
31	06:05	06:53		07:32				08:46
	21:32	20:33		17:20	73 10:30 (WT01_141m)			16:45
Potential sun hours	498	451	380	333		269		248
Total, worst case				1755		1304		
Sun reduction				0,35		0,26		
Oper. time red.				0,99		0,99		
Wind dir. red.				0,52		0,52		
Total reduction				0,18		0,13		
Total, real				318		171		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 34 - Zandvoortstraat 16

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

January			February			March			April			May			June		
1	08:46		10:41 (WT01_141m)	08:21		10:53 (WT01_141m)	07:29		07:21			06:18			05:34		
	16:46	66	11:47 (WT01_141m)	17:32	54	11:47 (WT01_141m)	18:22		20:14			21:03			21:47		
2	08:46		10:40 (WT01_141m)	08:19		10:55 (WT01_141m)	07:27		07:18			06:16			05:33		
	16:47	67	11:47 (WT01_141m)	17:34	52	11:47 (WT01_141m)	18:24		20:16			21:05			21:48		
3	08:46		10:41 (WT01_141m)	08:18		10:55 (WT01_141m)	07:25		07:16			06:14			05:33		
	16:48	67	11:48 (WT01_141m)	17:36	50	11:45 (WT01_141m)	18:26		20:17			21:06			21:49		
4	08:46		10:42 (WT01_141m)	08:16		10:57 (WT01_141m)	07:23		07:14			06:12			05:32		
	16:49	67	11:49 (WT01_141m)	17:38	48	11:45 (WT01_141m)	18:27		20:19			21:08			21:50		
5	08:46		10:41 (WT01_141m)	08:15		10:58 (WT01_141m)	07:21		07:12			06:10			05:31		
	16:50	67	11:48 (WT01_141m)	17:39	45	11:43 (WT01_141m)	18:29		20:21			21:10			21:51		
6	08:45		10:42 (WT01_141m)	08:13		10:59 (WT01_141m)	07:19		07:10			06:09			05:31		
	16:51	67	11:49 (WT01_141m)	17:41	43	11:42 (WT01_141m)	18:31		20:22			21:11			21:52		
7	08:45		10:43 (WT01_141m)	08:12		11:01 (WT01_141m)	07:16		07:07			06:07			05:30		
	16:53	67	11:50 (WT01_141m)	17:43	39	11:40 (WT01_141m)	18:32		20:24			21:13			21:53		
8	08:45		10:43 (WT01_141m)	08:10		11:03 (WT01_141m)	07:14		07:05			06:05			05:30		
	16:54	67	11:50 (WT01_141m)	17:45	35	11:38 (WT01_141m)	18:34		20:26			21:14			21:54		
9	08:44		10:43 (WT01_141m)	08:08		11:06 (WT01_141m)	07:12		07:03			06:04			05:29		
	16:55	67	11:50 (WT01_141m)	17:47	30	11:36 (WT01_141m)	18:36		20:27			21:16			21:55		
10	08:44		10:44 (WT01_141m)	08:06		11:09 (WT01_141m)	07:10		07:01			06:02			05:29		
	16:57	67	11:51 (WT01_141m)	17:48	23	11:32 (WT01_141m)	18:38		20:29			21:17			21:56		
11	08:43		10:44 (WT01_141m)	08:05		11:13 (WT01_141m)	07:08		06:59			06:00			05:28		
	16:58	67	11:51 (WT01_141m)	17:50	14	11:27 (WT01_141m)	18:39		20:31			21:19			21:56		
12	08:43		10:44 (WT01_141m)	08:03			07:05		06:56			05:59			05:28		
	16:59	68	11:52 (WT01_141m)	17:52			18:41		20:32			21:21			21:57		
13	08:42		10:44 (WT01_141m)	08:01			07:03		06:54			05:57			05:28		
	17:01	68	11:52 (WT01_141m)	17:54			18:43		20:34			21:22			21:58		
14	08:41		10:45 (WT01_141m)	07:59			07:01		06:52			05:56			05:28		
	17:02	68	11:53 (WT01_141m)	17:56			18:44		20:36			21:24			21:58		
15	08:41		10:45 (WT01_141m)	07:57			06:59		06:50			05:54			05:27		
	17:04	68	11:53 (WT01_141m)	17:57			18:46		20:37			21:25			21:59		
16	08:40		10:45 (WT01_141m)	07:55			06:57		06:48			05:53			05:27		
	17:05	68	11:53 (WT01_141m)	17:59			18:48		20:39			21:26			21:59		
17	08:39		10:46 (WT01_141m)	07:54			06:54		06:46			05:51			05:27		
	17:07	67	11:53 (WT01_141m)	18:01			18:49		20:40			21:28			22:00		
18	08:38		10:46 (WT01_141m)	07:52			06:52		06:44			05:50			05:27		
	17:08	68	11:54 (WT01_141m)	18:03			18:51		20:42			21:29			22:00		
19	08:37		10:46 (WT01_141m)	07:50			06:50		06:42			05:48			05:27		
	17:10	67	11:53 (WT01_141m)	18:05			18:53		20:44			21:31			22:01		
20	08:36		10:46 (WT01_141m)	07:48			06:48		06:39			05:47			05:27		
	17:12	67	11:53 (WT01_141m)	18:06			18:54		20:45			21:32			22:01		
21	08:35		10:47 (WT01_141m)	07:46			06:45		06:37			05:46			05:28		
	17:13	66	11:53 (WT01_141m)	18:08			18:56		20:47			21:34			22:01		
22	08:34		10:47 (WT01_141m)	07:44			06:43		06:35			05:45			05:28		
	17:15	66	11:53 (WT01_141m)	18:10			18:58		20:49			21:35			22:01		
23	08:33		10:48 (WT01_141m)	07:42			06:41		06:33			05:43			05:28		
	17:17	66	11:54 (WT01_141m)	18:12			18:59		20:50			21:36			22:01		
24	08:32		10:48 (WT01_141m)	07:40			06:39		06:31			05:42			05:28		
	17:18	65	11:53 (WT01_141m)	18:13			19:01		20:52			21:38			22:02		
25	08:30		10:49 (WT01_141m)	07:38			06:36		06:29			05:41			05:29		
	17:20	64	11:53 (WT01_141m)	18:15			19:03		20:53			21:39			22:02		
26	08:29		10:50 (WT01_141m)	07:36			06:34		06:27			05:40			05:29		
	17:22	63	11:53 (WT01_141m)	18:17			19:04		20:55			21:40			22:02		
27	08:28		10:50 (WT01_141m)	07:34			06:32		06:25			05:39			05:29		
	17:23	62	11:52 (WT01_141m)	18:19			19:06		20:57			21:41			22:02		
28	08:27		10:51 (WT01_141m)	07:31			06:30		06:23			05:38			05:30		
	17:25	61	11:52 (WT01_141m)	18:20			19:08		20:58			21:43			22:01		
29	08:25		10:51 (WT01_141m)				07:27		06:22			05:37			05:30		
	17:27	59	11:50 (WT01_141m)				20:09		21:00			21:44			22:01		
30	08:24		10:52 (WT01_141m)				07:25		06:20			05:36			05:31		
	17:29	58	11:50 (WT01_141m)				20:11		21:02			21:45			22:01		
31	08:22		10:53 (WT01_141m)				07:23					05:35					
	17:30	56	11:49 (WT01_141m)				20:13					21:46					
Potential sun hours	263			279			367		414			481			494		
Total, worst case	2031			433													
Sun reduction	0,24			0,28													
Oper. time red.	0,99			0,99													
Wind dir. red.	0,58			0,58													
Total reduction	0,14			0,16													
Total, real	276			70													

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 34 - Zandvoortstraat 16

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

		July	August	September	October		November		December			
	1	05:32 22:01	06:07 21:30	06:55 20:30	07:42 19:23		07:34 17:19	25	10:38 (WT01_141m) 11:03 (WT01_141m)	08:23 16:40	68	10:26 (WT01_141m) 11:34 (WT01_141m)
	2	05:32 22:01	06:08 21:29	06:56 20:28	07:43 19:20		07:35 17:17	31	10:35 (WT01_141m) 11:06 (WT01_141m)	08:24 16:39	67	10:26 (WT01_141m) 11:33 (WT01_141m)
	3	05:33 22:00	06:10 21:27	06:58 20:26	07:45 19:18		07:37 17:15	35	10:32 (WT01_141m) 11:07 (WT01_141m)	08:26 16:39	67	10:27 (WT01_141m) 11:34 (WT01_141m)
	4	05:34 22:00	06:11 21:26	06:59 20:24	07:47 19:16		07:39 17:13	40	10:30 (WT01_141m) 11:10 (WT01_141m)	08:27 16:38	67	10:27 (WT01_141m) 11:34 (WT01_141m)
	5	05:34 21:59	06:13 21:24	07:01 20:22	07:48 19:14		07:40 17:12	43	10:29 (WT01_141m) 11:12 (WT01_141m)	08:28 16:38	67	10:28 (WT01_141m) 11:35 (WT01_141m)
	6	05:35 21:59	06:14 21:22	07:02 20:19	07:50 19:12		07:42 17:10	45	10:28 (WT01_141m) 11:13 (WT01_141m)	08:29 16:37	67	10:28 (WT01_141m) 11:35 (WT01_141m)
	7	05:36 21:58	06:16 21:20	07:04 20:17	07:51 19:09		07:44 17:08	48	10:27 (WT01_141m) 11:15 (WT01_141m)	08:31 16:37	68	10:28 (WT01_141m) 11:36 (WT01_141m)
	8	05:37 21:58	06:17 21:19	07:05 20:15	07:53 19:07		07:46 17:07	50	10:26 (WT01_141m) 11:16 (WT01_141m)	08:32 16:37	67	10:29 (WT01_141m) 11:36 (WT01_141m)
	9	05:38 21:57	06:19 21:17	07:07 20:13	07:55 19:05		07:47 17:05	53	10:25 (WT01_141m) 11:18 (WT01_141m)	08:33 16:36	67	10:30 (WT01_141m) 11:37 (WT01_141m)
	10	05:39 21:56	06:20 21:15	07:09 20:10	07:56 19:03		07:49 17:03	54	10:25 (WT01_141m) 11:19 (WT01_141m)	08:34 16:36	66	10:31 (WT01_141m) 11:37 (WT01_141m)
	11	05:40 21:56	06:22 21:13	07:10 20:08	07:58 19:01		07:51 17:02	57	10:23 (WT01_141m) 11:20 (WT01_141m)	08:35 16:36	66	10:31 (WT01_141m) 11:37 (WT01_141m)
	12	05:41 21:55	06:23 21:11	07:12 20:06	08:00 18:58		07:53 17:00	58	10:23 (WT01_141m) 11:21 (WT01_141m)	08:36 16:36	67	10:31 (WT01_141m) 11:38 (WT01_141m)
	13	05:42 21:54	06:25 21:09	07:13 20:04	08:01 18:56		07:54 16:59	59	10:23 (WT01_141m) 11:22 (WT01_141m)	08:37 16:36	66	10:32 (WT01_141m) 11:38 (WT01_141m)
	14	05:43 21:53	06:26 21:08	07:15 20:01	08:03 18:54		07:56 16:58	61	10:23 (WT01_141m) 11:24 (WT01_141m)	08:38 16:36	66	10:33 (WT01_141m) 11:39 (WT01_141m)
	15	05:44 21:52	06:28 21:06	07:16 19:59	08:05 18:52		07:58 16:56	62	10:23 (WT01_141m) 11:25 (WT01_141m)	08:39 16:36	66	10:33 (WT01_141m) 11:39 (WT01_141m)
	16	05:45 21:51	06:30 21:04	07:18 19:57	08:06 18:50		07:59 16:55	63	10:23 (WT01_141m) 11:26 (WT01_141m)	08:40 16:36	66	10:34 (WT01_141m) 11:40 (WT01_141m)
	17	05:47 21:50	06:31 21:02	07:20 19:54	08:08 18:48		08:01 16:54	64	10:22 (WT01_141m) 11:26 (WT01_141m)	08:41 16:36	65	10:34 (WT01_141m) 11:39 (WT01_141m)
	18	05:48 21:49	06:33 21:00	07:21 19:52	08:10 18:46		08:03 16:52	65	10:22 (WT01_141m) 11:27 (WT01_141m)	08:41 16:37	65	10:35 (WT01_141m) 11:40 (WT01_141m)
	19	05:49 21:48	06:34 20:58	07:23 19:50	08:11 18:44		08:04 16:51	66	10:22 (WT01_141m) 11:28 (WT01_141m)	08:42 16:37	66	10:35 (WT01_141m) 11:41 (WT01_141m)
	20	05:50 21:47	06:36 20:56	07:24 19:48	08:13 18:42		08:06 16:50	66	10:22 (WT01_141m) 11:28 (WT01_141m)	08:43 16:37	66	10:35 (WT01_141m) 11:41 (WT01_141m)
	21	05:51 21:46	06:37 20:54	07:26 19:45	08:15 18:40		08:08 16:49	66	10:23 (WT01_141m) 11:29 (WT01_141m)	08:43 16:38	66	10:36 (WT01_141m) 11:42 (WT01_141m)
	22	05:53 21:45	06:39 20:52	07:27 19:43	08:16 18:38		08:09 16:48	67	10:22 (WT01_141m) 11:29 (WT01_141m)	08:44 16:38	66	10:36 (WT01_141m) 11:42 (WT01_141m)
	23	05:54 21:43	06:40 20:50	07:29 19:41	08:18 18:36		08:11 16:47	67	10:23 (WT01_141m) 11:30 (WT01_141m)	08:44 16:39	66	10:37 (WT01_141m) 11:43 (WT01_141m)
	24	05:55 21:42	06:42 20:47	07:31 19:39	08:20 18:34		08:12 16:46	68	10:23 (WT01_141m) 11:31 (WT01_141m)	08:45 16:39	66	10:37 (WT01_141m) 11:43 (WT01_141m)
	25	05:57 21:41	06:44 20:45	07:32 19:36	08:21 17:32		08:14 16:45	68	10:23 (WT01_141m) 11:31 (WT01_141m)	08:45 16:40	65	10:38 (WT01_141m) 11:43 (WT01_141m)
	26	05:58 21:39	06:45 20:43	07:34 19:34	08:23 17:30		08:16 16:44	68	10:23 (WT01_141m) 11:31 (WT01_141m)	08:46 16:40	65	10:39 (WT01_141m) 11:44 (WT01_141m)
	27	06:00 21:38	06:47 20:41	07:35 19:32	08:25 17:28		08:17 16:43	68	10:24 (WT01_141m) 11:32 (WT01_141m)	08:46 16:41	66	10:39 (WT01_141m) 11:45 (WT01_141m)
	28	06:01 21:37	06:48 20:39	07:37 19:29	08:27 17:26		08:19 16:42	68	10:24 (WT01_141m) 11:32 (WT01_141m)	08:46 16:42	66	10:39 (WT01_141m) 11:45 (WT01_141m)
	29	06:02 21:35	06:50 20:37	07:38 19:27	08:28 17:24		08:20 16:41	68	10:25 (WT01_141m) 11:33 (WT01_141m)	08:46 16:43	65	10:40 (WT01_141m) 11:45 (WT01_141m)
	30	06:04 21:34	06:51 20:35	07:40 19:25	08:30 17:22		08:21 16:41	68	10:25 (WT01_141m) 11:33 (WT01_141m)	08:46 16:44	66	10:40 (WT01_141m) 11:46 (WT01_141m)
	31	06:05 21:32	06:53 20:33	07:32 17:20	08:22 16:42	10:42 (WT01_141m) 10:58 (WT01_141m)				08:46 16:45	66	10:40 (WT01_141m) 11:46 (WT01_141m)
Potential sun hours		498	451	380	333		269			248		
Total, worst case					16			1721		2053		
Sun reduction					0,35			0,26		0,21		
Oper. time red.					0,99			0,99		0,99		
Wind dir. red.					0,58			0,58		0,58		
Total reduction					0,20			0,15		0,12		
Total, real					3			254		251		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 35 - Zandvoortstraat 15B

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46	08:21	07:29	09:07 (WT01_141m)	07:21	06:18
	16:46	17:32	18:22	10:12 (WT01_141m)	20:14	21:03
2	08:46	08:19	07:27	09:08 (WT01_141m)	07:18	06:16
	16:47	17:34	18:24	10:12 (WT01_141m)	20:16	21:05
3	08:46	08:18	09:35 (WT01_141m)	09:08 (WT01_141m)	07:16	06:14
	16:48	17:36	18:26	10:11 (WT01_141m)	20:17	21:06
4	08:46	08:16	09:32 (WT01_141m)	09:08 (WT01_141m)	07:14	06:12
	16:49	17:38	18:27	10:10 (WT01_141m)	20:19	21:08
5	08:46	08:15	09:28 (WT01_141m)	09:09 (WT01_141m)	07:12	06:10
	16:50	17:39	18:29	10:10 (WT01_141m)	20:21	21:10
6	08:45	08:13	09:25 (WT01_141m)	09:08 (WT01_141m)	07:10	06:09
	16:52	17:41	18:31	10:08 (WT01_141m)	20:22	21:11
7	08:45	08:12	09:23 (WT01_141m)	09:09 (WT01_141m)	07:07	06:07
	16:53	17:43	18:33	10:07 (WT01_141m)	20:24	21:13
8	08:45	08:10	09:22 (WT01_141m)	09:10 (WT01_141m)	07:05	06:05
	16:54	17:45	18:34	10:06 (WT01_141m)	20:26	21:14
9	08:44	08:08	09:21 (WT01_141m)	09:10 (WT01_141m)	07:03	06:04
	16:55	17:47	18:36	10:05 (WT01_141m)	20:27	21:16
10	08:44	08:06	09:19 (WT01_141m)	09:10 (WT01_141m)	07:01	06:02
	16:57	17:48	18:38	10:02 (WT01_141m)	20:29	21:17
11	08:43	08:05	09:18 (WT01_141m)	09:11 (WT01_141m)	06:59	06:00
	16:58	17:50	18:39	10:01 (WT01_141m)	20:31	21:19
12	08:43	08:03	09:16 (WT01_141m)	09:13 (WT01_141m)	06:56	05:59
	16:59	17:52	18:41	09:59 (WT01_141m)	20:32	21:21
13	08:42	08:01	09:15 (WT01_141m)	09:14 (WT01_141m)	06:54	05:57
	17:01	17:54	18:43	09:57 (WT01_141m)	20:34	21:22
14	08:41	07:59	09:14 (WT01_141m)	09:15 (WT01_141m)	06:52	05:56
	17:02	17:56	18:44	09:54 (WT01_141m)	20:36	21:24
15	08:41	07:57	09:13 (WT01_141m)	09:17 (WT01_141m)	06:50	05:54
	17:04	17:57	18:46	09:51 (WT01_141m)	20:37	21:25
16	08:40	07:55	09:12 (WT01_141m)	09:20 (WT01_141m)	06:48	05:53
	17:05	17:59	18:48	09:48 (WT01_141m)	20:39	21:26
17	08:39	07:54	09:12 (WT01_141m)	09:24 (WT01_141m)	06:46	05:51
	17:07	18:01	18:49	09:44 (WT01_141m)	20:40	21:28
18	08:38	07:52	09:11 (WT01_141m)		06:44	05:50
	17:09	18:03	18:51		20:42	21:29
19	08:37	07:50	09:10 (WT01_141m)		06:42	05:48
	17:10	18:05	18:53		20:44	21:31
20	08:36	07:48	09:10 (WT01_141m)		06:39	05:47
	17:12	18:06	18:54		20:45	21:32
21	08:35	07:46	09:09 (WT01_141m)		06:37	05:46
	17:13	18:08	18:56		20:47	21:34
22	08:34	07:44	09:09 (WT01_141m)		06:35	05:45
	17:15	18:10	18:58		20:49	21:35
23	08:33	07:42	09:09 (WT01_141m)		06:33	05:43
	17:17	18:12	18:59		20:50	21:36
24	08:32	07:40	09:08 (WT01_141m)		06:31	05:42
	17:18	18:13	19:01		20:52	21:38
25	08:30	07:38	09:08 (WT01_141m)		06:29	05:41
	17:20	18:15	19:03		20:54	21:39
26	08:29	07:36	09:08 (WT01_141m)		06:27	05:40
	17:22	18:17	19:04		20:55	21:40
27	08:28	07:34	09:08 (WT01_141m)		06:25	05:39
	17:23	18:19	19:06		20:57	21:41
28	08:27	07:31	09:07 (WT01_141m)		06:23	05:38
	17:25	18:20	19:08		20:58	21:43
29	08:25		07:27		06:22	05:37
	17:27		20:09		21:00	21:44
30	08:24		07:25		06:20	05:36
	17:29		20:11		21:02	21:45
31	08:22		07:23			05:35
	17:31		20:13			21:46
Potential sun hours	263	279	367	414	481	494
Total, worst case		1359	856			
Sun reduction		0,28	0,36			
Oper. time red.		0,99	0,99			
Wind dir. red.		0,52	0,52			
Total reduction		0,14	0,19			
Total, real		195	159			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 35 - Zandvoortstraat 15B

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December
1	05:32	06:07	06:55	07:42	09:52 (WT01_141m)	08:23
	22:01	21:30	20:30	19:23	45 10:37 (WT01_141m)	17:19
2	05:32	06:08	06:56	07:43	09:51 (WT01_141m)	08:24
	22:01	21:29	20:28	19:20	48 10:39 (WT01_141m)	17:17
3	05:33	06:10	06:58	07:45	09:50 (WT01_141m)	08:26
	22:00	21:27	20:26	19:18	50 10:40 (WT01_141m)	17:15
4	05:34	06:11	06:59	07:47	09:48 (WT01_141m)	08:27
	22:00	21:26	20:24	19:16	53 10:41 (WT01_141m)	17:13
5	05:34	06:13	07:01	07:48	09:47 (WT01_141m)	08:28
	21:59	21:24	20:22	19:14	55 10:42 (WT01_141m)	17:12
6	05:35	06:14	07:02	07:50	09:45 (WT01_141m)	08:29
	21:59	21:22	20:19	19:12	57 10:42 (WT01_141m)	17:10
7	05:36	06:16	07:04	07:51	09:44 (WT01_141m)	08:31
	21:58	21:20	20:17	19:09	59 10:43 (WT01_141m)	17:08
8	05:37	06:17	07:05	07:53	09:44 (WT01_141m)	08:32
	21:58	21:19	20:15	19:07	60 10:44 (WT01_141m)	17:07
9	05:38	06:19	07:07	07:55	09:42 (WT01_141m)	08:33
	21:57	21:17	20:13	19:05	62 10:44 (WT01_141m)	17:05
10	05:39	06:20	07:09	07:56	09:42 (WT01_141m)	08:34
	21:56	21:15	20:10	19:03	63 10:45 (WT01_141m)	17:03
11	05:40	06:22	07:10	07:58	09:42 (WT01_141m)	08:35
	21:56	21:13	20:08	19:01	63 10:45 (WT01_141m)	17:02
12	05:41	06:23	07:12	08:00	09:42 (WT01_141m)	08:36
	21:55	21:11	20:06	18:58	64 10:46 (WT01_141m)	17:00
13	05:42	06:25	07:13	08:01	09:40 (WT01_141m)	08:37
	21:54	21:09	20:04	18:56	65 10:45 (WT01_141m)	16:59
14	05:43	06:26	07:15	08:03	09:40 (WT01_141m)	08:38
	21:53	21:08	20:01	18:54	66 10:46 (WT01_141m)	16:58
15	05:44	06:28	07:16	08:05	09:40 (WT01_141m)	08:39
	21:52	21:06	19:59	18:52	66 10:46 (WT01_141m)	16:56
16	05:45	06:30	07:18	08:06	09:40 (WT01_141m)	08:40
	21:51	21:04	19:57	18:50	66 10:46 (WT01_141m)	16:55
17	05:47	06:31	07:20	08:08	09:40 (WT01_141m)	08:41
	21:50	21:02	19:54	18:48	65 10:45 (WT01_141m)	16:54
18	05:48	06:33	07:21	08:10	09:40 (WT01_141m)	08:43
	21:49	21:00	19:52	18:46	65 10:45 (WT01_141m)	16:52
19	05:49	06:34	07:23	08:11	09:40 (WT01_141m)	08:44
	21:48	20:58	19:50	18:44	65 10:45 (WT01_141m)	16:51
20	05:50	06:36	07:24	08:13	09:40 (WT01_141m)	08:46
	21:47	20:56	19:48	18:42	65 10:45 (WT01_141m)	16:50
21	05:52	06:37	07:26	08:15	09:40 (WT01_141m)	08:48
	21:46	20:54	19:45	18:40	64 10:44 (WT01_141m)	16:49
22	05:53	06:39	07:27	08:16	09:40 (WT01_141m)	08:49
	21:45	20:52	19:43	18:38	63 10:43 (WT01_141m)	16:48
23	05:54	06:40	07:29	08:18	09:41 (WT01_141m)	08:51
	21:43	20:50	19:41	18:36	62 10:43 (WT01_141m)	16:47
24	05:55	06:42	07:31	08:20	09:41 (WT01_141m)	08:52
	21:42	20:47	19:39	18:34	62 10:43 (WT01_141m)	16:46
25	05:57	06:44	07:32	08:21	08:42 (WT01_141m)	08:54
	21:41	20:45	19:36	17:32	60 09:42 (WT01_141m)	16:45
26	05:58	06:45	07:34	10:07 (WT01_141m)	08:43 (WT01_141m)	08:56
	21:39	20:43	19:34	16 10:23 (WT01_141m)	58 09:41 (WT01_141m)	16:44
27	06:00	06:47	07:35	10:03 (WT01_141m)	08:43 (WT01_141m)	08:57
	21:38	20:41	19:32	25 10:28 (WT01_141m)	57 09:40 (WT01_141m)	16:43
28	06:01	06:48	07:37	09:59 (WT01_141m)	08:44 (WT01_141m)	08:59
	21:37	20:39	19:29	32 10:31 (WT01_141m)	55 09:39 (WT01_141m)	16:42
29	06:02	06:50	07:38	09:57 (WT01_141m)	08:45 (WT01_141m)	08:20
	21:35	20:37	19:27	37 10:34 (WT01_141m)	53 09:38 (WT01_141m)	16:41
30	06:04	06:51	07:40	09:55 (WT01_141m)	08:46 (WT01_141m)	08:21
	21:34	20:35	19:25	41 10:36 (WT01_141m)	51 09:37 (WT01_141m)	16:41
31	06:05	06:53		07:32	08:47 (WT01_141m)	08:22
	21:32	20:33		17:20	49 09:36 (WT01_141m)	16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case			151	1836	256	
Sun reduction			0,43	0,35	0,26	
Oper. time red.			0,99	0,99	0,99	
Wind dir. red.			0,52	0,52	0,52	
Total reduction			0,22	0,18	0,13	
Total, real			33	333	34	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
 NL-1082 MS Amsterdam
 +31 (0)88 4261 261
 Margot Scheldeman /
 margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 36 - Blarenberglaan 2A

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

January			February			March			April			May			June		
1	08:46		12:37 (WT01_141m)	08:21		13:08 (WT01_141m)	07:29		07:21			06:18			05:34		
	16:46	64	13:41 (WT01_141m)	17:32	22	13:30 (WT01_141m)	18:22		20:14			21:03			21:47		
2	08:46		12:37 (WT01_141m)	08:19		13:14 (WT01_141m)	07:27		07:18			06:16			05:33		
	16:47	63	13:40 (WT01_141m)	17:34	11	13:25 (WT01_141m)	18:24		20:16			21:05			21:48		
3	08:46		12:37 (WT01_141m)	08:18			07:25		07:16			06:14			05:33		
	16:48	64	13:41 (WT01_141m)	17:36			18:26		20:17			21:06			21:49		
4	08:46		12:38 (WT01_141m)	08:16			07:23		07:14			06:12			05:32		
	16:49	64	13:42 (WT01_141m)	17:38			18:27		20:19			21:08			21:50		
5	08:46		12:38 (WT01_141m)	08:15			07:21		07:12			06:10			05:31		
	16:50	64	13:42 (WT01_141m)	17:39			18:29		20:21			21:10			21:51		
6	08:45		12:39 (WT01_141m)	08:13			07:19		07:09			06:09			05:31		
	16:51	63	13:42 (WT01_141m)	17:41			18:31		20:22			21:11			21:52		
7	08:45		12:40 (WT01_141m)	08:12			07:16		07:07			06:07			05:30		
	16:53	63	13:43 (WT01_141m)	17:43			18:32		20:24			21:13			21:53		
8	08:45		12:40 (WT01_141m)	08:10			07:14		07:05			06:05			05:30		
	16:54	63	13:43 (WT01_141m)	17:45			18:34		20:26			21:14			21:54		
9	08:44		12:40 (WT01_141m)	08:08			07:12		07:03			06:04			05:29		
	16:55	63	13:43 (WT01_141m)	17:47			18:36		20:27			21:16			21:55		
10	08:44		12:41 (WT01_141m)	08:06			07:10		07:01			06:02			05:29		
	16:57	63	13:44 (WT01_141m)	17:48			18:38		20:29			21:17			21:56		
11	08:43		12:42 (WT01_141m)	08:05			07:08		06:59			06:00			05:28		
	16:58	62	13:44 (WT01_141m)	17:50			18:39		20:31			21:19			21:56		
12	08:43		12:42 (WT01_141m)	08:03			07:05		06:56			05:59			05:28		
	16:59	62	13:44 (WT01_141m)	17:52			18:41		20:32			21:21			21:57		
13	08:42		12:43 (WT01_141m)	08:01			07:03		06:54			05:57			05:28		
	17:01	61	13:44 (WT01_141m)	17:54			18:43		20:34			21:22			21:58		
14	08:41		12:44 (WT01_141m)	07:59			07:01		06:52			05:56			05:28		
	17:02	61	13:45 (WT01_141m)	17:56			18:44		20:36			21:24			21:58		
15	08:41		12:45 (WT01_141m)	07:57			06:59		06:50			05:54			05:27		
	17:04	60	13:45 (WT01_141m)	17:57			18:46		20:37			21:25			21:59		
16	08:40		12:45 (WT01_141m)	07:55			06:57		06:48			05:53			05:27		
	17:05	60	13:45 (WT01_141m)	17:59			18:48		20:39			21:26			21:59		
17	08:39		12:46 (WT01_141m)	07:54			06:54		06:46			05:51			05:27		
	17:07	59	13:45 (WT01_141m)	18:01			18:49		20:40			21:28			22:00		
18	08:38		12:47 (WT01_141m)	07:52			06:52		06:44			05:50			05:27		
	17:08	58	13:45 (WT01_141m)	18:03			18:51		20:42			21:29			22:00		
19	08:37		12:47 (WT01_141m)	07:50			06:50		06:41			05:48			05:27		
	17:10	57	13:44 (WT01_141m)	18:05			18:53		20:44			21:31			22:00		
20	08:36		12:48 (WT01_141m)	07:48			06:48		06:39			05:47			05:27		
	17:12	56	13:44 (WT01_141m)	18:06			18:54		20:45			21:32			22:01		
21	08:35		12:49 (WT01_141m)	07:46			06:45		06:37			05:46			05:28		
	17:13	55	13:44 (WT01_141m)	18:08			18:56		20:47			21:34			22:01		
22	08:34		12:50 (WT01_141m)	07:44			06:43		06:35			05:45			05:28		
	17:15	53	13:43 (WT01_141m)	18:10			18:58		20:49			21:35			22:01		
23	08:33		12:51 (WT01_141m)	07:42			06:41		06:33			05:43			05:28		
	17:17	52	13:43 (WT01_141m)	18:12			18:59		20:50			21:36			22:01		
24	08:32		12:52 (WT01_141m)	07:40			06:39		06:31			05:42			05:28		
	17:18	50	13:42 (WT01_141m)	18:13			19:01		20:52			21:38			22:02		
25	08:30		12:53 (WT01_141m)	07:38			06:36		06:29			05:41			05:29		
	17:20	49	13:42 (WT01_141m)	18:15			19:03		20:53			21:39			22:02		
26	08:29		12:55 (WT01_141m)	07:36			06:34		06:27			05:40			05:29		
	17:22	46	13:41 (WT01_141m)	18:17			19:04		20:55			21:40			22:02		
27	08:28		12:56 (WT01_141m)	07:33			06:32		06:25			05:39			05:29		
	17:23	44	13:40 (WT01_141m)	18:19			19:06		20:57			21:41			22:02		
28	08:27		12:58 (WT01_141m)	07:31			06:30		06:23			05:38			05:30		
	17:25	41	13:39 (WT01_141m)	18:20			19:08		20:58			21:43			22:01		
29	08:25		13:00 (WT01_141m)				07:27		06:21			05:37			05:30		
	17:27	37	13:37 (WT01_141m)				20:09		21:00			21:44			22:01		
30	08:24		13:02 (WT01_141m)				07:25		06:20			05:36			05:31		
	17:29	34	13:36 (WT01_141m)				20:11		21:02			21:45			22:01		
31	08:22		13:04 (WT01_141m)				07:23					05:35					
	17:30	29	13:33 (WT01_141m)				20:13					21:46					
Potential sun hours	263			279			367		414			481			494		
Total, worst case	1720			33													
Sun reduction	0,24			0,28													
Oper. time red.	0,99			0,99													
Wind dir. red.	0,69			0,69													
Total reduction	0,16			0,19													
Total, real	274			6													

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 36 - Blarenberglaan 2A

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December
1	05:32	06:07	06:55	07:42	07:34	08:23
	22:01	21:30	20:30	19:23	17:18	16:40
2	05:32	06:08	06:56	07:43	07:35	08:24
	22:01	21:29	20:28	19:20	17:17	16:39
3	05:33	06:10	06:58	07:45	07:37	08:26
	22:00	21:27	20:26	19:18	17:15	16:39
4	05:34	06:11	06:59	07:46	07:39	08:27
	22:00	21:26	20:24	19:16	17:13	16:38
5	05:34	06:13	07:01	07:48	07:40	08:28
	21:59	21:24	20:22	19:14	17:12	16:38
6	05:35	06:14	07:02	07:50	07:42	08:29
	21:59	21:22	20:19	19:12	17:10	16:37
7	05:36	06:16	07:04	07:51	07:44	08:31
	21:58	21:20	20:17	19:09	17:08	16:37
8	05:37	06:17	07:05	07:53	07:46	08:32
	21:58	21:19	20:15	19:07	17:07	16:37
9	05:38	06:19	07:07	07:55	07:47	12:44 (WT01_141m)
	21:57	21:17	20:13	19:05	17:05	13:57 (WT01_141m)
10	05:39	06:20	07:09	07:56	07:49	12:39 (WT01_141m)
	21:56	21:15	20:10	19:03	17:03	13:02 (WT01_141m)
11	05:40	06:22	07:10	07:58	07:51	12:35 (WT01_141m)
	21:56	21:13	20:08	19:01	17:02	13:04 (WT01_141m)
12	05:41	06:23	07:12	08:00	07:53	12:33 (WT01_141m)
	21:55	21:11	20:06	18:58	17:00	13:07 (WT01_141m)
13	05:42	06:25	07:13	08:01	07:54	12:31 (WT01_141m)
	21:54	21:09	20:04	18:56	16:59	13:09 (WT01_141m)
14	05:43	06:26	07:15	08:03	07:56	12:30 (WT01_141m)
	21:53	21:08	20:01	18:54	16:58	13:11 (WT01_141m)
15	05:44	06:28	07:16	08:05	07:58	12:29 (WT01_141m)
	21:52	21:06	19:59	18:52	16:56	13:13 (WT01_141m)
16	05:45	06:30	07:18	08:06	07:59	12:28 (WT01_141m)
	21:51	21:04	19:57	18:50	16:55	13:14 (WT01_141m)
17	05:47	06:31	07:20	08:08	08:01	12:26 (WT01_141m)
	21:50	21:02	19:54	18:48	16:54	13:15 (WT01_141m)
18	05:48	06:33	07:21	08:10	08:03	12:26 (WT01_141m)
	21:49	21:00	19:52	18:46	16:52	13:16 (WT01_141m)
19	05:49	06:34	07:23	08:11	08:04	12:25 (WT01_141m)
	21:48	20:58	19:50	18:44	16:51	13:17 (WT01_141m)
20	05:50	06:36	07:24	08:13	08:06	12:25 (WT01_141m)
	21:47	20:56	19:48	18:42	16:50	13:18 (WT01_141m)
21	05:51	06:37	07:26	08:15	08:08	12:25 (WT01_141m)
	21:46	20:54	19:45	18:40	16:49	13:20 (WT01_141m)
22	05:53	06:39	07:27	08:16	08:09	12:24 (WT01_141m)
	21:45	20:52	19:43	18:38	16:48	13:20 (WT01_141m)
23	05:54	06:40	07:29	08:18	08:11	12:24 (WT01_141m)
	21:43	20:50	19:41	18:36	16:47	13:21 (WT01_141m)
24	05:55	06:42	07:31	08:20	08:12	12:24 (WT01_141m)
	21:42	20:47	19:39	18:34	16:46	13:22 (WT01_141m)
25	05:57	06:44	07:32	08:21	08:14	12:23 (WT01_141m)
	21:41	20:45	19:36	17:32	16:45	13:22 (WT01_141m)
26	05:58	06:45	07:34	08:23	08:15	12:23 (WT01_141m)
	21:39	20:43	19:34	17:30	16:44	13:23 (WT01_141m)
27	06:00	06:47	07:35	08:25	08:17	12:24 (WT01_141m)
	21:38	20:41	19:32	17:28	16:43	13:24 (WT01_141m)
28	06:01	06:48	07:37	08:27	08:18	12:23 (WT01_141m)
	21:37	20:39	19:29	17:26	16:42	13:24 (WT01_141m)
29	06:02	06:50	07:38	08:28	08:20	12:24 (WT01_141m)
	21:35	20:37	19:27	17:24	16:41	13:25 (WT01_141m)
30	06:04	06:51	07:40	08:30	08:21	12:23 (WT01_141m)
	21:34	20:35	19:25	17:22	16:40	13:25 (WT01_141m)
31	06:05	06:53		07:32		08:46
	21:32	20:33		17:20		16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case					1061	1977
Sun reduction					0,26	0,21
Oper. time red.					0,99	0,99
Wind dir. red.					0,69	0,69
Total reduction					0,17	0,14
Total, real					184	284

