

Appendix 15.2 Potential Shadow Periods

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Graphs 15.2.1 to 15.2.2 below visually represent the potential periods when each receptor may experience shadow flicker during the operational phase of the Proposed Development. These are calculated using commercial software model WindPro Version 3.2 which takes into account the movement of the sun relative to the time of day and time of year predicting the time and duration of expected shadow flicker at each window of an affected receptor (refer to Chapter 16). These graphs represent a worst-case scenario assuming no mitigation.

Key

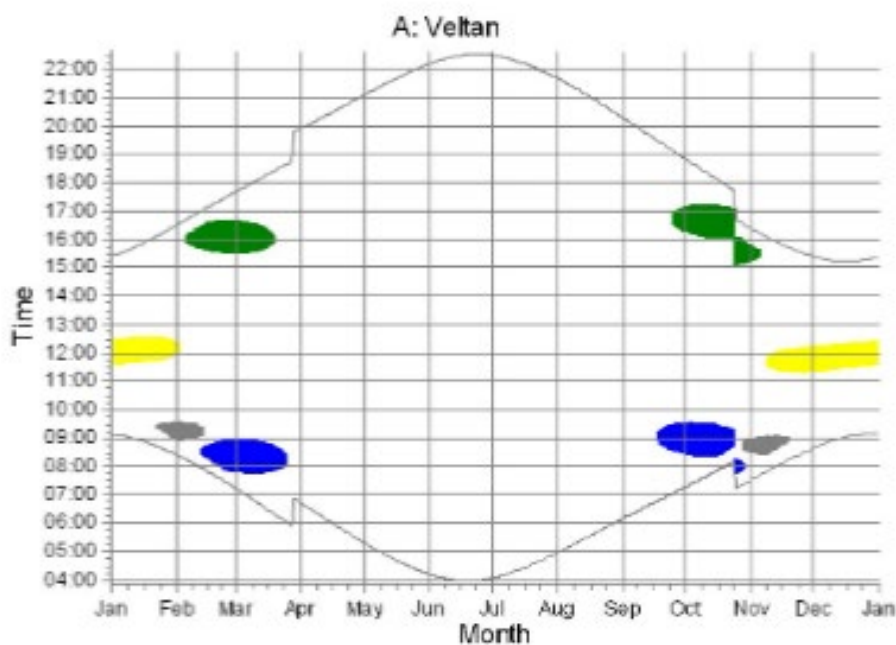
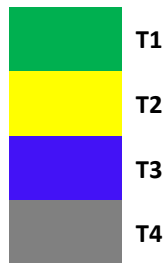


Figure 15.2.1 Shadow Periods at Receptor A, Worst-case

There is potential for turbine 1 and 2 to cause shadow flicker at Receptor A for periods during the afternoon from September through to March. There is also potential for shadow flicker at turbines 3 and 4 in the mornings of these months.

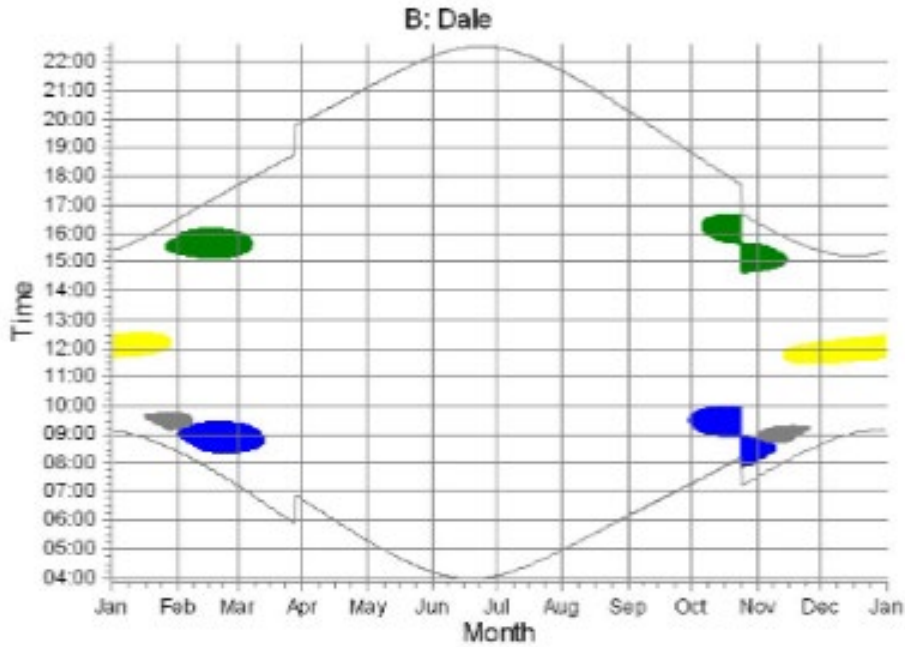


Figure 15.2.2 Shadow Periods at Receptor B, Worst-case

There is potential for turbine 1 and 2 to cause shadow flicker at Receptor B for periods during the afternoon from October through to March. There is also potential for shadow flicker at turbines 3 and 4 in the mornings of these months.

