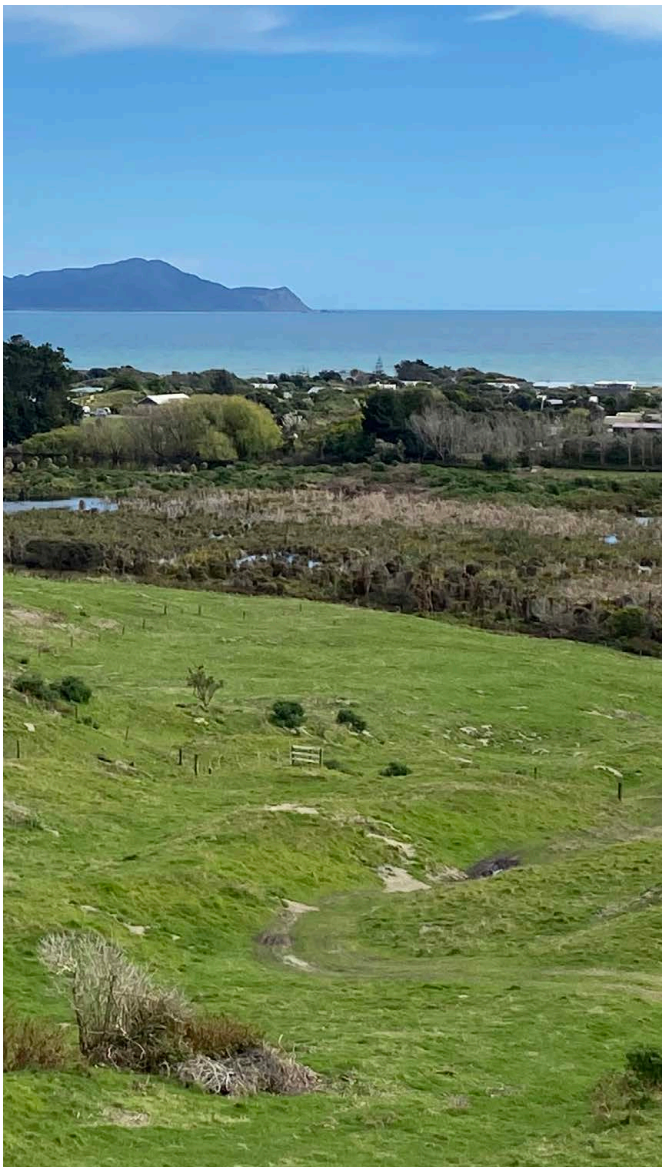


# C

## Appendix C

Hourly Shade Analysis



# Hourly Shade Analysis

## Study Areas 1 to 5

Buildings located to comply with all standards, including setback distance from the rural boundary.