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 37 - Zandvoortstraat 53

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January		February		March	April	May	June	July	August	September	October	November	December	
1	08:46		11:47 (WT01_141m)	08:21	07:29	07:21	06:18	05:34	05:32	06:07	06:55	07:42	07:34	08:23	
	16:46	47	12:34 (WT01_141m)	17:32	18:22	20:14	21:03	21:47	22:01	21:30	20:30	19:23	17:18	16:40	39
2	08:46		11:47 (WT01_141m)	08:19	07:27	07:18	06:16	05:33	05:32	06:08	06:56	07:43	07:35	08:24	
	16:47	47	12:34 (WT01_141m)	17:34	18:24	20:16	21:05	21:48	22:01	21:29	20:28	19:20	17:17	16:39	40
3	08:46		11:48 (WT01_141m)	08:18	07:25	07:16	06:14	05:33	05:33	06:10	06:58	07:45	07:37	08:26	
	16:48	46	12:34 (WT01_141m)	17:36	18:26	20:17	21:06	21:49	22:00	21:27	20:26	19:18	17:15	16:39	41
4	08:46		11:49 (WT01_141m)	08:16	07:23	07:14	06:12	05:32	05:34	06:11	06:59	07:46	07:39	08:27	
	16:49	45	12:34 (WT01_141m)	17:38	18:27	20:19	21:08	21:50	22:00	21:26	20:24	19:16	17:13	16:38	42
5	08:46		11:49 (WT01_141m)	08:15	07:21	07:12	06:10	05:31	05:34	06:13	07:01	07:48	07:40	08:28	
	16:50	45	12:34 (WT01_141m)	17:39	18:29	20:21	21:10	21:51	21:59	21:24	20:22	19:14	17:12	16:38	43
6	08:45		11:50 (WT01_141m)	08:13	07:19	07:09	06:09	05:31	05:35	06:14	07:02	07:50	07:42	08:29	
	16:51	44	12:34 (WT01_141m)	17:41	18:31	20:22	21:11	21:52	21:59	21:22	20:19	19:12	17:10	16:37	44
7	08:45		11:52 (WT01_141m)	08:12	07:16	07:07	06:07	05:30	05:36	06:16	07:04	07:51	07:44	08:31	
	16:53	43	12:35 (WT01_141m)	17:43	18:32	20:24	21:13	21:53	21:58	21:20	20:17	19:09	17:08	16:37	45
8	08:45		11:52 (WT01_141m)	08:10	07:14	07:05	06:05	05:30	05:37	06:17	07:05	07:53	07:46	08:32	
	16:54	42	12:34 (WT01_141m)	17:45	18:34	20:26	21:14	21:54	21:58	21:19	20:15	19:07	17:07	16:37	46
9	08:44		11:52 (WT01_141m)	08:08	07:12	07:03	06:04	05:29	05:38	06:19	07:07	07:55	07:47	08:33	
	16:55	42	12:34 (WT01_141m)	17:47	18:36	20:27	21:16	21:55	21:57	21:17	20:13	19:05	17:05	16:36	46
10	08:44		11:54 (WT01_141m)	08:06	07:10	07:01	06:02	05:29	05:39	06:20	07:09	07:56	07:49	08:34	
	16:57	40	12:34 (WT01_141m)	17:48	18:38	20:29	21:17	21:56	21:56	21:15	20:10	19:03	17:03	16:36	47
11	08:43		11:55 (WT01_141m)	08:05	07:08	06:59	06:00	05:28	05:40	06:22	07:10	07:58	07:51	08:35	
	16:58	38	12:33 (WT01_141m)	17:50	18:39	20:31	21:19	21:56	21:56	21:13	20:08	19:01	17:02	16:36	48
12	08:43		11:56 (WT01_141m)	08:03	07:05	06:56	05:59	05:28	05:41	06:23	07:12	08:00	07:53	08:36	
	16:59	37	12:33 (WT01_141m)	17:52	18:41	20:32	21:21	21:57	21:55	21:11	20:06	18:58	17:00	16:36	48
13	08:42		11:57 (WT01_141m)	08:01	07:03	06:54	05:57	05:28	05:42	06:25	07:13	08:01	07:54	08:37	
	17:01	35	12:32 (WT01_141m)	17:54	18:43	20:34	21:22	21:58	21:54	21:09	20:04	18:56	16:59	16:36	48
14	08:41		11:59 (WT01_141m)	07:59	07:01	06:52	05:56	05:28	05:43	06:26	07:15	08:03	07:56	08:38	
	17:02	33	12:32 (WT01_141m)	17:56	18:44	20:36	21:24	21:58	21:53	21:08	20:01	18:54	16:58	16:36	49
15	08:41		12:00 (WT01_141m)	07:57	06:59	06:50	05:54	05:27	05:44	06:28	07:16	08:05	07:58	08:39	
	17:04	32	12:32 (WT01_141m)	17:57	18:46	20:37	21:25	21:59	21:52	21:06	19:59	18:52	16:56	16:36	50
16	08:40		12:02 (WT01_141m)	07:55	06:57	06:48	05:53	05:27	05:45	06:30	07:18	08:06	07:59	08:40	
	17:05	29	12:31 (WT01_141m)	17:59	18:48	20:39	21:26	21:59	21:51	21:04	19:57	18:50	16:55	16:36	49
17	08:39		12:04 (WT01_141m)	07:54	06:54	06:46	05:51	05:27	05:47	06:31	07:20	08:08	08:01	08:41	
	17:07	25	12:29 (WT01_141m)	18:01	18:49	20:40	21:28	22:00	21:50	21:02	19:54	18:48	16:54	16:36	50
18	08:38		12:06 (WT01_141m)	07:52	06:52	06:44	05:50	05:27	05:48	06:33	07:21	08:10	08:03	08:41	
	17:08	22	12:28 (WT01_141m)	18:03	18:51	20:42	21:29	22:00	21:49	21:00	19:52	18:46	16:52	16:36	50
19	08:37		12:08 (WT01_141m)	07:50	06:50	06:41	05:48	05:27	05:49	06:34	07:23	08:11	08:04	08:42	
	17:10	17	12:25 (WT01_141m)	18:05	18:53	20:44	21:31	22:01	21:48	20:58	19:50	18:44	16:51	16:37	50
20	08:36		12:13 (WT01_141m)	07:48	06:48	06:39	05:47	05:27	05:50	06:36	07:24	08:13	08:06	08:43	
	17:12	8	12:21 (WT01_141m)	18:06	18:54	20:45	21:32	22:01	21:47	20:56	19:48	18:42	16:50	16:37	50
21	08:35		12:15 (WT01_141m)	07:46	06:45	06:37	05:46	05:28	05:51	06:37	07:26	08:15	08:08	08:43	
	17:13		18:08	18:56	20:47	21:34	22:01	21:46	20:54	19:45	18:40	16:49		16:38	50
22	08:34		12:17 (WT01_141m)	07:44	06:43	06:35	05:45	05:28	05:53	06:39	07:27	08:16	08:09	8	11:49 (WT01_141m)
	17:15		18:10	18:58	20:49	21:35	22:01	21:45	20:52	19:43	18:38	16:48		11:57 (WT01_141m)	16:38
23	08:33		12:19 (WT01_141m)	07:42	06:41	06:33	05:43	05:28	05:54	06:40	07:29	08:18	08:11	11:45 (WT01_141m)	16:38
	17:17		18:12	18:59	20:50	21:36	22:01	21:43	20:50	19:41	18:36	16:47	17	12:02 (WT01_141m)	16:39
24	08:32		12:21 (WT01_141m)	07:40	06:39	06:31	05:42	05:28	05:55	06:42	07:31	08:20	08:12	11:43 (WT01_141m)	16:39
	17:18		18:13	19:01	20:52	21:38	22:02	21:42	20:47	19:39	18:34	16:46	22	12:05 (WT01_141m)	16:39
25	08:30		12:23 (WT01_141m)	07:38	06:36	06:29	05:41	05:29	05:57	06:44	07:32	07:21	08:14	11:41 (WT01_141m)	16:39
	17:20		18:15	19:03	20:53	21:39	22:02	21:41	20:45	19:36	17:32	16:45	25	12:06 (WT01_141m)	16:40
26	08:29		12:25 (WT01_141m)	07:36	06:34	06:27	05:40	05:29	05:58	06:45	07:34	07:23	08:16	11:40 (WT01_141m)	16:46
	17:22		18:17	19:04	20:55	21:40	22:02	21:39	20:43	19:34	17:30	16:44	29	12:09 (WT01_141m)	16:40
27	08:28		12:27 (WT01_141m)	07:34	06:32	06:25	05:39	05:29	06:00	06:47	07:35	07:25	08:17	11:39 (WT01_141m)	16:46
	17:23		18:19	19:06	20:57	21:41	22:02	21:38	20:41	19:32	17:28	16:43	32	12:11 (WT01_141m)	16:41
28	08:27		12:29 (WT01_141m)	07:31	06:30	06:23	05:38	05:30	06:01	06:48	07:37	07:27	08:19	11:38 (WT01_141m)	16:46
	17:25		18:20	19:08	20:58	21:43	22:01	21:37	20:39	19:29	17:26	16:42	33	12:11 (WT01_141m)	16:42
29	08:25		12:31 (WT01_141m)	07:27	06:21	06:13	05:30	06:02	06:50	07:38	07:28	08:20		11:38 (WT01_141m)	16:46
	17:27		18:22	19:10	20:59	21:44	22:01	21:35	20:37	19:27	17:24	16:41	35	12:13 (WT01_141m)	16:43
30	08:24		12:33 (WT01_141m)	07:25	06:20	06:13	05:31	06:04	06:51	07:40	07:30	08:21		11:37 (WT01_141m)	16:46
	17:29		18:24	19:12	20:11	21:02	21:45	22:01	21:34	20:35	19:25	17:22	16:40	37	12:14 (WT01_141m)
31	08:22		12:35 (WT01_141m)	07:23	06:17	06:10	05:35	06:05	06:53	07:42	07:32			08:46	
	17:30		18:26	19:14	20:13	21:04	21:46	22:02	21:32	20:33	17:20			16:45	48
Potential sun hours	263			279	367	414	481	494	498	451	380	333	269		248
Total, worst case		717											238		1469
Sun reduction		0,24											0,26		0,21
Oper. time red.		0,99											0,99		0,99
Wind dir. red.		0,64											0,64		0,64
Total reduction		0,15											0,16		0,13
Total, real		106											38		195

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 38 - Zandvoortstraat 27C
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

January		February		March	April	May	June	July	August	September	October	November	December	
1	08:46	10:20 (WT01_141m)		08:21	07:29	07:21	06:18	05:34	05:32	06:07	06:55	07:42	07:34	08:23
	16:46	50	11:10 (WT01_141m)	17:32	18:22	20:14	21:03	21:47	22:01	21:30	20:30	19:23	17:19	16:40
2	08:46	10:20 (WT01_141m)		08:19	07:27	07:18	06:16	05:33	05:32	06:08	06:56	07:43	07:35	08:24
	16:47	49	11:09 (WT01_141m)	17:34	18:24	20:16	21:05	21:48	22:01	21:29	20:28	19:20	17:17	16:39
3	08:46	10:21 (WT01_141m)		08:18	07:25	07:16	06:14	05:33	05:33	06:10	06:58	07:45	07:37	08:26
	16:48	49	11:10 (WT01_141m)	17:36	18:26	20:17	21:06	21:49	22:00	21:27	20:26	19:18	17:15	16:39
4	08:46	10:22 (WT01_141m)		08:16	07:23	07:14	06:12	05:32	05:34	06:11	06:59	07:47	07:39	08:27
	16:49	49	11:11 (WT01_141m)	17:38	18:27	20:19	21:08	21:50	22:00	21:26	20:24	19:16	17:13	16:38
5	08:46	10:22 (WT01_141m)		08:15	07:21	07:12	06:10	05:31	05:34	06:13	07:01	07:48	07:40	08:28
	16:50	48	11:10 (WT01_141m)	17:39	18:29	20:21	21:10	21:51	21:59	21:24	20:22	19:14	17:12	16:38
6	08:46	10:23 (WT01_141m)		08:13	07:19	07:10	06:09	05:31	05:35	06:14	07:02	07:50	07:42	08:29
	16:51	48	11:11 (WT01_141m)	17:41	18:31	20:22	21:11	21:52	21:59	21:22	20:19	19:12	17:10	16:37
7	08:45	10:24 (WT01_141m)		08:12	07:16	07:07	06:07	05:30	05:36	06:16	07:04	07:51	07:44	08:31
	16:53	48	11:12 (WT01_141m)	17:43	18:32	20:24	21:13	21:53	21:58	21:20	20:17	19:09	17:08	16:37
8	08:45	10:24 (WT01_141m)		08:10	07:14	07:05	06:05	05:30	05:37	06:17	07:05	07:53	07:46	08:32
	16:54	47	11:11 (WT01_141m)	17:45	18:34	20:26	21:14	21:54	21:58	21:19	20:15	19:07	17:07	16:37
9	08:44	10:24 (WT01_141m)		08:08	07:12	07:03	06:04	05:29	05:38	06:19	07:07	07:55	07:47	08:33
	16:55	47	11:11 (WT01_141m)	17:47	18:36	20:27	21:16	21:55	21:57	21:17	20:13	19:05	17:05	16:36
10	08:44	10:25 (WT01_141m)		08:06	07:10	07:01	06:02	05:29	05:39	06:20	07:09	07:56	07:49	08:34
	16:57	47	11:12 (WT01_141m)	17:48	18:38	20:29	21:17	21:56	21:56	21:15	20:10	19:03	17:03	16:36
11	08:43	10:26 (WT01_141m)		08:05	07:08	06:59	06:00	05:28	05:40	06:22	07:10	07:58	07:51	08:35
	16:58	46	11:12 (WT01_141m)	17:50	18:39	20:31	21:19	21:56	21:56	21:13	20:08	19:01	17:02	16:36
12	08:43	10:26 (WT01_141m)		08:03	07:05	06:56	05:59	05:28	05:41	06:23	07:12	08:00	07:53	08:36
	16:59	45	11:11 (WT01_141m)	17:52	18:41	20:32	21:21	21:57	21:55	21:11	20:06	18:58	17:00	16:36
13	08:42	10:27 (WT01_141m)		08:01	07:03	06:54	05:57	05:28	05:42	06:25	07:13	08:01	07:54	08:37
	17:01	44	11:11 (WT01_141m)	17:54	18:43	20:34	21:22	21:58	21:54	21:10	20:04	18:56	16:59	16:36
14	08:41	10:29 (WT01_141m)		07:59	07:01	06:52	05:56	05:28	05:43	06:26	07:15	08:03	07:56	08:38
	17:02	43	11:12 (WT01_141m)	17:56	18:44	20:36	21:24	21:58	21:53	21:08	20:01	18:54	16:58	16:36
15	08:41	10:29 (WT01_141m)		07:57	06:59	06:50	05:54	05:27	05:44	06:28	07:16	08:05	07:58	08:39
	17:04	42	11:11 (WT01_141m)	17:57	18:46	20:37	21:25	21:59	21:52	21:06	19:59	18:52	16:56	16:36
16	08:40	10:30 (WT01_141m)		07:55	06:57	06:48	05:53	05:27	05:45	06:30	07:18	08:06	07:59	08:40
	17:05	41	11:11 (WT01_141m)	17:59	18:48	20:39	21:27	21:59	21:51	21:04	19:57	18:50	16:55	16:36
17	08:39	10:31 (WT01_141m)		07:54	06:54	06:46	05:51	05:27	05:47	06:31	07:20	08:08	08:01	08:41
	17:07	40	11:11 (WT01_141m)	18:01	18:49	20:40	21:28	22:00	21:50	21:02	19:54	18:48	16:54	16:36
18	08:38	10:32 (WT01_141m)		07:52	06:52	06:44	05:50	05:27	05:48	06:33	07:21	08:10	08:03	08:41
	17:09	38	11:10 (WT01_141m)	18:03	18:51	20:42	21:29	22:00	21:49	21:00	19:52	18:46	16:52	16:36
19	08:37	10:33 (WT01_141m)		07:50	06:50	06:42	05:48	05:27	05:49	06:34	07:23	08:11	08:04	08:42
	17:10	36	11:09 (WT01_141m)	18:05	18:53	20:44	21:31	22:01	21:48	20:58	19:50	18:44	16:51	16:36
20	08:36	10:34 (WT01_141m)		07:48	06:48	06:39	05:47	05:27	05:50	06:36	07:24	08:13	08:06	08:43
	17:12	34	11:08 (WT01_141m)	18:06	18:54	20:45	21:32	22:01	21:47	20:56	19:48	18:42	16:50	16:37
21	08:35	10:36 (WT01_141m)		07:46	06:45	06:37	05:46	05:28	05:51	06:37	07:26	08:15	08:08	08:43
	17:13	31	11:07 (WT01_141m)	18:08	18:56	20:47	21:34	22:01	21:46	20:54	19:45	18:40	16:49	16:36
22	08:34	10:38 (WT01_141m)		07:44	06:43	06:35	05:45	05:28	05:53	06:39	07:27	08:16	08:09	08:44
	17:15	27	11:05 (WT01_141m)	18:10	18:58	20:49	21:35	22:01	21:45	20:52	19:43	18:38	16:48	16:36
23	08:33	10:40 (WT01_141m)		07:42	06:41	06:33	05:43	05:28	05:54	06:40	07:29	08:18	08:11	08:44
	17:17	23	11:03 (WT01_141m)	18:12	18:59	20:50	21:36	22:01	21:43	20:50	19:41	18:36	16:47	16:36
24	08:32	10:42 (WT01_141m)		07:40	06:39	06:31	05:42	05:28	05:55	06:42	07:31	08:20	08:12	08:45
	17:18	16	10:58 (WT01_141m)	18:13	19:01	20:52	21:38	22:02	21:42	20:47	19:39	18:34	16:46	16:39
25	08:30	10:48 (WT01_141m)		07:38	06:36	06:29	05:41	05:29	05:57	06:44	07:32	08:21	08:14	08:45
	17:20	2	10:50 (WT01_141m)	18:15	19:03	20:54	21:39	22:02	21:41	20:45	19:36	17:32	16:45	16:40
26	08:29	10:50 (WT01_141m)		07:36	06:34	06:27	05:40	05:29	05:58	06:45	07:34	08:23	08:16	08:46
	17:22			18:17	19:04	20:55	21:40	22:02	21:39	20:43	19:34	17:30	16:44	16:40
27	08:28	10:50 (WT01_141m)		07:34	06:32	06:25	05:39	05:29	06:00	06:47	07:35	08:25	08:17	08:46
	17:23			18:19	19:06	20:57	21:41	22:02	21:38	20:41	19:32	17:28	16:43	16:41
28	08:27	10:50 (WT01_141m)		07:31	06:30	06:23	05:38	05:30	06:01	06:48	07:37	08:27	08:19	08:46
	17:25		18:20	19:08	20:58	21:43	22:02	22:02	21:37	20:39	19:29	17:26	16:42	16:43
29	08:25	10:50 (WT01_141m)		07:27	06:22	06:15	05:30	05:30	06:02	06:50	07:38	08:28	08:20	08:46
	17:27			20:09	21:00	21:44	22:01	22:01	21:35	20:37	19:27	17:24	16:41	16:43
30	08:24	10:50 (WT01_141m)		07:25	06:20	06:13	05:31	06:04	06:51	07:40	08:28	08:21	08:13	08:46
	17:29			20:11	21:02	21:45	22:01	22:01	21:34	20:35	19:25	17:22	16:41	16:43
31	08:22	10:50 (WT01_141m)		07:23	06:18	06:11	05:35	06:05	06:53	07:42	08:30	09:18	09:10	08:46
	17:30			20:13	21:04	21:46	22:01	22:01	21:32	20:33	19:23	17:20	16:40	16:45
Potential sun hours	263		279	367	414	481	494	498	451	380	333	269		248
Total, worst case		990											464	1524
Sun reduction		0,24											0,26	0,21
Oper. time red.		0,99											0,99	0,99
Wind dir. red.		0,57											0,57	0,57
Total reduction		0,13											0,14	0,12
Total, real		131											67	181

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 39 - Zandvoortstraat 21

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

January			February			March	April	May	June
1	08:46	10:14 (WT01_141m)	08:21	10:27 (WT01_141m)	07:29	07:21	06:18	05:34	
	16:46	54 11:08 (WT01_141m)	17:32	40 11:07 (WT01_141m)	18:22	20:14	21:03	21:47	
2	08:46	10:14 (WT01_141m)	08:19	10:29 (WT01_141m)	07:27	07:18	06:16	05:33	
	16:47	54 11:08 (WT01_141m)	17:34	37 11:06 (WT01_141m)	18:24	20:16	21:05	21:48	
3	08:46	10:14 (WT01_141m)	08:18	10:30 (WT01_141m)	07:25	07:16	06:14	05:33	
	16:48	54 11:08 (WT01_141m)	17:36	34 11:04 (WT01_141m)	18:26	20:17	21:06	21:49	
4	08:46	10:15 (WT01_141m)	08:16	10:33 (WT01_141m)	07:23	07:14	06:12	05:32	
	16:49	54 11:09 (WT01_141m)	17:38	30 11:03 (WT01_141m)	18:27	20:19	21:08	21:50	
5	08:46	10:15 (WT01_141m)	08:15	10:34 (WT01_141m)	07:21	07:12	06:10	05:31	
	16:50	54 11:09 (WT01_141m)	17:39	27 11:01 (WT01_141m)	18:29	20:21	21:10	21:51	
6	08:45	10:15 (WT01_141m)	08:13	10:37 (WT01_141m)	07:19	07:10	06:09	05:31	
	16:51	55 11:10 (WT01_141m)	17:41	21 10:58 (WT01_141m)	18:31	20:22	21:11	21:52	
7	08:45	10:16 (WT01_141m)	08:12	10:40 (WT01_141m)	07:16	07:07	06:07	05:30	
	16:53	55 11:11 (WT01_141m)	17:43	14 10:54 (WT01_141m)	18:32	20:24	21:13	21:53	
8	08:45	10:16 (WT01_141m)	08:10		07:14	07:05	06:05	05:30	
	16:54	55 11:11 (WT01_141m)	17:45		18:34	20:26	21:14	21:54	
9	08:44	10:16 (WT01_141m)	08:08		07:12	07:03	06:04	05:29	
	16:55	55 11:11 (WT01_141m)	17:47		18:36	20:27	21:16	21:55	
10	08:44	10:17 (WT01_141m)	08:06		07:10	07:01	06:02	05:29	
	16:57	55 11:12 (WT01_141m)	17:48		18:38	20:29	21:17	21:56	
11	08:43	10:17 (WT01_141m)	08:05		07:08	06:59	06:00	05:28	
	16:58	55 11:12 (WT01_141m)	17:50		18:39	20:31	21:19	21:56	
12	08:43	10:17 (WT01_141m)	08:03		07:05	06:56	05:59	05:28	
	16:59	55 11:12 (WT01_141m)	17:52		18:41	20:32	21:21	21:57	
13	08:42	10:17 (WT01_141m)	08:01		07:03	06:54	05:57	05:28	
	17:01	56 11:13 (WT01_141m)	17:54		18:43	20:34	21:22	21:58	
14	08:41	10:18 (WT01_141m)	07:59		07:01	06:52	05:56	05:28	
	17:02	56 11:14 (WT01_141m)	17:56		18:44	20:36	21:24	21:58	
15	08:41	10:18 (WT01_141m)	07:57		06:59	06:50	05:54	05:27	
	17:04	56 11:14 (WT01_141m)	17:57		18:46	20:37	21:25	21:59	
16	08:40	10:19 (WT01_141m)	07:55		06:57	06:48	05:53	05:27	
	17:05	55 11:14 (WT01_141m)	17:59		18:48	20:39	21:27	21:59	
17	08:39	10:19 (WT01_141m)	07:54		06:54	06:46	05:51	05:27	
	17:07	55 11:14 (WT01_141m)	18:01		18:49	20:40	21:28	22:00	
18	08:38	10:19 (WT01_141m)	07:52		06:52	06:44	05:50	05:27	
	17:09	56 11:15 (WT01_141m)	18:03		18:51	20:42	21:29	22:00	
19	08:37	10:19 (WT01_141m)	07:50		06:50	06:42	05:48	05:27	
	17:10	55 11:14 (WT01_141m)	18:05		18:53	20:44	21:31	22:01	
20	08:36	10:19 (WT01_141m)	07:48		06:48	06:39	05:47	05:27	
	17:12	55 11:14 (WT01_141m)	18:06		18:54	20:45	21:32	22:01	
21	08:35	10:20 (WT01_141m)	07:46		06:45	06:37	05:46	05:28	
	17:13	54 11:14 (WT01_141m)	18:08		18:56	20:47	21:34	22:01	
22	08:34	10:21 (WT01_141m)	07:44		06:43	06:35	05:45	05:28	
	17:15	53 11:14 (WT01_141m)	18:10		18:58	20:49	21:35	22:01	
23	08:33	10:21 (WT01_141m)	07:42		06:41	06:33	05:43	05:28	
	17:17	53 11:14 (WT01_141m)	18:12		18:59	20:50	21:36	22:01	
24	08:32	10:21 (WT01_141m)	07:40		06:39	06:31	05:42	05:28	
	17:18	52 11:13 (WT01_141m)	18:13		19:01	20:52	21:38	22:02	
25	08:30	10:22 (WT01_141m)	07:38		06:36	06:29	05:41	05:29	
	17:20	51 11:13 (WT01_141m)	18:15		19:03	20:54	21:39	22:02	
26	08:29	10:23 (WT01_141m)	07:36		06:34	06:27	05:40	05:29	
	17:22	50 11:13 (WT01_141m)	18:17		19:04	20:55	21:40	22:02	
27	08:28	10:23 (WT01_141m)	07:34		06:32	06:25	05:39	05:29	
	17:23	49 11:12 (WT01_141m)	18:19		19:06	20:57	21:41	22:02	
28	08:27	10:25 (WT01_141m)	07:31		06:30	06:23	05:38	05:30	
	17:25	47 11:12 (WT01_141m)	18:20		19:08	20:58	21:43	22:01	
29	08:25	10:25 (WT01_141m)			07:27	06:22	05:37	05:30	
	17:27	46 11:11 (WT01_141m)			20:09	21:00	21:44	22:01	
30	08:24	10:26 (WT01_141m)			07:25	06:20	05:36	05:31	
	17:29	44 11:10 (WT01_141m)			20:11	21:02	21:45	22:01	
31	08:22	10:27 (WT01_141m)			07:23		05:35		
	17:30	41 11:08 (WT01_141m)			20:13		21:46		
Potential sun hours	263		279		367	414	481	494	
Total, worst case	1639		203						
Sun reduction	0,24		0,28						
Oper. time red.	0,99		0,99						
Wind dir. red.	0,56		0,56						
Total reduction	0,13		0,16						
Total, real	214		32						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 39 - Zandvoortstraat 21

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December
1	05:32	06:07	06:55	07:42	07:34	08:23
	22:01	21:30	20:30	19:23	17:19	16:40
2	05:32	06:08	06:56	07:43	07:35	08:24
	22:01	21:29	20:28	19:20	17:17	16:39
3	05:33	06:10	06:58	07:45	07:37	08:26
	22:00	21:27	20:26	19:18	17:15	16:39
4	05:34	06:11	06:59	07:47	07:39	08:27
	22:00	21:26	20:24	19:16	17:13	16:38
5	05:34	06:13	07:01	07:48	07:40	08:28
	21:59	21:24	20:22	19:14	17:12	16:38
6	05:35	06:14	07:02	07:50	07:42	08:29
	21:59	21:22	20:19	19:12	17:10	16:37
7	05:36	06:16	07:04	07:51	07:44	08:31
	21:58	21:20	20:17	19:09	17:08	16:37
8	05:37	06:17	07:05	07:53	07:46	08:32
	21:58	21:19	20:15	19:07	17:07	16:37
9	05:38	06:19	07:07	07:55	07:47	08:33
	21:57	21:17	20:13	19:05	17:05	16:36
10	05:39	06:20	07:09	07:56	07:49	08:34
	21:56	21:15	20:10	19:03	17:03	16:36
11	05:40	06:22	07:10	07:58	07:51	08:35
	21:56	21:13	20:08	19:01	17:02	16:36
12	05:41	06:23	07:12	08:00	07:53	08:36
	21:55	21:11	20:06	18:58	17:00	16:36
13	05:42	06:25	07:13	08:01	07:54	08:37
	21:54	21:10	20:04	18:56	16:59	16:36
14	05:43	06:26	07:15	08:03	07:56	08:38
	21:53	21:08	20:01	18:54	16:58	16:36
15	05:44	06:28	07:16	08:05	07:58	08:39
	21:52	21:06	19:59	18:52	16:56	16:36
16	05:45	06:30	07:18	08:06	07:59	08:40
	21:51	21:04	19:57	18:50	16:55	16:36
17	05:47	06:31	07:20	08:08	08:01	08:41
	21:50	21:02	19:54	18:48	16:54	16:36
18	05:48	06:33	07:21	08:10	08:03	08:41
	21:49	21:00	19:52	18:46	16:52	16:37
19	05:49	06:34	07:23	08:11	08:04	08:42
	21:48	20:58	19:50	18:44	16:51	16:37
20	05:50	06:36	07:24	08:13	08:06	08:43
	21:47	20:56	19:48	18:42	16:50	16:37
21	05:52	06:37	07:26	08:15	08:08	08:43
	21:46	20:54	19:45	18:40	16:49	16:38
22	05:53	06:39	07:27	08:16	08:09	08:44
	21:45	20:52	19:43	18:38	16:48	16:38
23	05:54	06:40	07:29	08:18	08:11	08:44
	21:43	20:50	19:41	18:36	16:47	16:39
24	05:55	06:42	07:31	08:20	08:12	08:45
	21:42	20:47	19:39	18:34	16:46	16:39
25	05:57	06:44	07:32	08:21	08:14	08:45
	21:41	20:45	19:36	17:32	16:45	16:40
26	05:58	06:45	07:34	08:23	08:16	08:46
	21:39	20:43	19:34	17:30	16:44	16:40
27	06:00	06:47	07:35	08:25	08:17	08:46
	21:38	20:41	19:32	17:28	16:43	16:41
28	06:01	06:48	07:37	08:27	08:19	08:46
	21:37	20:39	19:29	17:26	16:42	16:42
29	06:02	06:50	07:38	08:28	08:20	08:46
	21:35	20:37	19:27	17:24	16:41	16:43
30	06:04	06:51	07:40	08:30	08:21	08:46
	21:34	20:35	19:25	17:22	16:41	16:44
31	06:05	06:53		07:32		08:46
	21:32	20:33		17:20		16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case					1249	1647
Sun reduction					0,26	0,21
Oper. time red.					0,99	0,99
Wind dir. red.					0,56	0,56
Total reduction					0,14	0,12
Total, real					177	194

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 40 - Baron Eduard Empainlaan 61

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June	
1	08:46	08:21	07:29	07:21	06:18	05:34	06:39 (WT01_141m)
	16:46	17:32	18:22	20:14	21:03	21:47	51 07:30 (WT01_141m)
2	08:46	08:19	07:27	07:18	06:16	05:33	06:39 (WT01_141m)
	16:47	17:34	18:24	20:16	21:05	21:48	50 07:29 (WT01_141m)
3	08:46	08:18	07:25	07:16	06:14	05:33	06:40 (WT01_141m)
	16:48	17:36	18:26	20:17	21:06	21:49	50 07:30 (WT01_141m)
4	08:46	08:16	07:23	07:14	06:12	05:32	06:39 (WT01_141m)
	16:49	17:38	18:27	20:19	21:08	21:50	51 07:30 (WT01_141m)
5	08:46	08:15	07:21	07:12	06:10	05:31	06:40 (WT01_141m)
	16:50	17:39	18:29	20:21	21:10	21:51	51 07:31 (WT01_141m)
6	08:45	08:13	07:19	07:10	06:09	05:31	06:39 (WT01_141m)
	16:52	17:41	18:31	20:22	21:11	21:52	52 07:31 (WT01_141m)
7	08:45	08:12	07:16	07:07	06:07	05:30	06:40 (WT01_141m)
	16:53	17:43	18:33	20:24	21:13	21:53	51 07:31 (WT01_141m)
8	08:45	08:10	07:14	07:05	06:05	05:30	06:39 (WT01_141m)
	16:54	17:45	18:34	20:26	21:14	21:54	52 07:31 (WT01_141m)
9	08:44	08:08	07:12	07:03	06:04	05:29	06:40 (WT01_141m)
	16:55	17:47	18:36	20:27	21:16	21:55	52 07:32 (WT01_141m)
10	08:44	08:06	07:10	07:01	06:02	05:29	06:40 (WT01_141m)
	16:57	17:48	18:38	20:29	21:17	21:56	52 07:32 (WT01_141m)
11	08:43	08:05	07:08	06:59	06:00	06:58 (WT01_141m)	05:28 06:40 (WT01_141m)
	16:58	17:50	18:39	20:31	21:19	11 07:09 (WT01_141m)	52 07:32 (WT01_141m)
12	08:43	08:03	07:06	06:56	05:59	06:55 (WT01_141m)	05:28 06:40 (WT01_141m)
	17:00	17:52	18:41	20:32	21:21	18 07:13 (WT01_141m)	52 07:32 (WT01_141m)
13	08:42	08:01	07:03	06:54	05:57	06:52 (WT01_141m)	05:28 06:40 (WT01_141m)
	17:01	17:54	18:43	20:34	21:22	23 07:15 (WT01_141m)	53 07:33 (WT01_141m)
14	08:41	07:59	07:01	06:52	05:56	06:50 (WT01_141m)	05:28 06:41 (WT01_141m)
	17:02	17:56	18:44	20:36	21:24	27 07:17 (WT01_141m)	52 07:33 (WT01_141m)
15	08:41	07:57	06:59	06:50	05:54	06:49 (WT01_141m)	05:28 06:41 (WT01_141m)
	17:04	17:57	18:46	20:37	21:25	30 07:19 (WT01_141m)	52 07:33 (WT01_141m)
16	08:40	07:55	06:57	06:48	05:53	06:47 (WT01_141m)	05:27 06:41 (WT01_141m)
	17:05	17:58	18:48	20:39	21:26	32 07:19 (WT01_141m)	53 07:34 (WT01_141m)
17	08:39	07:54	06:54	06:46	05:51	06:46 (WT01_141m)	05:27 06:41 (WT01_141m)
	17:07	18:01	18:49	20:40	21:28	35 07:21 (WT01_141m)	53 07:34 (WT01_141m)
18	08:38	07:52	06:52	06:44	05:50	06:46 (WT01_141m)	05:27 06:42 (WT01_141m)
	17:09	18:03	18:51	20:42	21:29	36 07:22 (WT01_141m)	52 07:34 (WT01_141m)
19	08:37	07:50	06:50	06:42	05:48	06:44 (WT01_141m)	05:27 06:42 (WT01_141m)
	17:10	18:05	18:53	20:44	21:31	38 07:22 (WT01_141m)	52 07:34 (WT01_141m)
20	08:36	07:48	06:48	06:39	05:47	06:43 (WT01_141m)	05:27 06:42 (WT01_141m)
	17:12	18:06	18:54	20:45	21:32	40 07:23 (WT01_141m)	52 07:34 (WT01_141m)
21	08:35	07:46	06:45	06:37	05:46	06:43 (WT01_141m)	05:28 06:42 (WT01_141m)
	17:13	18:08	18:56	20:47	21:34	41 07:24 (WT01_141m)	52 07:34 (WT01_141m)
22	08:34	07:44	06:43	06:35	05:45	06:42 (WT01_141m)	05:28 06:42 (WT01_141m)
	17:15	18:10	18:58	20:49	21:35	43 07:25 (WT01_141m)	52 07:34 (WT01_141m)
23	08:33	07:42	06:41	06:33	05:43	06:42 (WT01_141m)	05:28 06:43 (WT01_141m)
	17:17	18:12	18:59	20:50	21:36	44 07:26 (WT01_141m)	52 07:35 (WT01_141m)
24	08:32	07:40	06:39	06:31	05:42	06:41 (WT01_141m)	05:28 06:43 (WT01_141m)
	17:18	18:13	19:01	20:52	21:38	45 07:26 (WT01_141m)	52 07:35 (WT01_141m)
25	08:30	07:38	06:36	06:29	05:41	06:41 (WT01_141m)	05:29 06:42 (WT01_141m)
	17:20	18:15	19:03	20:54	21:39	46 07:27 (WT01_141m)	53 07:35 (WT01_141m)
26	08:29	07:36	06:34	06:27	05:40	06:40 (WT01_141m)	05:29 06:43 (WT01_141m)
	17:22	18:17	19:04	20:55	21:40	47 07:27 (WT01_141m)	53 07:36 (WT01_141m)
27	08:28	07:34	06:32	06:25	05:39	06:40 (WT01_141m)	05:29 06:43 (WT01_141m)
	17:24	18:19	19:06	20:57	21:41	48 07:28 (WT01_141m)	52 07:35 (WT01_141m)
28	08:27	07:31	06:30	06:23	05:38	06:40 (WT01_141m)	05:30 06:44 (WT01_141m)
	17:25	18:20	19:08	20:58	21:43	48 07:28 (WT01_141m)	52 07:36 (WT01_141m)
29	08:25		07:27	06:22	05:37	06:39 (WT01_141m)	05:30 06:44 (WT01_141m)
	17:27		20:09	21:00	21:44	49 07:28 (WT01_141m)	52 07:36 (WT01_141m)
30	08:24		07:25	06:20	05:36	06:39 (WT01_141m)	05:31 06:44 (WT01_141m)
	17:29		20:11	21:02	21:45	49 07:28 (WT01_141m)	52 07:36 (WT01_141m)
31	08:22		07:23		05:35	06:40 (WT01_141m)	
	17:31		20:13		21:46	49 07:29 (WT01_141m)	
Potential sun hours	263	280	367	414	481	494	
Total, worst case					799		1557
Sun reduction					0,45		0,44
Oper. time red.					0,99		0,99
Wind dir. red.					0,70		0,70
Total reduction					0,31		0,30
Total, real					249		471