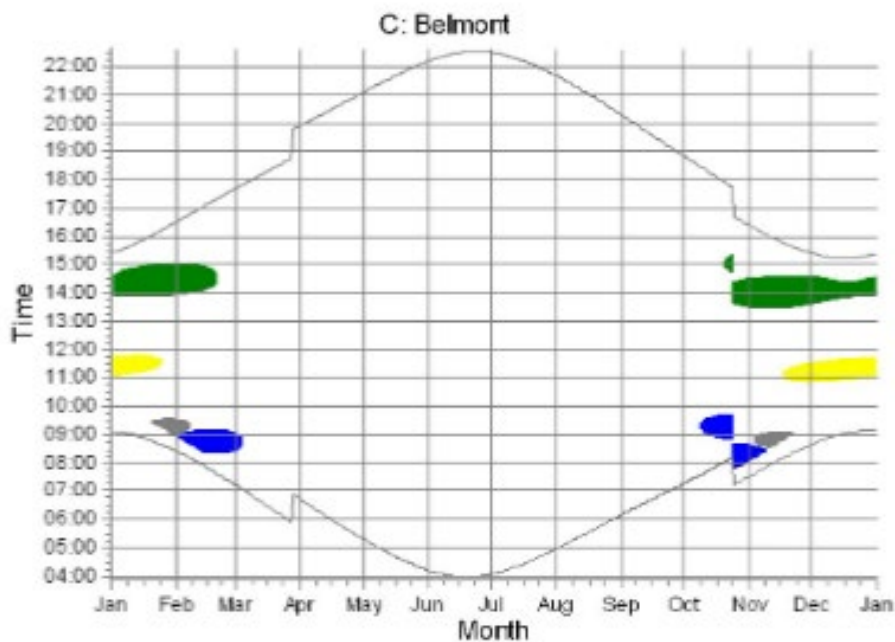


Figure 15.2.3 Shadow Periods at Receptor C, Worst-case

There is potential for turbine 1 and 2 to cause shadow flicker at Receptor C for periods during the afternoon from October through to February. There is also potential for shadow flicker at turbines 3 and 4 in the mornings of these months.

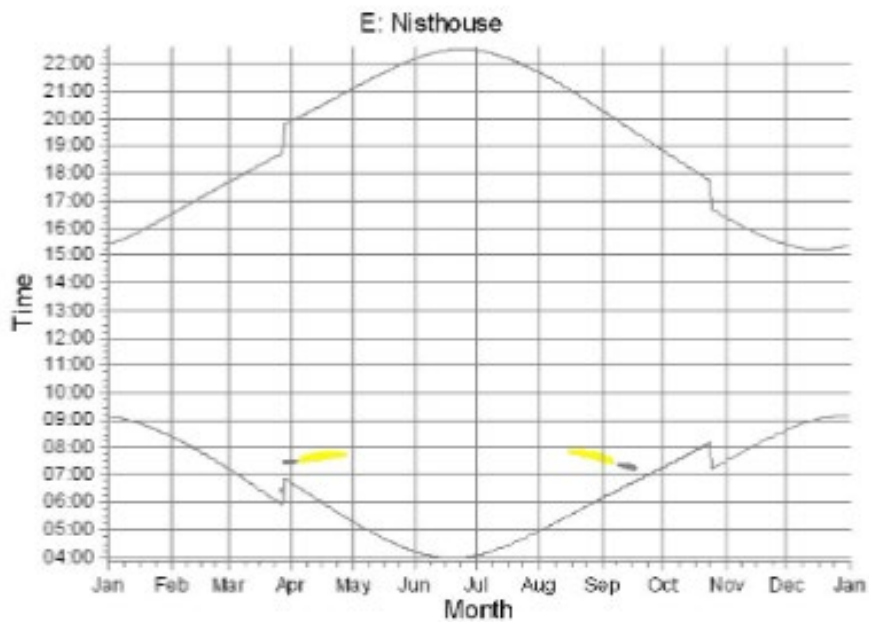


Figure 15.2.4 Shadow Periods at Receptor E, Worst-case

There is potential for turbine 2 and 4 to cause shadow flicker at Receptor E in the early mornings of March – April and August to September.