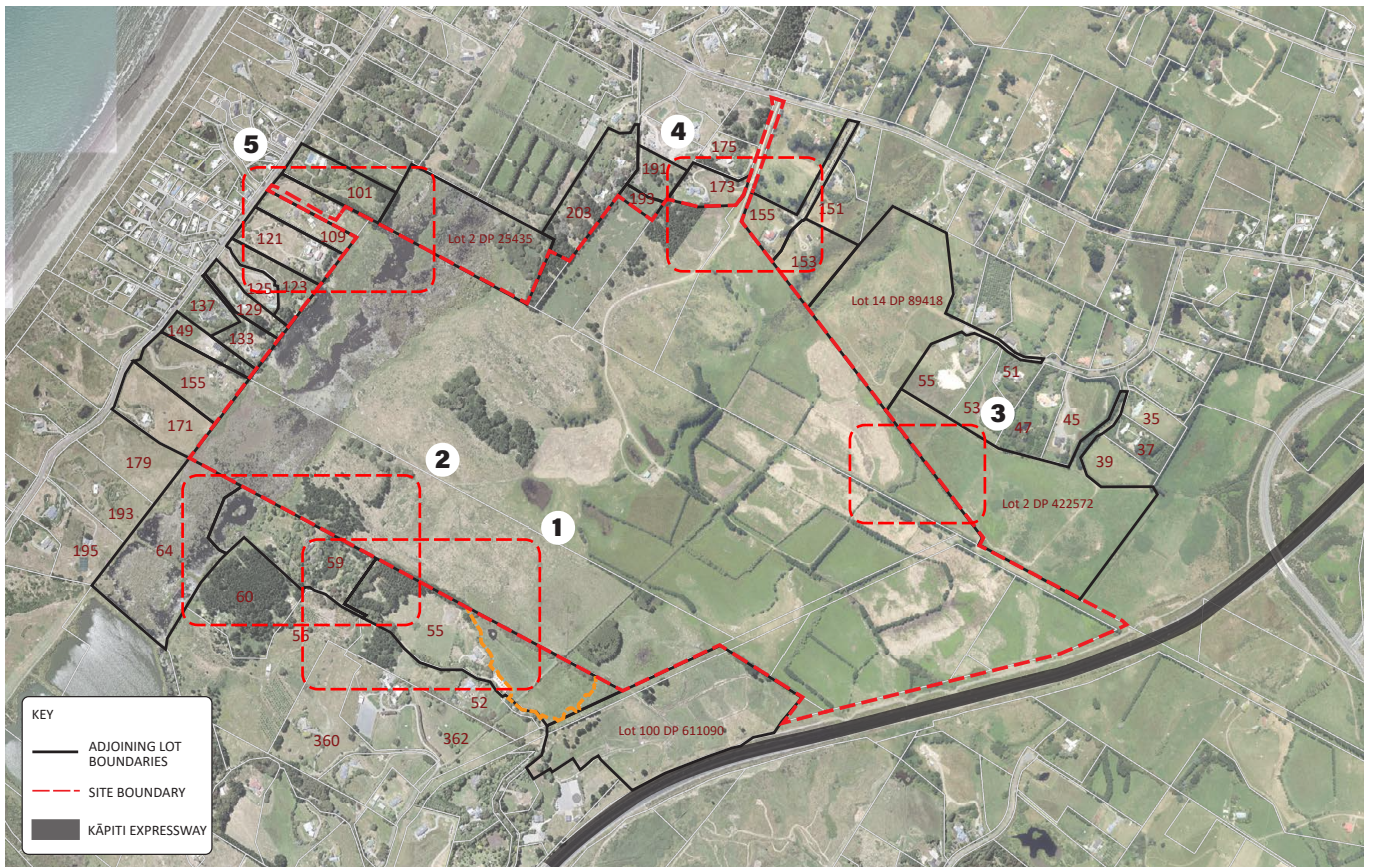


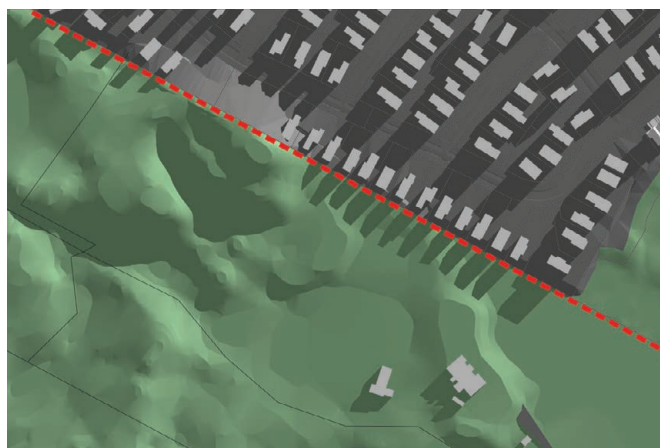
Figure 178. Shading Study areas

# Hourly Shade Analysis

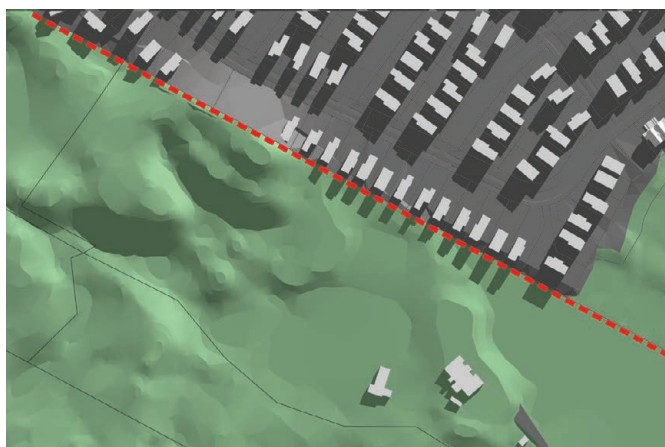
## Study Area 1



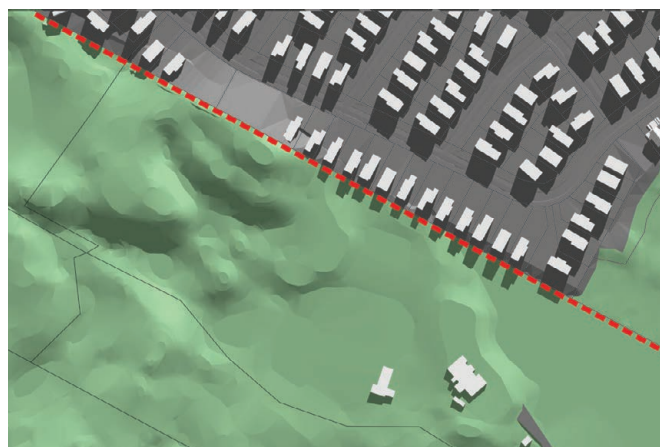
Winter Solstice 8 am



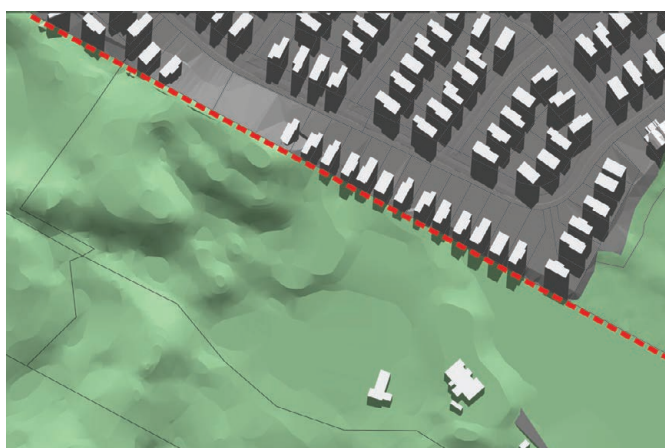
Winter Solstice 9 am



Winter Solstice 10 am



Winter Solstice 11 am



Winter Solstice 12 pm



Winter Solstice 1 pm

Winter Solstice: 21st Jun 2025  
Sunrise at 07:46  
Sunset at 16:58



Winter Solstice 2 pm



Winter Solstice 3 pm



Winter Solstice 4 pm



Winter Solstice 5 pm

Winter Solstice: 21st Jun 2025  
Sunrise at 07:46  
Sunset at 16:58

# Hourly Shade Analysis

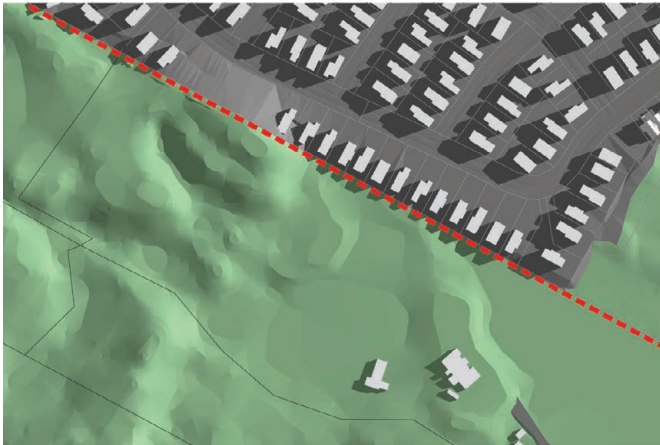
## Study Area 1



Spring Equinox 6 am



Spring Equinox 7 am



Spring Equinox 8 am



Spring Equinox 9 am



Spring Equinox 10 am



Spring Equinox 11 am

*Spring/Vernal Equinox: 23rd Sep 2025*  
*Sunrise at 06:08*  
*Sunset at 18:18*



Spring Equinox 12 pm



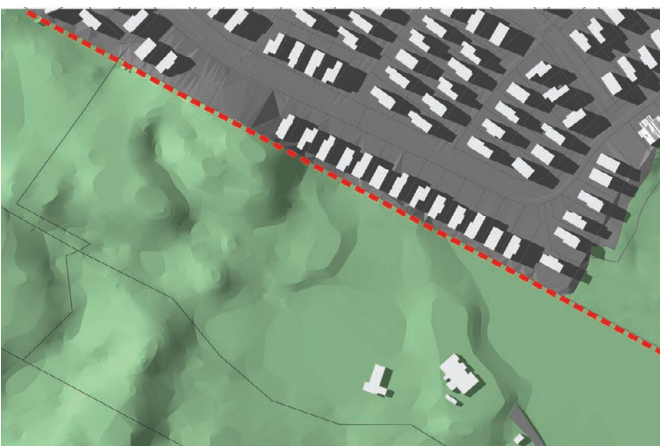
Spring Equinox 1 pm



Spring Equinox 2 pm



Spring Equinox 3 pm



Spring Equinox 4 pm



Spring Equinox 5 pm

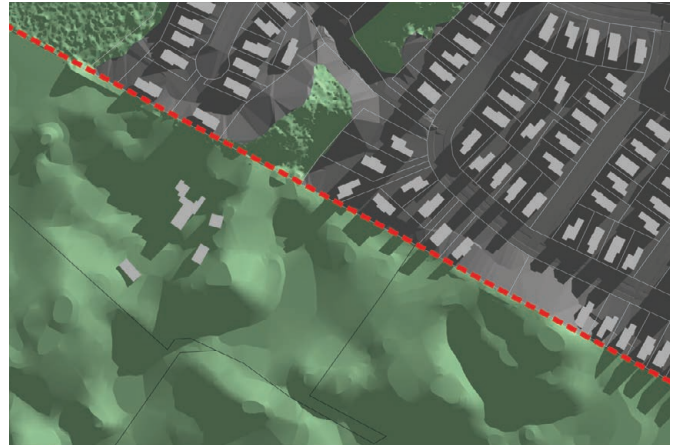
Spring/Vernal Equinox: 23rd Sep 2025  
Sunrise at 06:08  
Sunset at 18:18