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

Shadow receptor: 40 - Baron Eduard Empainlaan 61
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July			August			September			October			November			December		
1	05:32		06:44 (WT01_141m)	06:07		07:07 (WT01_141m)	06:55		07:42		07:34		08:23				
	22:01	52	07:36 (WT01_141m)	21:30	15	07:22 (WT01_141m)	20:30		19:23		17:19		16:40				
2	05:32		06:44 (WT01_141m)	06:08		07:12 (WT01_141m)	06:56		07:43		07:35		08:24				
	22:01	52	07:36 (WT01_141m)	21:29	4	07:16 (WT01_141m)	20:28		19:21		17:17		16:39				
3	05:33		06:45 (WT01_141m)	06:10			06:58		07:45		07:37		08:26				
	22:00	52	07:37 (WT01_141m)	21:27			20:26		19:18		17:15		16:39				
4	05:34		06:45 (WT01_141m)	06:11			06:59		07:47		07:39		08:27				
	22:00	51	07:36 (WT01_141m)	21:26			20:24		19:16		17:13		16:38				
5	05:35		06:45 (WT01_141m)	06:13			07:01		07:48		07:40		08:28				
	21:59	52	07:37 (WT01_141m)	21:24			20:22		19:14		17:12		16:38				
6	05:35		06:46 (WT01_141m)	06:14			07:02		07:50		07:42		08:29				
	21:59	51	07:37 (WT01_141m)	21:22			20:19		19:12		17:10		16:37				
7	05:36		06:46 (WT01_141m)	06:16			07:04		07:51		07:44		08:31				
	21:58	51	07:37 (WT01_141m)	21:20			20:17		19:09		17:08		16:37				
8	05:37		06:46 (WT01_141m)	06:17			07:06		07:53		07:46		08:32				
	21:58	52	07:38 (WT01_141m)	21:19			20:15		19:07		17:07		16:37				
9	05:38		06:47 (WT01_141m)	06:19			07:07		07:55		07:47		08:33				
	21:57	51	07:38 (WT01_141m)	21:17			20:13		19:05		17:05		16:36				
10	05:39		06:47 (WT01_141m)	06:20			07:09		07:56		07:49		08:34				
	21:56	51	07:38 (WT01_141m)	21:15			20:10		19:03		17:04		16:36				
11	05:40		06:47 (WT01_141m)	06:22			07:10		07:58		07:51		08:35				
	21:56	50	07:37 (WT01_141m)	21:13			20:08		19:01		17:02		16:36				
12	05:41		06:47 (WT01_141m)	06:23			07:12		08:00		07:53		08:36				
	21:55	50	07:37 (WT01_141m)	21:11			20:06		18:58		17:01		16:36				
13	05:42		06:47 (WT01_141m)	06:25			07:13		08:01		07:54		08:37				
	21:54	50	07:37 (WT01_141m)	21:09			20:04		18:56		16:59		16:36				
14	05:43		06:48 (WT01_141m)	06:26			07:15		08:03		07:56		08:38				
	21:53	49	07:37 (WT01_141m)	21:08			20:01		18:54		16:58		16:36				
15	05:44		06:49 (WT01_141m)	06:28			07:16		08:05		07:58		08:39				
	21:52	49	07:38 (WT01_141m)	21:06			19:59		18:52		16:56		16:36				
16	05:45		06:49 (WT01_141m)	06:30			07:18		08:06		07:59		08:40				
	21:51	48	07:37 (WT01_141m)	21:04			19:57		18:50		16:55		16:36				
17	05:47		06:50 (WT01_141m)	06:31			07:20		08:08		08:01		08:41				
	21:50	47	07:37 (WT01_141m)	21:02			19:55		18:48		16:54		16:36				
18	05:48		06:50 (WT01_141m)	06:33			07:21		08:10		08:03		08:41				
	21:49	47	07:37 (WT01_141m)	21:00			19:52		18:46		16:52		16:37				
19	05:49		06:51 (WT01_141m)	06:34			07:23		08:11		08:04		08:42				
	21:48	45	07:36 (WT01_141m)	20:58			19:50		18:44		16:51		16:37				
20	05:50		06:51 (WT01_141m)	06:36			07:24		08:13		08:06		08:43				
	21:47	45	07:36 (WT01_141m)	20:56			19:48		18:42		16:50		16:37				
21	05:52		06:51 (WT01_141m)	06:37			07:26		08:15		08:08		08:43				
	21:46	44	07:35 (WT01_141m)	20:54			19:45		18:40		16:49		16:38				
22	05:53		06:53 (WT01_141m)	06:39			07:27		08:16		08:09		08:44				
	21:45	42	07:35 (WT01_141m)	20:52			19:43		18:38		16:48		16:38				
23	05:54		06:53 (WT01_141m)	06:40			07:29		08:18		08:11		08:44				
	21:43	41	07:34 (WT01_141m)	20:50			19:41		18:36		16:47		16:39				
24	05:55		06:54 (WT01_141m)	06:42			07:31		08:20		08:12		08:45				
	21:42	39	07:33 (WT01_141m)	20:47			19:39		18:34		16:46		16:39				
25	05:57		06:55 (WT01_141m)	06:44			07:32		07:21		08:14		08:45				
	21:41	37	07:32 (WT01_141m)	20:45			19:36		17:32		16:45		16:40				
26	05:58		06:56 (WT01_141m)	06:45			07:34		07:23		08:15		08:45				
	21:39	36	07:32 (WT01_141m)	20:43			19:34		17:30		16:44		16:41				
27	06:00		06:57 (WT01_141m)	06:47			07:35		07:25		08:17		08:46				
	21:38	34	07:31 (WT01_141m)	20:41			19:32		17:28		16:43		16:41				
28	06:01		06:58 (WT01_141m)	06:48			07:37		07:27		08:19		08:46				
	21:37	31	07:29 (WT01_141m)	20:39			19:30		17:26		16:42		16:42				
29	06:02		07:00 (WT01_141m)	06:50			07:38		07:28		08:20		08:46				
	21:35	29	07:29 (WT01_141m)	20:37			19:27		17:24		16:41		16:43				
30	06:04		07:02 (WT01_141m)	06:51			07:40		07:30		08:21		08:46				
	21:34	25	07:27 (WT01_141m)	20:35			19:25		17:22		16:41		16:44				
31	06:05		07:03 (WT01_141m)	06:53					07:32				08:46				
	21:32	21	07:24 (WT01_141m)	20:33					17:20				16:45				
Potential sun hours	498		451			380		333		269		248					
Total, worst case	1374				19												
Sun reduction	0,44				0,46												
Oper. time red.	0,99				0,99												
Wind dir. red.	0,70				0,70												
Total reduction	0,31				0,32												
Total, real	420				6												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 41 - Baron Eduard Empainlaan 75

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46	08:21	07:29	07:21	06:18	07:19 (WT01_141m) 05:34
	16:46	17:32	18:22	20:14	21:03	08:07 (WT01_141m) 21:47
2	08:46	08:19	07:27	07:18	06:16	07:18 (WT01_141m) 05:33
	16:47	17:34	18:24	20:16	21:05	08:07 (WT01_141m) 21:48
3	08:46	08:18	07:25	07:16	06:14	07:17 (WT01_141m) 05:33
	16:48	17:36	18:26	20:17	21:06	08:06 (WT01_141m) 21:49
4	08:46	08:16	07:23	07:14	06:12	07:17 (WT01_141m) 05:32
	16:49	17:38	18:27	20:19	21:08	08:06 (WT01_141m) 21:50
5	08:46	08:15	07:21	07:12	06:10	07:17 (WT01_141m) 05:31
	16:50	17:39	18:29	20:21	21:10	08:07 (WT01_141m) 21:51
6	08:45	08:13	07:19	07:10	06:09	07:17 (WT01_141m) 05:31
	16:52	17:41	18:31	20:22	21:11	08:06 (WT01_141m) 21:52
7	08:45	08:12	07:16	07:07	06:07	07:16 (WT01_141m) 05:30
	16:53	17:43	18:33	20:24	21:13	08:06 (WT01_141m) 21:53
8	08:45	08:10	07:14	07:05	06:05	07:17 (WT01_141m) 05:30
	16:54	17:45	18:34	20:26	21:14	08:06 (WT01_141m) 21:54
9	08:44	08:08	07:12	07:03	06:04	07:16 (WT01_141m) 05:29
	16:55	17:47	18:36	20:27	21:16	08:05 (WT01_141m) 21:55
10	08:44	08:06	07:10	07:01	06:02	07:17 (WT01_141m) 05:29
	16:57	17:48	18:38	20:29	21:17	08:05 (WT01_141m) 21:56
11	08:43	08:05	07:08	06:59	06:00	07:17 (WT01_141m) 05:28
	16:58	17:50	18:39	20:31	21:19	08:05 (WT01_141m) 21:56
12	08:43	08:03	07:06	06:56	05:59	07:17 (WT01_141m) 05:28
	16:59	17:52	18:41	20:32	21:21	08:05 (WT01_141m) 21:57
13	08:42	08:01	07:03	06:54	05:57	07:17 (WT01_141m) 05:28
	17:01	17:54	18:43	20:34	21:22	08:04 (WT01_141m) 21:58
14	08:41	07:59	07:01	06:52	05:56	07:18 (WT01_141m) 05:28
	17:02	17:56	18:44	20:36	21:24	08:04 (WT01_141m) 21:58
15	08:41	07:57	06:59	06:50	05:54	07:19 (WT01_141m) 05:28
	17:04	17:57	18:46	20:37	21:25	08:03 (WT01_141m) 21:59
16	08:40	07:55	06:57	06:48	05:53	07:18 (WT01_141m) 05:27
	17:05	17:59	18:48	20:39	21:27	08:02 (WT01_141m) 21:59
17	08:39	07:54	06:54	06:46	05:51	07:19 (WT01_141m) 05:27
	17:07	18:01	18:49	20:40	21:28	08:02 (WT01_141m) 22:00
18	08:38	07:52	06:52	06:44	07:37 (WT01_141m) 05:50	07:20 (WT01_141m) 05:27
	17:09	18:03	18:51	20:42	21:29	08:01 (WT01_141m) 22:00
19	08:37	07:50	06:50	06:42	07:34 (WT01_141m) 05:48	07:20 (WT01_141m) 05:27
	17:10	18:05	18:53	20:44	21:31	08:00 (WT01_141m) 22:01
20	08:36	07:48	06:48	06:39	07:31 (WT01_141m) 05:47	07:21 (WT01_141m) 05:27
	17:12	18:06	18:54	20:45	21:32	08:00 (WT01_141m) 22:01
21	08:35	07:46	06:45	06:37	07:29 (WT01_141m) 05:46	07:21 (WT01_141m) 05:28
	17:13	18:08	18:56	20:47	21:34	07:59 (WT01_141m) 22:01
22	08:34	07:44	06:43	06:35	07:27 (WT01_141m) 05:45	07:22 (WT01_141m) 05:28
	17:15	18:10	18:58	20:49	21:35	07:58 (WT01_141m) 22:01
23	08:33	07:42	06:41	06:33	07:25 (WT01_141m) 05:43	07:23 (WT01_141m) 05:28
	17:17	18:12	18:59	20:50	21:36	07:58 (WT01_141m) 22:01
24	08:32	07:40	06:39	06:31	07:25 (WT01_141m) 05:42	07:24 (WT01_141m) 05:28
	17:18	18:13	19:01	20:52	21:38	07:57 (WT01_141m) 22:02
25	08:30	07:38	06:36	06:29	07:23 (WT01_141m) 05:41	07:25 (WT01_141m) 05:29
	17:20	18:15	19:03	20:54	21:39	07:56 (WT01_141m) 22:02
26	08:29	07:36	06:34	06:27	07:22 (WT01_141m) 05:40	07:26 (WT01_141m) 05:29
	17:22	18:17	19:04	20:55	21:40	07:55 (WT01_141m) 22:02
27	08:28	07:34	06:32	06:25	07:21 (WT01_141m) 05:39	07:27 (WT01_141m) 05:29
	17:24	18:19	19:06	20:57	21:41	07:54 (WT01_141m) 22:02
28	08:27	07:31	06:30	06:23	07:20 (WT01_141m) 05:38	07:28 (WT01_141m) 05:30
	17:25	18:20	19:08	20:58	21:43	07:53 (WT01_141m) 22:01
29	08:25		07:27	06:22	07:19 (WT01_141m) 05:37	07:29 (WT01_141m) 05:30
	17:27		20:09	21:00	21:44	07:52 (WT01_141m) 22:01
30	08:24		07:25	06:20	07:18 (WT01_141m) 05:36	07:30 (WT01_141m) 05:31
	17:29		20:11	21:02	21:45	07:50 (WT01_141m) 22:01
31	08:22		07:23		05:35	07:32 (WT01_141m)
	17:31		20:13		21:46	07:50 (WT01_141m)
Potential sun hours	263	279	367	414	481	494
Total, worst case				475	1245	24
Sun reduction				0,45	0,45	0,44
Oper. time red.				0,99	0,99	0,99
Wind dir. red.				0,66	0,66	0,66
Total reduction				0,29	0,29	0,28
Total, real				139	365	7

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 41 - Baron Eduard Empainlaan 75

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July		August		September		October		November		December	
1	05:32	06:07	07:28 (WT01_141m)	06:55	07:42	07:34	08:23				
	22:01	21:30	47 08:15 (WT01_141m)	20:30	19:23	17:19	16:40				
2	05:32	06:08	07:27 (WT01_141m)	06:56	07:43	07:35	08:24				
	22:01	21:29	48 08:15 (WT01_141m)	20:28	19:21	17:17	16:39				
3	05:33	06:10	07:27 (WT01_141m)	06:58	07:45	07:37	08:26				
	22:00	21:27	49 08:16 (WT01_141m)	20:26	19:18	17:15	16:39				
4	05:34	06:11	07:27 (WT01_141m)	06:59	07:47	07:39	08:27				
	22:00	21:26	49 08:16 (WT01_141m)	20:24	19:16	17:13	16:38				
5	05:35	06:13	07:26 (WT01_141m)	07:01	07:48	07:40	08:28				
	21:59	21:24	49 08:15 (WT01_141m)	20:22	19:14	17:12	16:38				
6	05:35	06:14	07:27 (WT01_141m)	07:02	07:50	07:42	08:29				
	21:59	21:22	49 08:16 (WT01_141m)	20:19	19:12	17:10	16:37				
7	05:36	06:16	07:26 (WT01_141m)	07:04	07:51	07:44	08:31				
	21:58	21:20	50 08:16 (WT01_141m)	20:17	19:09	17:08	16:37				
8	05:37	06:17	07:27 (WT01_141m)	07:06	07:53	07:46	08:32				
	21:58	21:19	49 08:16 (WT01_141m)	20:15	19:07	17:07	16:37				
9	05:38	06:19	07:26 (WT01_141m)	07:07	07:55	07:47	08:33				
	21:57	21:17	50 08:16 (WT01_141m)	20:13	19:05	17:05	16:36				
10	05:39	07:45 (WT01_141m)	06:20	07:27 (WT01_141m)	07:09	07:56	07:49	08:34			
	21:56	8 07:53 (WT01_141m)	21:15	49 08:16 (WT01_141m)	20:10	19:03	17:04	16:36			
11	05:40	07:42 (WT01_141m)	06:22	07:27 (WT01_141m)	07:10	07:58	07:51	08:35			
	21:56	12 07:54 (WT01_141m)	21:13	48 08:15 (WT01_141m)	20:08	19:01	17:02	16:36			
12	05:41	07:40 (WT01_141m)	06:23	07:26 (WT01_141m)	07:12	08:00	07:53	08:36			
	21:55	16 07:56 (WT01_141m)	21:11	48 08:14 (WT01_141m)	20:06	18:58	17:01	16:36			
13	05:42	07:39 (WT01_141m)	06:25	07:27 (WT01_141m)	07:13	08:01	07:54	08:37			
	21:54	19 07:58 (WT01_141m)	21:10	47 08:14 (WT01_141m)	20:04	18:56	16:59	16:36			
14	05:43	07:38 (WT01_141m)	06:26	07:27 (WT01_141m)	07:15	08:03	07:56	08:38			
	21:53	22 08:00 (WT01_141m)	21:08	46 08:13 (WT01_141m)	20:01	18:54	16:58	16:36			
15	05:44	07:38 (WT01_141m)	06:28	07:28 (WT01_141m)	07:16	08:05	07:58	08:39			
	21:52	24 08:02 (WT01_141m)	21:06	45 08:13 (WT01_141m)	19:59	18:52	16:56	16:36			
16	05:45	07:37 (WT01_141m)	06:30	07:28 (WT01_141m)	07:18	08:06	07:59	08:40			
	21:51	26 08:03 (WT01_141m)	21:04	44 08:12 (WT01_141m)	19:57	18:50	16:55	16:36			
17	05:47	07:36 (WT01_141m)	06:31	07:29 (WT01_141m)	07:20	08:08	08:01	08:41			
	21:50	28 08:04 (WT01_141m)	21:02	42 08:11 (WT01_141m)	19:55	18:48	16:54	16:36			
18	05:48	07:35 (WT01_141m)	06:33	07:29 (WT01_141m)	07:21	08:10	08:03	08:41			
	21:49	30 08:05 (WT01_141m)	21:00	41 08:10 (WT01_141m)	19:52	18:46	16:52	16:37			
19	05:49	07:34 (WT01_141m)	06:34	07:31 (WT01_141m)	07:23	08:11	08:04	08:42			
	21:48	32 08:06 (WT01_141m)	20:58	38 08:09 (WT01_141m)	19:50	18:44	16:51	16:37			
20	05:50	07:33 (WT01_141m)	06:36	07:31 (WT01_141m)	07:24	08:13	08:06	08:43			
	21:47	34 08:07 (WT01_141m)	20:56	36 08:07 (WT01_141m)	19:48	18:42	16:50	16:37			
21	05:52	07:32 (WT01_141m)	06:37	07:33 (WT01_141m)	07:26	08:15	08:08	08:43			
	21:46	35 08:07 (WT01_141m)	20:54	33 08:06 (WT01_141m)	19:45	18:40	16:49	16:38			
22	05:53	07:32 (WT01_141m)	06:39	07:34 (WT01_141m)	07:27	08:16	08:09	08:44			
	21:45	37 08:09 (WT01_141m)	20:52	30 08:04 (WT01_141m)	19:43	18:38	16:48	16:38			
23	05:54	07:32 (WT01_141m)	06:40	07:36 (WT01_141m)	07:29	08:18	08:11	08:44			
	21:43	38 08:10 (WT01_141m)	20:50	26 08:02 (WT01_141m)	19:41	18:36	16:47	16:39			
24	05:55	07:31 (WT01_141m)	06:42	07:38 (WT01_141m)	07:31	08:20	08:12	08:45			
	21:42	39 08:10 (WT01_141m)	20:47	21 07:59 (WT01_141m)	19:39	18:34	16:46	16:39			
25	05:57	07:30 (WT01_141m)	06:44	07:42 (WT01_141m)	07:32	07:21	08:14	08:45			
	21:41	41 08:11 (WT01_141m)	20:45	14 07:56 (WT01_141m)	19:36	17:32	16:45	16:40			
26	05:58	07:30 (WT01_141m)	06:45		07:34	07:23	08:16	08:46			
	21:39	42 08:12 (WT01_141m)	20:43		19:34	17:30	16:44	16:41			
27	06:00	07:29 (WT01_141m)	06:47		07:35	07:25	08:17	08:46			
	21:38	44 08:13 (WT01_141m)	20:41		19:32	17:28	16:43	16:41			
28	06:01	07:29 (WT01_141m)	06:48		07:37	07:27	08:19	08:46			
	21:37	44 08:13 (WT01_141m)	20:39		19:30	17:26	16:42	16:42			
29	06:02	07:29 (WT01_141m)	06:50		07:38	07:28	08:20	08:46			
	21:35	45 08:14 (WT01_141m)	20:37		19:27	17:24	16:41	16:43			
30	06:04	07:28 (WT01_141m)	06:51		07:40	07:30	08:21	08:46			
	21:34	46 08:14 (WT01_141m)	20:35		19:25	17:22	16:41	16:44			
31	06:05	07:27 (WT01_141m)	06:53			07:32		08:46			
	21:32	47 08:14 (WT01_141m)	20:33			17:20		16:45			
Potential sun hours	498	451		380	333	269	248				
Total, worst case	709	1048									
Sun reduction	0,44	0,46									
Oper. time red.	0,99	0,99									
Wind dir. red.	0,66	0,66									
Total reduction	0,29	0,30									
Total, real	204	314									

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 42 - Baron Eduard Empainlaan 74
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	January	February	March	April	May	June
1	08:46	08:21	07:29	07:21	06:18	07:43 (WT01_141m) 05:34
	16:46	17:32	18:22	20:14	21:03	08:26 (WT01_141m) 21:47
2	08:46	08:19	07:27	07:18	06:16	07:43 (WT01_141m) 05:33
	16:47	17:34	18:24	20:16	21:05	08:25 (WT01_141m) 21:48
3	08:46	08:18	07:25	07:16	06:14	07:43 (WT01_141m) 05:33
	16:48	17:36	18:26	20:17	21:06	08:23 (WT01_141m) 21:49
4	08:46	08:16	07:23	07:14	06:12	07:44 (WT01_141m) 05:32
	16:49	17:38	18:27	20:19	21:08	08:22 (WT01_141m) 21:50
5	08:46	08:15	07:21	07:12	08:09 (WT01_141m) 06:10	07:45 (WT01_141m) 05:31
	16:50	17:39	18:29	20:21	21:10	08:21 (WT01_141m) 21:51
6	08:45	08:13	07:19	07:10	08:03 (WT01_141m) 06:09	07:46 (WT01_141m) 05:31
	16:52	17:41	18:31	20:22	21:11	08:20 (WT01_141m) 21:52
7	08:45	08:12	07:16	07:07	07:59 (WT01_141m) 06:07	07:47 (WT01_141m) 05:30
	16:53	17:43	18:33	20:24	21:13	08:18 (WT01_141m) 21:53
8	08:45	08:10	07:14	07:05	07:56 (WT01_141m) 06:05	07:49 (WT01_141m) 05:30
	16:54	17:45	18:34	20:26	21:14	08:17 (WT01_141m) 21:54
9	08:44	08:08	07:12	07:03	07:54 (WT01_141m) 06:04	07:50 (WT01_141m) 05:29
	16:55	17:47	18:36	20:27	21:16	08:14 (WT01_141m) 21:55
10	08:44	08:06	07:10	07:01	07:52 (WT01_141m) 06:02	07:52 (WT01_141m) 05:29
	16:57	17:48	18:38	20:29	21:17	08:13 (WT01_141m) 21:56
11	08:43	08:05	07:08	06:59	07:50 (WT01_141m) 06:00	07:54 (WT01_141m) 05:28
	16:58	17:50	18:39	20:31	21:19	08:10 (WT01_141m) 21:56
12	08:43	08:03	07:06	06:56	07:49 (WT01_141m) 05:59	07:58 (WT01_141m) 05:28
	16:59	17:52	18:41	20:32	21:21	08:06 (WT01_141m) 21:57
13	08:42	08:01	07:03	06:54	07:48 (WT01_141m) 05:57	05:28
	17:01	17:54	18:43	20:34	21:22	21:58
14	08:41	07:59	07:01	06:52	07:47 (WT01_141m) 05:56	05:28
	17:02	17:56	18:44	20:36	21:24	21:58
15	08:41	07:57	06:59	06:50	07:46 (WT01_141m) 05:54	05:28
	17:04	17:57	18:46	20:37	21:25	21:59
16	08:40	07:55	06:57	06:48	07:44 (WT01_141m) 05:53	05:27
	17:05	17:59	18:48	20:39	21:27	21:59
17	08:39	07:54	06:54	06:46	07:43 (WT01_141m) 05:51	05:27
	17:07	18:01	18:49	20:40	21:28	22:00
18	08:38	07:52	06:52	06:44	07:43 (WT01_141m) 05:50	05:27
	17:09	18:03	18:51	20:42	21:29	22:00
19	08:37	07:50	06:50	06:42	07:42 (WT01_141m) 05:48	05:27
	17:10	18:05	18:53	20:44	21:31	22:01
20	08:36	07:48	06:48	06:39	07:41 (WT01_141m) 05:47	05:27
	17:12	18:06	18:54	20:45	21:32	22:01
21	08:35	07:46	06:45	06:37	07:41 (WT01_141m) 05:46	05:28
	17:13	18:08	18:56	20:47	21:34	22:01
22	08:34	07:44	06:43	06:35	07:41 (WT01_141m) 05:45	05:28
	17:15	18:10	18:58	20:49	21:35	22:01
23	08:33	07:42	06:41	06:33	07:40 (WT01_141m) 05:43	05:28
	17:17	18:12	18:59	20:50	21:36	22:01
24	08:32	07:40	06:39	06:31	07:40 (WT01_141m) 05:42	05:28
	17:18	18:13	19:01	20:52	21:38	22:02
25	08:30	07:38	06:36	06:29	07:41 (WT01_141m) 05:41	05:29
	17:20	18:15	19:03	20:54	21:39	22:02
26	08:29	07:36	06:34	06:27	07:41 (WT01_141m) 05:40	05:29
	17:22	18:17	19:04	20:55	21:40	22:02
27	08:28	07:34	06:32	06:25	07:41 (WT01_141m) 05:39	05:29
	17:24	18:19	19:06	20:57	21:41	22:02
28	08:27	07:31	06:30	06:23	07:41 (WT01_141m) 05:38	05:30
	17:25	18:20	19:08	20:58	21:43	22:01
29	08:25		07:27	06:22	07:41 (WT01_141m) 05:37	05:30
	17:27		20:09	21:00	21:44	22:01
30	08:24		07:25	06:20	07:41 (WT01_141m) 05:36	05:31
	17:29		20:11	21:02	21:45	22:01
31	08:22		07:23		05:35	
	17:31		20:13		21:46	
Potential sun hours	263	279	367	414	481	494
Total, worst case				1082		361
Sun reduction				0,45		0,45
Oper. time red.				0,99		0,99
Wind dir. red.				0,64		0,64
Total reduction				0,28		0,28
Total, real				306		103

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 42 - Baron Eduard Empainlaan 74
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	July	August	September	October	November	December
1	05:32 22:01	06:07 21:30	08:07 (WT01_141m) 08:18 (WT01_141m)	06:55 20:30	07:49 (WT01_141m) 08:28 (WT01_141m)	07:42 19:23
2	05:32 22:01	06:08 21:29	08:03 (WT01_141m) 08:21 (WT01_141m)	06:56 20:28	07:51 (WT01_141m) 08:27 (WT01_141m)	17:19 19:21
3	05:33 22:00	06:10 21:27	08:02 (WT01_141m) 08:24 (WT01_141m)	06:58 20:26	07:52 (WT01_141m) 08:24 (WT01_141m)	17:15 19:18
4	05:34 22:00	06:11 21:26	07:59 (WT01_141m) 08:26 (WT01_141m)	06:59 20:24	07:54 (WT01_141m) 08:23 (WT01_141m)	17:13 19:16
5	05:35 21:59	06:13 21:24	07:57 (WT01_141m) 08:27 (WT01_141m)	07:01 20:22	07:55 (WT01_141m) 08:19 (WT01_141m)	17:12 19:14
6	05:35 21:59	06:14 21:22	07:57 (WT01_141m) 08:29 (WT01_141m)	07:02 20:19	07:59 (WT01_141m) 08:16 (WT01_141m)	17:10 19:12
7	05:36 21:58	06:16 21:20	07:55 (WT01_141m) 08:29 (WT01_141m)	07:04 20:17	07:51 (WT01_141m) 08:10 (WT01_141m)	17:08 19:09
8	05:37 21:58	06:17 21:19	07:54 (WT01_141m) 08:31 (WT01_141m)	07:06 20:15	07:53 19:07	17:07 19:07
9	05:38 21:57	06:19 21:17	07:53 (WT01_141m) 08:32 (WT01_141m)	07:07 20:13	07:55 19:05	17:07 17:05
10	05:39 21:56	06:20 21:15	07:53 (WT01_141m) 08:33 (WT01_141m)	07:09 20:10	07:56 19:03	17:05 17:04
11	05:40 21:56	06:22 21:13	07:51 (WT01_141m) 08:34 (WT01_141m)	07:10 20:08	07:58 19:01	17:04 17:02
12	05:41 21:55	06:23 21:11	07:50 (WT01_141m) 08:34 (WT01_141m)	07:12 20:06	08:00 18:58	17:03 17:01
13	05:42 21:54	06:25 21:10	07:50 (WT01_141m) 08:35 (WT01_141m)	07:13 20:04	08:01 18:56	17:04 16:59
14	05:43 21:53	06:26 21:08	07:49 (WT01_141m) 08:35 (WT01_141m)	07:15 20:01	08:03 18:54	17:06 16:58
15	05:44 21:52	06:28 21:06	07:49 (WT01_141m) 08:36 (WT01_141m)	07:16 19:59	08:05 18:52	17:08 16:56
16	05:45 21:51	06:30 21:04	07:48 (WT01_141m) 08:36 (WT01_141m)	07:18 19:57	08:06 18:50	17:09 16:55
17	05:47 21:50	06:31 21:02	07:48 (WT01_141m) 08:36 (WT01_141m)	07:20 19:55	08:08 18:48	17:01 16:54
18	05:48 21:49	06:33 21:00	07:47 (WT01_141m) 08:36 (WT01_141m)	07:21 19:52	08:10 18:46	16:53 16:52
19	05:49 21:48	06:34 20:58	07:47 (WT01_141m) 08:37 (WT01_141m)	07:23 19:50	08:11 18:44	16:52 16:51
20	05:50 21:47	06:36 20:56	07:46 (WT01_141m) 08:36 (WT01_141m)	07:24 19:48	08:13 18:42	16:50 16:50
21	05:52 21:46	06:37 20:54	07:46 (WT01_141m) 08:37 (WT01_141m)	07:26 19:45	08:15 18:40	16:49 16:49
22	05:53 21:45	06:39 20:52	07:46 (WT01_141m) 08:36 (WT01_141m)	07:27 19:43	08:16 18:38	16:48 16:48
23	05:54 21:43	06:40 20:50	07:46 (WT01_141m) 08:36 (WT01_141m)	07:29 19:41	08:18 18:36	16:48 16:47
24	05:55 21:42	06:42 20:48	07:46 (WT01_141m) 08:35 (WT01_141m)	07:31 19:39	08:20 18:34	16:47 16:46
25	05:57 21:41	06:44 20:45	07:46 (WT01_141m) 08:35 (WT01_141m)	07:32 19:36	07:21 17:32	16:46 16:45
26	05:58 21:39	06:45 20:43	07:46 (WT01_141m) 08:34 (WT01_141m)	07:34 19:34	07:23 17:30	16:45 16:44
27	06:00 21:38	06:47 20:41	07:47 (WT01_141m) 08:34 (WT01_141m)	07:35 19:32	07:25 17:28	16:44 16:43
28	06:01 21:37	06:48 20:39	07:47 (WT01_141m) 08:33 (WT01_141m)	07:37 19:30	07:27 17:26	16:43 16:42
29	06:02 21:35	06:50 20:37	07:48 (WT01_141m) 08:32 (WT01_141m)	07:38 19:27	07:28 17:24	16:42 16:41
30	06:04 21:34	06:51 20:35	07:48 (WT01_141m) 08:30 (WT01_141m)	07:40 19:25	07:30 17:22	16:41 16:41
31	06:05 21:32	06:53 20:33	07:49 (WT01_141m) 08:30 (WT01_141m)		07:32 17:20	16:41 16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case		1277	183			
Sun reduction		0,46	0,43			
Oper. time red.		0,99	0,99			
Wind dir. red.		0,64	0,64			
Total reduction		0,29	0,27			
Total, real		371	49			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
 NL-1082 MS Amsterdam
 +31 (0)88 4261 261
 Margot Scheldeman /
 margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 43 - Baron Eduard Empainlaan 89