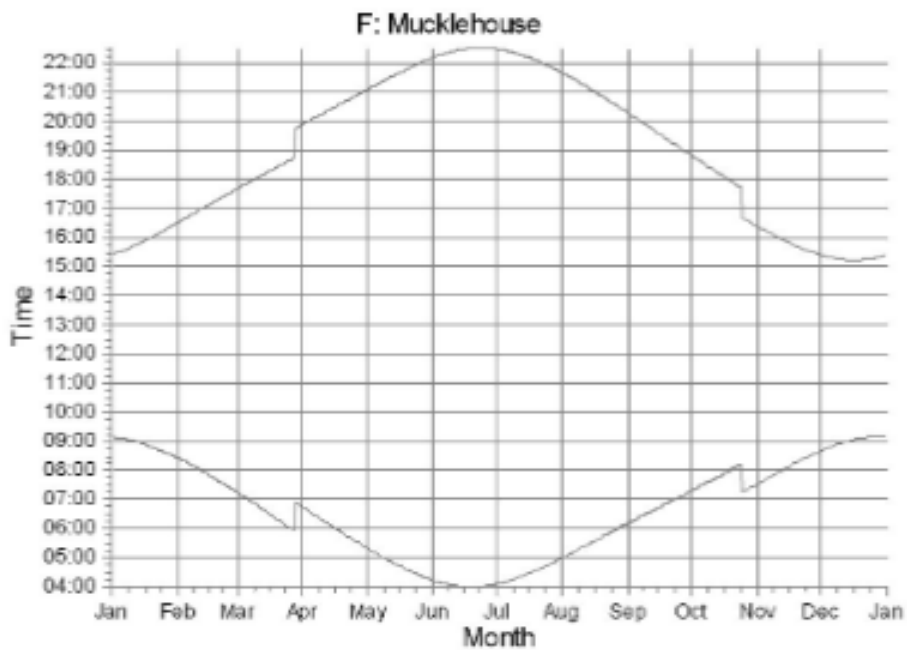


Figure 15.2.5 Shadow Periods at Receptor F, Worst-case

There is no potential for the turbines to cause shadow flicker at Receptor F.

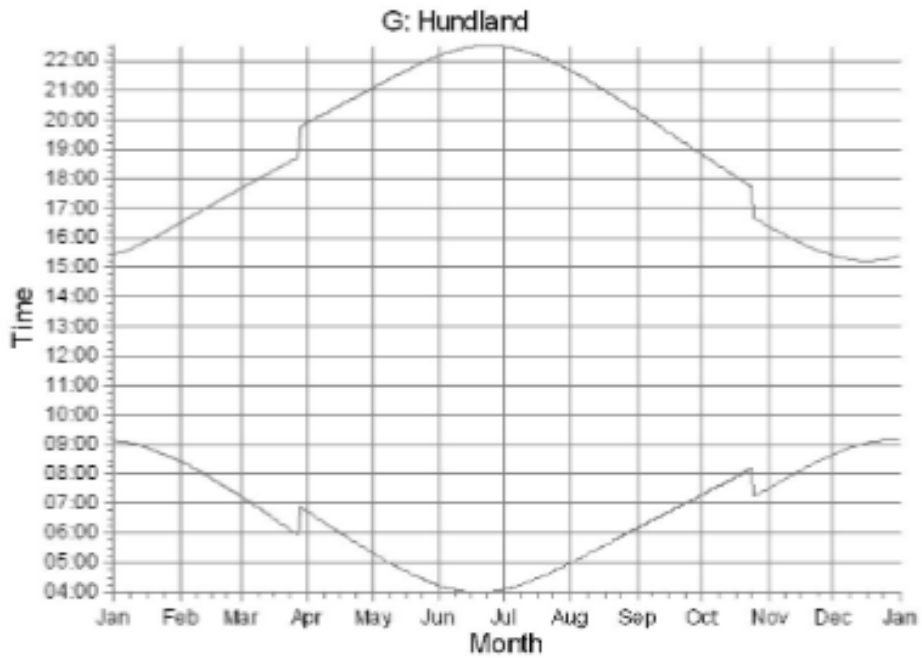


Figure 15.2.6 Shadow Periods at Receptor G, Worst-case

There is no potential for the turbines to cause shadow flicker at Receptor G.