# Hourly Shade Analysis

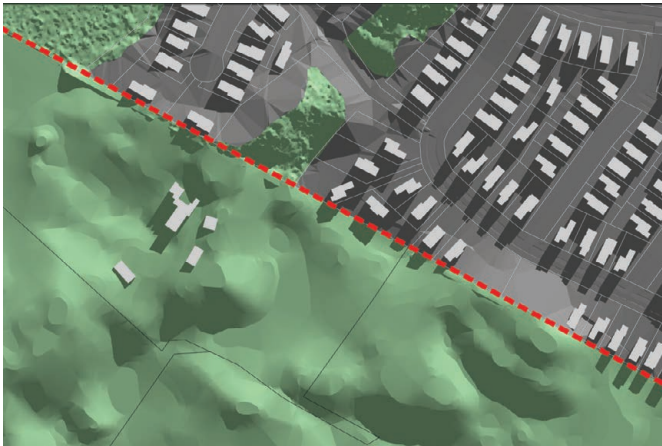
## Study Area 2



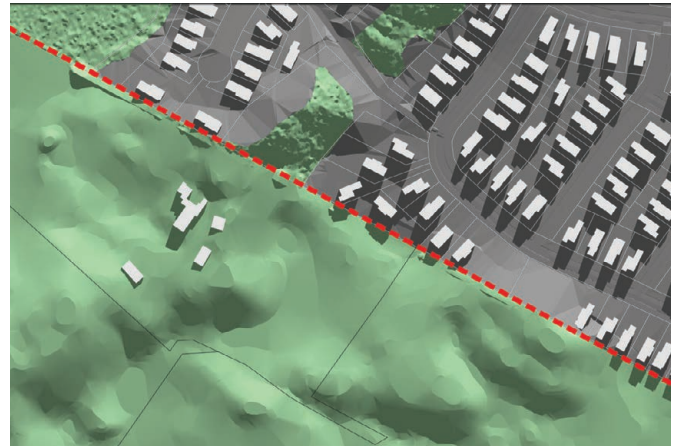
Winter Solstice 8 am



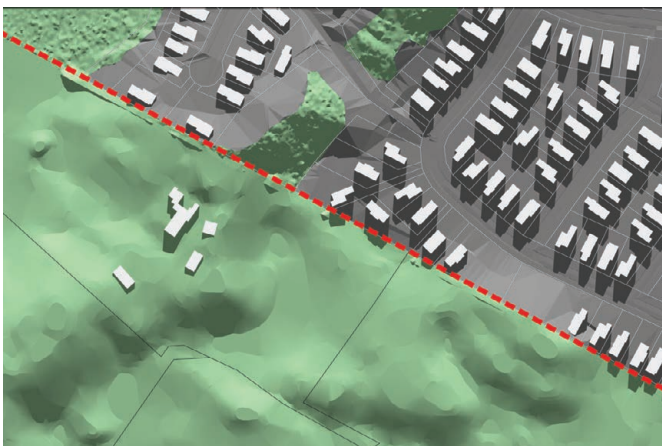
Winter Solstice 9 am



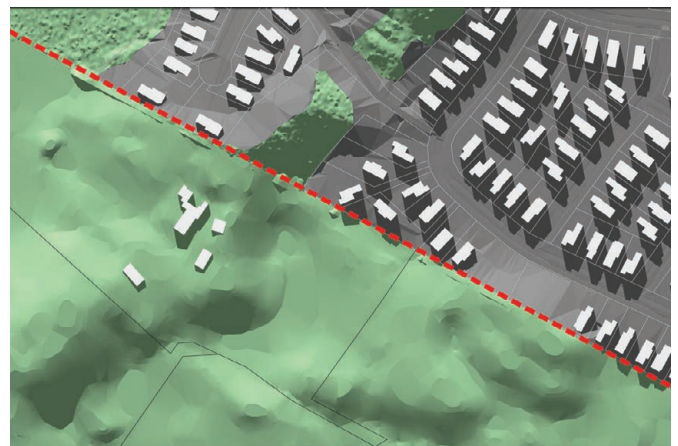
Winter Solstice 10 am



Winter Solstice 11 am



Winter Solstice 12 pm



Winter Solstice 1 pm

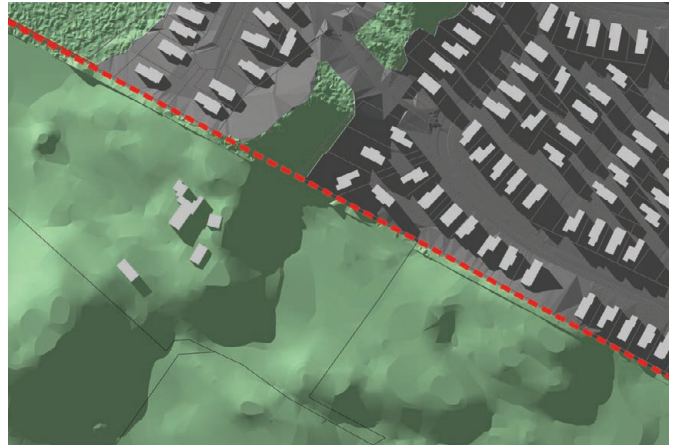
Winter Solstice: 21st Jun 2025

Sunrise at 07:46

Sunset at 16:58



Winter Solstice 2 pm



Winter Solstice 3 pm



Winter Solstice 4 pm



Winter Solstice 5 pm

Winter Solstice: 21st Jun 2025  
Sunrise at 07:46  
Sunset at 16:58

# Hourly Shade Analysis

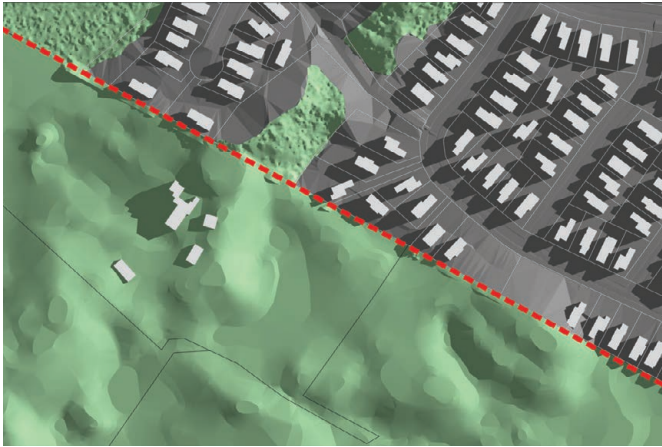
## Study Area 2



Spring Equinox 6 am



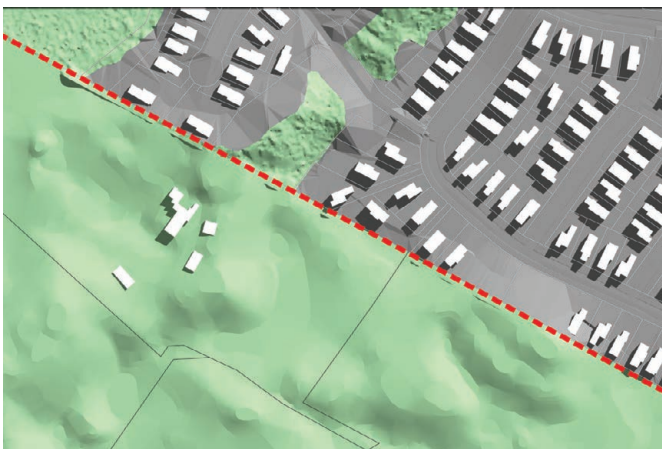
Spring Equinox 7 am



Spring Equinox 8 am



Spring Equinox 9 am



Spring Equinox 10 am



Spring Equinox 11 am

*Spring/Vernal Equinox: 23rd Sep 2025*  
*Sunrise at 06:08*  
*Sunset at 18:18*



Spring Equinox 12 pm



Spring Equinox 1 pm



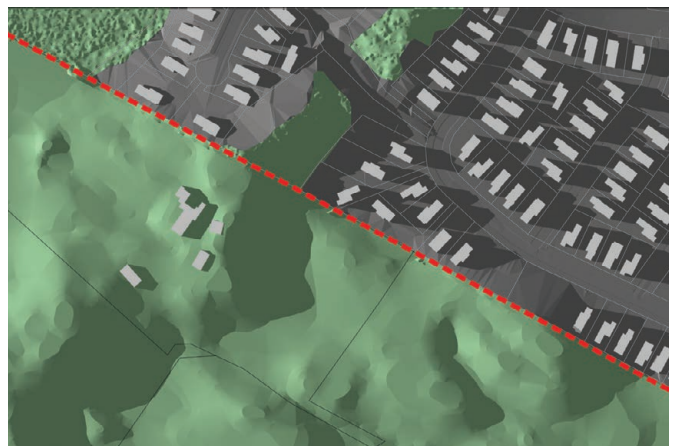
Spring Equinox 2 pm



Spring Equinox 3 pm



Spring Equinox 4 pm

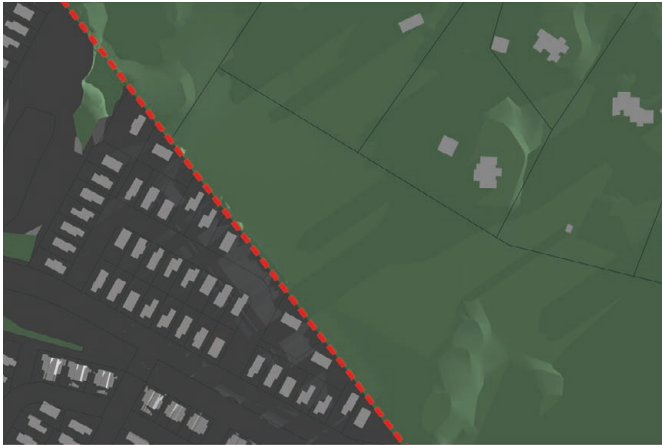


Spring Equinox 5 pm

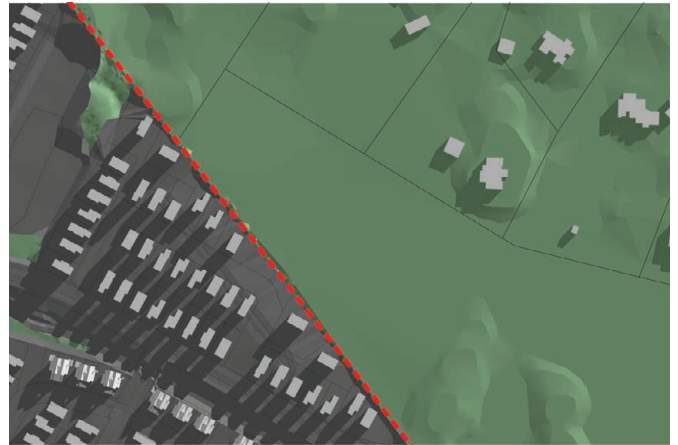
Spring/Vernal Equinox: 23rd Sep 2025  
Sunrise at 06:08  
Sunset at 18:18