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46	08:21	07:29	07:21	08:09 (WT01_141m)	06:18
	16:46	17:32	18:22	20:14	29 08:38 (WT01_141m)	21:03
2	08:46	08:19	07:27	07:18	08:07 (WT01_141m)	06:16
	16:47	17:34	18:24	20:16	33 08:40 (WT01_141m)	21:05
3	08:46	08:18	07:25	07:16	08:04 (WT01_141m)	06:14
	16:48	17:36	18:26	20:17	36 08:40 (WT01_141m)	21:06
4	08:46	08:16	07:23	07:14	08:03 (WT01_141m)	06:12
	16:49	17:38	18:27	20:19	38 08:41 (WT01_141m)	21:08
5	08:46	08:15	07:21	07:12	08:02 (WT01_141m)	06:10
	16:50	17:39	18:29	20:21	40 08:42 (WT01_141m)	21:10
6	08:45	08:13	07:19	07:10	08:01 (WT01_141m)	06:09
	16:52	17:41	18:31	20:22	41 08:42 (WT01_141m)	21:11
7	08:45	08:12	07:16	07:07	08:00 (WT01_141m)	06:07
	16:53	17:43	18:33	20:24	43 08:43 (WT01_141m)	21:13
8	08:45	08:10	07:14	07:05	07:58 (WT01_141m)	06:05
	16:54	17:45	18:34	20:26	44 08:42 (WT01_141m)	21:14
9	08:44	08:08	07:12	07:03	07:58 (WT01_141m)	06:04
	16:55	17:47	18:36	20:27	44 08:42 (WT01_141m)	21:16
10	08:44	08:06	07:10	07:01	07:57 (WT01_141m)	06:02
	16:57	17:48	18:38	20:29	45 08:42 (WT01_141m)	21:17
11	08:43	08:05	07:08	06:59	07:57 (WT01_141m)	06:00
	16:58	17:50	18:39	20:31	45 08:42 (WT01_141m)	21:19
12	08:43	08:03	07:06	06:56	07:57 (WT01_141m)	05:59
	16:59	17:52	18:41	20:32	45 08:42 (WT01_141m)	21:21
13	08:42	08:01	07:03	06:54	07:57 (WT01_141m)	05:57
	17:01	17:54	18:43	20:34	45 08:42 (WT01_141m)	21:22
14	08:41	07:59	07:01	06:52	07:56 (WT01_141m)	05:56
	17:02	17:56	18:44	20:36	45 08:41 (WT01_141m)	21:24
15	08:41	07:57	06:59	06:50	07:56 (WT01_141m)	05:54
	17:04	17:57	18:46	20:37	45 08:41 (WT01_141m)	21:25
16	08:40	07:55	06:57	06:48	07:56 (WT01_141m)	05:53
	17:05	17:59	18:48	20:39	43 08:39 (WT01_141m)	21:27
17	08:39	07:54	06:54	06:46	07:56 (WT01_141m)	05:51
	17:07	18:01	18:49	20:40	42 08:38 (WT01_141m)	21:28
18	08:38	07:52	06:52	06:44	07:56 (WT01_141m)	05:50
	17:09	18:03	18:51	20:42	42 08:38 (WT01_141m)	21:29
19	08:37	07:50	06:50	06:42	07:56 (WT01_141m)	05:48
	17:10	18:05	18:53	20:44	41 08:37 (WT01_141m)	21:31
20	08:36	07:48	06:48	06:39	07:57 (WT01_141m)	05:47
	17:12	18:06	18:54	20:45	39 08:36 (WT01_141m)	21:32
21	08:35	07:46	06:45	06:37	07:57 (WT01_141m)	05:46
	17:13	18:08	18:56	20:47	37 08:34 (WT01_141m)	21:34
22	08:34	07:44	06:43	06:35	07:58 (WT01_141m)	05:45
	17:15	18:10	18:58	20:49	35 08:33 (WT01_141m)	21:35
23	08:33	07:42	06:41	06:33	07:59 (WT01_141m)	05:43
	17:17	18:12	18:59	20:50	32 08:31 (WT01_141m)	21:36
24	08:32	07:40	06:39	06:31	08:01 (WT01_141m)	05:42
	17:18	18:13	19:01	20:52	29 08:30 (WT01_141m)	21:38
25	08:30	07:38	06:36	06:29	08:02 (WT01_141m)	05:41
	17:20	18:15	19:03	20:54	26 08:28 (WT01_141m)	21:39
26	08:29	07:36	06:34	06:27	08:04 (WT01_141m)	05:40
	17:22	18:17	19:04	20:55	22 08:26 (WT01_141m)	21:40
27	08:28	07:34	06:32	06:25	08:06 (WT01_141m)	05:39
	17:24	18:19	19:06	20:57	17 08:23 (WT01_141m)	21:41
28	08:27	07:31	06:30	06:23	08:10 (WT01_141m)	05:38
	17:25	18:20	19:08	20:58	8 08:18 (WT01_141m)	21:43
29	08:25		07:27	08:18 (WT01_141m)	06:22	05:37
	17:27		20:09	13 08:31 (WT01_141m)	21:00	21:44
30	08:24		07:25	08:13 (WT01_141m)	06:20	05:36
	17:29		20:11	21 08:34 (WT01_141m)	21:02	21:45
31	08:22		07:23	08:11 (WT01_141m)		05:35
	17:31		20:13	25 08:36 (WT01_141m)		21:46
Potential sun hours	263	279	367	414		481
Total, worst case					1031	
Sun reduction					0,45	
Oper. time red.					0,99	
Wind dir. red.					0,62	
Total reduction					0,28	
Total, real					284	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 43 - Baron Eduard Empainlaan 89
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	July	August	September	October	November	December
1	05:32	06:07	06:55	07:56 (WT01_141m)	07:42	07:34
	22:01	21:30	20:30	08:41 (WT01_141m)	19:23	17:19
2	05:32	06:08	06:56	07:56 (WT01_141m)	07:43	07:35
	22:01	21:29	20:28	08:41 (WT01_141m)	19:21	17:17
3	05:33	06:10	06:58	07:56 (WT01_141m)	07:45	07:37
	22:00	21:27	20:26	08:40 (WT01_141m)	19:18	17:15
4	05:34	06:11	06:59	07:56 (WT01_141m)	07:47	07:39
	22:00	21:26	20:24	08:40 (WT01_141m)	19:16	17:13
5	05:35	06:13	07:01	07:56 (WT01_141m)	07:48	07:40
	21:59	21:24	20:22	08:39 (WT01_141m)	19:14	17:12
6	05:35	06:14	07:02	07:57 (WT01_141m)	07:50	07:42
	21:59	21:22	20:19	08:38 (WT01_141m)	19:12	17:10
7	05:36	06:16	07:04	07:57 (WT01_141m)	07:51	07:44
	21:58	21:20	20:17	08:37 (WT01_141m)	19:09	17:08
8	05:37	06:17	07:06	07:58 (WT01_141m)	07:53	07:46
	21:58	21:19	20:15	08:36 (WT01_141m)	19:07	17:07
9	05:38	06:19	07:07	07:58 (WT01_141m)	07:55	07:47
	21:57	21:17	20:13	08:34 (WT01_141m)	19:05	17:05
10	05:39	06:20	07:09	08:00 (WT01_141m)	07:56	07:49
	21:56	21:15	20:10	08:33 (WT01_141m)	19:03	17:04
11	05:40	06:22	07:10	08:01 (WT01_141m)	07:58	07:51
	21:56	21:13	20:08	08:31 (WT01_141m)	19:01	17:02
12	05:41	06:23	07:12	08:03 (WT01_141m)	08:00	07:53
	21:55	21:11	20:06	08:29 (WT01_141m)	18:58	17:01
13	05:42	06:25	07:13	08:04 (WT01_141m)	08:01	07:54
	21:54	21:10	20:04	08:26 (WT01_141m)	18:56	16:59
14	05:43	06:26	07:15	08:08 (WT01_141m)	08:03	07:56
	21:53	21:08	20:01	08:22 (WT01_141m)	18:54	16:58
15	05:44	06:28	08:16 (WT01_141m)	07:16	08:05	07:58
	21:52	21:06	11 08:27 (WT01_141m)	19:59	18:52	16:56
16	05:45	06:30	08:12 (WT01_141m)	07:18	08:06	07:59
	21:51	21:04	18 08:30 (WT01_141m)	19:57	18:50	16:55
17	05:47	06:31	08:10 (WT01_141m)	07:20	08:08	08:01
	21:50	21:02	23 08:33 (WT01_141m)	19:55	18:48	16:54
18	05:48	06:33	08:08 (WT01_141m)	07:21	08:10	08:03
	21:49	21:00	26 08:34 (WT01_141m)	19:52	18:46	16:52
19	05:49	06:34	08:07 (WT01_141m)	07:23	08:11	08:04
	21:48	20:58	29 08:36 (WT01_141m)	19:50	18:44	16:51
20	05:50	06:36	08:05 (WT01_141m)	07:24	08:13	08:06
	21:47	20:56	32 08:37 (WT01_141m)	19:48	18:42	16:50
21	05:52	06:37	08:04 (WT01_141m)	07:26	08:15	08:08
	21:46	20:54	35 08:39 (WT01_141m)	19:45	18:40	16:49
22	05:53	06:39	08:02 (WT01_141m)	07:27	08:16	08:09
	21:45	20:52	37 08:39 (WT01_141m)	19:43	18:38	16:48
23	05:54	06:40	08:02 (WT01_141m)	07:29	08:18	08:11
	21:43	20:50	38 08:40 (WT01_141m)	19:41	18:36	16:47
24	05:55	06:42	08:00 (WT01_141m)	07:31	08:20	08:12
	21:42	20:48	41 08:41 (WT01_141m)	19:39	18:34	16:46
25	05:57	06:44	08:00 (WT01_141m)	07:32	07:21	08:14
	21:41	20:45	42 08:42 (WT01_141m)	19:36	17:32	16:45
26	05:58	06:45	07:59 (WT01_141m)	07:34	07:23	08:16
	21:39	20:43	42 08:41 (WT01_141m)	19:34	17:30	16:44
27	06:00	06:47	07:58 (WT01_141m)	07:35	07:25	08:17
	21:38	20:41	44 08:42 (WT01_141m)	19:32	17:28	16:43
28	06:01	06:48	07:57 (WT01_141m)	07:37	07:27	08:19
	21:37	20:39	45 08:42 (WT01_141m)	19:30	17:26	16:42
29	06:02	06:50	07:57 (WT01_141m)	07:39	07:28	08:20
	21:35	20:37	45 08:42 (WT01_141m)	19:27	17:24	16:41
30	06:04	06:51	07:56 (WT01_141m)	07:40	07:30	08:21
	21:34	20:35	46 08:42 (WT01_141m)	19:25	17:22	16:41
31	06:05	06:53	07:57 (WT01_141m)		07:32	08:46
	21:32	20:33	45 08:42 (WT01_141m)		17:20	16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case		599	501			
Sun reduction		0,46	0,43			
Oper. time red.		0,99	0,99			
Wind dir. red.		0,62	0,62			
Total reduction		0,28	0,26			
Total, real		169	131			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 44 - Baron Eduard Empainlaan 92
 Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	January	February	March	April	May	June
1	08:46 16:46	08:21 17:32	07:29 18:22	07:21 20:14	08:22 (WT01_141m) 09:06 (WT01_141m)	06:18 21:03
2	08:46 16:47	08:19 17:34	07:27 18:24	07:18 20:16	08:22 (WT01_141m) 09:06 (WT01_141m)	06:16 21:05
3	08:46 16:48	08:18 17:36	07:25 18:26	07:16 20:17	08:22 (WT01_141m) 09:04 (WT01_141m)	06:14 21:06
4	08:46 16:49	08:16 17:38	07:23 18:27	07:14 20:19	08:22 (WT01_141m) 09:04 (WT01_141m)	06:12 21:08
5	08:46 16:50	08:15 17:39	07:21 18:29	07:12 20:21	08:22 (WT01_141m) 09:03 (WT01_141m)	06:10 21:10
6	08:46 16:52	08:13 17:41	07:19 18:31	07:10 20:22	08:23 (WT01_141m) 09:02 (WT01_141m)	06:09 21:11
7	08:45 16:53	08:12 17:43	07:16 18:33	07:07 20:24	08:24 (WT01_141m) 09:01 (WT01_141m)	06:07 21:13
8	08:45 16:54	08:10 17:45	07:14 18:34	07:05 20:26	08:23 (WT01_141m) 08:59 (WT01_141m)	06:05 21:14
9	08:44 16:55	08:08 17:47	07:12 18:36	07:03 20:27	08:24 (WT01_141m) 08:57 (WT01_141m)	06:04 21:16
10	08:44 16:57	08:06 17:48	07:10 18:38	07:01 20:29	08:26 (WT01_141m) 08:55 (WT01_141m)	06:02 21:17
11	08:43 16:58	08:05 17:50	07:08 18:39	06:59 20:31	08:27 (WT01_141m) 08:53 (WT01_141m)	06:00 21:19
12	08:43 16:59	08:03 17:52	07:06 18:41	06:56 20:32	08:29 (WT01_141m) 08:51 (WT01_141m)	05:59 21:21
13	08:42 17:01	08:01 17:54	07:03 18:43	06:54 20:34	08:31 (WT01_141m) 08:48 (WT01_141m)	05:57 21:22
14	08:41 17:02	07:59 17:56	07:01 18:44	06:52 20:36	08:36 (WT01_141m) 08:42 (WT01_141m)	05:56 21:24
15	08:41 17:04	07:57 17:57	06:59 18:46	06:50 20:37		05:54 21:25
16	08:40 17:05	07:55 17:59	06:57 18:48	06:48 20:39		05:53 21:27
17	08:39 17:07	07:54 18:01	06:54 18:49	06:46 20:40	07:46 (WT01_141m) 07:54 (WT01_141m)	05:51 21:28
18	08:38 17:09	07:52 18:03	06:52 18:51	06:44 20:42	07:40 (WT01_141m) 07:58 (WT01_141m)	05:50 21:29
19	08:37 17:10	07:50 18:05	06:50 18:53	06:42 20:44	07:37 (WT01_141m) 08:01 (WT01_141m)	05:48 21:31
20	08:36 17:12	07:48 18:06	06:48 18:54	06:39 20:45	07:35 (WT01_141m) 08:03 (WT01_141m)	05:47 21:32
21	08:35 17:13	07:46 18:08	06:45 18:56	06:37 20:47	07:33 (WT01_141m) 08:04 (WT01_141m)	05:46 21:34
22	08:34 17:15	07:44 18:10	06:43 18:58	06:35 20:49	07:30 (WT01_141m) 08:05 (WT01_141m)	05:45 21:35
23	08:33 17:17	07:42 18:12	06:41 18:59	06:33 20:50	07:29 (WT01_141m) 08:06 (WT01_141m)	05:43 21:36
24	08:32 17:18	07:40 18:13	06:39 19:01	06:31 20:52	07:28 (WT01_141m) 08:07 (WT01_141m)	05:42 21:38
25	08:30 17:20	07:38 18:15	06:36 19:03	06:29 20:54	07:27 (WT01_141m) 08:07 (WT01_141m)	05:41 21:39
26	08:29 17:22	07:36 18:17	06:34 19:04	06:27 20:55	07:25 (WT01_141m) 08:07 (WT01_141m)	05:40 21:40
27	08:28 17:24	07:34 18:19	06:32 19:06	06:25 20:57	07:25 (WT01_141m) 08:07 (WT01_141m)	05:39 21:41
28	08:27 17:25	07:31 18:20	06:30 19:08	06:23 20:58	07:24 (WT01_141m) 08:07 (WT01_141m)	05:38 21:43
29	08:25 17:27		07:27 20:09	06:22 21:00	08:24 (WT01_141m) 09:08 (WT01_141m)	05:37 21:44
30	08:24 17:29		07:25 20:11	06:20 21:02	08:23 (WT01_141m) 09:07 (WT01_141m)	05:36 21:45
31	08:22 17:31		07:23 20:13	06:19 21:02	08:22 (WT01_141m) 09:06 (WT01_141m)	05:35 21:46
Potential sun hours	263	279	367	414	481	494
Total, worst case			519		458	
Sun reduction			0,36		0,45	
Oper. time red.			0,99		0,99	
Wind dir. red.			0,59		0,59	
Total reduction			0,21		0,26	
Total, real			109		119	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 44 - Baron Eduard Empainlaan 92
 Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December
1	05:32	06:07	06:55	08:26 (WT01_141m)	07:42	07:34
	22:01	21:30	20:30	08:52 (WT01_141m)	19:23	17:19
2	05:32	06:08	06:56	08:24 (WT01_141m)	07:43	07:35
	22:01	21:29	20:28	08:54 (WT01_141m)	19:21	17:17
3	05:33	06:10	06:58	08:22 (WT01_141m)	07:45	07:37
	22:00	21:27	20:26	08:55 (WT01_141m)	19:18	17:15
4	05:34	06:11	06:59	08:21 (WT01_141m)	07:47	07:39
	22:00	21:26	20:24	08:57 (WT01_141m)	19:16	17:13
5	05:35	06:13	07:01	08:20 (WT01_141m)	07:48	07:40
	21:59	21:24	20:22	08:57 (WT01_141m)	19:14	17:12
6	05:35	06:14	07:02	08:19 (WT01_141m)	07:50	07:42
	21:59	21:22	20:19	08:58 (WT01_141m)	19:12	17:10
7	05:36	06:16	07:04	08:17 (WT01_141m)	07:51	07:44
	21:58	21:20	20:17	08:58 (WT01_141m)	19:09	17:08
8	05:37	06:17	07:06	08:17 (WT01_141m)	07:53	07:46
	21:58	21:19	20:15	08:59 (WT01_141m)	19:07	17:07
9	05:38	06:19	07:07	08:16 (WT01_141m)	07:55	07:47
	21:57	21:17	20:13	08:58 (WT01_141m)	19:05	17:05
10	05:39	06:20	07:09	08:16 (WT01_141m)	07:56	07:49
	21:56	21:15	20:10	08:59 (WT01_141m)	19:03	17:04
11	05:40	06:22	07:10	08:15 (WT01_141m)	07:58	07:51
	21:56	21:13	20:08	08:58 (WT01_141m)	19:01	17:02
12	05:41	06:23	07:12	08:15 (WT01_141m)	08:00	07:53
	21:55	21:11	20:06	08:59 (WT01_141m)	18:58	17:01
13	05:42	06:25	07:13	08:14 (WT01_141m)	08:01	07:54
	21:54	21:10	20:04	08:58 (WT01_141m)	18:56	16:59
14	05:43	06:26	07:15	08:14 (WT01_141m)	08:03	07:56
	21:53	21:08	20:01	08:58 (WT01_141m)	18:54	16:58
15	05:44	06:28	07:16	08:13 (WT01_141m)	08:05	07:58
	21:52	21:06	19:59	08:57 (WT01_141m)	18:52	16:56
16	05:45	06:30	07:18	08:14 (WT01_141m)	08:06	07:59
	21:51	21:04	19:57	08:57 (WT01_141m)	18:50	16:55
17	05:47	06:31	07:20	08:14 (WT01_141m)	08:08	08:01
	21:50	21:02	19:55	08:55 (WT01_141m)	18:48	16:54
18	05:48	06:33	07:21	08:14 (WT01_141m)	08:10	08:03
	21:49	21:00	19:52	08:55 (WT01_141m)	18:46	16:52
19	05:49	06:34	07:23	08:14 (WT01_141m)	08:11	08:04
	21:48	20:58	19:50	08:53 (WT01_141m)	18:44	16:51
20	05:50	06:36	07:24	08:15 (WT01_141m)	08:13	08:06
	21:47	20:56	19:48	08:52 (WT01_141m)	18:42	16:50
21	05:52	06:37	07:26	08:15 (WT01_141m)	08:15	08:08
	21:46	20:54	19:45	08:50 (WT01_141m)	18:40	16:49
22	05:53	06:39	07:27	08:17 (WT01_141m)	08:16	08:09
	21:45	20:52	19:43	08:49 (WT01_141m)	18:38	16:48
23	05:54	06:40	07:29	08:19 (WT01_141m)	08:18	08:11
	21:43	20:50	19:41	08:48 (WT01_141m)	18:36	16:47
24	05:55	06:42	07:31	08:20 (WT01_141m)	08:20	08:12
	21:42	20:48	19:39	08:45 (WT01_141m)	18:34	16:46
25	05:57	06:44	07:32	08:22 (WT01_141m)	07:21	08:14
	21:41	20:45	19:36	08:42 (WT01_141m)	17:32	16:45
26	05:58	06:45	07:34	08:25 (WT01_141m)	07:23	08:16
	21:39	20:43	19:34	08:38 (WT01_141m)	17:30	16:44
27	06:00	06:47	07:35		07:25	08:17
	21:38	20:41	19:32		17:28	16:43
28	06:01	06:48	07:37		07:27	08:19
	21:37	20:39	19:30		17:26	16:42
29	06:02	06:50	07:39		07:28	08:20
	21:35	20:37	19:27		17:24	16:41
30	06:04	06:51	07:40		07:30	08:21
	21:34	20:35	19:25		17:22	16:41
31	06:05	06:53			07:32	08:46
	21:32	20:33			17:20	16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case		46	943			
Sun reduction		0,46	0,43			
Oper. time red.		0,99	0,99			
Wind dir. red.		0,59	0,59			
Total reduction		0,27	0,25			
Total, real		12	233			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
 NL-1082 MS Amsterdam
 +31 (0)88 4261 261
 Margot Scheldeman /
 margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 45 - Baron Eduard Empainlaan 115
 Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46	08:21	07:29	08:11 (WT01_141m)	07:21	06:18
	16:46	17:32	18:22	18:29 (WT01_141m)	20:14	21:03
2	08:46	08:19	07:27	08:09 (WT01_141m)	07:18	06:16
	16:47	17:34	18:24	08:31 (WT01_141m)	20:16	21:05
3	08:46	08:18	07:25	08:07 (WT01_141m)	07:16	06:14
	16:48	17:36	18:26	08:33 (WT01_141m)	20:18	21:06
4	08:46	08:16	07:23	08:05 (WT01_141m)	07:14	06:12
	16:49	17:38	18:27	08:34 (WT01_141m)	20:19	21:08
5	08:46	08:15	07:21	08:04 (WT01_141m)	07:12	06:10
	16:50	17:39	18:29	08:35 (WT01_141m)	20:21	21:10
6	08:46	08:13	07:19	08:02 (WT01_141m)	07:10	06:09
	16:52	17:41	18:31	08:35 (WT01_141m)	20:22	21:11
7	08:45	08:12	07:16	08:01 (WT01_141m)	07:07	06:07
	16:53	17:43	18:33	08:36 (WT01_141m)	20:24	21:13
8	08:45	08:10	07:14	08:00 (WT01_141m)	07:05	06:05
	16:54	17:45	18:34	08:37 (WT01_141m)	20:26	21:14
9	08:44	08:08	07:12	08:00 (WT01_141m)	07:03	06:04
	16:55	17:47	18:36	08:37 (WT01_141m)	20:27	21:16
10	08:44	08:06	07:10	07:58 (WT01_141m)	07:01	06:02
	16:57	17:48	18:38	08:36 (WT01_141m)	20:29	21:17
11	08:43	08:05	07:08	07:58 (WT01_141m)	06:59	06:00
	16:58	17:50	18:39	08:37 (WT01_141m)	20:31	21:19
12	08:43	08:03	07:06	07:58 (WT01_141m)	06:56	05:59
	16:59	17:52	18:41	08:37 (WT01_141m)	20:32	21:21
13	08:42	08:01	07:03	07:58 (WT01_141m)	06:54	05:57
	17:01	17:54	18:43	08:36 (WT01_141m)	20:34	21:22
14	08:41	07:59	07:01	07:57 (WT01_141m)	06:52	05:56
	17:02	17:56	18:44	08:35 (WT01_141m)	20:36	21:24
15	08:41	07:57	06:59	07:58 (WT01_141m)	06:50	05:54
	17:04	17:57	18:46	08:35 (WT01_141m)	20:37	21:25
16	08:40	07:55	06:57	07:58 (WT01_141m)	06:48	05:53
	17:05	17:59	18:48	08:34 (WT01_141m)	20:39	21:27
17	08:39	07:54	06:54	07:59 (WT01_141m)	06:46	05:51
	17:07	18:01	18:49	08:33 (WT01_141m)	20:40	21:28
18	08:38	07:52	06:52	07:58 (WT01_141m)	06:44	05:50
	17:09	18:03	18:51	08:31 (WT01_141m)	20:42	21:29
19	08:37	07:50	06:50	07:59 (WT01_141m)	06:42	05:48
	17:10	18:05	18:53	08:30 (WT01_141m)	20:44	21:31
20	08:36	07:48	06:48	08:01 (WT01_141m)	06:39	05:47
	17:12	18:06	18:54	08:28 (WT01_141m)	20:45	21:32
21	08:35	07:46	06:45	08:02 (WT01_141m)	06:37	05:46
	17:13	18:08	18:56	08:26 (WT01_141m)	20:47	21:34
22	08:34	07:44	06:43	08:03 (WT01_141m)	06:35	05:45
	17:15	18:10	18:58	08:23 (WT01_141m)	20:49	21:35
23	08:33	07:42	06:41	08:06 (WT01_141m)	06:33	05:43
	17:17	18:12	18:59	08:20 (WT01_141m)	20:50	21:36
24	08:32	07:40	06:39		06:31	05:42
	17:18	18:13	19:01		20:52	21:38
25	08:30	07:38	06:36		06:29	05:41
	17:20	18:15	19:03		20:54	21:39
26	08:29	07:36	06:34		06:27	05:40
	17:22	18:17	19:04		20:55	21:40
27	08:28	07:34	06:32		06:25	05:39
	17:24	18:19	19:06		20:57	21:41
28	08:27	07:31	06:30	08:16 (WT01_141m)	06:23	05:38
	17:25	18:20	19:08	08:26 (WT01_141m)	20:58	21:43
29	08:25		07:27		06:22	05:37
	17:27		20:09		21:00	21:44
30	08:24		07:25		06:20	05:36
	17:29		20:11		21:02	21:45
31	08:22		07:23			05:35
	17:31		20:13			21:46
Potential sun hours	263	279	367	414	481	494
Total, worst case						
Sun reduction		10	716			
Oper. time red.		0,28	0,36			
Wind dir. red.		0,99	0,99			
Total reduction		0,54	0,54			
Total, real		0,15	0,19			
		2	139			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 45 - Baron Eduard Empainlaan 115

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July	August	September	October	November	December
1	05:32	06:07	06:55	07:42	08:37 (WT01_141m)	07:34
	22:01	21:30	20:30	19:23	09:15 (WT01_141m)	17:19
2	05:32	06:08	06:56	07:43	08:37 (WT01_141m)	07:35
	22:01	21:29	20:28	19:21	09:15 (WT01_141m)	17:17
3	05:33	06:10	06:58	07:45	08:37 (WT01_141m)	07:37
	22:00	21:27	20:26	19:18	09:15 (WT01_141m)	17:15
4	05:34	06:11	06:59	07:47	08:36 (WT01_141m)	07:39
	22:00	21:26	20:24	19:16	09:14 (WT01_141m)	17:13
5	05:35	06:13	07:01	07:48	08:37 (WT01_141m)	07:41
	21:59	21:24	20:22	19:14	09:14 (WT01_141m)	17:12
6	05:35	06:14	07:02	07:50	08:36 (WT01_141m)	07:42
	21:59	21:22	20:19	19:12	09:12 (WT01_141m)	17:10
7	05:36	06:16	07:04	07:51	08:37 (WT01_141m)	07:44
	21:58	21:20	20:17	19:09	09:12 (WT01_141m)	17:08
8	05:37	06:17	07:06	07:53	08:38 (WT01_141m)	07:46
	21:58	21:19	20:15	19:07	09:11 (WT01_141m)	17:07
9	05:38	06:19	07:07	07:55	08:39 (WT01_141m)	07:47
	21:57	21:17	20:13	19:05	09:10 (WT01_141m)	17:05
10	05:39	06:20	07:09	07:56	08:40 (WT01_141m)	07:49
	21:56	21:15	20:10	19:03	09:08 (WT01_141m)	17:04
11	05:40	06:22	07:10	07:58	08:42 (WT01_141m)	07:51
	21:56	21:13	20:08	19:01	09:06 (WT01_141m)	17:02
12	05:41	06:23	07:12	08:00	08:44 (WT01_141m)	07:53
	21:55	21:11	20:06	18:58	09:04 (WT01_141m)	17:01
13	05:42	06:25	07:13	08:01	08:45 (WT01_141m)	07:54
	21:54	21:10	20:04	18:56	09:01 (WT01_141m)	16:59
14	05:43	06:26	07:15	08:03	08:51 (WT01_141m)	07:56
	21:53	21:08	20:01	18:54	08:55 (WT01_141m)	16:58
15	05:44	06:28	07:16	08:05		07:58
	21:52	21:06	19:59	18:52		16:56
16	05:45	06:30	07:18	08:06		07:59
	21:51	21:04	19:57	18:50		16:55
17	05:47	06:31	07:20	08:08		08:01
	21:50	21:02	19:55	18:48		16:54
18	05:48	06:33	07:21	08:10		08:03
	21:49	21:00	19:52	18:46		16:52
19	05:49	06:34	07:23	08:11		08:04
	21:48	20:58	19:50	18:44		16:51
20	05:50	06:36	07:24	08:13		08:06
	21:47	20:56	19:48	11 09:05 (WT01_141m)	18:42	16:50
21	05:52	06:37	07:26	08:15		08:08
	21:46	20:54	19:45	19 09:08 (WT01_141m)	18:40	16:49
22	05:53	06:39	07:27	08:16		08:09
	21:45	20:52	19:43	23 09:10 (WT01_141m)	18:38	16:48
23	05:54	06:40	07:29	08:18		08:11
	21:43	20:50	19:41	26 09:12 (WT01_141m)	18:36	16:47
24	05:55	06:42	07:31	08:20		08:12
	21:42	20:48	19:39	30 09:13 (WT01_141m)	18:34	16:46
25	05:57	06:44	07:32	08:21		08:14
	21:41	20:45	19:36	32 09:14 (WT01_141m)	17:32	16:45
26	05:58	06:45	07:34	08:23		08:16
	21:39	20:43	19:34	33 09:14 (WT01_141m)	17:30	16:44
27	06:00	06:47	07:35	08:25		08:17
	21:38	20:41	19:32	35 09:15 (WT01_141m)	17:28	16:43
28	06:01	06:48	07:37	08:27		08:19
	21:37	20:39	19:30	37 09:15 (WT01_141m)	17:26	16:42
29	06:02	06:50	07:39	08:28		08:20
	21:35	20:37	19:27	38 09:16 (WT01_141m)	17:24	16:41
30	06:04	06:51	07:40	08:30		08:21
	21:34	20:35	19:25	38 09:16 (WT01_141m)	17:22	16:41
31	06:05	06:53		07:32		08:22
	21:32	20:33		17:20		16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case			322		416	
Sun reduction			0,43		0,35	
Oper. time red.			0,99		0,99	
Wind dir. red.			0,54		0,54	
Total reduction			0,23		0,19	
Total, real			74	79		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 46 - Hogeweg 239

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March		April	May	June	July	August	September		October		November	December	
1	08:46	08:21	07:29		08:26 (WT01_141m)	07:21	06:18	05:34	05:32	06:07	06:55	07:42		08:41 (WT01_141m)	07:34	08:23
	16:46	17:32	18:22	3	08:29 (WT01_141m)	20:14	21:03	21:47	22:01	21:30	20:30	19:23	45	09:26 (WT01_141m)	17:19	16:40
2	08:46	08:19	07:27		08:19 (WT01_141m)	07:18	06:16	05:33	05:32	06:08	06:56	07:43		08:42 (WT01_141m)	07:35	08:24
	16:47	17:34	18:24	17	08:36 (WT01_141m)	20:16	21:05	21:48	22:01	21:29	20:28	19:21	44	09:26 (WT01_141m)	17:17	16:39
3	08:46	08:18	07:25		08:16 (WT01_141m)	07:16	06:14	05:33	05:33	06:10	06:58	07:45		08:42 (WT01_141m)	07:37	08:26
	16:48	17:36	18:26	23	08:39 (WT01_141m)	20:17	21:06	21:49	22:00	21:27	20:26	19:18	44	09:26 (WT01_141m)	17:15	16:39
4	08:46	08:16	07:23		08:14 (WT01_141m)	07:14	06:12	05:32	05:34	06:11	06:59	07:47		08:42 (WT01_141m)	07:39	08:27
	16:49	17:38	18:27	27	08:41 (WT01_141m)	20:19	21:08	21:50	22:00	21:26	20:24	19:16	42	09:24 (WT01_141m)	17:13	16:38
5	08:46	08:15	07:21		08:12 (WT01_141m)	07:12	06:10	05:31	05:35	06:13	07:01	07:48		08:43 (WT01_141m)	07:40	08:28
	16:50	17:39	18:29	31	08:43 (WT01_141m)	20:21	21:10	21:51	21:59	21:24	20:22	19:14	40	09:23 (WT01_141m)	17:12	16:38
6	08:46	08:13	07:19		08:09 (WT01_141m)	07:10	06:09	05:31	05:35	06:14	07:02	07:50		08:43 (WT01_141m)	07:42	08:29
	16:52	17:41	18:31	35	08:44 (WT01_141m)	20:22	21:11	21:52	21:59	21:22	20:19	19:12	38	09:21 (WT01_141m)	17:10	16:37
7	08:45	08:12	07:16		08:08 (WT01_141m)	07:07	06:07	05:30	05:36	06:16	07:04	07:51		08:44 (WT01_141m)	07:44	08:31
	16:53	17:43	18:33	37	08:45 (WT01_141m)	20:24	21:13	21:53	21:58	21:20	20:17	19:09	36	09:20 (WT01_141m)	17:08	16:37
8	08:45	08:10	07:14		08:06 (WT01_141m)	07:05	06:05	05:30	05:37	06:17	07:06	07:53		08:46 (WT01_141m)	07:46	08:32
	16:54	17:45	18:34	40	08:46 (WT01_141m)	20:26	21:14	21:54	21:58	21:19	20:15	19:07	33	09:19 (WT01_141m)	17:07	16:37
9	08:44	08:08	07:12		08:05 (WT01_141m)	07:03	06:04	05:29	05:38	06:19	07:07	07:55		08:48 (WT01_141m)	07:47	08:33
	16:55	17:47	18:36	42	08:47 (WT01_141m)	20:27	21:16	21:55	21:57	21:17	20:13	19:05	29	09:17 (WT01_141m)	17:05	16:36
10	08:44	08:06	07:10		08:04 (WT01_141m)	07:01	06:02	05:29	05:39	06:20	07:09	07:56		08:49 (WT01_141m)	07:49	08:34
	16:57	17:48	18:38	42	08:46 (WT01_141m)	20:29	21:17	21:56	21:56	21:15	20:10	19:03	25	09:14 (WT01_141m)	17:04	16:36
11	08:43	08:05	07:08		08:03 (WT01_141m)	06:59	06:00	05:28	05:40	06:22	07:10	07:58		08:51 (WT01_141m)	07:51	08:35
	16:58	17:50	18:39	44	08:47 (WT01_141m)	20:31	21:19	21:56	21:56	21:13	20:08	19:01	21	09:12 (WT01_141m)	17:02	16:36
12	08:43	08:03	07:06		08:02 (WT01_141m)	06:56	05:59	05:28	05:41	06:23	07:12	08:00		08:55 (WT01_141m)	07:53	08:36
	16:59	17:52	18:41	45	08:47 (WT01_141m)	20:32	21:21	21:57	21:55	21:11	20:06	18:58	13	09:08 (WT01_141m)	17:00	16:36
13	08:42	08:01	07:03		08:02 (WT01_141m)	06:54	05:57	05:28	05:42	06:25	07:13	08:01		09:05 (WT01_141m)	17:03	16:36
	17:01	17:54	18:43	46	08:48 (WT01_141m)	20:34	21:22	21:58	21:54	21:10	20:04	18:56	7	09:12 (WT01_141m)	17:04	16:36
14	08:41	07:59	07:01		08:01 (WT01_141m)	06:52	05:56	05:28	05:43	06:26	07:15	08:03		09:00 (WT01_141m)	17:05	16:36
	17:02	17:56	18:44	46	08:47 (WT01_141m)	20:36	21:24	21:58	21:53	21:08	20:01	18:54	18	09:18 (WT01_141m)	17:06	16:36
15	08:41	07:57	06:59		08:00 (WT01_141m)	06:50	05:54	05:28	05:44	06:28	07:16	08:05		08:56 (WT01_141m)	17:07	16:36
	17:04	17:57	18:46	47	08:47 (WT01_141m)	20:37	21:25	21:59	21:52	21:06	19:59	18:52	24	09:20 (WT01_141m)	17:08	16:36
16	08:40	07:55	06:57		08:00 (WT01_141m)	06:48	05:53	05:27	05:45	06:30	07:18	08:06		08:54 (WT01_141m)	17:09	16:36
	17:05	17:59	18:48	47	08:47 (WT01_141m)	20:39	21:27	21:59	21:51	21:04	19:57	18:50	28	09:22 (WT01_141m)	17:10	16:36
17	08:39	07:54	06:54		08:00 (WT01_141m)	06:46	05:51	05:27	05:47	06:31	07:20	08:08		08:52 (WT01_141m)	17:11	16:36
	17:07	18:01	18:49	47	08:47 (WT01_141m)	20:40	21:28	22:00	21:50	21:02	19:55	18:48	31	09:23 (WT01_141m)	17:12	16:36
18	08:38	07:52	06:52		08:00 (WT01_141m)	06:44	05:50	05:27	05:48	06:33	07:21	08:10		08:51 (WT01_141m)	17:13	16:36
	17:09	18:03	18:51	45	08:45 (WT01_141m)	20:42	21:29	22:00	21:49	21:00	19:52	18:46	34	09:25 (WT01_141m)	17:14	16:37
19	08:37	07:50	06:50		08:00 (WT01_141m)	06:42	05:48	05:27	05:49	06:34	07:23	08:11		08:49 (WT01_141m)	17:15	16:37
	17:10	18:05	18:53	45	08:45 (WT01_141m)	20:44	21:31	22:01	21:48	20:58	19:50	18:44	37	09:26 (WT01_141m)	17:16	16:37
20	08:36	07:48	06:48		08:00 (WT01_141m)	06:39	05:47	05:27	05:50	06:36	07:24	08:13		08:48 (WT01_141m)	17:17	16:37
	17:12	18:06	18:54	44	08:44 (WT01_141m)	20:45	21:32	22:01	21:47	20:56	19:48	18:42	39	09:27 (WT01_141m)	17:18	16:37
21	08:35	07:46	06:45		08:01 (WT01_141m)	06:37	05:46	05:28	05:52	06:37	07:26	08:15		08:46 (WT01_141m)	17:19	16:37
	17:13	18:08	18:56	43	08:44 (WT01_141m)	20:47	21:34	22:01	21:46	20:54	19:45	18:40	41	09:27 (WT01_141m)	17:20	16:38
22	08:34	07:44	06:43		08:00 (WT01_141m)	06:35	05:45	05:28	05:53	06:39	07:27	08:16		08:45 (WT01_141m)	17:21	16:38
	17:15	18:10	18:58	42	08:42 (WT01_141m)	20:49	21:35	22:01	21:45	20:52	19:43	18:38	43	09:28 (WT01_141m)	17:22	16:38
23	08:33	07:42	06:41		08:01 (WT01_141m)	06:33	05:43	05:28	05:54	06:40	07:29	08:18		08:45 (WT01_141m)	17:23	16:38
	17:17	18:12	18:59	40	08:41 (WT01_141m)	20:50	21:36	22:01	21:43	20:50	19:41	18:36	44	09:29 (WT01_141m)	17:24	16:39
24	08:32	07:40	06:39		08:02 (WT01_141m)	06:31	05:42	05:28	05:55	06:42	07:31	08:20		08:43 (WT01_141m)	17:25	16:39
	17:18	18:13	19:01	38	08:40 (WT01_141m)	20:52	21:38	22:02	21:42	20:48	19:39	18:34	45	09:28 (WT01_141m)	17:26	16:39
25	08:30	07:38	06:36		08:03 (WT01_141m)	06:29	05:41	05:29	05:57	06:44	07:32	08:21		08:43 (WT01_141m)	17:27	16:40
	17:20	18:15	19:03	35	08:38 (WT01_141m)	20:54	21:39	22:02	21:41	20:45	19:36	18:32	46	09:29 (WT01_141m)	17:28	16:40
26	08:29	07:36	06:34		08:03 (WT01_141m)	06:27	05:40	05:29	05:58	06:45	07:34	08:23		08:42 (WT01_141m)	17:29	16:40
	17:22	18:17	19:04	32	08:35 (WT01_141m)	20:55	21:40	22:02	21:39	20:43	19:34	18:30	46	09:28 (WT01_141m)	17:30	16:40
27	08:28	07:34	06:32		08:05 (WT01_141m)	06:25	05:39	05:29	06:00	06:47	07:35	08:24		08:42 (WT01_141m)	17:31	16:40
	17:24	18:19	19:06	28	08:33 (WT01_141m)	20:57	21:41	22:02	21:38	20:41	19:32	18:28		09:29 (WT01_141m)	17:32	16:41
28	08:27	07:31	06:30		08:07 (WT01_141m)	06:23	05:38	05:30	06:01	06:48	07:37	08:26		08:41 (WT01_141m)	17:33	16:41
	17:25	18:20	19:08	24	08:31 (WT01_141m)	20:58	21:43	22:01	21:37	20:39	19:30	18:26	47	09:28 (WT01_141m)	17:34	16:42
29	08:25		07:27		09:09 (WT01_141m)	06:22	05:37	05:30	06:02	06:50	07:38	08:27		08:41 (WT01_141m)	17:35	16:42
	17:27		20:09	19	09:28 (WT01_141m)	21:00	21:44	22:01	21:35	20:37	19:27	18:24	47	09:28 (WT01_141m)	17:36	16:43
30	08:24		07:25		09:13 (WT01_141m)	06:20	05:36	05:31	06:04	06:51	07:40	08:29		08:42 (WT01_141m)	17:37	16:44
	17:29		20:11	9	09:22 (WT01_141m)	21:02	21:45	22:01	21:34	20:35	19:25	18:22	46	09:28 (WT01_141m)	17:38	16:44
31	08:22		07:23				05:35		06:05	06:53		07:32				16:45
	17:31		20:13				21:46		21:32	20:33		17:20				16:45
Potential sun hours	263	279	367		414	481	494	498	451	380		333		269	248	
Total, worst case				1063							670		410			
Sun reduction				0,36							0,43		0,35			
Oper. time red.				0,99							0,99		0,99			
Wind dir. red.				0,54							0,54		0,54			
Total reduction				0,19							0,23		0,19			
Total_real				207												