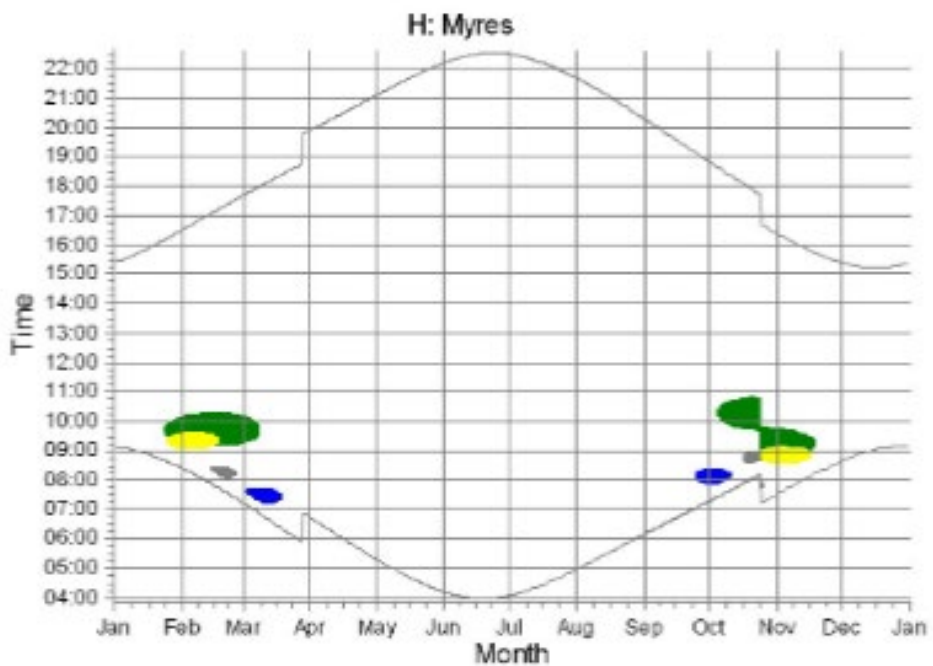


Figure 15.2.7 Shadow Periods at Receptor H, Worst-case

There is potential for Turbines 1, 2, 3 and 4 to cause shadow flicker at Receptor H in the mornings of late September through to March.

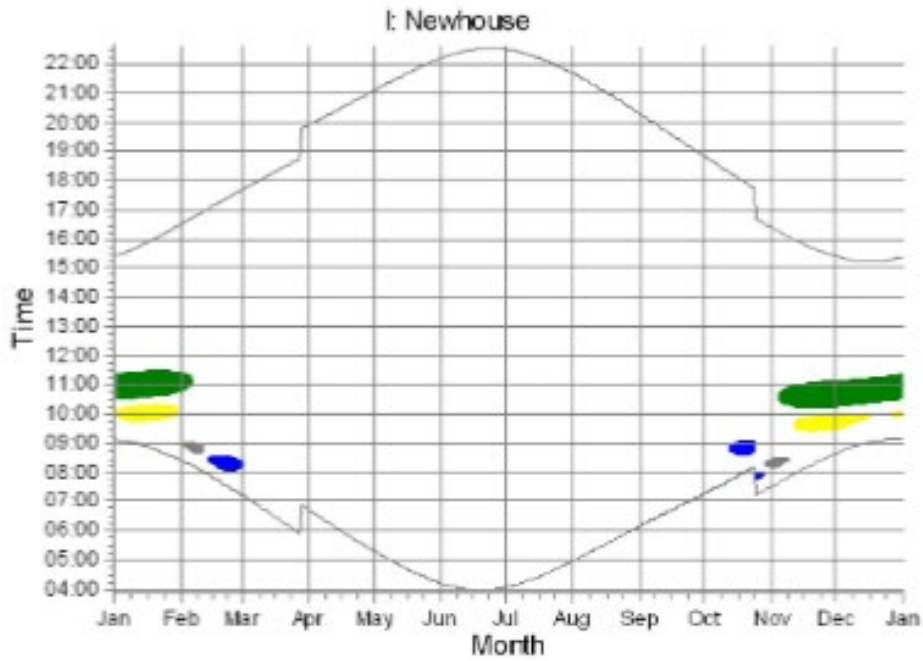


Figure 15.2.8 Shadow Periods at Receptor I, Worst-case

There is potential for Turbines 1, 2, 3 and 4 to cause shadow flicker at Receptor I in the mornings of October through to February.