# Hourly Shade Analysis

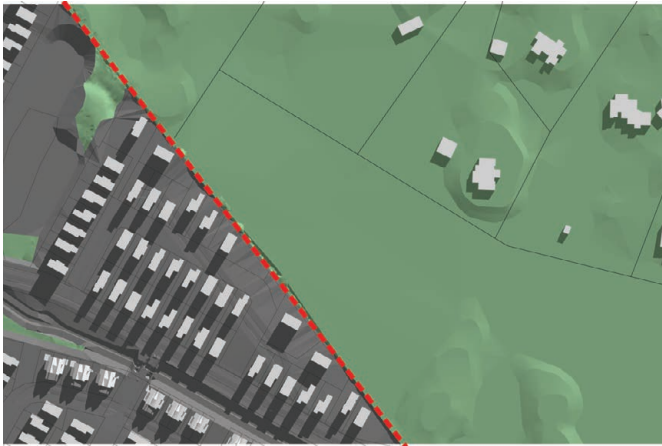
## Study Area 3



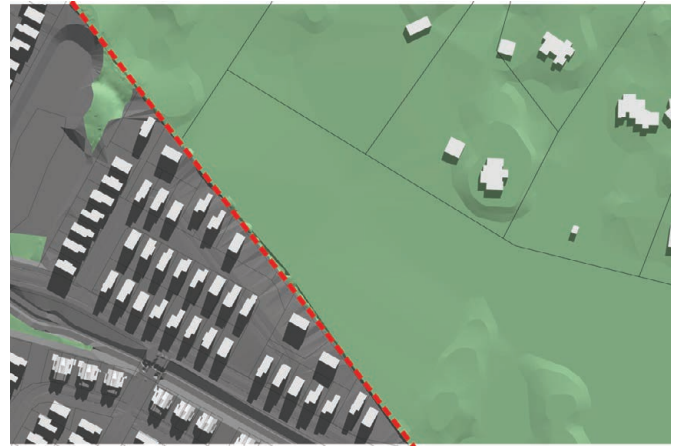
Winter Solstice 8 am



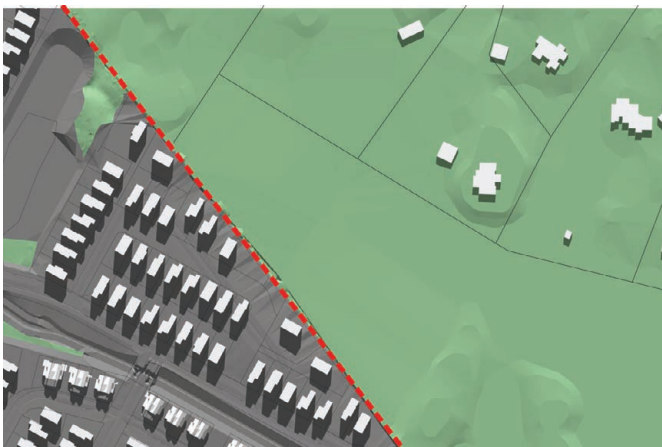
Winter Solstice 9 am



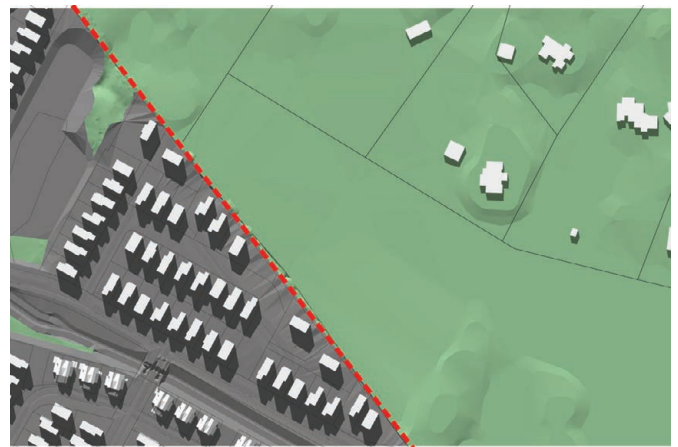
Winter Solstice 10 am



Winter Solstice 11 am



Winter Solstice 12 pm

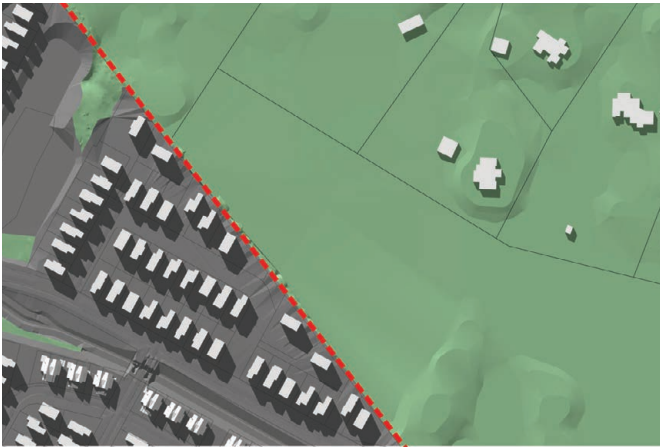


Winter Solstice 1 pm

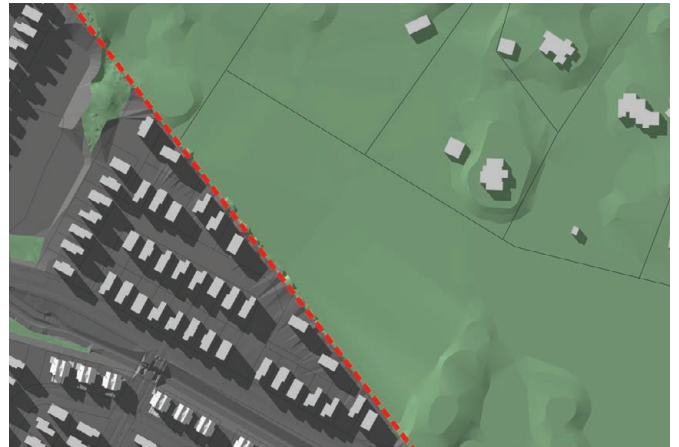
Winter Solstice: 21st Jun 2025

Sunrise at 07:46

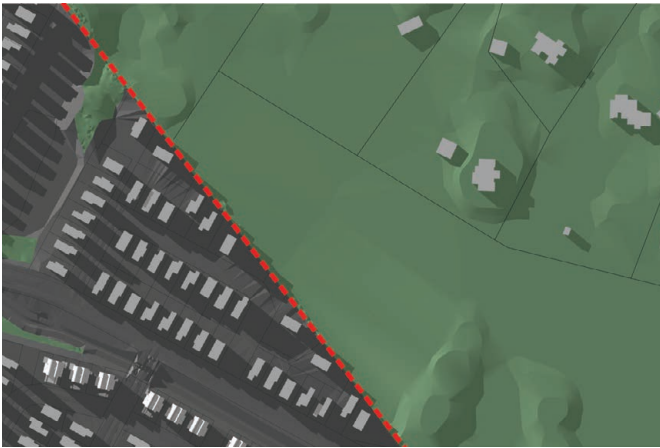
Sunset at 16:58



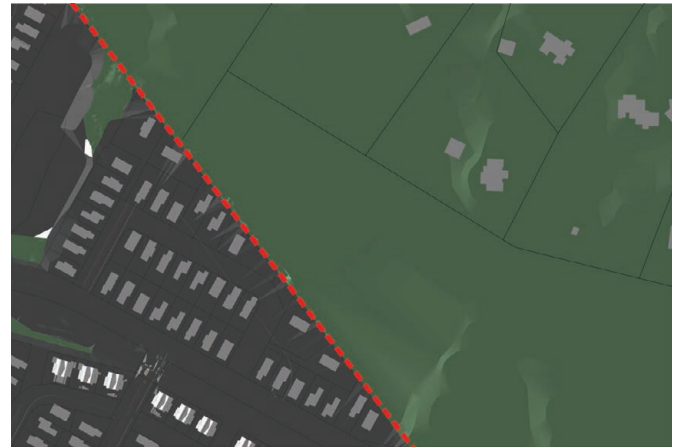
Winter Solstice 2 pm



Winter Solstice 3 pm



Winter Solstice 4 pm

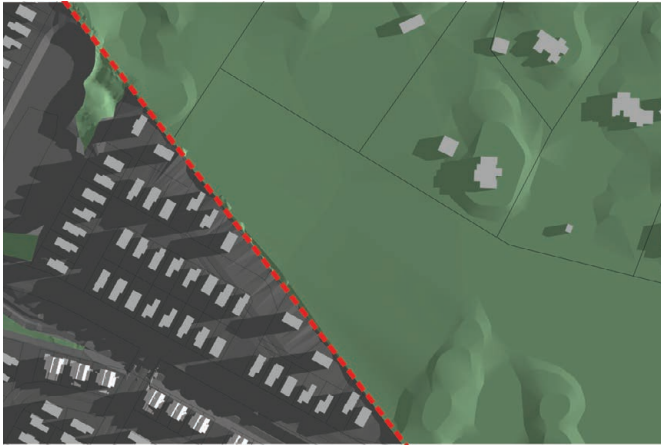


Winter Solstice 5 pm

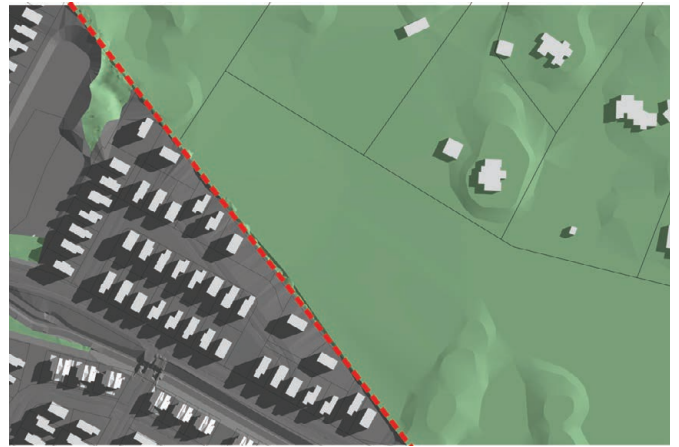
*Winter Solstice: 21st Jun 2025*  
*Sunrise at 07:46*  
*Sunset at 16:58*