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 47 - Hogeweg 191

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April		May		June
1	08:46	08:21	07:29	07:21		06:18	07:41 (WT01_141m)	05:34
	16:46	17:32	18:22	20:14		21:03	58 08:39 (WT01_141m)	21:47
2	08:46	08:19	07:27	07:18		06:16	07:41 (WT01_141m)	05:33
	16:47	17:34	18:24	20:16		21:05	58 08:39 (WT01_141m)	21:48
3	08:46	08:18	07:25	07:16		06:14	07:41 (WT01_141m)	05:33
	16:48	17:36	18:26	20:17		21:06	57 08:38 (WT01_141m)	21:49
4	08:46	08:16	07:23	07:14		06:12	07:41 (WT01_141m)	05:32
	16:49	17:38	18:27	20:19		21:08	56 08:37 (WT01_141m)	21:50
5	08:46	08:15	07:21	07:12		06:10	07:42 (WT01_141m)	05:31
	16:50	17:39	18:29	20:21		21:10	55 08:37 (WT01_141m)	21:51
6	08:45	08:13	07:19	07:10		06:09	07:42 (WT01_141m)	05:31
	16:52	17:41	18:31	20:22		21:11	54 08:36 (WT01_141m)	21:52
7	08:45	08:12	07:16	07:07		06:07	07:42 (WT01_141m)	05:30
	16:53	17:43	18:33	20:24		21:13	53 08:35 (WT01_141m)	21:53
8	08:45	08:10	07:14	07:05	08:07 (WT01_141m)	06:05	07:43 (WT01_141m)	05:30
	16:54	17:45	18:34	20:26	18 08:25 (WT01_141m)	21:14	52 08:35 (WT01_141m)	21:54
9	08:44	08:08	07:12	07:03	08:03 (WT01_141m)	06:04	07:43 (WT01_141m)	05:29
	16:55	17:47	18:36	20:27	26 08:29 (WT01_141m)	21:16	50 08:33 (WT01_141m)	21:55
10	08:44	08:06	07:10	07:01	08:00 (WT01_141m)	06:02	07:44 (WT01_141m)	05:29
	16:57	17:48	18:38	20:29	31 08:31 (WT01_141m)	21:17	49 08:33 (WT01_141m)	21:56
11	08:43	08:05	07:08	06:59	07:58 (WT01_141m)	06:00	07:44 (WT01_141m)	05:28
	16:58	17:50	18:39	20:31	35 08:33 (WT01_141m)	21:19	48 08:32 (WT01_141m)	21:56
12	08:43	08:03	07:06	06:56	07:56 (WT01_141m)	05:59	07:45 (WT01_141m)	05:28
	16:59	17:52	18:41	20:32	39 08:35 (WT01_141m)	21:21	46 08:31 (WT01_141m)	21:57
13	08:42	08:01	07:03	06:54	07:54 (WT01_141m)	05:57	07:45 (WT01_141m)	05:28
	17:01	17:54	18:43	20:34	42 08:36 (WT01_141m)	21:22	45 08:30 (WT01_141m)	21:58
14	08:41	07:59	07:01	06:52	07:53 (WT01_141m)	05:56	07:46 (WT01_141m)	05:28
	17:02	17:56	18:44	20:36	44 08:37 (WT01_141m)	21:24	43 08:29 (WT01_141m)	21:58
15	08:41	07:57	06:59	06:50	07:51 (WT01_141m)	05:54	07:48 (WT01_141m)	05:28
	17:04	17:57	18:46	20:37	47 08:38 (WT01_141m)	21:25	40 08:28 (WT01_141m)	21:59
16	08:40	07:55	06:57	06:48	07:49 (WT01_141m)	05:53	07:48 (WT01_141m)	05:27
	17:05	17:59	18:48	20:39	49 08:38 (WT01_141m)	21:26	39 08:27 (WT01_141m)	21:59
17	08:39	07:54	06:54	06:46	07:48 (WT01_141m)	05:51	07:49 (WT01_141m)	05:27
	17:07	18:01	18:49	20:40	51 08:39 (WT01_141m)	21:28	37 08:26 (WT01_141m)	22:00
18	08:38	07:52	06:52	06:44	07:47 (WT01_141m)	05:50	07:50 (WT01_141m)	05:27
	17:09	18:03	18:51	20:42	52 08:39 (WT01_141m)	21:29	35 08:25 (WT01_141m)	22:00
19	08:37	07:50	06:50	06:42	07:46 (WT01_141m)	05:48	07:51 (WT01_141m)	05:27
	17:10	18:05	18:53	20:44	54 08:40 (WT01_141m)	21:31	32 08:23 (WT01_141m)	22:00
20	08:36	07:48	06:48	06:39	07:45 (WT01_141m)	05:47	07:52 (WT01_141m)	05:27
	17:12	18:06	18:54	20:45	55 08:40 (WT01_141m)	21:32	30 08:22 (WT01_141m)	22:01
21	08:35	07:46	06:45	06:37	07:44 (WT01_141m)	05:46	07:54 (WT01_141m)	05:28
	17:13	18:08	18:56	20:47	56 08:40 (WT01_141m)	21:34	26 08:20 (WT01_141m)	22:01
22	08:34	07:44	06:43	06:35	07:43 (WT01_141m)	05:45	07:56 (WT01_141m)	05:28
	17:15	18:10	18:58	20:49	57 08:40 (WT01_141m)	21:35	23 08:19 (WT01_141m)	22:01
23	08:33	07:42	06:41	06:33	07:43 (WT01_141m)	05:43	07:58 (WT01_141m)	05:28
	17:17	18:12	18:59	20:50	57 08:40 (WT01_141m)	21:36	19 08:17 (WT01_141m)	22:01
24	08:32	07:40	06:39	06:31	07:42 (WT01_141m)	05:42	08:01 (WT01_141m)	05:28
	17:18	18:13	19:01	20:52	58 08:40 (WT01_141m)	21:38	13 08:14 (WT01_141m)	22:02
25	08:30	07:38	06:36	06:29	07:43 (WT01_141m)	05:41	08:05 (WT01_141m)	05:29
	17:20	18:15	19:03	20:54	58 08:41 (WT01_141m)	21:39	5 08:10 (WT01_141m)	22:02
26	08:29	07:36	06:34	06:27	07:42 (WT01_141m)	05:40		05:29
	17:22	18:17	19:04	20:55	59 08:41 (WT01_141m)	21:40		22:02
27	08:28	07:34	06:32	06:25	07:42 (WT01_141m)	05:39		05:29
	17:24	18:19	19:06	20:57	58 08:40 (WT01_141m)	21:41		22:02
28	08:27	07:31	06:30	06:23	07:41 (WT01_141m)	05:38		05:30
	17:25	18:20	19:08	20:58	59 08:40 (WT01_141m)	21:43		22:01
29	08:25		07:27	06:22	07:41 (WT01_141m)	05:37		05:30
	17:27		20:09	21:00	59 08:40 (WT01_141m)	21:44		22:01
30	08:24		07:25	06:20	07:41 (WT01_141m)	05:36		05:31
	17:29		20:11	21:02	58 08:39 (WT01_141m)	21:45		22:01
31	08:22		07:23			05:35		
	17:31		20:13			21:46		
Potential sun hours	263	279	367	414		481		494
Total, worst case				1122			1023	
Sun reduction				0,45			0,45	
Oper. time red.				0,99			0,99	
Wind dir. red.				0,64			0,64	
Total reduction				0,28			0,28	
Total, real				318			291	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 47 - Hogeweg 191

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July		August		September		October		November		December	
1	05:32	06:07	07:55 (WT01_141m)	06:55	07:57 (WT01_141m)	07:42	07:34	08:23			
	22:01	21:30	47 08:42 (WT01_141m)	20:30	35 08:32 (WT01_141m)	19:23	17:19	16:40			
2	05:32	06:08	07:54 (WT01_141m)	06:56	07:59 (WT01_141m)	07:43	07:35	08:24			
	22:01	21:29	49 08:43 (WT01_141m)	20:28	31 08:30 (WT01_141m)	19:21	17:17	16:39			
3	05:33	06:10	07:54 (WT01_141m)	06:58	08:01 (WT01_141m)	07:45	07:37	08:26			
	22:00	21:27	50 08:44 (WT01_141m)	20:26	26 08:27 (WT01_141m)	19:18	17:15	16:39			
4	05:34	06:11	07:53 (WT01_141m)	06:59	08:05 (WT01_141m)	07:47	07:39	08:27			
	22:00	21:26	51 08:44 (WT01_141m)	20:24	18 08:23 (WT01_141m)	19:16	17:13	16:38			
5	05:35	06:13	07:52 (WT01_141m)	07:01	08:12 (WT01_141m)	07:48	07:40	08:28			
	21:59	21:24	52 08:44 (WT01_141m)	20:22	3 08:15 (WT01_141m)	19:14	17:12	16:38			
6	05:35	06:14	07:52 (WT01_141m)	07:02		07:50	07:42	08:29			
	21:59	21:22	54 08:46 (WT01_141m)	20:19		19:12	17:10	16:37			
7	05:36	06:16	07:51 (WT01_141m)	07:04		07:51	07:44	08:31			
	21:58	21:20	55 08:46 (WT01_141m)	20:17		19:09	17:08	16:37			
8	05:37	06:17	07:51 (WT01_141m)	07:06		07:53	07:46	08:32			
	21:58	21:19	56 08:47 (WT01_141m)	20:15		19:07	17:07	16:37			
9	05:38	06:19	07:50 (WT01_141m)	07:07		07:55	07:47	08:33			
	21:57	21:17	57 08:47 (WT01_141m)	20:13		19:05	17:05	16:36			
10	05:39	06:20	07:51 (WT01_141m)	07:09		07:56	07:49	08:34			
	21:56	21:15	56 08:47 (WT01_141m)	20:10		19:03	17:04	16:36			
11	05:40	06:22	07:50 (WT01_141m)	07:10		07:58	07:51	08:35			
	21:56	21:13	57 08:47 (WT01_141m)	20:08		19:01	17:02	16:36			
12	05:41	06:23	07:49 (WT01_141m)	07:12		08:00	07:53	08:36			
	21:55	21:11	58 08:47 (WT01_141m)	20:06		18:58	17:00	16:36			
13	05:42	06:25	07:49 (WT01_141m)	07:13		08:01	07:54	08:37			
	21:54	21:09	59 08:48 (WT01_141m)	20:04		18:56	16:59	16:36			
14	05:43	06:26	07:49 (WT01_141m)	07:15		08:03	07:56	08:38			
	21:53	21:08	58 08:47 (WT01_141m)	20:01		18:54	16:58	16:36			
15	05:44	06:28	07:49 (WT01_141m)	07:16		08:05	07:58	08:39			
	21:52	21:06	59 08:48 (WT01_141m)	19:59		18:52	16:56	16:36			
16	05:45	06:30	07:48 (WT01_141m)	07:18		08:06	07:59	08:40			
	21:51	21:04	59 08:47 (WT01_141m)	19:57		18:50	16:55	16:36			
17	05:47	06:31	07:49 (WT01_141m)	07:20		08:08	08:01	08:41			
	21:50	21:02	58 08:47 (WT01_141m)	19:54		18:48	16:54	16:36			
18	05:48	06:33	07:48 (WT01_141m)	07:21		08:10	08:03	08:41			
	21:49	21:00	59 08:47 (WT01_141m)	19:52		18:46	16:52	16:37			
19	05:49	08:12 (WT01_141m)	06:34	07:23		08:11	08:04	08:42			
	21:48	20:58	58 08:47 (WT01_141m)	19:50		18:44	16:51	16:37			
20	05:50	08:09 (WT01_141m)	06:36	07:24		08:13	08:06	08:43			
	21:47	20:56	58 08:46 (WT01_141m)	19:48		18:42	16:50	16:37			
21	05:52	08:06 (WT01_141m)	06:37	07:26		08:15	08:08	08:43			
	21:46	20:54	57 08:46 (WT01_141m)	19:45		18:40	16:49	16:38			
22	05:53	08:05 (WT01_141m)	06:39	07:27		08:16	08:09	08:44			
	21:45	20:52	56 08:45 (WT01_141m)	19:43		18:38	16:48	16:38			
23	05:54	08:04 (WT01_141m)	06:40	07:29		08:18	08:11	08:44			
	21:43	20:50	55 08:45 (WT01_141m)	19:41		18:36	16:47	16:39			
24	05:55	08:02 (WT01_141m)	06:42	07:31		08:20	08:12	08:45			
	21:42	20:47	53 08:43 (WT01_141m)	19:39		18:34	16:46	16:39			
25	05:57	08:01 (WT01_141m)	06:44	07:32		07:21	08:14	08:45			
	21:41	20:45	52 08:43 (WT01_141m)	19:36		17:32	16:45	16:40			
26	05:58	08:00 (WT01_141m)	06:45	07:34		07:23	08:16	08:45			
	21:39	20:43	51 08:42 (WT01_141m)	19:34		17:30	16:44	16:41			
27	06:00	07:59 (WT01_141m)	06:47	07:35		07:25	08:17	08:46			
	21:38	20:41	49 08:41 (WT01_141m)	19:32		17:28	16:43	16:41			
28	06:01	07:58 (WT01_141m)	06:48	07:37		07:27	08:19	08:46			
	21:37	20:39	47 08:39 (WT01_141m)	19:30		17:26	16:42	16:42			
29	06:02	07:58 (WT01_141m)	06:50	07:38		07:28	08:20	08:46			
	21:35	20:37	44 08:38 (WT01_141m)	19:27		17:24	16:41	16:43			
30	06:04	07:56 (WT01_141m)	06:51	07:40		07:30	08:21	08:46			
	21:34	20:35	42 08:36 (WT01_141m)	19:25		17:22	16:41	16:44			
31	06:05	07:55 (WT01_141m)	06:53	07:56 (WT01_141m)		07:32		08:46			
	21:32	20:33	39 08:35 (WT01_141m)			17:20		16:45			
Potential sun hours	498	451		380		333	269	248			
Total, worst case	407	1655		113							
Sun reduction	0,44	0,46		0,43							
Oper. time red.	0,99	0,99		0,99							
Wind dir. red.	0,64	0,64		0,64							
Total reduction	0,28	0,29		0,27							
Total, real	114	481		30							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 48 - Blarenberglaan 231

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March		April		May		June		
1	08:46 16:46	08:21 17:32	07:29 18:22		07:21 20:14	103	14:31 (WT01_141m) 16:14 (WT01_141m)	06:18 21:03	13:52 (WT01_141m) 16:33 (WT01_141m)	05:34 21:47	14:06 (WT01_141m) 16:36 (WT01_141m)
2	08:46 16:47	08:19 17:34	07:27 18:24		07:18 20:16	106	14:29 (WT01_141m) 16:15 (WT01_141m)	06:16 21:05	13:51 (WT01_141m) 16:33 (WT01_141m)	05:33 21:48	14:07 (WT01_141m) 16:36 (WT01_141m)
3	08:46 16:48	08:18 17:36	07:25 18:26		07:16 20:17	110	14:26 (WT01_141m) 16:16 (WT01_141m)	06:14 21:06	13:50 (WT01_141m) 16:32 (WT01_141m)	05:33 21:49	14:10 (WT01_141m) 16:36 (WT01_141m)
4	08:46 16:49	08:16 17:38	07:23 18:27		07:14 20:19	113	14:24 (WT01_141m) 16:17 (WT01_141m)	06:12 21:08	13:50 (WT01_141m) 16:32 (WT01_141m)	05:32 21:50	14:11 (WT01_141m) 16:36 (WT01_141m)
5	08:46 16:50	08:15 17:39	07:21 18:29		07:12 20:21	117	14:22 (WT01_141m) 16:19 (WT01_141m)	06:10 21:10	13:50 (WT01_141m) 16:33 (WT01_141m)	05:31 21:51	14:13 (WT01_141m) 16:37 (WT01_141m)
6	08:45 16:51	08:13 17:41	07:19 18:31		07:09 20:22	119	14:21 (WT01_141m) 16:20 (WT01_141m)	06:09 21:11	13:49 (WT01_141m) 16:33 (WT01_141m)	05:31 21:52	14:15 (WT01_141m) 16:36 (WT01_141m)
7	08:45 16:53	08:11 17:43	07:16 18:32		07:07 20:24	122	14:19 (WT01_141m) 16:21 (WT01_141m)	06:07 21:13	13:49 (WT01_141m) 16:33 (WT01_141m)	05:30 21:53	14:17 (WT01_141m) 16:37 (WT01_141m)
8	08:45 16:54	08:10 17:45	07:14 18:34		07:05 20:26	125	14:16 (WT01_141m) 16:21 (WT01_141m)	06:05 21:14	13:49 (WT01_141m) 16:33 (WT01_141m)	05:30 21:54	14:18 (WT01_141m) 16:37 (WT01_141m)
9	08:44 16:55	08:08 17:47	07:12 18:36		07:03 20:27	127	14:15 (WT01_141m) 16:22 (WT01_141m)	06:04 21:16	13:49 (WT01_141m) 16:33 (WT01_141m)	05:29 21:55	14:20 (WT01_141m) 16:37 (WT01_141m)
10	08:44 16:57	08:06 17:48	07:10 18:38		07:01 20:29	130	14:13 (WT01_141m) 16:23 (WT01_141m)	06:02 21:17	13:49 (WT01_141m) 16:34 (WT01_141m)	05:29 21:56	14:21 (WT01_141m) 16:38 (WT01_141m)
11	08:43 16:58	08:05 17:50	07:08 18:39		06:59 20:31	132	14:12 (WT01_141m) 16:24 (WT01_141m)	06:00 21:19	13:48 (WT01_141m) 16:33 (WT01_141m)	05:28 21:56	14:22 (WT01_141m) 16:37 (WT01_141m)
12	08:43 16:59	08:03 17:52	07:05 18:41		06:56 20:32	135	14:10 (WT01_141m) 16:25 (WT01_141m)	05:59 21:20	13:49 (WT01_141m) 16:34 (WT01_141m)	05:28 21:57	14:23 (WT01_141m) 16:37 (WT01_141m)
13	08:42 17:01	08:01 17:54	07:03 18:43		06:54 20:34	137	14:09 (WT01_141m) 16:26 (WT01_141m)	05:57 21:22	13:48 (WT01_141m) 16:34 (WT01_141m)	05:28 21:58	14:25 (WT01_141m) 16:38 (WT01_141m)
14	08:41 17:02	07:59 17:56	07:01 18:44		06:52 20:36	138	14:08 (WT01_141m) 16:26 (WT01_141m)	05:56 21:24	13:49 (WT01_141m) 16:34 (WT01_141m)	05:28 21:58	14:26 (WT01_141m) 16:38 (WT01_141m)
15	08:41 17:04	07:57 17:57	06:59 18:46		06:50 20:37	141	14:05 (WT01_141m) 16:26 (WT01_141m)	05:54 21:25	13:49 (WT01_141m) 16:35 (WT01_141m)	05:27 21:59	14:27 (WT01_141m) 16:38 (WT01_141m)
16	08:40 17:05	07:55 17:59	06:57 18:48		06:48 20:39	143	14:04 (WT01_141m) 16:27 (WT01_141m)	05:53 21:26	13:49 (WT01_141m) 16:34 (WT01_141m)	05:27 21:59	14:28 (WT01_141m) 16:39 (WT01_141m)
17	08:39 17:07	07:54 18:01	06:54 18:49		06:46 20:40	144	14:03 (WT01_141m) 16:27 (WT01_141m)	05:51 21:28	13:50 (WT01_141m) 16:34 (WT01_141m)	05:27 22:00	14:28 (WT01_141m) 16:39 (WT01_141m)
18	08:38 17:08	07:52 18:03	06:52 18:51		06:44 20:42	146	14:02 (WT01_141m) 16:28 (WT01_141m)	05:50 21:29	13:50 (WT01_141m) 16:35 (WT01_141m)	05:27 22:00	14:29 (WT01_141m) 16:39 (WT01_141m)
19	08:37 17:10	07:50 18:05	06:50 18:53		06:41 20:44	147	14:01 (WT01_141m) 16:28 (WT01_141m)	05:48 21:31	13:50 (WT01_141m) 16:34 (WT01_141m)	05:27 22:00	14:29 (WT01_141m) 16:39 (WT01_141m)
20	08:36 17:12	07:48 18:06	06:48 18:54		06:39 20:45	149	14:00 (WT01_141m) 16:29 (WT01_141m)	05:47 21:32	13:51 (WT01_141m) 16:34 (WT01_141m)	05:27 22:01	14:29 (WT01_141m) 16:39 (WT01_141m)
21	08:35 17:13	07:46 18:08	06:45 18:56	23	14:17 (WT01_141m) 14:40 (WT01_141m)	150	13:59 (WT01_141m) 16:29 (WT01_141m)	05:46 21:34	13:52 (WT01_141m) 16:35 (WT01_141m)	05:28 22:01	14:29 (WT01_141m) 16:39 (WT01_141m)
22	08:34 17:15	07:44 18:10	06:43 18:58	39	14:08 (WT01_141m) 14:47 (WT01_141m)	151	13:58 (WT01_141m) 16:29 (WT01_141m)	05:45 21:35	13:53 (WT01_141m) 16:35 (WT01_141m)	05:28 22:01	14:29 (WT01_141m) 16:39 (WT01_141m)
23	08:33 17:17	07:42 18:12	06:41 18:59	50	14:02 (WT01_141m) 14:52 (WT01_141m)	153	13:57 (WT01_141m) 16:30 (WT01_141m)	05:43 21:36	13:53 (WT01_141m) 16:35 (WT01_141m)	05:28 22:01	14:30 (WT01_141m) 16:40 (WT01_141m)
24	08:32 17:18	07:40 18:13	06:39 19:01	59	13:57 (WT01_141m) 14:56 (WT01_141m)	154	13:56 (WT01_141m) 16:30 (WT01_141m)	05:42 21:38	13:54 (WT01_141m) 16:35 (WT01_141m)	05:28 22:02	14:30 (WT01_141m) 16:40 (WT01_141m)
25	08:30 17:20	07:38 18:15	06:36 19:03	67	13:53 (WT01_141m) 15:00 (WT01_141m)	155	13:56 (WT01_141m) 16:31 (WT01_141m)	05:41 21:39	13:55 (WT01_141m) 16:35 (WT01_141m)	05:29 22:02	14:29 (WT01_141m) 16:40 (WT01_141m)
26	08:29 17:22	07:36 18:17	06:34 19:04	74	15:00 (WT01_141m) 15:02 (WT01_141m)	156	13:57 (WT01_141m) 16:31 (WT01_141m)	05:40 21:40	13:57 (WT01_141m) 16:35 (WT01_141m)	05:29 22:02	14:30 (WT01_141m) 16:41 (WT01_141m)
27	08:28 17:23	07:33 18:19	06:32 19:06	79	13:45 (WT01_141m) 15:04 (WT01_141m)	157	13:54 (WT01_141m) 16:31 (WT01_141m)	05:39 21:41	13:58 (WT01_141m) 16:35 (WT01_141m)	05:29 22:02	14:29 (WT01_141m) 16:40 (WT01_141m)
28	08:27 17:25	07:31 18:20	06:30 19:08	85	13:42 (WT01_141m) 15:07 (WT01_141m)	158	13:53 (WT01_141m) 16:32 (WT01_141m)	05:38 21:43	13:59 (WT01_141m) 16:35 (WT01_141m)	05:30 22:01	14:29 (WT01_141m) 16:41 (WT01_141m)
29	08:25 17:27		07:27 20:09	90	14:38 (WT01_141m) 16:08 (WT01_141m)	160	13:52 (WT01_141m) 16:32 (WT01_141m)	05:37 21:44	14:00 (WT01_141m) 16:35 (WT01_141m)	05:30 22:01	14:28 (WT01_141m) 16:41 (WT01_141m)
30	08:24 17:29		07:25 20:11	94	14:36 (WT01_141m) 16:10 (WT01_141m)	160	13:52 (WT01_141m) 16:32 (WT01_141m)	05:36 21:45	14:02 (WT01_141m) 16:35 (WT01_141m)	05:31 22:01	14:28 (WT01_141m) 16:42 (WT01_141m)
31	08:22 17:30		07:23 20:13	99	14:33 (WT01_141m) 16:12 (WT01_141m)			05:35 21:46	14:04 (WT01_141m) 16:36 (WT01_141m)		
Potential sun hours	263	279	367		414		481		494		
Total, worst case			759		4139		5018		4057		
Sun reduction			0,36		0,45		0,45		0,44		
Oper. time red.			0,99		0,99		0,99		0,99		
Wind dir. red.			0,74		0,74		0,74		0,74		
Total reduction			0,26		0,33		0,33		0,32		
Total, real			201		1357		1652		1295		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 48 - Blarenberglaan 23I

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

July			August			September			October			November			December		
1	05:32		14:27 (WT01_141m)	06:07		13:59 (WT01_141m)	06:55		14:11 (WT01_141m)	07:42		07:34			08:23		
	22:01	134	16:41 (WT01_141m)	21:30	165	16:44 (WT01_141m)	20:30	132	16:23 (WT01_141m)	19:23		17:19			16:40		
2	05:32		14:26 (WT01_141m)	06:08		13:59 (WT01_141m)	06:56		14:12 (WT01_141m)	07:43		07:35			08:24		
	22:01	136	16:42 (WT01_141m)	21:29	165	16:44 (WT01_141m)	20:28	130	16:22 (WT01_141m)	19:20		17:17			16:39		
3	05:33		14:25 (WT01_141m)	06:10		13:59 (WT01_141m)	06:58		14:13 (WT01_141m)	07:45		07:37			08:26		
	22:00	137	16:42 (WT01_141m)	21:27	165	16:44 (WT01_141m)	20:26	127	16:20 (WT01_141m)	19:18		17:15			16:39		
4	05:34		14:24 (WT01_141m)	06:11		13:59 (WT01_141m)	06:59		14:14 (WT01_141m)	07:46		07:39			08:27		
	22:00	138	16:42 (WT01_141m)	21:26	165	16:44 (WT01_141m)	20:24	125	16:19 (WT01_141m)	19:16		17:13			16:38		
5	05:34		14:23 (WT01_141m)	06:13		13:59 (WT01_141m)	07:01		14:15 (WT01_141m)	07:48		07:40			08:28		
	21:59	139	16:42 (WT01_141m)	21:24	164	16:43 (WT01_141m)	20:22	122	16:17 (WT01_141m)	19:14		17:12			16:38		
6	05:35		14:22 (WT01_141m)	06:14		13:59 (WT01_141m)	07:02		14:17 (WT01_141m)	07:50		07:42			08:29		
	21:59	141	16:43 (WT01_141m)	21:22	164	16:43 (WT01_141m)	20:19	119	16:16 (WT01_141m)	19:12		17:10			16:37		
7	05:36		14:20 (WT01_141m)	06:16		13:59 (WT01_141m)	07:04		14:17 (WT01_141m)	07:51		07:44			08:31		
	21:58	143	16:43 (WT01_141m)	21:20	163	16:42 (WT01_141m)	20:17	117	16:14 (WT01_141m)	19:09		17:08			16:37		
8	05:37		14:19 (WT01_141m)	06:17		14:00 (WT01_141m)	07:05		14:19 (WT01_141m)	07:53		07:46			08:32		
	21:58	144	16:43 (WT01_141m)	21:19	163	16:43 (WT01_141m)	20:15	114	16:13 (WT01_141m)	19:07		17:07			16:37		
9	05:38		14:18 (WT01_141m)	06:19		13:59 (WT01_141m)	07:07		14:20 (WT01_141m)	07:55		07:47			08:33		
	21:57	146	16:44 (WT01_141m)	21:17	163	16:42 (WT01_141m)	20:13	110	16:10 (WT01_141m)	19:05		17:05			16:36		
10	05:39		14:15 (WT01_141m)	06:20		14:00 (WT01_141m)	07:09		14:22 (WT01_141m)	07:56		07:49			08:34		
	21:56	148	16:43 (WT01_141m)	21:15	162	16:42 (WT01_141m)	20:10	107	16:09 (WT01_141m)	19:03		17:03			16:36		
11	05:40		14:14 (WT01_141m)	06:22		14:00 (WT01_141m)	07:10		14:23 (WT01_141m)	07:58		07:51			08:35		
	21:56	149	16:43 (WT01_141m)	21:13	161	16:41 (WT01_141m)	20:08	103	16:06 (WT01_141m)	19:01		17:02			16:36		
12	05:41		14:12 (WT01_141m)	06:23		13:59 (WT01_141m)	07:12		14:25 (WT01_141m)	08:00		07:53			08:36		
	21:55	151	16:43 (WT01_141m)	21:11	161	16:40 (WT01_141m)	20:06	99	16:04 (WT01_141m)	18:58		17:00			16:36		
13	05:42		14:11 (WT01_141m)	06:25		14:00 (WT01_141m)	07:13		14:27 (WT01_141m)	08:01		07:54			08:37		
	21:54	153	16:44 (WT01_141m)	21:09	160	16:40 (WT01_141m)	20:04	95	16:02 (WT01_141m)	18:56		16:59			16:36		
14	05:43		14:10 (WT01_141m)	06:26		14:00 (WT01_141m)	07:15		14:29 (WT01_141m)	08:03		07:56			08:38		
	21:53	154	16:44 (WT01_141m)	21:08	159	16:39 (WT01_141m)	20:01	91	16:00 (WT01_141m)	18:54		16:58			16:36		
15	05:44		14:09 (WT01_141m)	06:28		14:01 (WT01_141m)	07:16		14:31 (WT01_141m)	08:05		07:58			08:39		
	21:52	156	16:45 (WT01_141m)	21:06	158	16:39 (WT01_141m)	19:59	86	15:57 (WT01_141m)	18:52		16:56			16:36		
16	05:45		14:08 (WT01_141m)	06:30		14:01 (WT01_141m)	07:18		14:34 (WT01_141m)	08:06		07:59			08:40		
	21:51	157	16:45 (WT01_141m)	21:04	157	16:38 (WT01_141m)	19:57	80	15:54 (WT01_141m)	18:50		16:55			16:36		
17	05:47		14:07 (WT01_141m)	06:31		14:02 (WT01_141m)	07:20		14:36 (WT01_141m)	08:08		08:01			08:41		
	21:50	158	16:45 (WT01_141m)	21:02	156	16:38 (WT01_141m)	19:54	75	15:51 (WT01_141m)	18:48		16:54			16:36		
18	05:48		14:06 (WT01_141m)	06:33		14:02 (WT01_141m)	07:21		14:39 (WT01_141m)	08:10		08:03			08:41		
	21:49	159	16:45 (WT01_141m)	21:00	155	16:37 (WT01_141m)	19:52	69	15:48 (WT01_141m)	18:46		16:52			16:37		
19	05:49		14:04 (WT01_141m)	06:34		14:03 (WT01_141m)	07:23		14:42 (WT01_141m)	08:11		08:04			08:42		
	21:48	161	16:45 (WT01_141m)	20:58	154	16:37 (WT01_141m)	19:50	61	15:43 (WT01_141m)	18:44		16:51			16:37		
20	05:50		14:03 (WT01_141m)	06:36		14:02 (WT01_141m)	07:24		14:47 (WT01_141m)	08:13		08:06			08:43		
	21:47	162	16:45 (WT01_141m)	20:56	153	16:35 (WT01_141m)	19:48	53	15:40 (WT01_141m)	18:42		16:50			16:37		
21	05:51		14:03 (WT01_141m)	06:37		14:03 (WT01_141m)	07:26		14:52 (WT01_141m)	08:15		08:08			08:43		
	21:46	161	16:44 (WT01_141m)	20:54	152	16:35 (WT01_141m)	19:45	42	15:34 (WT01_141m)	18:40		16:49			16:38		
22	05:53		14:03 (WT01_141m)	06:39		14:04 (WT01_141m)	07:27		14:59 (WT01_141m)	08:16		08:09			08:44		
	21:45	162	16:45 (WT01_141m)	20:52	150	16:34 (WT01_141m)	19:43	29	15:28 (WT01_141m)	18:38		16:48			16:38		
23	05:54		14:02 (WT01_141m)	06:40		14:05 (WT01_141m)	07:29			08:18		08:11			08:44		
	21:43	163	16:45 (WT01_141m)	20:50	148	16:33 (WT01_141m)	19:41			18:36		16:47			16:39		
24	05:55		14:01 (WT01_141m)	06:42		14:05 (WT01_141m)	07:31			08:20		08:12			08:45		
	21:42	164	16:45 (WT01_141m)	20:47	147	16:32 (WT01_141m)	19:39			18:34		16:46			16:39		
25	05:57		14:00 (WT01_141m)	06:44		14:06 (WT01_141m)	07:32			07:21		08:14			08:45		
	21:41	164	16:44 (WT01_141m)	20:45	146	16:32 (WT01_141m)	19:36			17:32		16:45			16:40		
26	05:58		14:01 (WT01_141m)	06:45		14:06 (WT01_141m)	07:34			07:23		08:15			08:45		
	21:39	164	16:45 (WT01_141m)	20:43	144	16:30 (WT01_141m)	19:34			17:30		16:44			16:40		
27	06:00		14:00 (WT01_141m)	06:47		14:07 (WT01_141m)	07:35			07:25		08:17			08:46		
	21:38	165	16:45 (WT01_141m)	20:41	142	16:29 (WT01_141m)	19:32			17:28		16:43			16:41		
28	06:01		13:59 (WT01_141m)	06:48		14:07 (WT01_141m)	07:37			07:27		08:18			08:46		
	21:37	165	16:44 (WT01_141m)	20:39	141	16:28 (WT01_141m)	19:29			17:26		16:42			16:42		
29	06:02		14:00 (WT01_141m)	06:50		14:09 (WT01_141m)	07:38			07:28		08:20			08:46		
	21:35	165	16:45 (WT01_141m)	20:37	138	16:27 (WT01_141m)	19:27			17:24		16:41			16:43		
30	06:04		13:59 (WT01_141m)	06:51		14:09 (WT01_141m)	07:40			07:30		08:21			08:46		
	21:34	165	16:44 (WT01_141m)	20:35	137	16:26 (WT01_141m)	19:25			17:22		16:41			16:44		
31	06:05		13:59 (WT01_141m)	06:53		14:10 (WT01_141m)				07:32					08:46		
	21:32	165	16:44 (WT01_141m)	20:33	135	16:25 (WT01_141m)				17:20					16:45		
Potential sun hours	498			451			380			333		269			248		
Total, worst case	4769			4793			2086										
Sun reduction	0,44			0,46			0,43										
Oper. time red.	0,99			0,99			0,99										
Wind dir. red.	0,74			0,74			0,74										
Total reduction	0,32			0,34			0,31										
Total, real	1540			1611			649										

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 49 - Steenhoevestraat 7

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46	08:21	07:29	07:21	09:25 (WT01_141m)	05:34
	16:46	17:32	18:22	20:14	11:20 (WT01_141m)	21:47
2	08:46	08:19	07:27	07:18	09:25 (WT01_141m)	05:33
	16:47	17:34	18:24	20:16	11:20 (WT01_141m)	21:48
3	08:46	08:18	07:25	07:16	09:24 (WT01_141m)	05:33
	16:48	17:36	18:26	20:17	11:20 (WT01_141m)	21:49
4	08:46	08:16	07:23	07:14	09:23 (WT01_141m)	05:32
	16:49	17:38	18:27	20:19	11:20 (WT01_141m)	21:50
5	08:46	08:15	07:21	07:12	09:23 (WT01_141m)	05:31
	16:50	17:39	18:29	20:21	11:19 (WT01_141m)	21:51
6	08:45	08:13	07:19	07:10	09:23 (WT01_141m)	05:31
	16:52	17:41	18:31	20:22	11:19 (WT01_141m)	21:52
7	08:45	08:12	07:16	07:07	09:22 (WT01_141m)	05:30
	16:53	17:43	18:32	20:24	11:19 (WT01_141m)	21:53
8	08:45	08:10	07:14	07:05	09:21 (WT01_141m)	05:30
	16:54	17:45	18:34	20:26	11:18 (WT01_141m)	21:54
9	08:44	08:08	07:12	07:03	09:21 (WT01_141m)	05:29
	16:55	17:47	18:36	20:27	11:17 (WT01_141m)	21:55
10	08:44	08:06	07:10	07:01	09:21 (WT01_141m)	05:29
	16:57	17:48	18:38	20:29	11:17 (WT01_141m)	21:56
11	08:43	08:05	07:08	06:59	09:21 (WT01_141m)	05:28
	16:58	17:50	18:39	20:31	11:16 (WT01_141m)	21:56
12	08:43	08:03	07:05	06:56	09:21 (WT01_141m)	05:28
	16:59	17:52	18:41	20:32	11:16 (WT01_141m)	21:57
13	08:42	08:01	07:03	06:54	09:21 (WT01_141m)	05:28
	17:01	17:54	18:43	20:34	11:15 (WT01_141m)	21:58
14	08:41	07:59	07:01	06:52	09:21 (WT01_141m)	05:28
	17:02	17:56	18:44	20:36	11:14 (WT01_141m)	21:58
15	08:41	07:57	06:59	06:50	09:21 (WT01_141m)	05:28
	17:04	17:57	18:46	20:37	11:14 (WT01_141m)	21:59
16	08:40	07:55	06:57	06:48	09:20 (WT01_141m)	05:27
	17:05	17:59	18:48	20:39	11:12 (WT01_141m)	21:59
17	08:39	07:54	06:54	06:46	09:20 (WT01_141m)	05:27
	17:07	18:01	18:49	20:40	11:11 (WT01_141m)	22:00
18	08:38	07:52	06:52	06:44	09:20 (WT01_141m)	05:27
	17:09	18:03	18:51	20:42	11:10 (WT01_141m)	22:00
19	08:37	07:50	06:50	06:42	09:20 (WT01_141m)	05:27
	17:10	18:05	18:53	20:44	11:09 (WT01_141m)	22:00
20	08:36	07:48	06:48	06:39	09:20 (WT01_141m)	05:27
	17:12	18:06	18:54	20:45	11:08 (WT01_141m)	22:01
21	08:35	07:46	06:45	06:37	09:21 (WT01_141m)	05:28
	17:13	18:08	18:56	20:47	11:06 (WT01_141m)	22:01
22	08:34	07:44	06:43	06:35	09:21 (WT01_141m)	05:28
	17:15	18:10	18:58	20:49	11:05 (WT01_141m)	22:01
23	08:33	07:42	06:41	06:33	09:21 (WT01_141m)	05:28
	17:17	18:12	18:59	20:50	11:04 (WT01_141m)	22:01
24	08:32	07:40	06:39	06:31	09:21 (WT01_141m)	05:28
	17:18	18:13	19:01	20:52	11:02 (WT01_141m)	22:02
25	08:30	07:38	06:36	06:29	09:23 (WT01_141m)	05:29
	17:20	18:15	19:03	20:53	11:02 (WT01_141m)	22:02
26	08:29	07:36	06:34	06:27	09:23 (WT01_141m)	05:29
	17:22	18:17	19:04	20:55	11:00 (WT01_141m)	22:02
27	08:28	07:34	06:32	06:25	09:23 (WT01_141m)	05:29
	17:23	18:19	19:06	20:57	10:59 (WT01_141m)	22:02
28	08:27	07:31	06:30	06:23	09:24 (WT01_141m)	05:30
	17:25	18:20	19:08	20:58	10:57 (WT01_141m)	22:01
29	08:25		07:27	06:22	09:24 (WT01_141m)	05:30
	17:27		20:09	21:00	10:56 (WT01_141m)	22:01
30	08:24		07:25	06:20	09:25 (WT01_141m)	05:31
	17:29		20:11	21:02	10:54 (WT01_141m)	22:01
31	08:22		07:23	06:18		
	17:30		20:13	11:20 (WT01_141m)		
Potential sun hours	263	279	367	414	481	494
Total, worst case			2183			
Sun reduction			0,36			
Oper. time red.			0,99			
Wind dir. red.			0,54			
Total reduction			0,19			
Total, real			424			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 49 - Steenhoevestraat 7