# Hourly Shade Analysis

## Study Area 3



Spring Equinox 7 am



Spring Equinox 8 am



Spring Equinox 9 am



Spring Equinox 10 am



Spring Equinox 11 am



Spring Equinox 12 pm

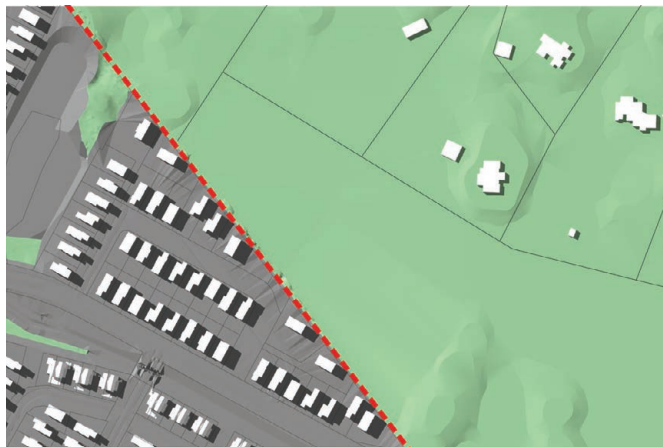
*Spring/Vernal Equinox: 23rd Sep 2025*  
*Sunrise at 06:08*  
*Sunset at 18:18*



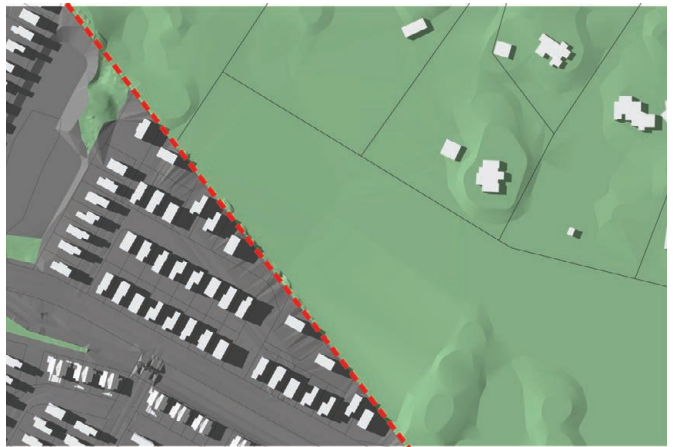
Spring Equinox 1 pm



Spring Equinox 2 pm



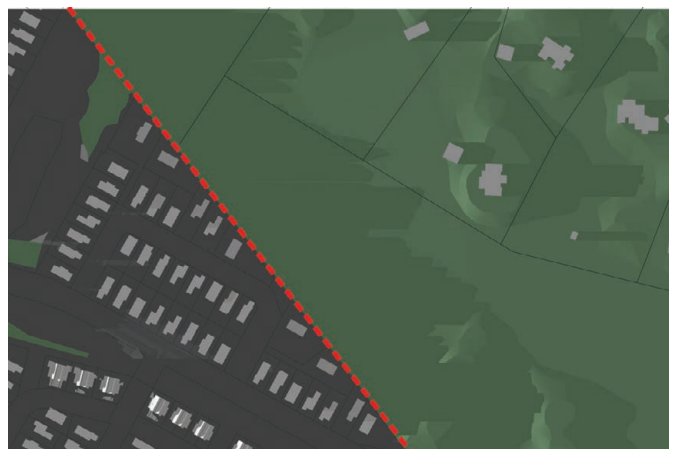
Spring Equinox 3 pm



Spring Equinox 4 pm



Spring Equinox 5 pm



Spring Equinox 6 pm

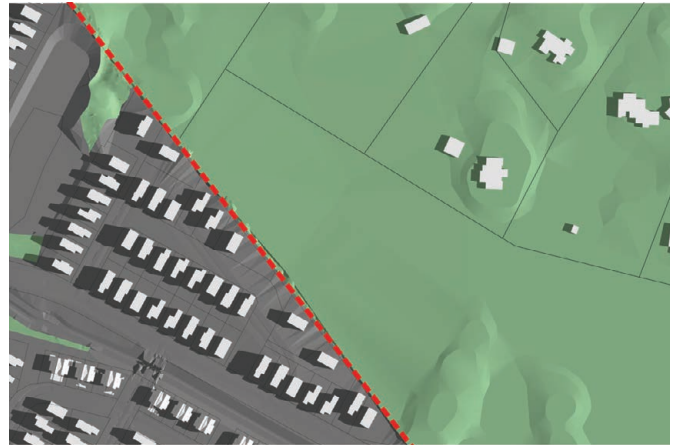
Spring/Vernal Equinox: 23rd Sep 2025  
Sunrise at 06:08  
Sunset at 18:18