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July		August		September		October		November		December		
1	05:32 22:01		06:07 21:30	63	09:44 (WT01_141m) 10:47 (WT01_141m)	06:55 20:30	115	09:20 (WT01_141m) 11:15 (WT01_141m)	07:42 19:23	70	09:31 (WT01_141m) 10:41 (WT01_141m)	07:34 17:19	08:23 16:40
2	05:32 22:01		06:08 21:29	66	09:42 (WT01_141m) 10:48 (WT01_141m)	06:56 20:28	116	09:20 (WT01_141m) 11:16 (WT01_141m)	07:43 19:20	65	09:33 (WT01_141m) 10:38 (WT01_141m)	07:35 17:17	08:24 16:39
3	05:33 22:00		06:10 21:27	68	09:42 (WT01_141m) 10:50 (WT01_141m)	06:58 20:26	116	09:19 (WT01_141m) 11:15 (WT01_141m)	07:45 19:18	59	09:36 (WT01_141m) 10:35 (WT01_141m)	07:37 17:15	08:26 16:39
4	05:34 22:00		06:11 21:26	70	09:41 (WT01_141m) 10:51 (WT01_141m)	06:59 20:24	117	09:19 (WT01_141m) 11:16 (WT01_141m)	07:47 19:16	53	09:37 (WT01_141m) 10:30 (WT01_141m)	07:39 17:13	08:27 16:38
5	05:34 21:59		06:13 21:24	72	09:40 (WT01_141m) 10:52 (WT01_141m)	07:01 20:22	116	09:19 (WT01_141m) 11:15 (WT01_141m)	07:48 19:14	44	09:41 (WT01_141m) 10:25 (WT01_141m)	07:40 17:12	08:28 16:38
6	05:35 21:59		06:14 21:22	75	09:39 (WT01_141m) 10:54 (WT01_141m)	07:02 20:19	116	09:19 (WT01_141m) 11:15 (WT01_141m)	07:50 19:12	33	09:44 (WT01_141m) 10:17 (WT01_141m)	07:42 17:10	08:29 16:37
7	05:36 21:58		06:16 21:20	77	09:38 (WT01_141m) 10:55 (WT01_141m)	07:04 20:17	117	09:18 (WT01_141m) 11:15 (WT01_141m)	07:51 19:09	20	09:50 (WT01_141m) 10:10 (WT01_141m)	07:44 17:08	08:31 16:37
8	05:37 21:58		06:17 21:19	79	09:38 (WT01_141m) 10:57 (WT01_141m)	07:05 20:15	117	09:18 (WT01_141m) 11:15 (WT01_141m)	07:53 19:07			07:46 17:07	08:32 16:37
9	05:38 21:57		06:19 21:17	81	09:37 (WT01_141m) 10:58 (WT01_141m)	07:07 20:13	116	09:18 (WT01_141m) 11:14 (WT01_141m)	07:55 19:05			07:47 17:05	08:33 16:36
10	05:39 21:56		06:20 21:15	84	09:36 (WT01_141m) 11:00 (WT01_141m)	07:09 20:10	116	09:18 (WT01_141m) 11:14 (WT01_141m)	07:56 19:03			07:49 17:03	08:34 16:36
11	05:40 21:56		06:22 21:13	85	09:35 (WT01_141m) 11:00 (WT01_141m)	07:10 20:08	115	09:18 (WT01_141m) 11:13 (WT01_141m)	07:58 19:01			07:51 17:02	08:35 16:36
12	05:41 21:55		06:23 21:11	88	09:33 (WT01_141m) 11:01 (WT01_141m)	07:12 20:06	114	09:18 (WT01_141m) 11:12 (WT01_141m)	08:00 18:58			07:53 17:00	08:36 16:36
13	05:42 21:54		06:25 21:09	90	09:33 (WT01_141m) 11:03 (WT01_141m)	07:13 20:04	113	09:18 (WT01_141m) 11:11 (WT01_141m)	08:01 18:56			07:54 16:59	08:37 16:36
14	05:43 21:53		06:26 21:08	92	09:32 (WT01_141m) 11:04 (WT01_141m)	07:15 20:01	113	09:18 (WT01_141m) 11:11 (WT01_141m)	08:03 18:54			07:56 16:58	08:38 16:36
15	05:44 21:52		06:28 21:06	94	09:31 (WT01_141m) 11:05 (WT01_141m)	07:16 19:59	111	09:18 (WT01_141m) 11:09 (WT01_141m)	08:05 18:52			07:58 16:56	08:39 16:36
16	05:45 21:51		06:30 21:04	96	09:30 (WT01_141m) 11:06 (WT01_141m)	07:18 19:57	110	09:19 (WT01_141m) 11:09 (WT01_141m)	08:06 18:50			07:59 16:55	08:40 16:36
17	05:47 21:50		06:31 21:02	98	09:29 (WT01_141m) 11:07 (WT01_141m)	07:20 19:54	109	09:18 (WT01_141m) 11:07 (WT01_141m)	08:08 18:48			08:01 16:54	08:41 16:36
18	05:48 21:49		06:33 21:00	100	09:28 (WT01_141m) 11:08 (WT01_141m)	07:21 19:52	107	09:19 (WT01_141m) 11:06 (WT01_141m)	08:10 18:46			08:03 16:52	08:41 16:37
19	05:49 21:48	15	10:03 (WT01_141m) 10:18 (WT01_141m)	06:34 20:58	09:28 (WT01_141m) 11:09 (WT01_141m)	07:23 19:50	106	09:19 (WT01_141m) 11:05 (WT01_141m)	08:11 18:44			08:04 16:51	08:42 16:37
20	05:50 21:47	21	10:00 (WT01_141m) 10:21 (WT01_141m)	06:36 20:56	09:27 (WT01_141m) 11:10 (WT01_141m)	07:24 19:48	104	09:20 (WT01_141m) 11:04 (WT01_141m)	08:13 18:42			08:06 16:50	08:43 16:37
21	05:52 21:46	26	09:58 (WT01_141m) 10:24 (WT01_141m)	06:37 20:54	09:26 (WT01_141m) 11:11 (WT01_141m)	07:26 19:45	102	09:20 (WT01_141m) 11:02 (WT01_141m)	08:15 18:40			08:08 16:49	08:43 16:38
22	05:53 21:45	32	09:56 (WT01_141m) 10:28 (WT01_141m)	06:39 20:52	09:25 (WT01_141m) 11:11 (WT01_141m)	07:27 19:43	100	09:21 (WT01_141m) 11:01 (WT01_141m)	08:16 18:38			08:09 16:48	08:44 16:38
23	05:54 21:43	36	09:54 (WT01_141m) 10:30 (WT01_141m)	06:40 20:50	09:25 (WT01_141m) 11:12 (WT01_141m)	07:29 19:41	98	09:22 (WT01_141m) 11:00 (WT01_141m)	08:18 18:36			08:11 16:47	08:44 16:39
24	05:55 21:42	39	09:53 (WT01_141m) 10:32 (WT01_141m)	06:42 20:47	09:24 (WT01_141m) 11:13 (WT01_141m)	07:31 19:39	95	09:22 (WT01_141m) 10:57 (WT01_141m)	08:20 18:34			08:12 16:46	08:45 16:39
25	05:57 21:41	42	09:51 (WT01_141m) 10:33 (WT01_141m)	06:44 20:45	09:24 (WT01_141m) 11:14 (WT01_141m)	07:32 19:36	92	09:24 (WT01_141m) 10:56 (WT01_141m)	07:21 17:32			08:14 16:45	08:45 16:40
26	05:58 21:39	46	09:50 (WT01_141m) 10:36 (WT01_141m)	06:45 20:43	09:23 (WT01_141m) 11:14 (WT01_141m)	07:34 19:34	89	09:24 (WT01_141m) 10:53 (WT01_141m)	07:23 17:30			08:15 16:44	08:45 16:40
27	06:00 21:38	49	09:49 (WT01_141m) 10:38 (WT01_141m)	06:47 20:41	09:23 (WT01_141m) 11:15 (WT01_141m)	07:35 19:32	87	09:25 (WT01_141m) 10:52 (WT01_141m)	07:25 17:28			08:17 16:43	08:46 16:41
28	06:01 21:37	52	09:47 (WT01_141m) 10:39 (WT01_141m)	06:48 20:39	09:22 (WT01_141m) 11:15 (WT01_141m)	07:37 19:29	83	09:26 (WT01_141m) 10:49 (WT01_141m)	07:27 17:26			08:18 16:42	08:46 16:42
29	06:02 21:35	55	09:47 (WT01_141m) 10:42 (WT01_141m)	06:50 20:37	09:22 (WT01_141m) 11:15 (WT01_141m)	07:38 19:27	79	09:28 (WT01_141m) 10:47 (WT01_141m)	07:28 17:24			08:20 16:41	08:46 16:43
30	06:04 21:34	57	09:46 (WT01_141m) 10:43 (WT01_141m)	06:51 20:35	09:21 (WT01_141m) 11:15 (WT01_141m)	07:40 19:25	75	09:30 (WT01_141m) 10:45 (WT01_141m)	07:30 17:22			08:21 16:41	08:46 16:44
31	06:05 21:32	60	09:44 (WT01_141m) 10:44 (WT01_141m)	06:53 20:33	09:21 (WT01_141m) 11:16 (WT01_141m)	07:41 19:25			07:32 17:20			08:22 16:41	08:46 16:45
Potential sun hours	498		451	380	3164	333	344	269	248				
Total, worst case	530		2897	3164	344	269	248						
Sun reduction	0,44		0,46	0,43	0,35	0,35	0,35						
Oper. time red.	0,99		0,99	0,99	0,99	0,99	0,99						
Wind dir. red.	0,54		0,54	0,54	0,54	0,54	0,54						
Total reduction	0,24		0,25	0,23	0,19	0,19	0,19						
Total, real	125		713	721	65								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103
NL-1082 MS Amsterdam
+31 (0)88 4261 261
Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m

Assumptions for shadow calculations

Shadow receptor: 50 - Steenhoevestraat 4

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March		April		May		June
1	08:46	08:21	07:29		07:21	09:12 (WT01_141m)	06:18	09:16 (WT01_141m)	05:34
	16:46	17:32	18:22		20:14	93 10:45 (WT01_141m)	21:03	56 10:12 (WT01_141m)	21:47
2	08:46	08:19	07:27		07:18	09:12 (WT01_141m)	06:16	09:16 (WT01_141m)	05:33
	16:47	17:34	18:24		20:16	93 10:45 (WT01_141m)	21:05	54 10:10 (WT01_141m)	21:48
3	08:46	08:18	07:25		07:16	09:11 (WT01_141m)	06:14	09:17 (WT01_141m)	05:33
	16:48	17:36	18:26		20:17	92 10:43 (WT01_141m)	21:06	51 10:08 (WT01_141m)	21:49
4	08:46	08:16	07:23		07:14	09:10 (WT01_141m)	06:12	09:18 (WT01_141m)	05:32
	16:49	17:38	18:27		20:19	93 10:43 (WT01_141m)	21:08	47 10:05 (WT01_141m)	21:50
5	08:46	08:15	07:21		07:12	09:10 (WT01_141m)	06:10	09:20 (WT01_141m)	05:31
	16:50	17:39	18:29		20:21	93 10:43 (WT01_141m)	21:10	44 10:04 (WT01_141m)	21:51
6	08:45	08:13	07:19		07:10	09:10 (WT01_141m)	06:09	09:22 (WT01_141m)	05:31
	16:52	17:41	18:31		20:22	93 10:43 (WT01_141m)	21:11	39 10:01 (WT01_141m)	21:52
7	08:45	08:12	07:16		07:07	09:09 (WT01_141m)	06:07	09:23 (WT01_141m)	05:30
	16:53	17:43	18:32		20:24	94 10:43 (WT01_141m)	21:13	35 09:58 (WT01_141m)	21:53
8	08:45	08:10	07:14		07:05	09:08 (WT01_141m)	06:05	09:26 (WT01_141m)	05:30
	16:54	17:45	18:34		20:26	93 10:41 (WT01_141m)	21:14	30 09:56 (WT01_141m)	21:54
9	08:44	08:08	07:12		07:03	09:08 (WT01_141m)	06:04	09:28 (WT01_141m)	05:29
	16:55	17:47	18:36		20:27	93 10:41 (WT01_141m)	21:16	24 09:52 (WT01_141m)	21:55
10	08:44	08:06	07:10		07:01	09:08 (WT01_141m)	06:02	09:32 (WT01_141m)	05:29
	16:57	17:48	18:38	22 09:15 (WT01_141m)	20:29	92 10:40 (WT01_141m)	21:17	16 09:48 (WT01_141m)	21:56
11	08:43	08:05	07:08		08:48 (WT01_141m)	06:59	09:08 (WT01_141m)	06:00	05:28
	16:58	17:50	18:39	33 09:21 (WT01_141m)	20:31	91 10:39 (WT01_141m)	21:19		21:56
12	08:43	08:03	07:05		08:44 (WT01_141m)	06:56	09:08 (WT01_141m)	05:59	05:28
	16:59	17:52	18:41	41 09:25 (WT01_141m)	20:32	91 10:39 (WT01_141m)	21:21		21:57
13	08:42	08:01	07:03		08:41 (WT01_141m)	06:54	09:08 (WT01_141m)	05:57	05:28
	17:01	17:54	18:43	47 09:28 (WT01_141m)	20:34	90 10:38 (WT01_141m)	21:22		21:58
14	08:41	07:59	07:01		08:38 (WT01_141m)	06:52	09:08 (WT01_141m)	05:56	05:28
	17:02	17:56	18:44	52 09:30 (WT01_141m)	20:36	89 10:37 (WT01_141m)	21:24		21:58
15	08:41	07:57	06:59		08:36 (WT01_141m)	06:50	09:08 (WT01_141m)	05:54	05:28
	17:04	17:57	18:46	57 09:33 (WT01_141m)	20:37	88 10:36 (WT01_141m)	21:25		21:59
16	08:40	07:55	06:57		08:34 (WT01_141m)	06:48	09:07 (WT01_141m)	05:53	05:27
	17:05	17:59	18:48	61 09:35 (WT01_141m)	20:39	87 10:34 (WT01_141m)	21:26		21:59
17	08:39	07:54	06:54		08:32 (WT01_141m)	06:46	09:08 (WT01_141m)	05:51	05:27
	17:07	18:01	18:49	65 09:37 (WT01_141m)	20:40	85 10:33 (WT01_141m)	21:28		22:00
18	08:38	07:52	06:52		08:29 (WT01_141m)	06:44	09:08 (WT01_141m)	05:50	05:27
	17:09	18:03	18:51	68 09:37 (WT01_141m)	20:42	84 10:32 (WT01_141m)	21:29		22:00
19	08:37	07:50	06:50		08:27 (WT01_141m)	06:42	09:08 (WT01_141m)	05:48	05:27
	17:10	18:05	18:53	72 09:39 (WT01_141m)	20:44	82 10:30 (WT01_141m)	21:31		22:00
20	08:36	07:48	06:48		08:26 (WT01_141m)	06:39	09:08 (WT01_141m)	05:47	05:27
	17:12	18:06	18:54	74 09:40 (WT01_141m)	20:45	81 10:29 (WT01_141m)	21:32		22:01
21	08:35	07:46	06:45		08:24 (WT01_141m)	06:37	09:09 (WT01_141m)	05:46	05:28
	17:13	18:08	18:56	77 09:41 (WT01_141m)	20:47	79 10:28 (WT01_141m)	21:34		22:01
22	08:34	07:44	06:43		08:22 (WT01_141m)	06:35	09:09 (WT01_141m)	05:45	05:28
	17:15	18:10	18:58	79 09:41 (WT01_141m)	20:49	77 10:26 (WT01_141m)	21:35		22:01
23	08:33	07:42	06:41		08:21 (WT01_141m)	06:33	09:10 (WT01_141m)	05:43	05:28
	17:17	18:12	18:59	81 09:42 (WT01_141m)	20:50	75 10:25 (WT01_141m)	21:36		22:01
24	08:32	07:40	06:39		08:20 (WT01_141m)	06:31	09:10 (WT01_141m)	05:42	05:28
	17:18	18:13	19:01	83 09:43 (WT01_141m)	20:52	73 10:23 (WT01_141m)	21:38		22:02
25	08:30	07:38	06:36		08:19 (WT01_141m)	06:29	09:11 (WT01_141m)	05:41	05:29
	17:20	18:15	19:03	85 09:44 (WT01_141m)	20:53	72 10:23 (WT01_141m)	21:39		22:02
26	08:29	07:36	06:34		08:17 (WT01_141m)	06:27	09:12 (WT01_141m)	05:40	05:29
	17:22	18:17	19:04	87 09:44 (WT01_141m)	20:55	69 10:21 (WT01_141m)	21:40		22:02
27	08:28	07:34	06:32		08:16 (WT01_141m)	06:25	09:12 (WT01_141m)	05:39	05:29
	17:23	18:19	19:06	88 09:44 (WT01_141m)	20:57	67 10:19 (WT01_141m)	21:41		22:02
28	08:27	07:31	06:30		08:16 (WT01_141m)	06:23	09:13 (WT01_141m)	05:38	05:30
	17:25	18:20	19:08	89 09:45 (WT01_141m)	20:58	64 10:17 (WT01_141m)	21:43		22:01
29	08:25		07:27		09:15 (WT01_141m)	06:22	09:13 (WT01_141m)	05:37	05:30
	17:27		20:09	90 10:45 (WT01_141m)	21:00	62 10:15 (WT01_141m)	21:44		22:01
30	08:24		07:25		09:13 (WT01_141m)	06:20	09:14 (WT01_141m)	05:36	05:31
	17:29		20:11	91 10:44 (WT01_141m)	21:02	59 10:13 (WT01_141m)	21:45		22:01
31	08:22		07:23		09:13 (WT01_141m)		05:35		
	17:31		20:13	91 10:44 (WT01_141m)			21:46		
Potential sun hours	263	279	367		414		481		494
Total, worst case				1533		2494		396	
Sun reduction				0,36		0,45		0,45	
Oper. time red.				0,99		0,99		0,99	
Wind dir. red.				0,55		0,55		0,55	
Total reduction				0,19		0,24		0,24	
Total, real				299		601		96	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 50 - Steenhoevestraat 4

Sunshine probability S (Average daily sunshine hours) []

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
 2,00 2,80 4,30 6,20 7,00 7,20 7,10 6,70 5,40 3,80 2,30 1,70

Operational time

N NNE ENE E ESE SSE S SSW WSW W WNW NNW Sum
 391 547 689 513 353 374 630 1.375 1.712 934 580 534 8.632

	July	August	September	October	November	December
1	05:32 22:01	06:07 21:30	06:55 20:30	09:07 (WT01_141m) 10:38 (WT01_141m)	07:42 19:23	09:22 (WT01_141m) 17:19
2	05:32 22:01	06:08 21:29	09:46 (WT01_141m) 20:28	09:07 (WT01_141m) 10:39 (WT01_141m)	07:43 19:20	09:25 (WT01_141m) 17:17
3	05:33 22:00	06:10 21:27	09:41 (WT01_141m) 20:26	09:06 (WT01_141m) 10:39 (WT01_141m)	07:45 19:18	09:29 (WT01_141m) 17:15
4	05:34 22:00	06:11 21:26	09:37 (WT01_141m) 20:24	09:06 (WT01_141m) 10:39 (WT01_141m)	07:47 19:16	09:35 (WT01_141m) 17:13
5	05:34 21:59	06:13 21:24	09:34 (WT01_141m) 20:22	09:05 (WT01_141m) 10:39 (WT01_141m)	07:48 19:14	09:49 (WT01_141m) 17:12
6	05:35 21:59	06:14 21:22	09:33 (WT01_141m) 20:19	09:06 (WT01_141m) 10:39 (WT01_141m)	07:50 19:12	09:57 (WT01_141m) 17:10
7	05:36 21:58	06:16 21:20	09:30 (WT01_141m) 20:17	09:05 (WT01_141m) 10:38 (WT01_141m)	07:51 19:09	10:05 (WT01_141m) 17:08
8	05:37 21:58	06:17 21:19	09:29 (WT01_141m) 20:15	09:05 (WT01_141m) 10:39 (WT01_141m)	07:53 19:07	10:02 (WT01_141m) 17:07
9	05:38 21:57	06:19 21:17	09:27 (WT01_141m) 20:13	09:05 (WT01_141m) 10:38 (WT01_141m)	07:55 19:05	10:02 (WT01_141m) 17:05
10	05:39 21:56	06:20 21:15	09:26 (WT01_141m) 20:10	09:05 (WT01_141m) 10:38 (WT01_141m)	07:56 19:03	10:05 (WT01_141m) 17:03
11	05:40 21:56	06:22 21:13	09:25 (WT01_141m) 20:08	09:05 (WT01_141m) 10:37 (WT01_141m)	07:58 19:01	10:05 (WT01_141m) 17:02
12	05:41 21:55	06:23 21:11	09:23 (WT01_141m) 20:06	09:05 (WT01_141m) 10:37 (WT01_141m)	08:00 18:58	10:05 (WT01_141m) 17:00
13	05:42 21:54	06:25 21:09	09:22 (WT01_141m) 20:04	09:05 (WT01_141m) 10:36 (WT01_141m)	08:01 18:56	10:05 (WT01_141m) 16:59
14	05:43 21:53	06:26 21:08	09:21 (WT01_141m) 20:01	09:05 (WT01_141m) 10:35 (WT01_141m)	08:03 18:54	10:05 (WT01_141m) 16:58
15	05:44 21:52	06:28 21:06	09:20 (WT01_141m) 19:59	09:05 (WT01_141m) 10:34 (WT01_141m)	08:05 18:52	10:05 (WT01_141m) 16:56
16	05:45 21:51	06:30 21:04	09:19 (WT01_141m) 19:57	09:06 (WT01_141m) 10:34 (WT01_141m)	08:06 18:50	10:05 (WT01_141m) 16:55
17	05:47 21:50	06:31 21:02	09:18 (WT01_141m) 19:54	09:05 (WT01_141m) 10:32 (WT01_141m)	08:08 18:48	10:05 (WT01_141m) 16:54
18	05:48 21:49	06:33 21:00	09:17 (WT01_141m) 19:52	09:06 (WT01_141m) 10:32 (WT01_141m)	08:10 18:46	10:05 (WT01_141m) 16:52
19	05:49 21:48	06:34 20:58	09:16 (WT01_141m) 19:50	09:06 (WT01_141m) 10:30 (WT01_141m)	08:11 18:44	10:05 (WT01_141m) 16:51
20	05:50 21:47	06:36 20:56	09:15 (WT01_141m) 19:48	09:07 (WT01_141m) 10:29 (WT01_141m)	08:13 18:42	10:05 (WT01_141m) 16:50
21	05:52 21:46	06:37 20:54	09:15 (WT01_141m) 19:45	09:07 (WT01_141m) 10:27 (WT01_141m)	08:15 18:40	10:05 (WT01_141m) 16:49
22	05:53 21:45	06:39 20:52	09:13 (WT01_141m) 19:43	09:09 (WT01_141m) 10:26 (WT01_141m)	08:16 18:38	10:05 (WT01_141m) 16:48
23	05:54 21:43	06:40 20:50	09:13 (WT01_141m) 19:41	09:10 (WT01_141m) 10:25 (WT01_141m)	08:18 18:36	10:05 (WT01_141m) 16:47
24	05:55 21:42	06:42 20:47	09:12 (WT01_141m) 19:39	09:10 (WT01_141m) 10:23 (WT01_141m)	08:20 18:34	10:05 (WT01_141m) 16:46
25	05:57 21:41	06:44 20:45	09:12 (WT01_141m) 19:36	09:12 (WT01_141m) 10:21 (WT01_141m)	07:21 17:32	10:05 (WT01_141m) 16:45
26	05:58 21:39	06:45 20:43	09:10 (WT01_141m) 19:34	09:13 (WT01_141m) 10:19 (WT01_141m)	07:23 17:30	10:05 (WT01_141m) 16:44
27	06:00 21:38	06:47 20:41	09:10 (WT01_141m) 19:32	09:15 (WT01_141m) 10:17 (WT01_141m)	07:25 17:28	10:05 (WT01_141m) 16:43
28	06:01 21:37	06:48 20:39	09:09 (WT01_141m) 19:29	09:16 (WT01_141m) 10:14 (WT01_141m)	07:27 17:26	10:05 (WT01_141m) 16:42
29	06:02 21:35	06:50 20:37	09:09 (WT01_141m) 19:27	09:18 (WT01_141m) 10:12 (WT01_141m)	07:28 17:24	10:05 (WT01_141m) 16:41
30	06:04 21:34	06:51 20:35	09:08 (WT01_141m) 19:25	09:20 (WT01_141m) 10:09 (WT01_141m)	07:30 17:22	10:05 (WT01_141m) 16:40
31	06:05 21:32	06:53 20:33	09:08 (WT01_141m) 10:39 (WT01_141m)	07:32 17:20	07:32 17:20	10:05 (WT01_141m) 16:45
Potential sun hours	498	451	380	333	269	248
Total, worst case		1902	2473	122		
Sun reduction		0,46	0,43	0,35		
Oper. time red.		0,99	0,99	0,99		
Wind dir. red.		0,55	0,55	0,55		
Total reduction		0,25	0,23	0,19		
Total, real		470	566	23		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Last time (hh:mm) with flicker	(WTG causing flicker last time)
	Minutes with flicker		

SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 51 - Blokhuisstraat 49

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46	08:21	07:29	07:21	17:44 (WT01_141m)	06:18
	16:46	17:32	18:22	20:14	59 18:43 (WT01_141m)	21:03
2	08:46	08:19	07:27	07:18	17:45 (WT01_141m)	06:16
	16:47	17:34	18:24	20:16	58 18:43 (WT01_141m)	21:05
3	08:46	08:18	07:25	07:16	17:46 (WT01_141m)	06:14
	16:48	17:36	18:26	20:17	55 18:41 (WT01_141m)	21:06
4	08:46	08:16	07:23	07:14	17:47 (WT01_141m)	06:12
	16:49	17:38	18:27	20:19	53 18:40 (WT01_141m)	21:08
5	08:46	08:15	07:21	17:07 (WT01_141m)	17:48 (WT01_141m)	06:10
	16:50	17:39	18:29	18 17:25 (WT01_141m)	20:21	52 18:40 (WT01_141m)
	16:50	17:39	18:29	18 17:25 (WT01_141m)	20:21	52 18:40 (WT01_141m)
6	08:45	08:13	07:19	17:02 (WT01_141m)	07:09	17:50 (WT01_141m)
	16:51	17:41	18:31	26 17:28 (WT01_141m)	20:22	49 18:39 (WT01_141m)
7	08:45	08:11	07:16	16:59 (WT01_141m)	07:07	17:51 (WT01_141m)
	16:53	17:43	18:32	32 17:31 (WT01_141m)	20:24	46 18:37 (WT01_141m)
8	08:45	08:10	07:14	16:57 (WT01_141m)	07:05	17:52 (WT01_141m)
	16:54	17:45	18:34	36 17:33 (WT01_141m)	20:26	43 18:35 (WT01_141m)
9	08:44	08:08	07:12	16:55 (WT01_141m)	07:03	17:53 (WT01_141m)
	16:55	17:47	18:36	40 17:35 (WT01_141m)	20:27	41 18:34 (WT01_141m)
10	08:44	08:06	07:10	16:52 (WT01_141m)	07:01	17:55 (WT01_141m)
	16:57	17:48	18:38	44 17:36 (WT01_141m)	20:29	37 18:32 (WT01_141m)
11	08:43	08:05	07:08	16:51 (WT01_141m)	06:59	17:57 (WT01_141m)
	16:58	17:50	18:39	47 17:38 (WT01_141m)	20:31	33 18:30 (WT01_141m)
12	08:43	08:03	07:05	16:50 (WT01_141m)	06:56	18:00 (WT01_141m)
	16:59	17:52	18:41	50 17:40 (WT01_141m)	20:32	27 18:27 (WT01_141m)
13	08:42	08:01	07:03	16:49 (WT01_141m)	06:54	18:03 (WT01_141m)
	17:01	17:54	18:43	52 17:41 (WT01_141m)	20:34	21 18:24 (WT01_141m)
14	08:41	07:59	07:01	16:47 (WT01_141m)	06:52	18:07 (WT01_141m)
	17:02	17:56	18:44	55 17:42 (WT01_141m)	20:35	13 18:20 (WT01_141m)
15	08:40	07:57	06:59	16:46 (WT01_141m)	06:50	05:54
	17:04	17:57	18:46	57 17:43 (WT01_141m)	20:37	21:25
16	08:40	07:55	06:57	16:45 (WT01_141m)	06:48	05:53
	17:05	17:59	18:48	59 17:44 (WT01_141m)	20:39	21:26
17	08:39	07:54	06:54	16:45 (WT01_141m)	06:46	05:51
	17:07	18:01	18:49	60 17:45 (WT01_141m)	20:40	21:28
18	08:38	07:52	06:52	16:43 (WT01_141m)	06:44	05:50
	17:08	18:03	18:51	62 17:45 (WT01_141m)	20:42	21:29
19	08:37	07:50	06:50	16:43 (WT01_141m)	06:41	05:48
	17:10	18:05	18:53	63 17:46 (WT01_141m)	20:44	21:31
20	08:36	07:48	06:48	16:43 (WT01_141m)	06:39	05:47
	17:12	18:06	18:54	63 17:46 (WT01_141m)	20:45	21:32
21	08:35	07:46	06:45	16:43 (WT01_141m)	06:37	05:46
	17:13	18:08	18:56	64 17:47 (WT01_141m)	20:47	21:34
22	08:34	07:44	06:43	16:42 (WT01_141m)	06:35	05:45
	17:15	18:10	18:58	64 17:46 (WT01_141m)	20:49	21:35
23	08:33	07:42	06:41	16:42 (WT01_141m)	06:33	05:43
	17:17	18:12	18:59	65 17:47 (WT01_141m)	20:50	21:36
24	08:32	07:40	06:39	16:42 (WT01_141m)	06:31	05:42
	17:18	18:13	19:01	65 17:47 (WT01_141m)	20:52	21:38
25	08:30	07:38	06:36	16:41 (WT01_141m)	06:29	05:41
	17:20	18:15	19:03	65 17:46 (WT01_141m)	20:53	21:39
26	08:29	07:36	06:34	16:41 (WT01_141m)	06:27	05:40
	17:22	18:17	19:04	65 17:46 (WT01_141m)	20:55	21:40
27	08:28	07:33	06:32	16:42 (WT01_141m)	06:25	05:39
	17:23	18:19	19:06	64 17:46 (WT01_141m)	20:57	21:41
28	08:27	07:31	06:30	16:42 (WT01_141m)	06:23	05:38
	17:25	18:20	19:08	64 17:46 (WT01_141m)	20:58	21:43
29	08:25		07:27	17:42 (WT01_141m)	06:21	05:37
	17:27		20:09	63 18:45 (WT01_141m)	21:00	21:44
30	08:24		07:25	17:43 (WT01_141m)	06:20	05:36
	17:29		20:11	61 18:44 (WT01_141m)	21:02	21:45
31	08:22		07:23	17:43 (WT01_141m)		05:35
	17:30		20:12	61 18:44 (WT01_141m)		21:46
Potential sun hours	263	279	367	414	481	494
Total, worst case			1465		587	
Sun reduction			0,36		0,45	
Oper. time red.			0,99		0,99	
Wind dir. red.			0,69		0,69	
Total reduction			0,25		0,30	
Total, real			359		178	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Slagschaduw Mechelen-Noord - Project_141m
 Assumptions for shadow calculations

Shadow receptor: 51 - Blokhuisstraat 49

Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	July		August		September		October		November		December	
1	05:32	06:07			06:55	17:56 (WT01_141m)	07:42	17:28 (WT01_141m)	07:33	08:23		
	22:01	21:30			20:30	33 18:29 (WT01_141m)	19:23	51 18:19 (WT01_141m)	17:18	16:40		
2	05:32	06:08			06:56	17:54 (WT01_141m)	07:43	17:29 (WT01_141m)	07:35	08:24		
	22:01	21:29			20:28	37 18:31 (WT01_141m)	19:20	48 18:17 (WT01_141m)	17:17	16:39		
3	05:33	06:10			06:58	17:51 (WT01_141m)	07:45	17:29 (WT01_141m)	07:37	08:26		
	22:00	21:27			20:26	41 18:32 (WT01_141m)	19:18	46 18:15 (WT01_141m)	17:15	16:39		
4	05:34	06:11			06:59	17:50 (WT01_141m)	07:46	17:31 (WT01_141m)	07:39	08:27		
	22:00	21:26			20:24	43 18:33 (WT01_141m)	19:16	42 18:13 (WT01_141m)	17:13	16:38		
5	05:34	06:13			07:01	17:48 (WT01_141m)	07:48	17:33 (WT01_141m)	07:40	08:28		
	21:59	21:24			20:21	45 18:33 (WT01_141m)	19:14	38 18:11 (WT01_141m)	17:12	16:38		
6	05:35	06:14			07:02	17:46 (WT01_141m)	07:50	17:34 (WT01_141m)	07:42	08:29		
	21:59	21:22			20:19	49 18:35 (WT01_141m)	19:12	34 18:08 (WT01_141m)	17:10	16:37		
7	05:36	06:16			07:04	17:44 (WT01_141m)	07:51	17:36 (WT01_141m)	07:44	08:31		
	21:58	21:20			20:17	51 18:35 (WT01_141m)	19:09	29 18:05 (WT01_141m)	17:08	16:37		
8	05:37	06:17			07:05	17:42 (WT01_141m)	07:53	17:40 (WT01_141m)	07:46	08:32		
	21:58	21:19			20:15	54 18:36 (WT01_141m)	19:07	22 18:02 (WT01_141m)	17:07	16:37		
9	05:38	06:19			07:07	17:40 (WT01_141m)	07:55	17:44 (WT01_141m)	07:47	08:33		
	21:57	21:17			20:13	55 18:35 (WT01_141m)	19:05	12 17:56 (WT01_141m)	17:05	16:36		
10	05:39	06:20			07:09	17:39 (WT01_141m)	07:56		07:49	08:34		
	21:56	21:15			20:10	57 18:36 (WT01_141m)	19:03		17:03	16:36		
11	05:40	06:22			07:10	17:37 (WT01_141m)	07:58		07:51	08:35		
	21:56	21:13			20:08	59 18:36 (WT01_141m)	19:01		17:02	16:36		
12	05:41	06:23			07:12	17:36 (WT01_141m)	08:00		07:53	08:36		
	21:55	21:11			20:06	60 18:36 (WT01_141m)	18:58		17:00	16:36		
13	05:42	06:25			07:13	17:34 (WT01_141m)	08:01		07:54	08:37		
	21:54	21:09			20:04	62 18:36 (WT01_141m)	18:56		16:59	16:36		
14	05:43	06:26			07:15	17:33 (WT01_141m)	08:03		07:56	08:38		
	21:53	21:08			20:01	63 18:36 (WT01_141m)	18:54		16:58	16:36		
15	05:44	06:28			07:16	17:32 (WT01_141m)	08:04		07:58	08:39		
	21:52	21:06			19:59	63 18:35 (WT01_141m)	18:52		16:56	16:36		
16	05:45	06:30			07:18	17:31 (WT01_141m)	08:06		07:59	08:40		
	21:51	21:04			19:57	64 18:35 (WT01_141m)	18:50		16:55	16:36		
17	05:47	06:31			07:19	17:30 (WT01_141m)	08:08		08:01	08:41		
	21:50	21:02			19:54	64 18:34 (WT01_141m)	18:48		16:54	16:36		
18	05:48	06:33			07:21	17:29 (WT01_141m)	08:10		08:03	08:41		
	21:49	21:00			19:52	65 18:34 (WT01_141m)	18:46		16:52	16:36		
19	05:49	06:34			07:23	17:28 (WT01_141m)	08:11		08:04	08:42		
	21:48	20:58			19:50	65 18:33 (WT01_141m)	18:44		16:51	16:37		
20	05:50	06:36			07:24	17:28 (WT01_141m)	08:13		08:06	08:43		
	21:47	20:56			19:48	65 18:33 (WT01_141m)	18:42		16:50	16:37		
21	05:51	06:37			07:26	17:27 (WT01_141m)	08:15		08:08	08:43		
	21:46	20:54			19:45	65 18:32 (WT01_141m)	18:40		16:49	16:38		
22	05:53	06:39			07:27	17:27 (WT01_141m)	08:16		08:09	08:44		
	21:45	20:52			19:43	65 18:32 (WT01_141m)	18:38		16:48	16:38		
23	05:54	06:40			07:29	17:26 (WT01_141m)	08:18		08:11	08:44		
	21:43	20:50			19:41	64 18:30 (WT01_141m)	18:36		16:47	16:39		
24	05:55	06:42			07:30	17:27 (WT01_141m)	08:20		08:12	08:45		
	21:42	20:47			19:39	63 18:30 (WT01_141m)	18:34		16:46	16:39		
25	05:57	06:44			07:32	17:27 (WT01_141m)	07:21		08:14	08:45		
	21:41	20:45			19:36	62 18:29 (WT01_141m)	17:32		16:45	16:40		
26	05:58	06:45			07:34	17:26 (WT01_141m)	07:23		08:15	08:45		
	21:39	20:43			19:34	61 18:27 (WT01_141m)	17:30		16:44	16:40		
27	06:00	06:47			07:35	17:27 (WT01_141m)	07:25		08:17	08:46		
	21:38	20:41			19:32	59 18:26 (WT01_141m)	17:28		16:43	16:41		
28	06:01	06:48			07:37	17:26 (WT01_141m)	07:27		08:18	08:46		
	21:36	20:39			19:29	58 18:24 (WT01_141m)	17:26		16:42	16:42		
29	06:02	06:50	18:08 (WT01_141m)		07:38	17:27 (WT01_141m)	07:28		08:20	08:46		
	21:35	20:37	13 18:21 (WT01_141m)		19:27	56 18:23 (WT01_141m)	17:24		16:41	16:43		
30	06:04	06:51	18:02 (WT01_141m)		07:40	17:28 (WT01_141m)	07:30		08:21	08:46		
	21:34	20:35	22 18:24 (WT01_141m)		19:25	54 18:22 (WT01_141m)	17:22		16:40	16:44		
31	06:05	06:53	17:59 (WT01_141m)				07:32			08:46		
	21:32	20:32	28 18:27 (WT01_141m)				17:20			16:45		
Potential sun hours	498	451			380		333		269	248		
Total, worst case		63			1702		322					
Sun reduction		0,46			0,43		0,35					
Oper. time red.		0,99			0,99		0,99					
Wind dir. red.		0,69			0,69		0,69					
Total reduction		0,31			0,29		0,24					
Total, real		20			490		77					