# Hourly Shade Analysis

## Study Area 3



Summer Solstice 7 am



Summer Solstice 8 am



Summer Solstice 9 am



Summer Solstice 10 am



Summer Solstice 11 am



Summer Solstice 12 pm

Summer Solstice: 22nd Dec 2025

Sunrise at 05:44

Sunset at 20:54



Summer Solstice 1 pm



Summer Solstice 2 pm



Summer Solstice 3 pm



Summer Solstice 4 pm



Summer Solstice 5 pm

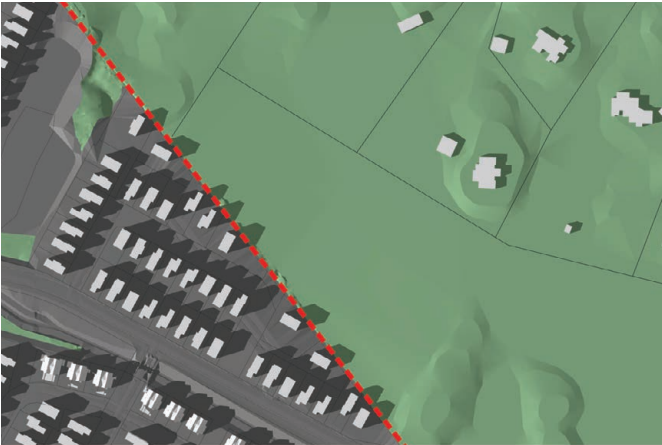


Summer Solstice 6 pm

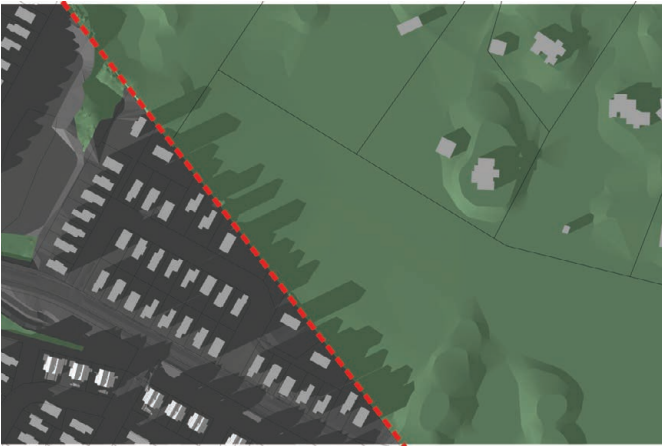
*Summer Solstice: 22nd Dec 2025*

*Sunrise at 05:44*

*Sunset at 20:54*



Summer Solstice 7 pm



Summer Solstice 8 pm



Summer Solstice 9 pm

*Summer Solstice: 22nd Dec 2025*

*Sunrise at 05:44*

*Sunset at 20:54*

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# Hourly Shade Analysis

## Study Area 4



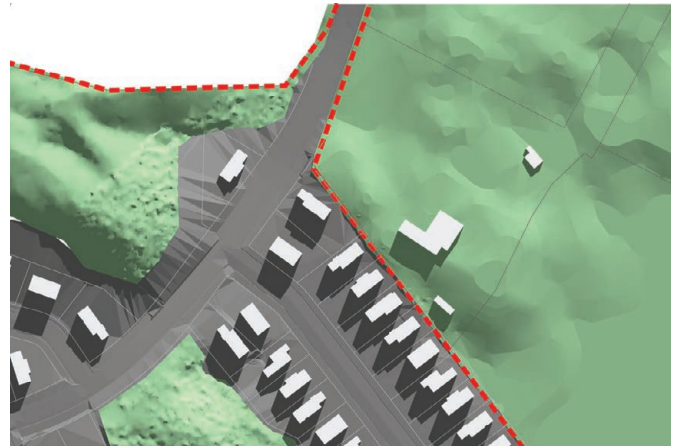
Winter Solstice 8 am



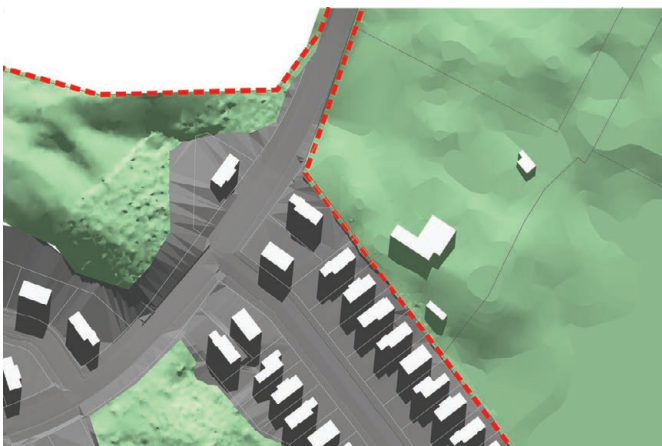
Winter Solstice 9 am



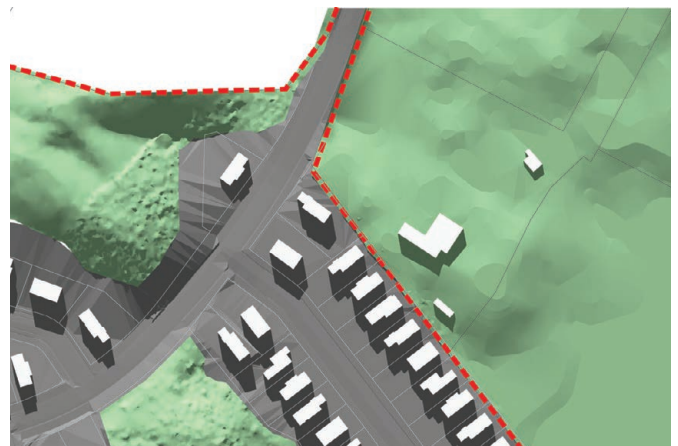
Winter Solstice 10 am



Winter Solstice 11 am



Winter Solstice 12 pm

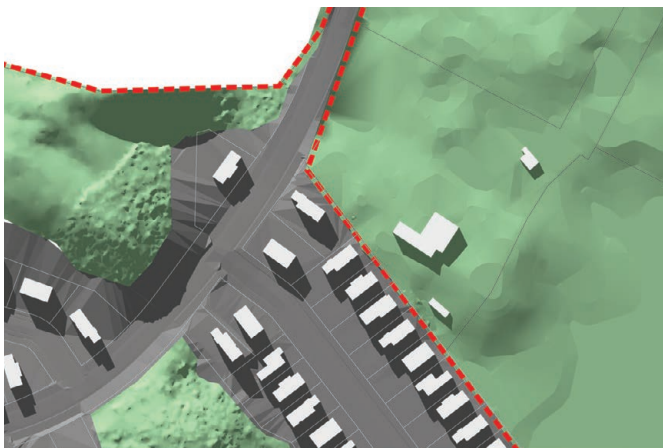


Winter Solstice 1 pm

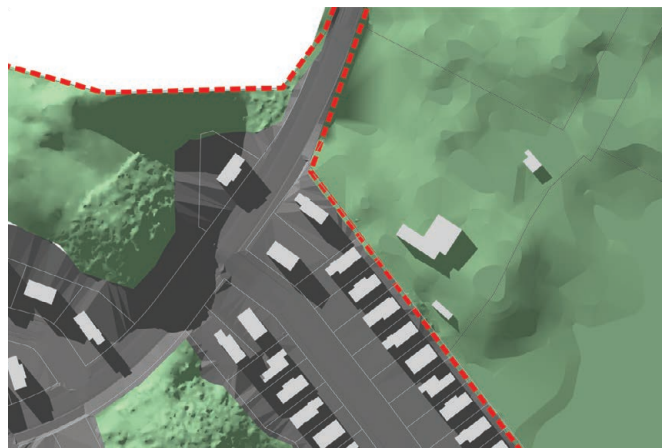
*Winter Solstice: 21st Jun 2025*

*Sunrise at 07:46*

*Sunset at 16:58*



Winter Solstice 2 pm



Winter Solstice 3 pm



Winter Solstice 4 pm

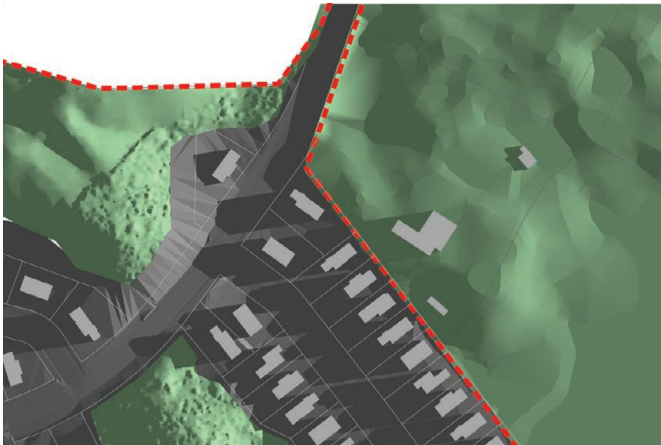


Winter Solstice 5 pm

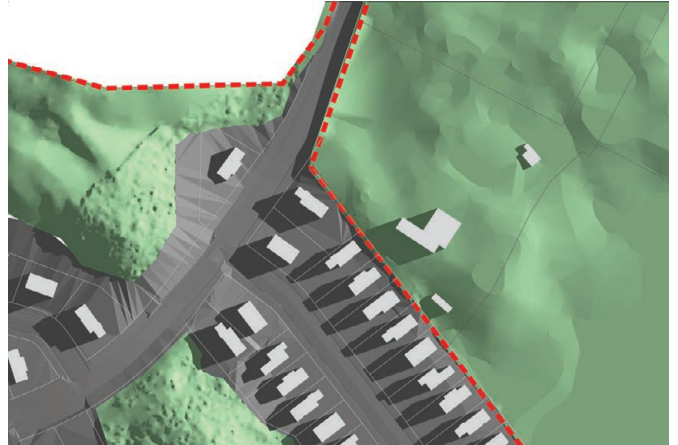
Winter Solstice: 21st Jun 2025  
Sunrise at 07:46  
Sunset at 16:58

# Hourly Shade Analysis

## Study Area 4



Spring Equinox 7 am



Spring Equinox 8 am



Spring Equinox 9 am



Spring Equinox 10 am

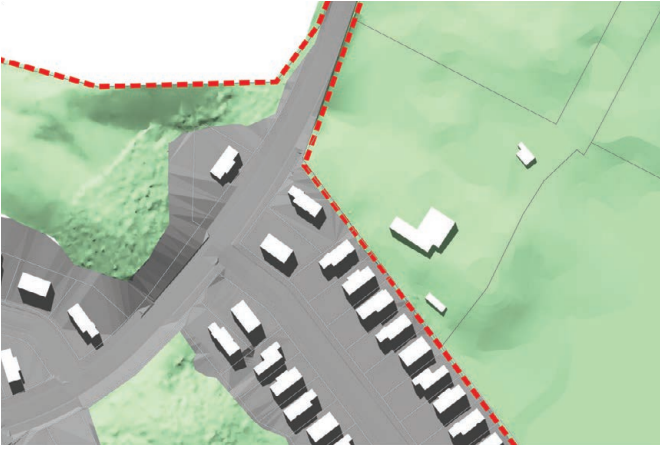


Spring Equinox 11 am

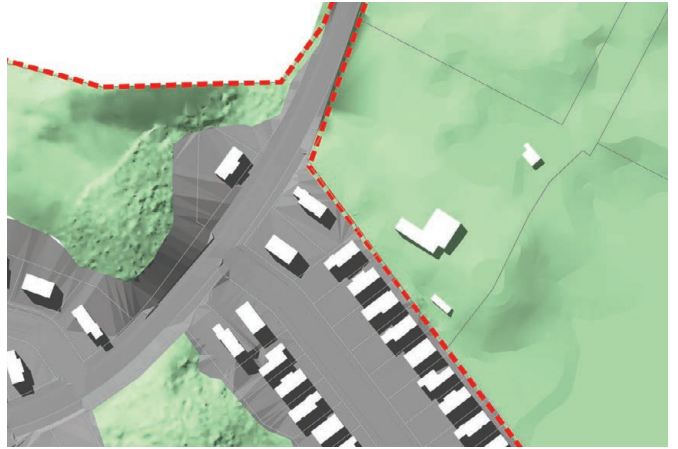


Spring Equinox 12 pm

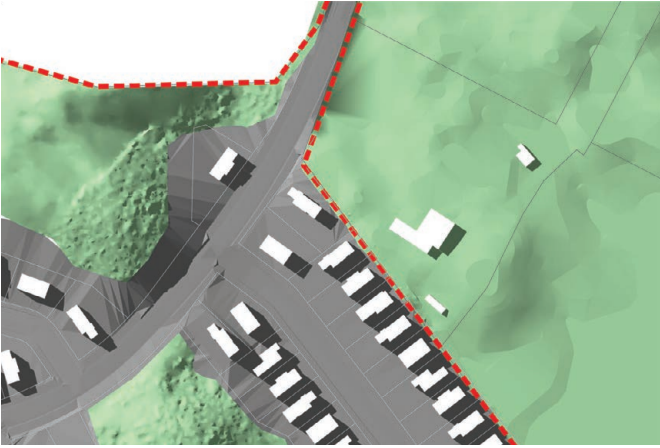
*Spring/Vernal Equinox: 23rd Sep 2025*  
*Sunrise at 06:08*  
*Sunset at 18:18*



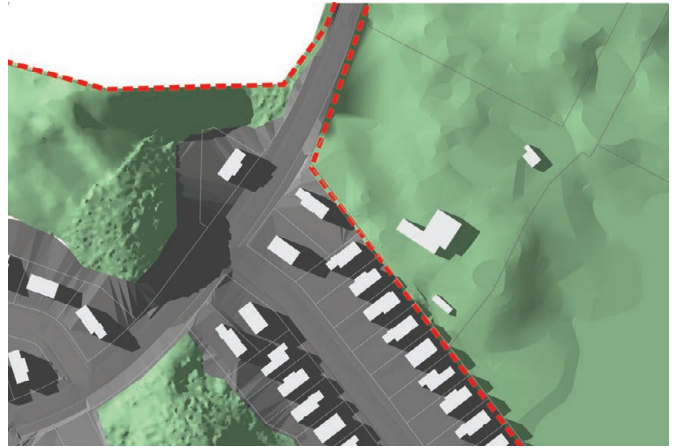
Spring Equinox 1 pm



Spring Equinox 2 pm



Spring Equinox 3 pm



Spring Equinox 4 pm



Spring Equinox 5 pm

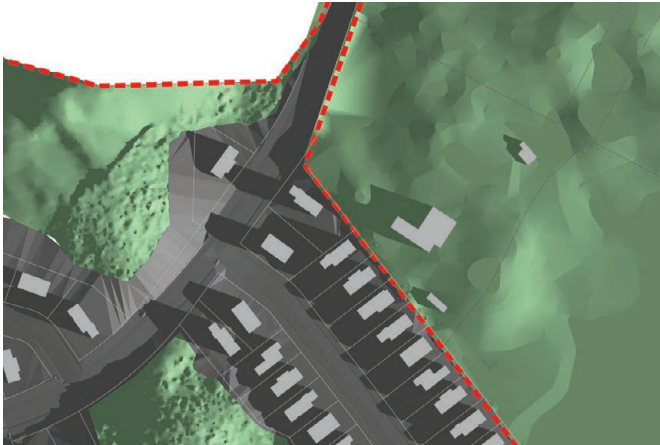


Spring Equinox 6 pm

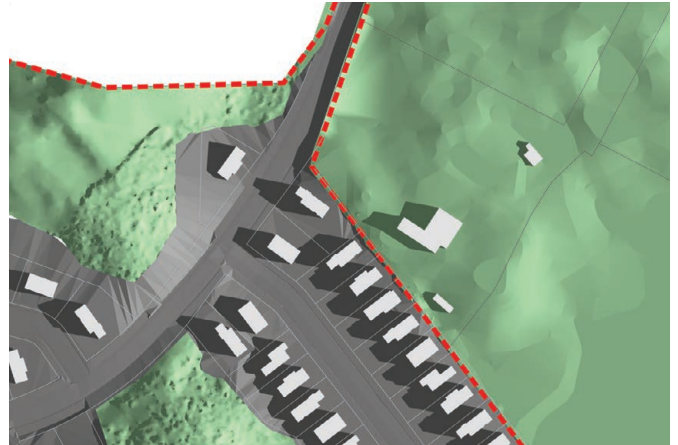
Spring/Vernal Equinox: 23rd Sep 2025  
Sunrise at 06:08  
Sunset at 18:18