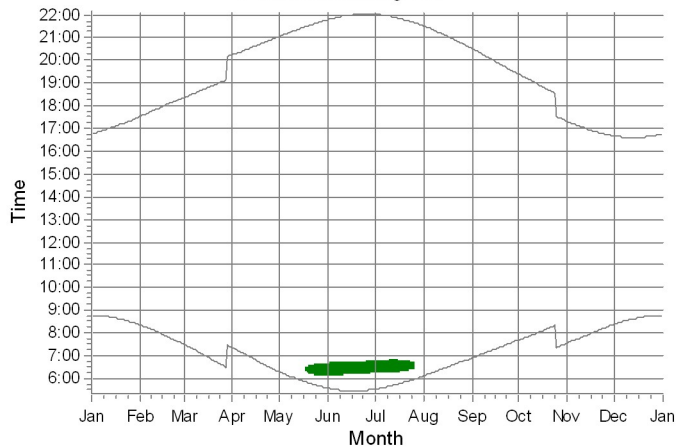
Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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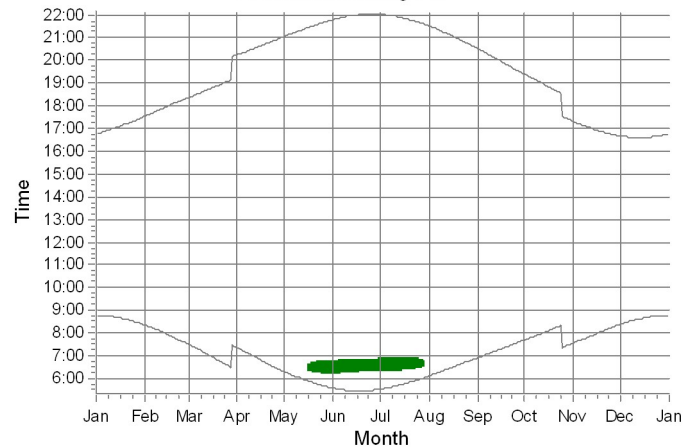
SHADOW - Calendar, graphical

Calculation: Slagschaduw Mechelen-Noord - Project_141m

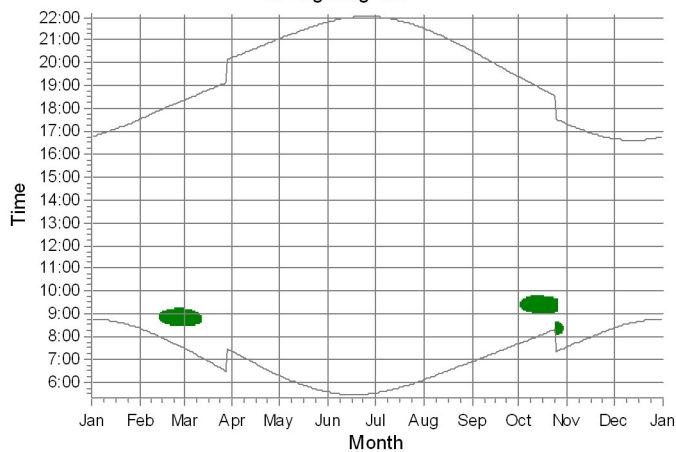
1: Gentssesteenweg 161



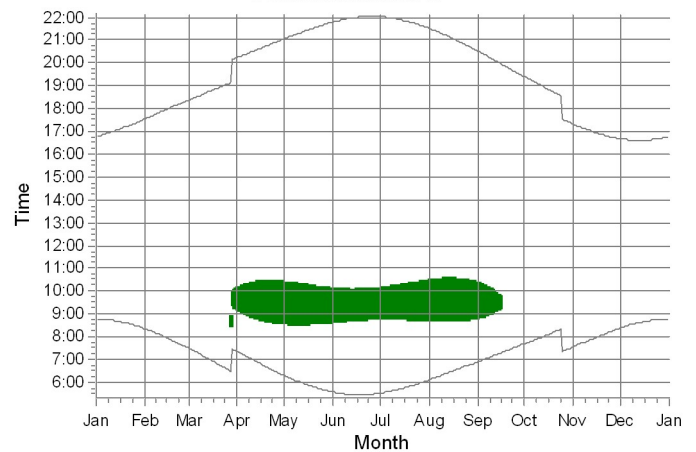
2: Gentssesteenweg 149



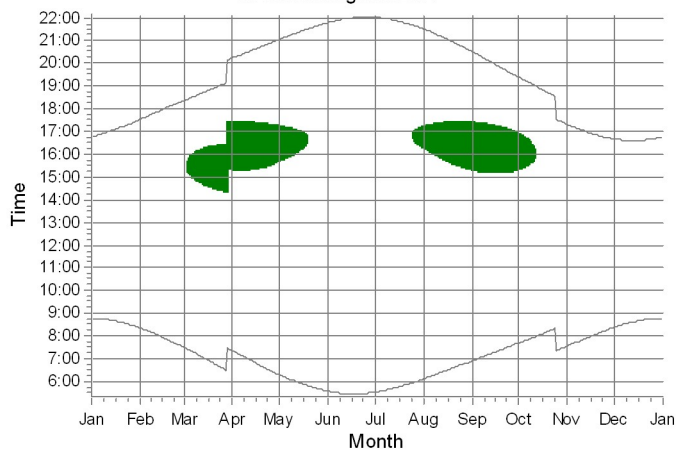
3: Hogeweg 136



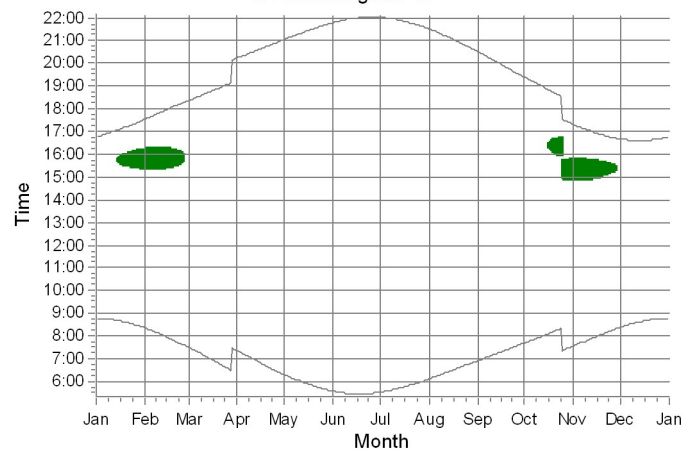
4: Steenhoevestraat 6



5: Blarenberglaan 23A



6: Blarenberglaan 13



WTGs



WT01_141m: Turbine Mechelen Noord_141m

Project:

Mechelen-Noord

Licensed user:

Arcadis Global B.V

Symphony, Gustav Mahlerplein 97-103

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Margot Scheldeman /

margot.scheldeman@arcadis.com

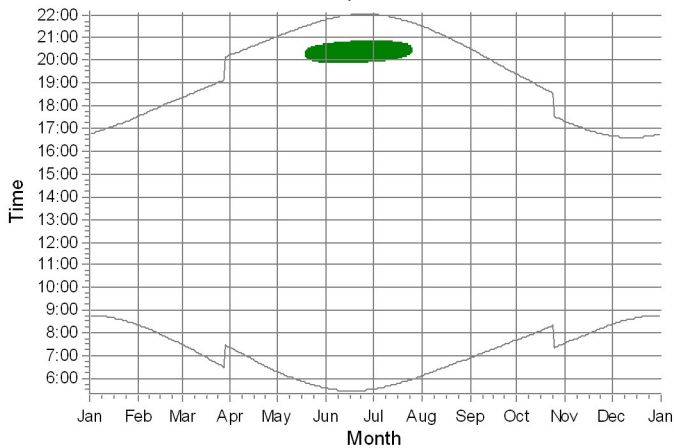
Calculated:

16/07/2026 10:30/4.2.303

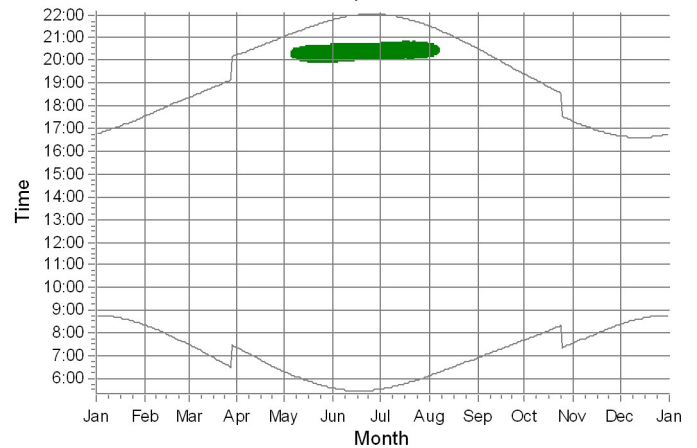
SHADOW - Calendar, graphical

Calculation: Slagschaduw Mechelen-Noord - Project_141m

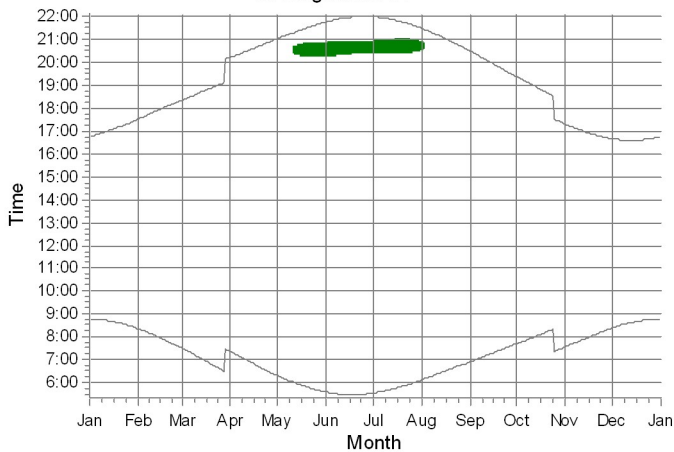
7: Oude Antwerpsebaan 287



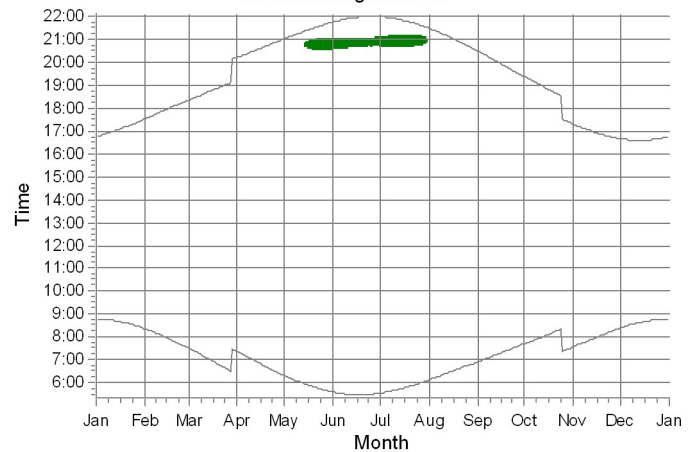
8: Oude Antwerpsebaan 230



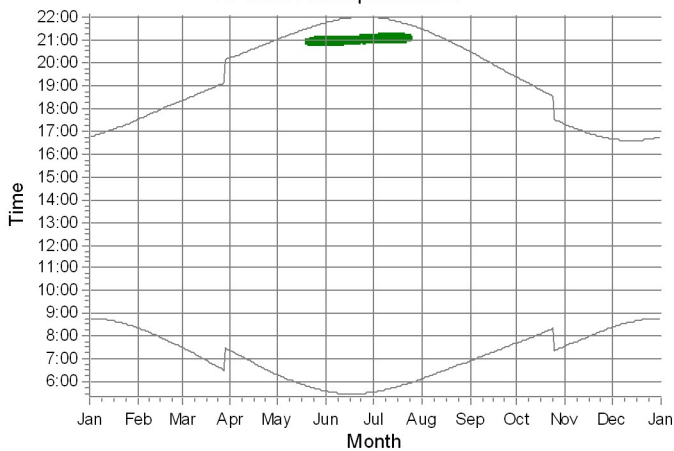
9: Galgestraat 91



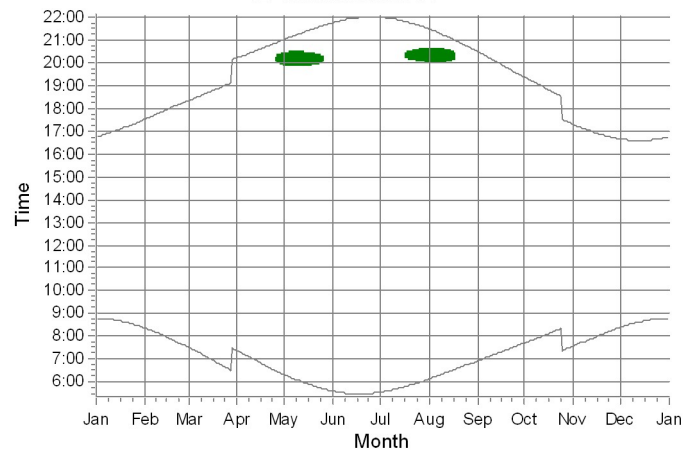
10: Molenbergstraat 26



11: Oude Antwerpsebaan 22



12: Slachthuislaan 34



WTGs

WT01_141m: Turbine Mechelen Noord_141m

Project:

Mechelen-Noord

Licensed user:

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Symphony, Gustav Mahlerplein 97-103

NL-1082 MS Amsterdam

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Margot Scheldeman /

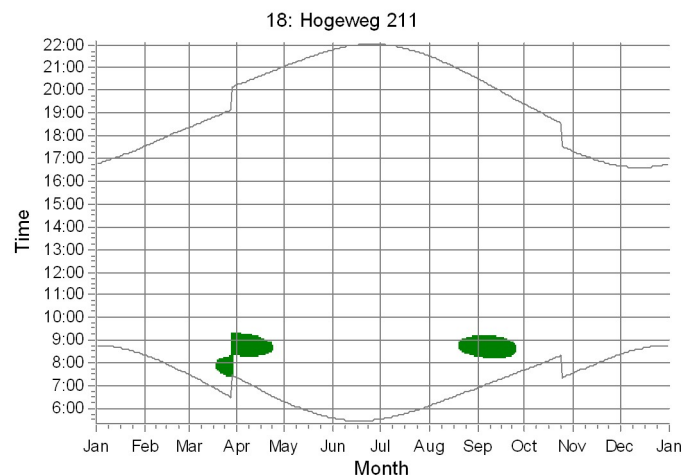
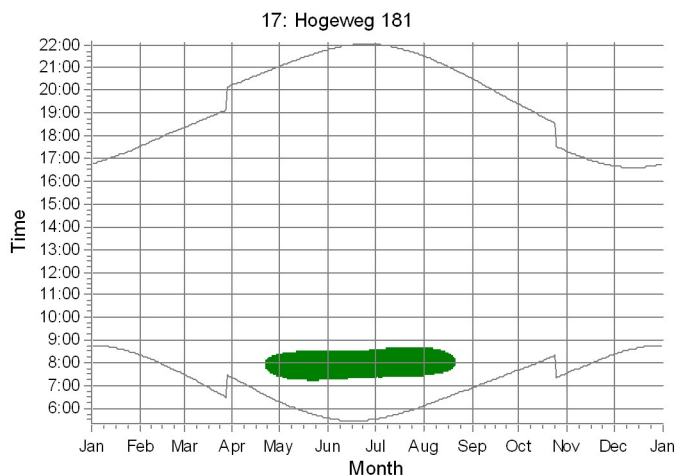
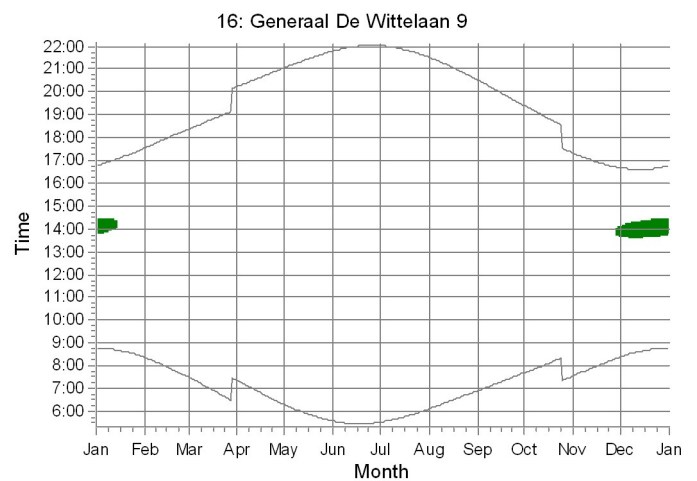
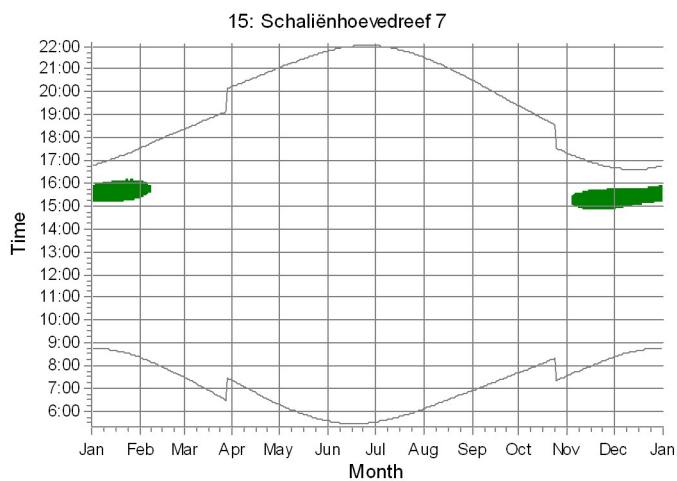
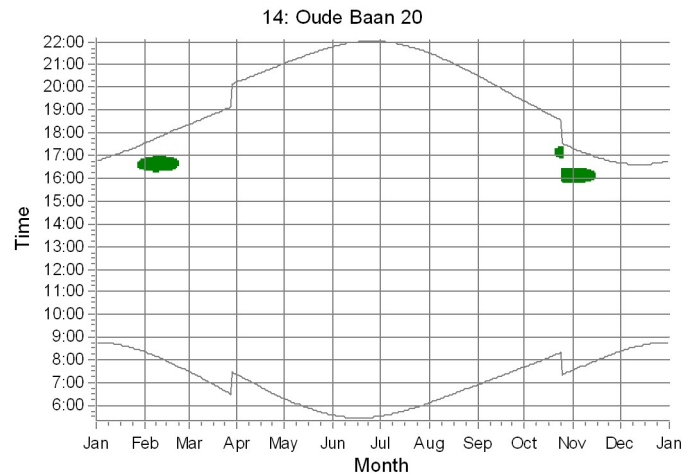
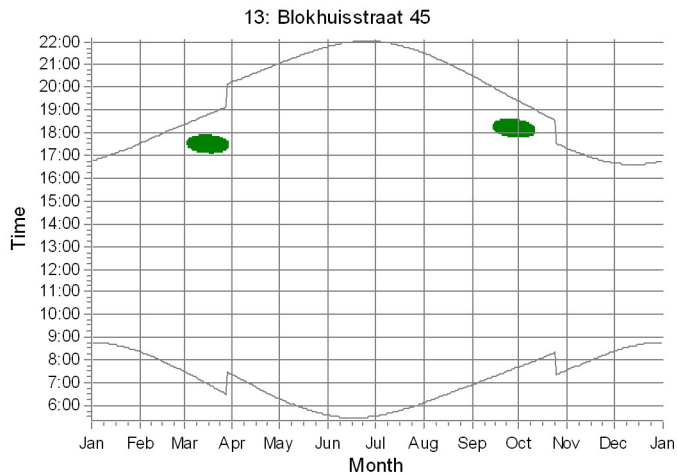
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar, graphical

Calculation: Slagschaduw Mechelen-Noord - Project_141m



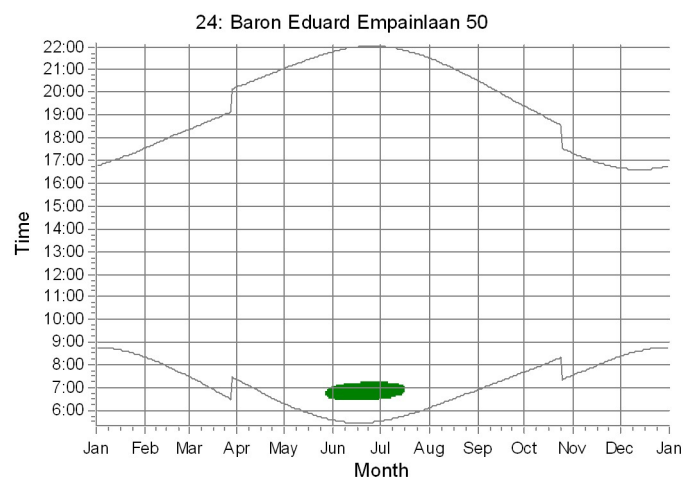
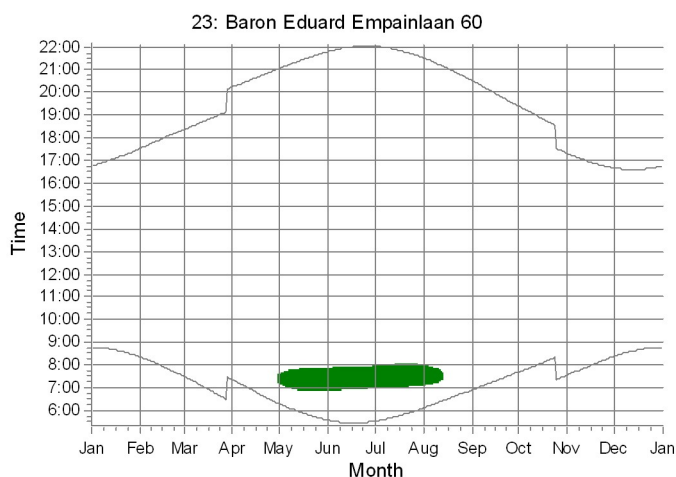
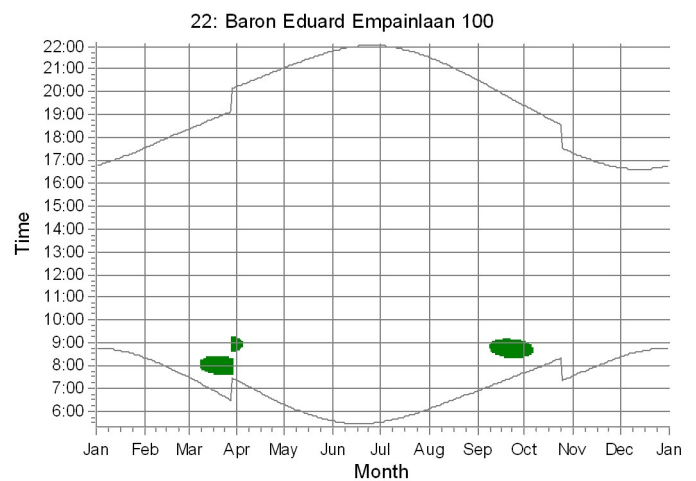
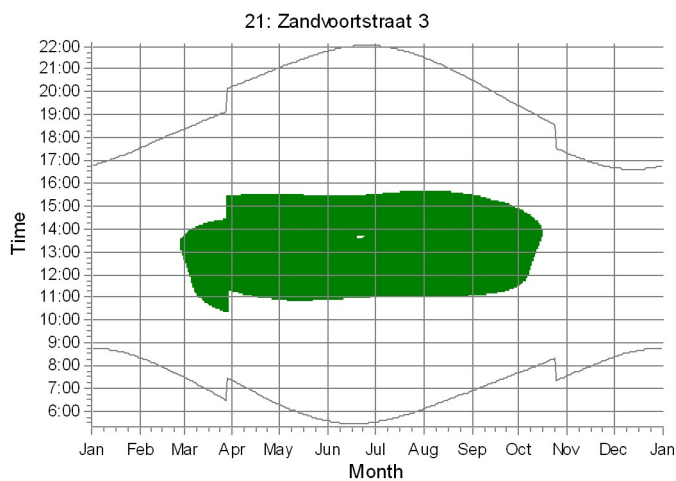
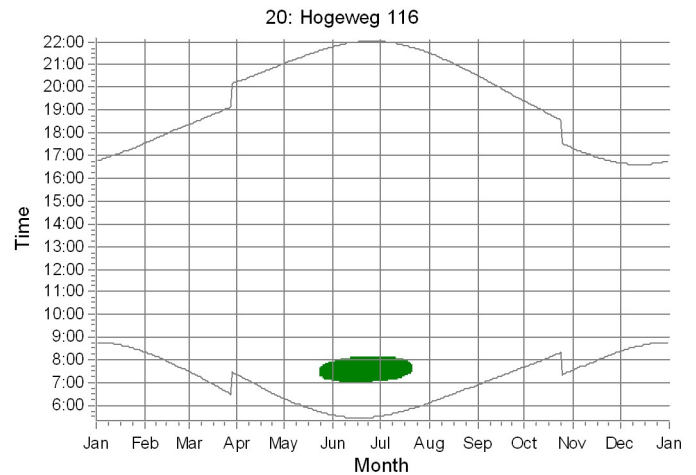
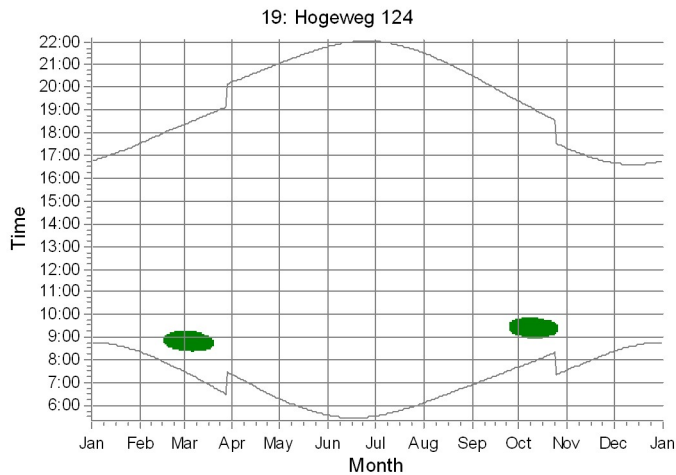
WTGs



WT01_141m: Turbine Mechelen Noord_141m

SHADOW - Calendar, graphical

Calculation: Slagschaduw Mechelen-Noord - Project_141m



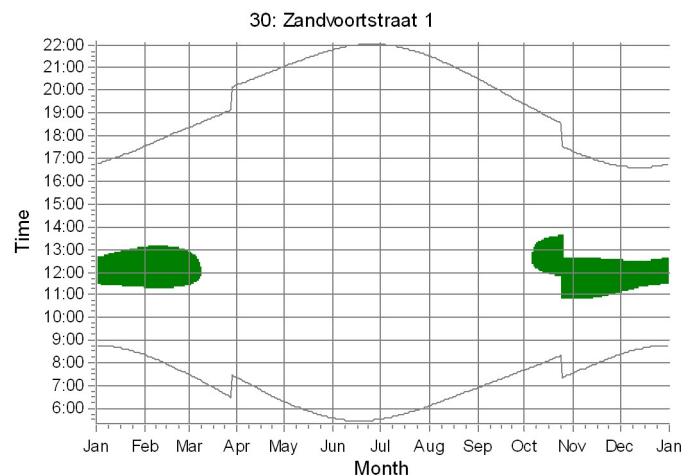
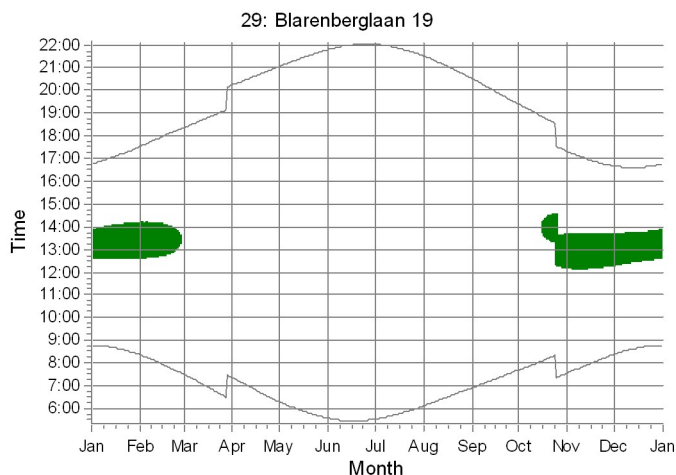
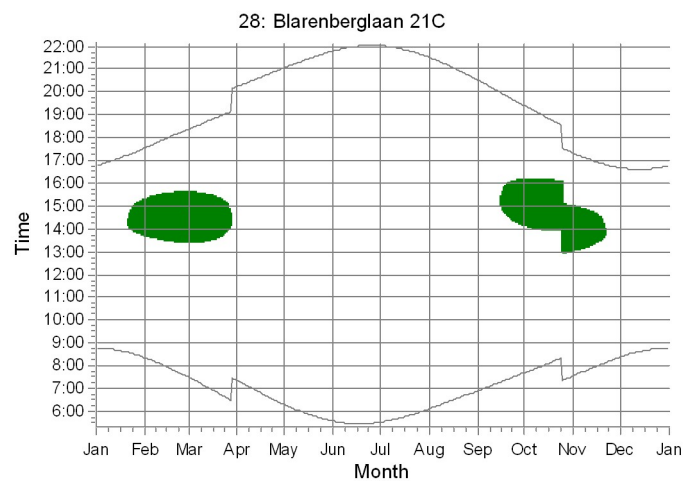
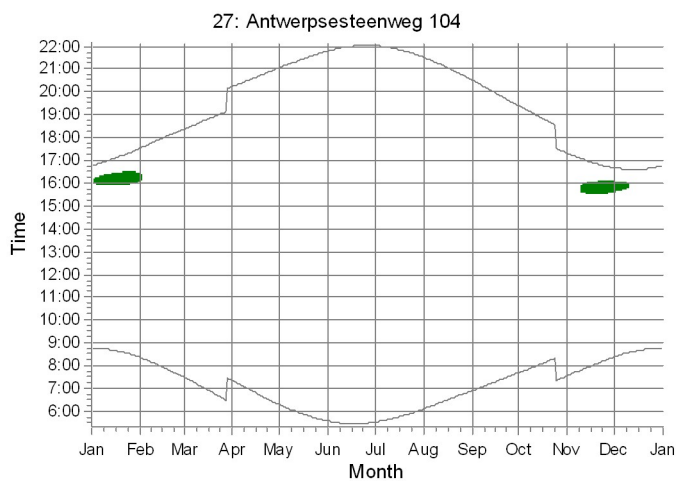
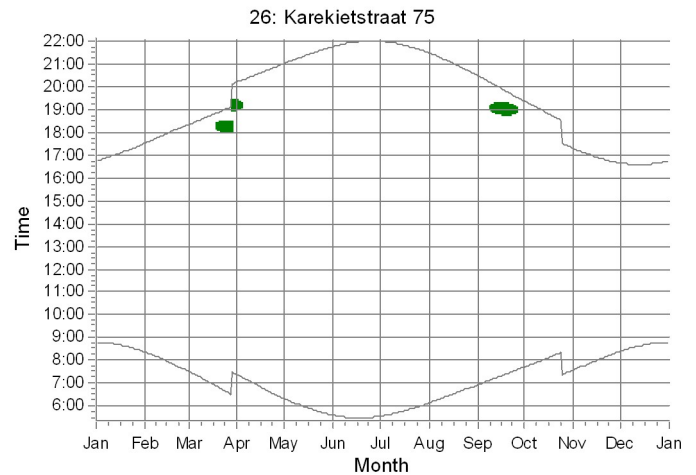
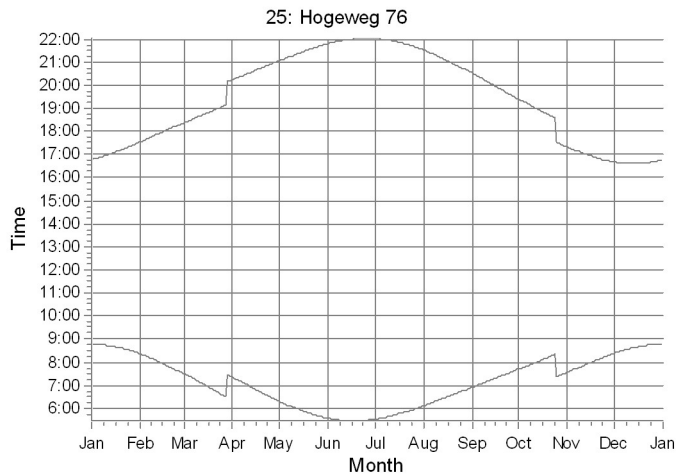
WTGs



WT01_141m: Turbine Mechelen Noord_141m

SHADOW - Calendar, graphical

Calculation: Slagschaduw Mechelen-Noord - Project_141m



WTGs



WT01_141m: Turbine Mechelen Noord_141m

Project:

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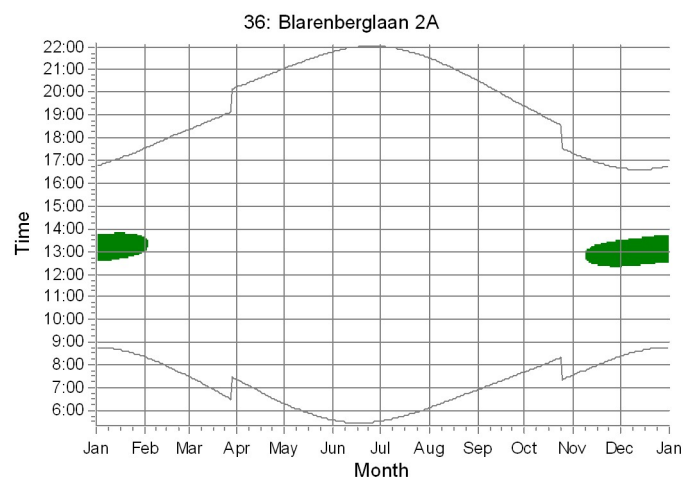
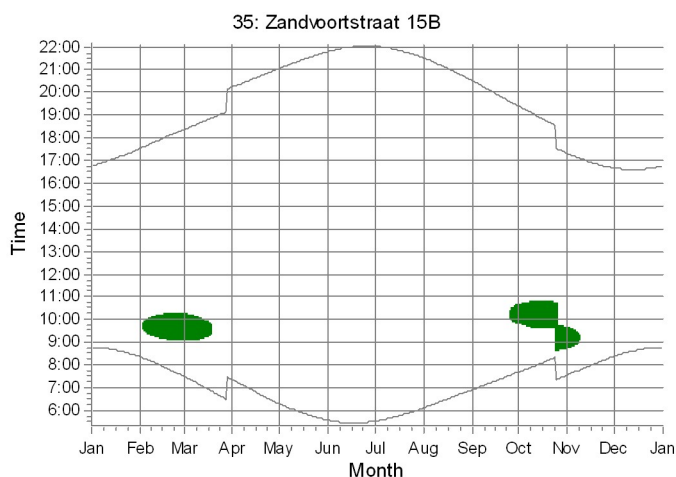
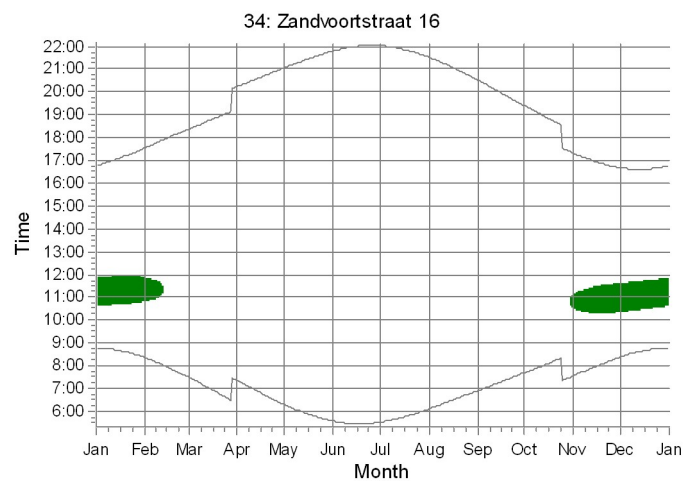
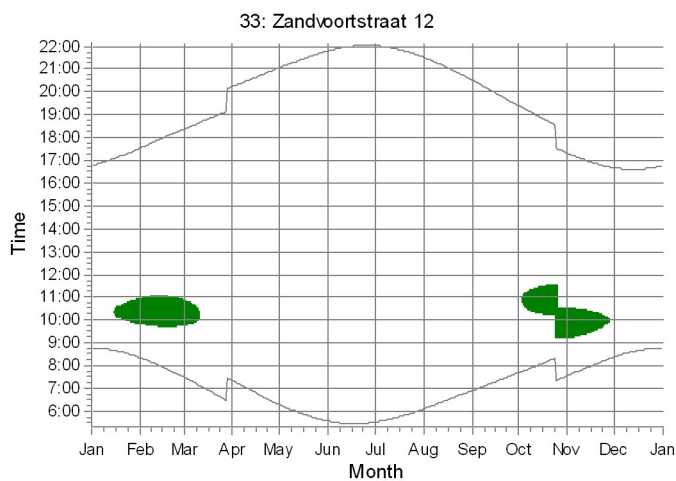
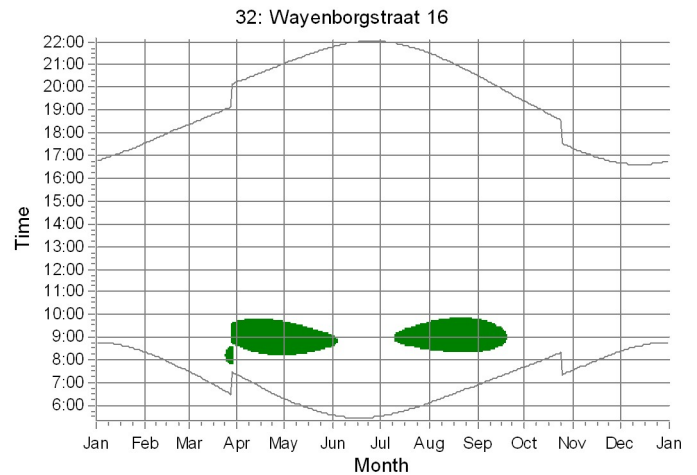
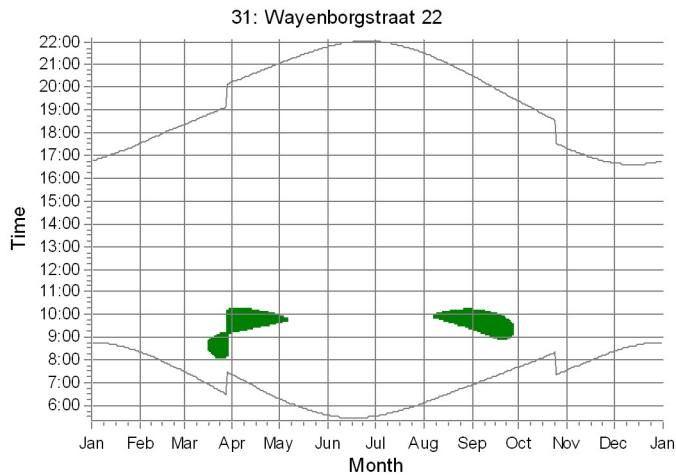
margot.scheldeman@arcadis.com