# Hourly Shade Analysis

## Study Area 4



Summer Solstice 7 am



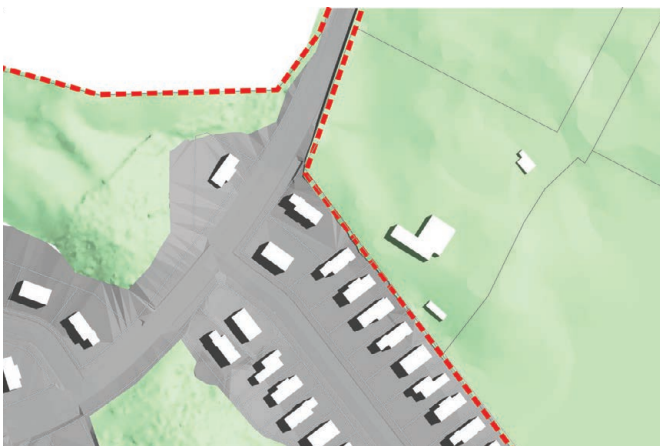
Summer Solstice 8 am



Summer Solstice 9 am



Summer Solstice 10 am



Summer Solstice 11 am



Summer Solstice 12 pm

*Summer Solstice: 22nd Dec 2025*

*Sunrise at 05:44*

*Sunset at 20:54*



Summer Solstice 1 pm



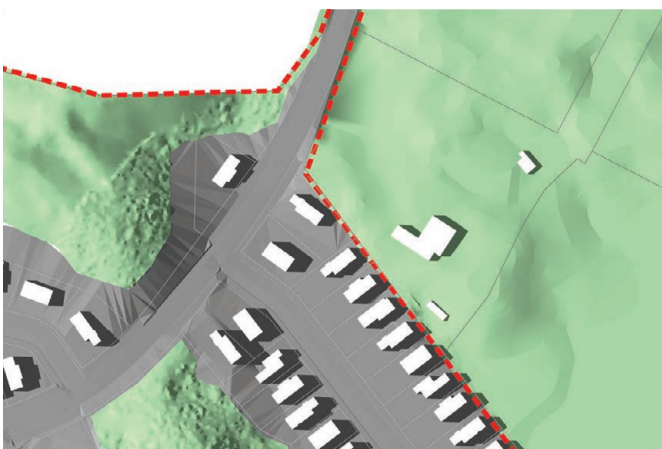
Summer Solstice 2 pm



Summer Solstice 3 pm



Summer Solstice 4 pm



Summer Solstice 5 pm

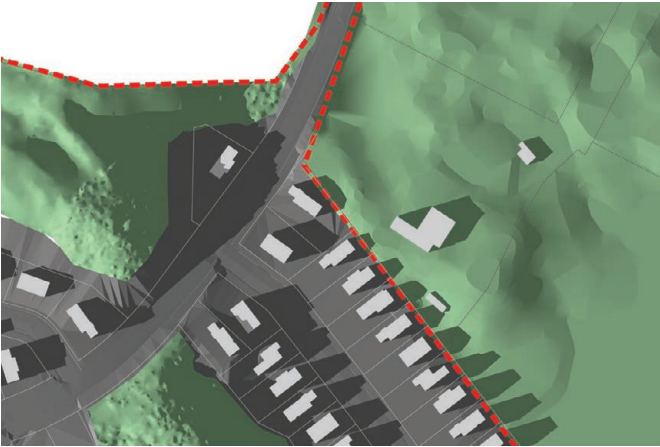


Summer Solstice 6 pm

*Summer Solstice: 22nd Dec 2025*

*Sunrise at 05:44*

*Sunset at 20:54*



Summer Solstice 7 pm



Summer Solstice 8 pm



Summer Solstice 9 pm

*Summer Solstice: 22nd Dec 2025*

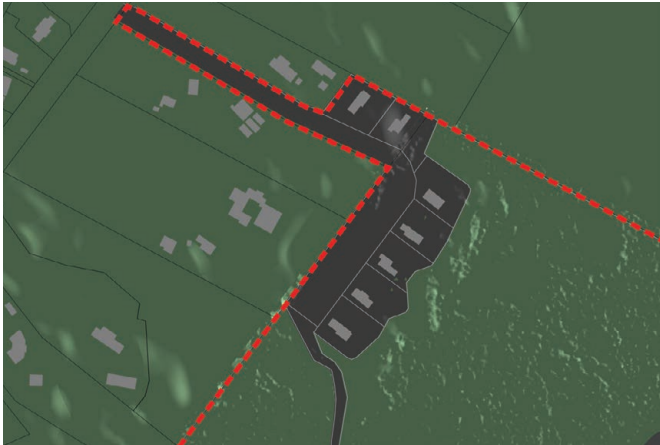
*Sunrise at 05:44*

*Sunset at 20:54*

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# Hourly Shade Analysis

## Study Area 5



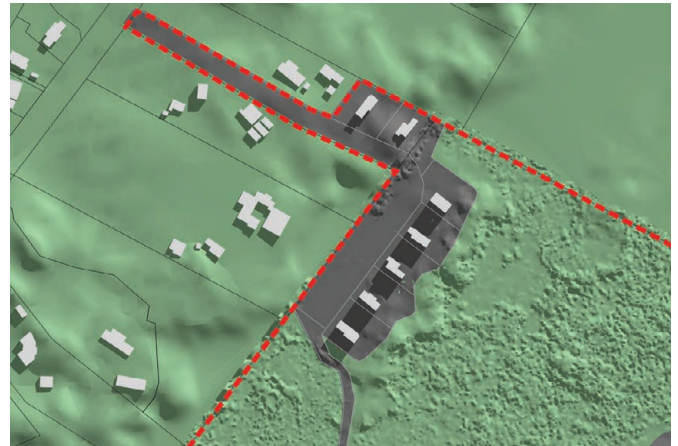
Winter Solstice 8 am



Winter Solstice 9 am



Winter Solstice 10 am



Winter Solstice 11 am



Winter Solstice 12 pm



Winter Solstice 1 pm

Winter Solstice: 21st Jun 2025

Sunrise at 07:46

Sunset at 16:58



Winter Solstice 2 pm



Winter Solstice 3 pm



Winter Solstice 4 pm

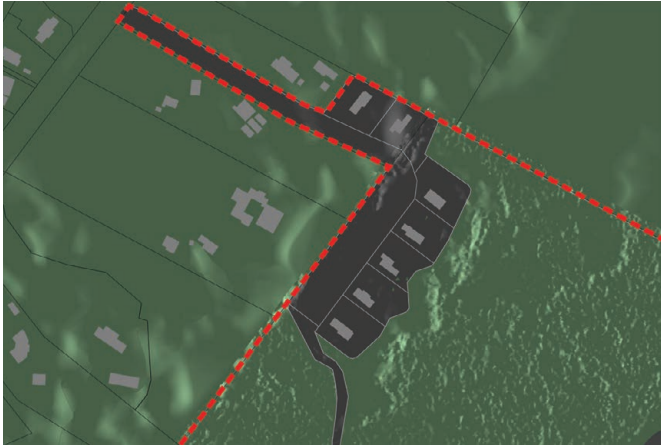


Winter Solstice 5 pm

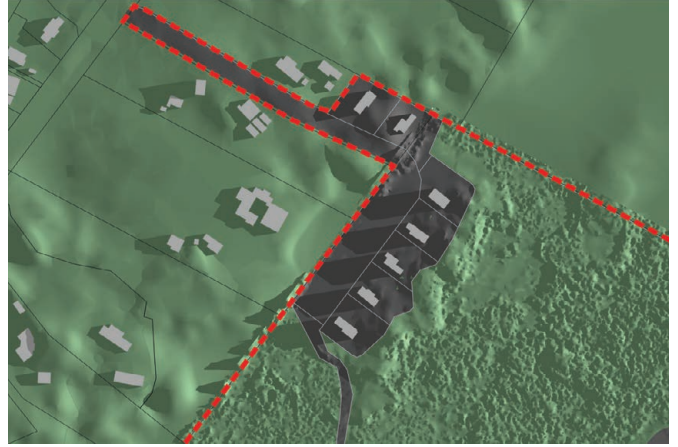
Winter Solstice: 21st Jun 2025  
Sunrise at 07:46  
Sunset at 16:58

# Hourly Shade Analysis

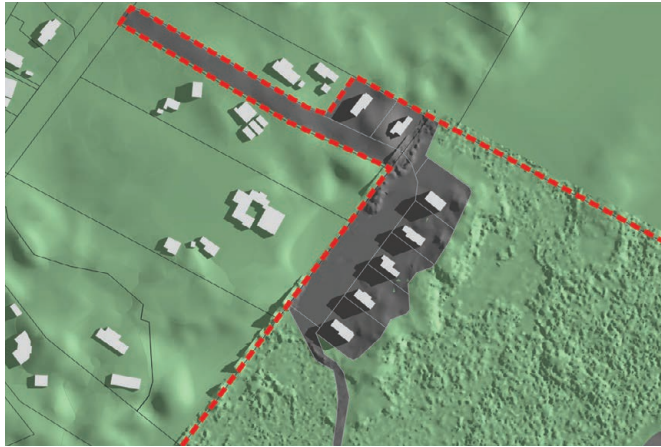
## Study Area 5



Spring Equinox 7 am



Spring Equinox 8 am



Spring Equinox 9 am



Spring Equinox 10 am

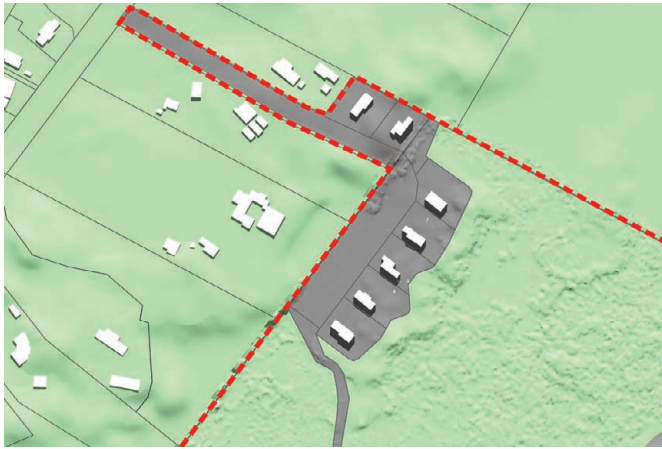


Spring Equinox 11 am



Spring Equinox 12 pm

Spring/Vernal Equinox: 23rd Sep 2025  
Sunrise at 06:08  
Sunset at 18:18



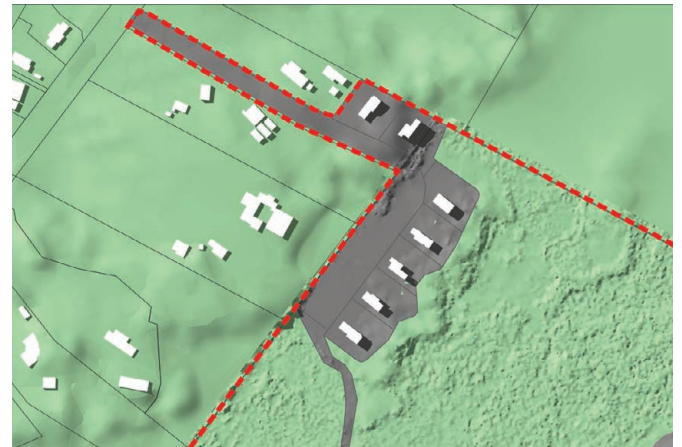
Spring Equinox 1 pm



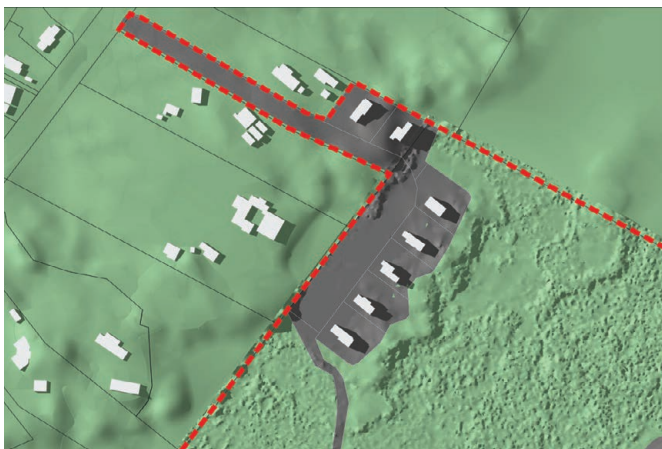
Spring Equinox 2 pm



Spring Equinox 3 pm



Spring Equinox 4 pm



Spring Equinox 5 pm



Spring Equinox 6 pm

Spring/Vernal Equinox: 23rd Sep 2025  
Sunrise at 06:08  
Sunset at 18:18