Calculated:

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SHADOW - Calendar, graphical

Calculation: Slagschaduw Mechelen-Noord - Project_141m



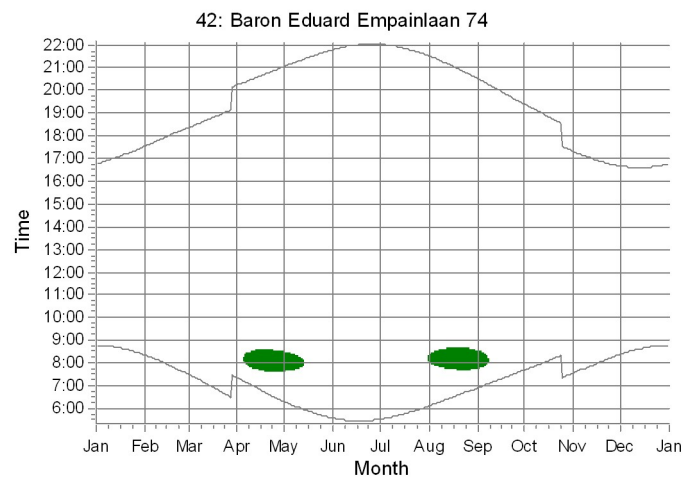
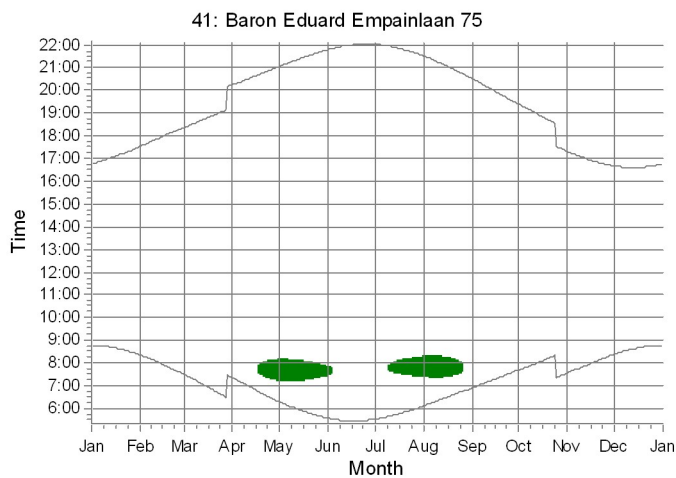
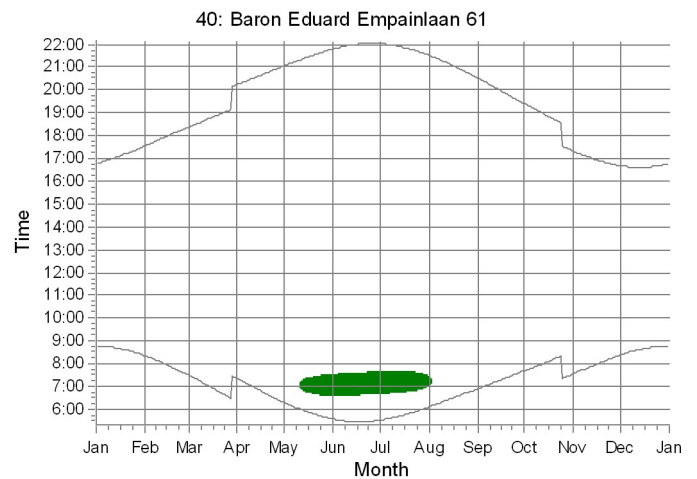
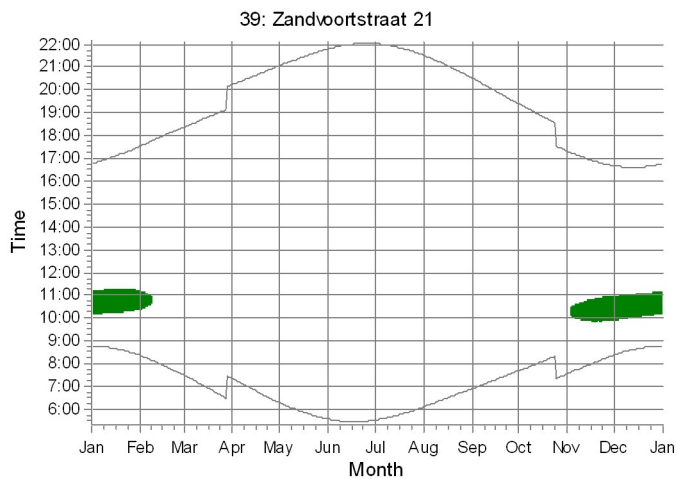
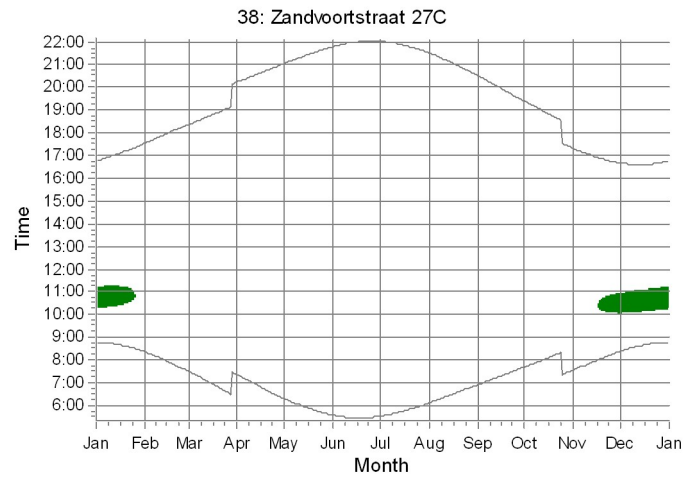
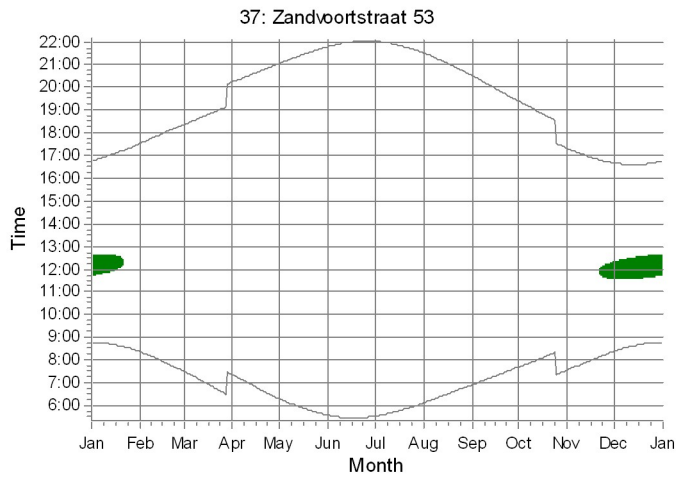
WTGs



WT01_141m: Turbine Mechelen Noord_141m

SHADOW - Calendar, graphical

Calculation: Slagschaduw Mechelen-Noord - Project_141m



WTGs

WT01_141m: Turbine Mechelen Noord_141m

Project:

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margot.scheldeman@arcadis.com

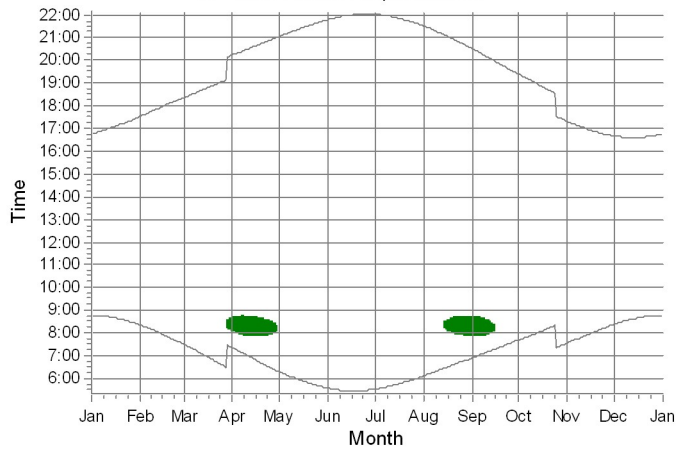
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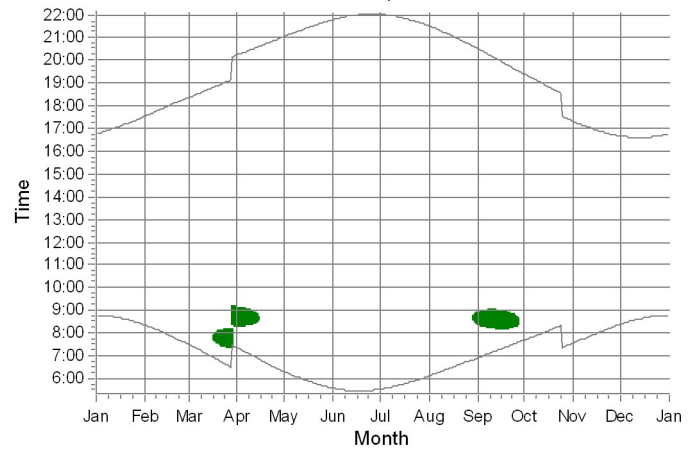
SHADOW - Calendar, graphical

Calculation: Slagschaduw Mechelen-Noord - Project_141m

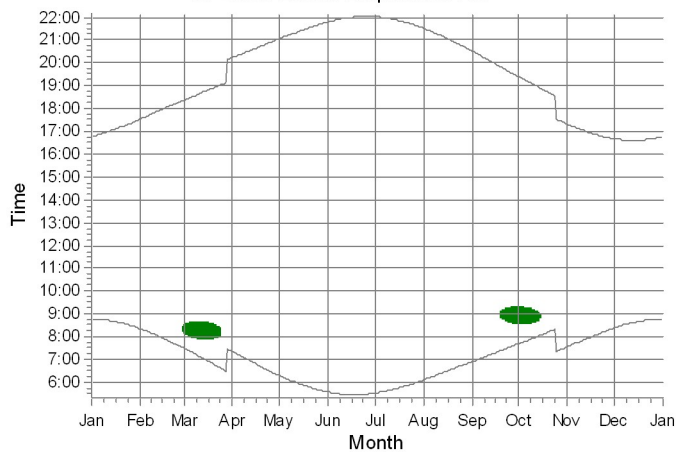
43: Baron Eduard Empainlaan 89



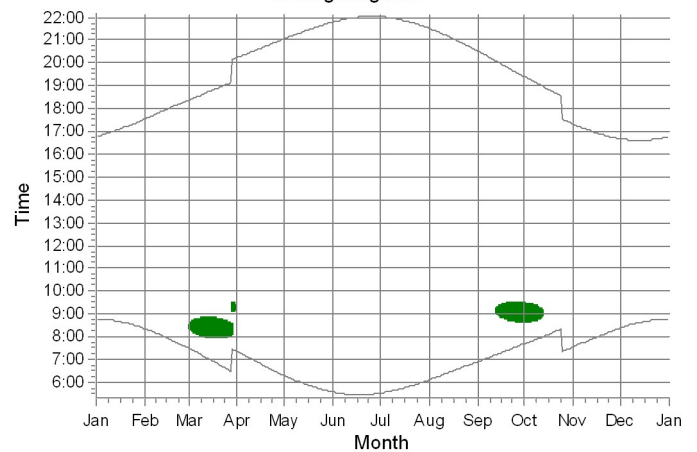
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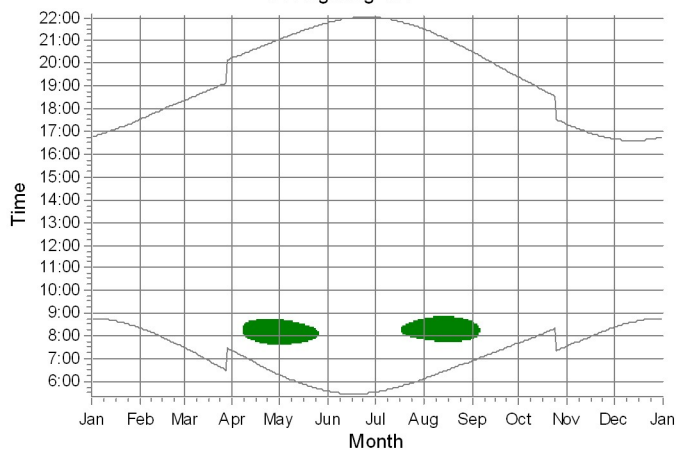
45: Baron Eduard Empainlaan 115



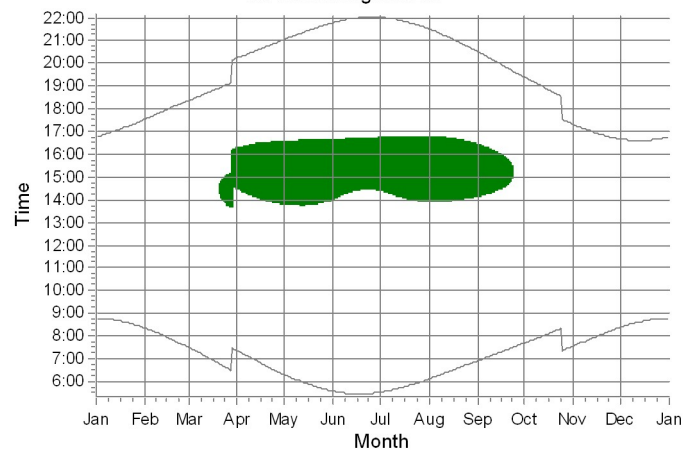
46: Hogeweg 239



47: Hogeweg 191



48: Blarenberglaan 231



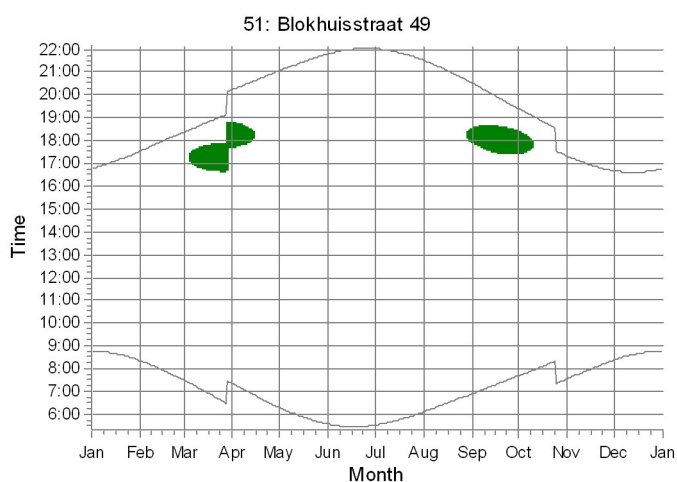
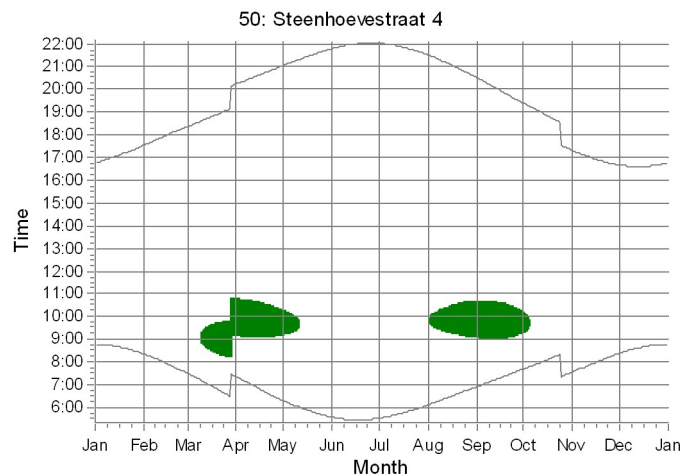
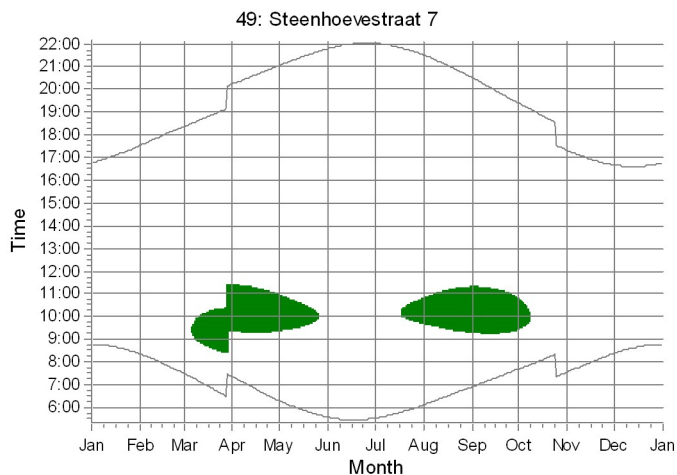
WTGs



WT01_141m: Turbine Mechelen Noord_141m

SHADOW - Calendar, graphical

Calculation: Slagschaduw Mechelen-Noord - Project_141m



WTGs



WT01_141m: Turbine Mechelen Noord_141m

Project:

Mechelen-Noord

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Margot Scheldeman /
margot.scheldeman@arcadis.com

Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar per WTG

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

WTG: WT01_141m - Turbine Mechelen Noord_141m
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

	January	February	March	April	May	June
1	08:46 10:14-12:36/142 15:14-15:52/38 16:46 12:37-14:24/107	08:21 09:52-15:15/323 16:24-16:48/24 17:32 15:24-16:21/57	07:29 08:11-10:49/158 18:22 11:31-15:34/243	07:21 17:44-18:43/59 19:05-19:22/17 20:14 08:09-17:24/555	06:18 07:17-10:53/216 19:58-20:24/26 21:03 10:58-17:13/375	06:14 10:57-16:36/399 08:40-10:06/86 21:47 06:12-08:27/135 19:56-21:10/74
2	08:46 10:14-12:36/142 15:14-15:52/38 16:47 12:37-14:24/107	08:19 09:52-15:17/325 16:24-16:50/26 17:34 15:24-16:15/61	07:27 08:09-10:47/158 18:24 11:32-15:34/242	07:18 17:46-18:43/58 19:06-19:19/13 20:16 08:07-17:25/558	06:16 07:13-10:51/218 19:58-20:25/27 21:05 10:57-17:12/375	06:13 10:57-16:36/399 08:40-10:05/85 21:48 06:12-08:27/135 19:56-21:09/73
3	08:46 10:14-14:24/249 15:14-15:53/39 16:48 16:04-16:07/3	08:18 09:51-15:18/327 15:24-16:15/61 17:36 09:35-09:47/12 16:23-16:51/28	07:25 08:07-10:45/158 17:31-17:35/4 18:26 11:34-15:41/247	07:16 17:46-18:41/55 19:09-19:16/7 20:17 08:04-17:24/560	06:14 07:10-10:50/220 19:57-20:26/29 21:06 10:57-17:10/373	06:13 10:58-16:36/398 19:56-21:10/74 21:49 06:12-08:28/136 08:41-10:05/84
4	08:46 10:15-14:24/249 15:15-15:54/39 16:49 16:03-16:10/7	08:16 09:32-15:20/348 16:22-16:51/29 17:41 10:59-15:23/264 16:22-16:53/31	07:23 08:05-10:44/159 17:25-17:41/16 18:27 11:36-15:48/252	07:14 17:47-18:40/53 20:19 08:03-17:24/561	06:12 07:08-10:48/220 19:56-20:26/30 21:08 10:56-17:08/372	06:12 10:58-16:36/398 19:56-21:10/74 21:50 06:12-08:27/135 08:41-10:05/84
5	08:46 10:15-14:24/249 15:14-15:55/41 16:50 16:01-16:11/10	08:15 09:28-15:22/364 16:22-16:53/31 17:39 15:24-16:16/52	07:21 17:07-17:44/37 11:38-15:54/255 18:29 08:04-10:42/158	07:12 17:48-18:40/52 20:21 08:02-17:24/562	06:10 07:07-10:47/220 19:56-20:27/31 21:07 10:57-17:09/372	06:11 10:58-16:37/398 19:56-21:10/74 21:51 06:13-08-28/135 08:42-10:05/83
6	08:45 10:15-14:24/249 15:15-15:56/41 16:51 16:01-16:13/12	08:13 09:25-10:58/93 15:24-16:16/52 17:41 10:59-15:23/264 16:22-16:53/31	07:19 17:02-17:45/43 11:41-15:57/256 18:31 08:02-10:38/158	07:10 17:50-18:39/49 20:22 08:01-17:24/563	06:09 07:05-10:45/220 19:55-20:27/32 21:11 10:56-17:08/372	06:11 10:59-16:36/397 19:55-21:10/75 21:52 06:13-08-27/134 08:41-10:04/82
7	08:45 10:16-16:16/119 17:04 15:17-16:23/66	08:11 09:23-10:58/95 16:21-16:54/33 17:43 11:03-16:16/53	07:16 16:59-17:47/48 11:30-16:00/270 18:32 08:01-10:36/155	07:07 17:51-18:37/46 20:24 07:59-17:06/371	06:07 07:03-10:43/220 19:55-20:26/31 21:13 10:55-17:07/371	06:08 10:58-16:36/398 19:56-21:10/74 21:53 06:13-08-28/135 08:42-10:04/82
8	08:45 10:16-13:55/219 13:57-14:23/26 16:54 16:00-16:16/15 15:15-15:57/42	08:10 09:22-11:00/98 16:21-16:54/33 17:45 11:03-16:16/53	07:14 16:57-17:48/51 11:19-16:03/284 18:34 08:00-10:33/153	07:05 17:52-18:38/43 20:26 07:56-17:23/567	06:05 07:02-10:42/220 19:55-20:27/32 21:14 10:56-17:08/370	06:10 10:58-16:36/398 19:55-21:10/75 21:54 06:13-08-27/134 08:42-10:04/82
9	08:44 10:16-13:56/220 13:58-14:22/24 16:55 16:06-16:17/11 15:15-15:58/43	08:08 09:21-11:00/99 16:22-16:55/33 17:47 11:06-16:17/311	07:12 16:55-17:49/54 11:13-16:06/293 18:36 07:58-10:29/151	07:03 17:53-18:34/41 20:27 07:54-17:23/569	06:04 07:01-10:42/219 19:55-20:28/33 21:16 10:55-17:04/369	06:09 10:56-16:36/398 19:55-21:10/75 21:55 06:14-08-27/134 08:43-10:04/81
10	08:44 10:17-13:57/220 14:01-14:22/21 16:57 16:06-16:19/19 15:16-15:59/43	08:06 09:21-11:00/101 16:22-16:55/33 17:48 11:09-16:17/308	07:10 16:52-17:49/57 10:05-10:23/18 18:38 07:54-10:02/128 11:07-16:07/300	07:01 17:55-18:32/37 20:29 07:52-17:23/571	06:02 07:00-10:39/219 19:55-20:30/35 21:17 10:56-17:04/368	06:09 10:56-16:36/398 19:55-21:10/75 21:56 06:14-08-27/134 08:43-10:03/80
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13	08:42 10:17-13:59/222 14:07-14:17/10 17:01 15:16-16:21/66	08:01 09:15-11:00/105 16:22-16:54/32 17:54 11:23-16:16/293	07:03 16:49-17:51/62 10:57-16:13/316 18:43 07:48-10:04/136	06:54 18:03-18:24/21 20:34 07:48-17:23/575	05:57 06:52-10:33/221 19:55-20:43/48 21:22 10:55-16:59/364	06:08 10:58-16:36/398 19:55-21:10/75 21:58 06:14-08-28/134 08:44-10:03/79
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Project:

Mechelen-Noord

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Calculated:

16/07/2026 10:30/4.2.303

SHADOW - Calendar per WTG

Calculation: Slagschaduw Mechelen-Noord - Project_141m
Assumptions for shadow calculations

WTG: WT01_141m - Turbine Mechelen Noord_141m
Sunshine probability S (Average daily sunshine hours) []

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2,00	2,80	4,30	6,20	7,00	7,20	7,10	6,70	5,40	3,80	2,30	1,70

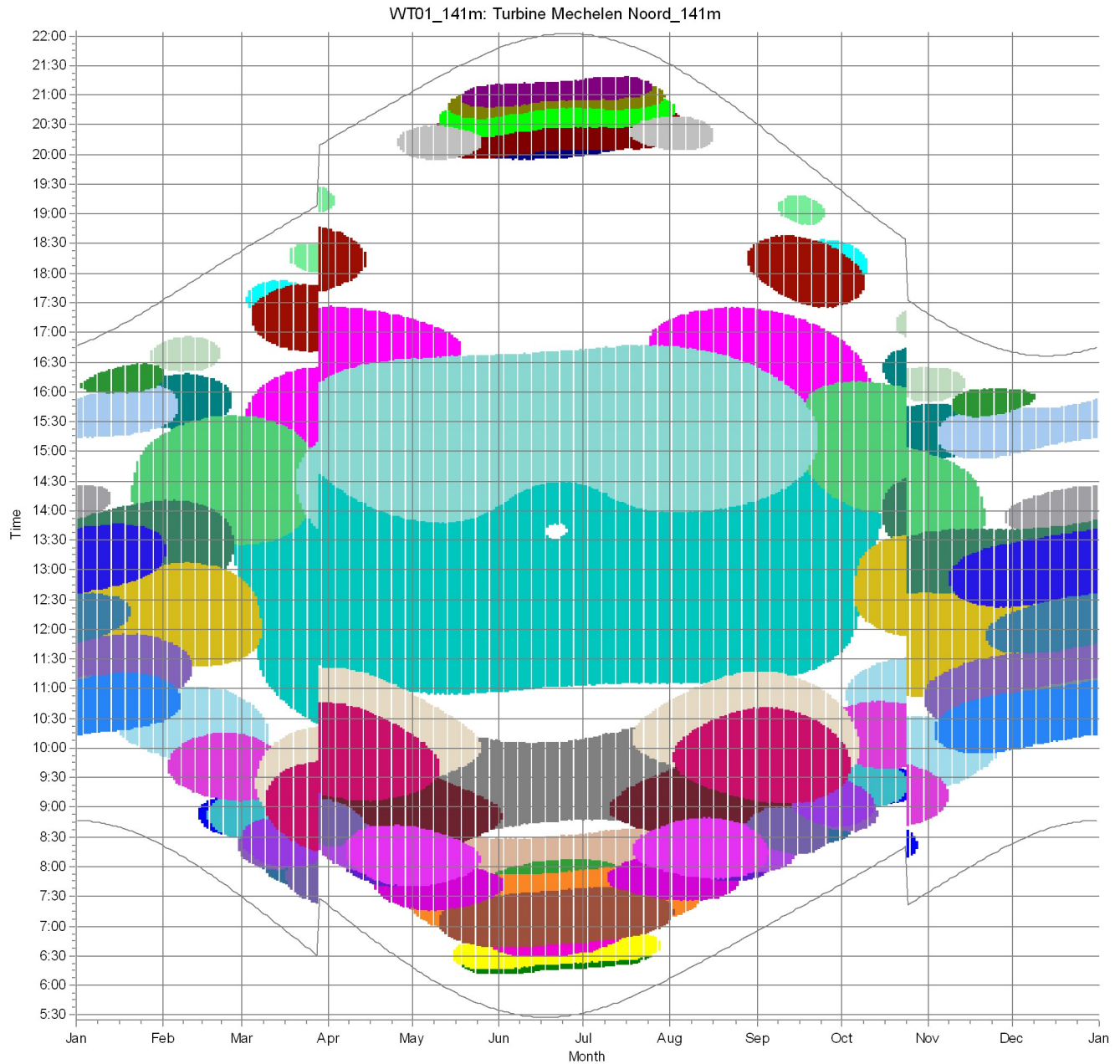
Operational time

N	NNE	ENE	E	ESE	SSE	S	SSW	WSW	W	WNW	NNW	Sum
391	547	689	513	353	374	630	1.375	1.712	934	580	534	8.632

[July	[August	[September	[October	[November	[December
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24 05:55 06:54-10:32/218 20:07-21:12/65 21:42 11:06-16:45/338 20:08-20:50/22	[06:42 07:38-17:23/585 20:47	[07:31 17:27-18:33/66 11:24-17:03/339 19:39 08:20-10:57/157 18:54-19:07/13	[08:20 09:41-11:30/109 09:08-09:36/28 18:34 11:54-16:43/289 16:56-17:21/25	[08:12 09:48-13:40/232 16:46 14:54-16:02/68	[08:46 10:12-14:22/251 16:39 15:11-15:46/35
25 05:57 06:55-10:33/218 20:07-21:10/63 06:29-06:49/20 21:41 11:06-16:44/338 16:45-16:55/10	[06:44 07:42-17:24/582 20:45	[07:32 17:27-18:33/66 11:26-17:02/336 19:36 08:22-10:56/154 18:57-19:04/7	[07:31 10:53-15:44/291 08:10-08:35/25 17:22 10:52-15:44/292 08:14-08:29/15	[08:14 09:51-13:39/228 16:46 14:54-16:02/68	[08:47 10:13-14:23/109 16:36 15:11-15:46/35
26 05:58 06:55-10:36/220 20:08-21:08/60 21:39 11:06-17:01/355 06:33-06:48/15	[06:45 07:46-17:23/577 20:43	[07:34 17:26-18:32/66 11:27-17:00/333 19:34 08:24-10:53/149	[07:32 08:43-10:30/107 15:53-16:22/29 17:20 10:52-15:44/292 08:12-08:33/21	[08:15 09:57-13:40/223 16:44 14:55-16:02/67	[08:48 10:13-14:23/109 16:36 15:11-15:46/35
27 06:00 06:57-10:38/221 20:08-21:07/59 21:38 11:06-17:03/357 06:34-06:47/13	[06:47 07:47-17:24/577 20:41	[07:35 17:27-18:33/65 11:29-16:59/330 19:32 08:25-10:52/147	[07:30 08:45-10:30/105 15:51-16:24/33 17:28 10:52-15:44/292 08:14-08:29/15	[08:17 09:57-13:40/223 16:43 14:56-16:02/66	[08:49 10:13-14:23/109 16:36 15:11-15:46/35
28 06:01 06:58-10:39/221 20:07-21:05/58 21:37 11:05-17:05/360 06:36-06:44/8	[06:48 07:47-17:23/576 20:39	[07:37 17:26-18:31/65 11:30-16:56/326 19:29 08:25-10:49/144	[07:37 08:44-10:30/106 15:52-16:23/31 17:26 10:52-15:45/293 08:19-08:24/5	[08:18 09:57-13:39/222 16:42 14:56-16:02/66	[08:46 10:13-14:23/109 16:36 15:11-15:46/35
29 06:02 07:00-10:42/222 20:07-21:04/57 21:35 11:06-17:06/362	[06:50 18:08-18:21/13 20:37	[07:38 17:27-18:31/64 11:33-16:55/322 19:27 08:26-10:47/141	[07:38 08:45-10:30/105 15:51-16:24/33 1		

SHADOW - Calendar per WTG, graphical

Calculation: Slagschaduw Mechelen-Noord - Project_141m WTG: WT01_141m - Turbine Mechelen Noord_141m

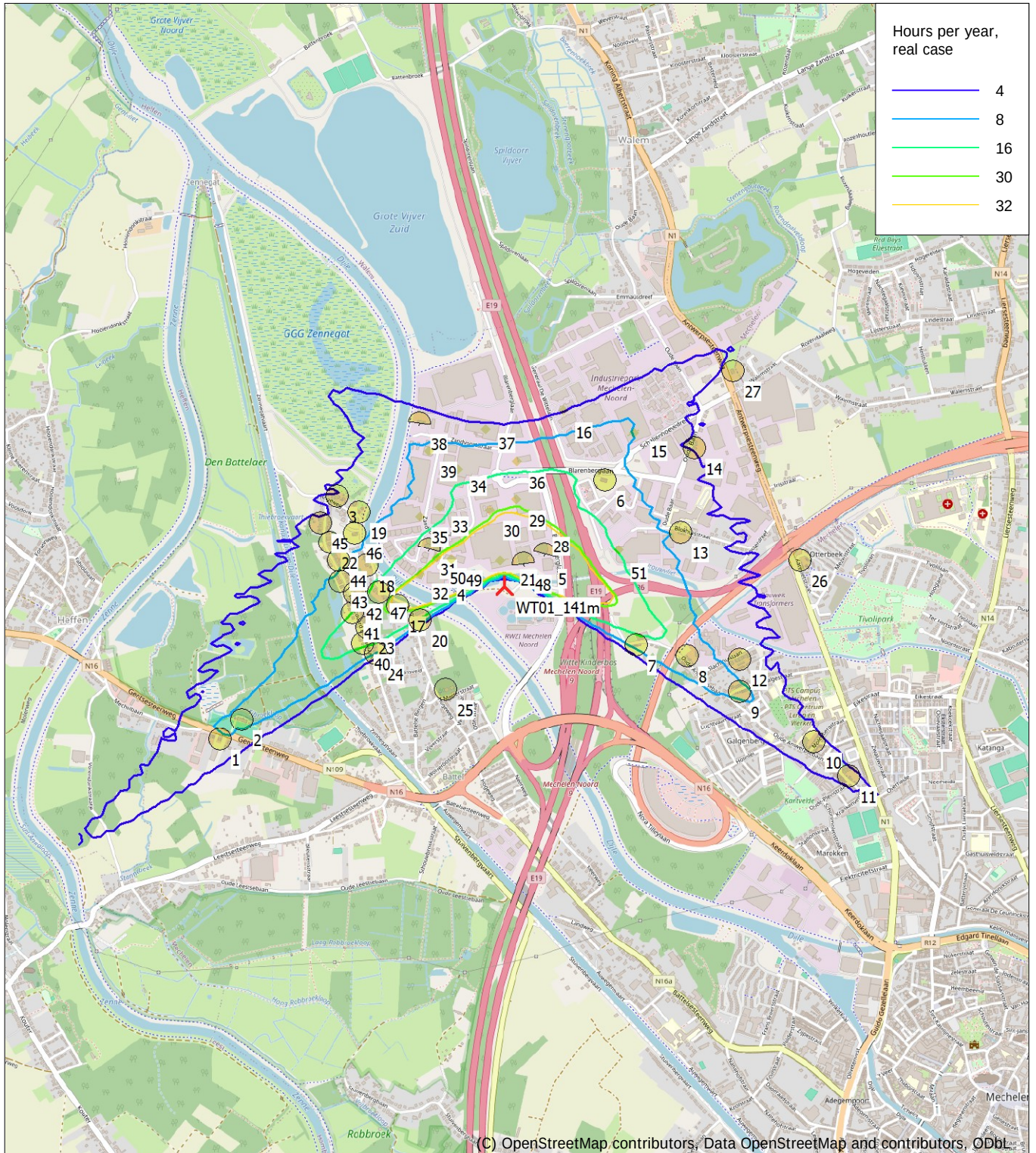


Shadow receptors

1: Gentsesteenweg 161	11: Oude Antwerpsebaan 22	21: Zandvoortstraat 3	32: Wayenbergstraat 16	42: Baron Eduard Empainlaan 74
2: Gentsesteenweg 149	12: Slachthuislaan 34	22: Baron Eduard Empainlaan 100	33: Zandvoortstraat 12	43: Baron Eduard Empainlaan 89
3: Hogeweg 136	13: Blokhuisstraat 45	23: Baron Eduard Empainlaan 60	34: Zandvoortstraat 16	44: Baron Eduard Empainlaan 92
4: Steenhoevestraat 6	14: Oude Baan 20	24: Baron Eduard Empainlaan 50	35: Zandvoortstraat 15B	45: Baron Eduard Empainlaan 115
5: Blarenberglaan 23A	15: Schallénhoedreef 7	26: Karekietstraat 75	36: Blarenberglaan 2A	46: Hogeweg 239
6: Blarenberglaan 13	16: Generaal De Wittelaan 9	27: Antwerpsesteenweg 104	37: Zandvoortstraat 53	47: Hogeweg 191
7: Oude Antwerpsebaan 287	17: Hogeweg 181	28: Blarenberglaan 21C	38: Zandvoortstraat 27C	48: Blarenberglaan 23I
8: Oude Antwerpsebaan 230	18: Hogeweg 211	29: Blarenberglaan 19	39: Zandvoortstraat 21	49: Steenhoevestraat 7
9: Galgestraat 91	19: Hogeweg 124	30: Zandvoortstraat 1	40: Baron Eduard Empainlaan 61	50: Steenhoevestraat 4
10: Molenbergstraat 26	20: Hogeweg 116	31: Wayenbergstraat 22	41: Baron Eduard Empainlaan 75	51: Blokhuisstraat 49

SHADOW - Map

Calculation: Slagschaduw Mechelen-Noord - Project_141m



Colofon

SLAGSCHADUWSTUDIE
ECOPOWER MECHELEN-NOORD

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DATUM
16 juli 2026