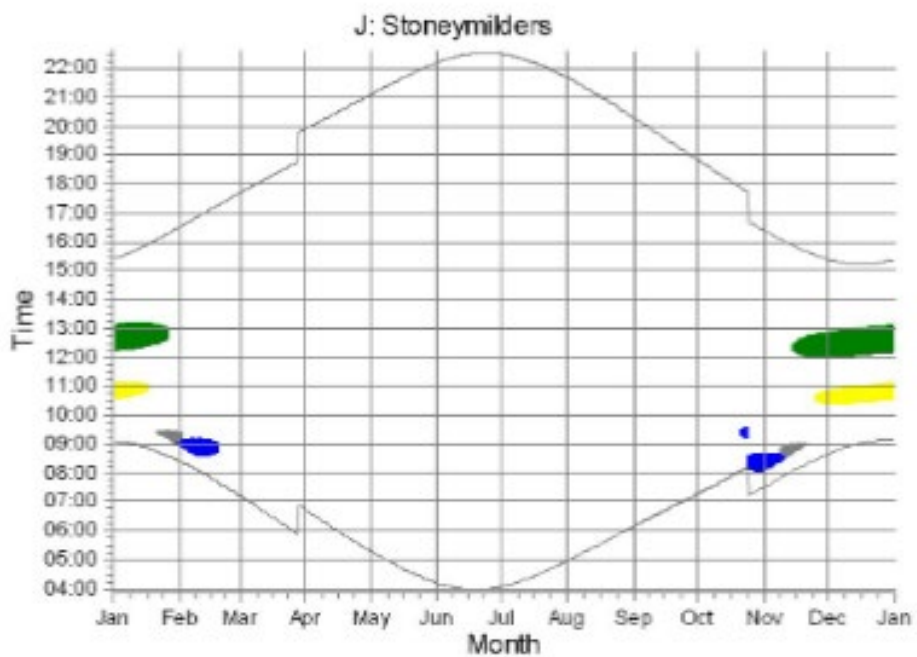


Figure 15.2.9 Shadow Periods at Receptor J, Worst-case

There is potential for Turbines 1, 2, 3 and 4 to cause shadow flicker at Receptor J in the mornings of October through to February.

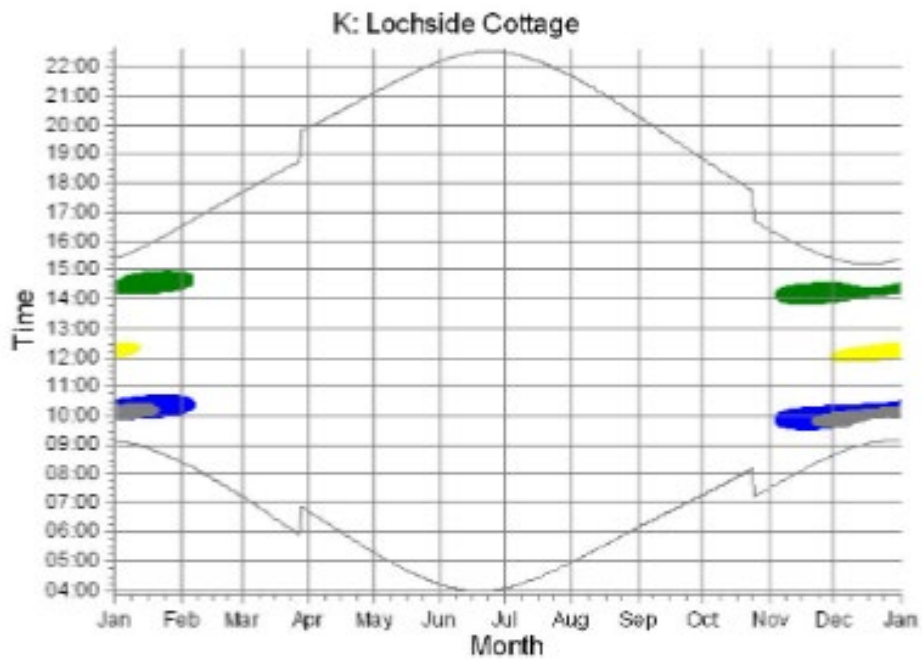


Figure 15.2.10 Shadow Periods at Receptor K, Worst-case

There is potential for Turbines 1, 2 and 3 to cause shadow flicker at Receptor K in the mornings of November through to early February. Then potential for Turbine 4 to cause shadow flicker in the early afternoon of these months.

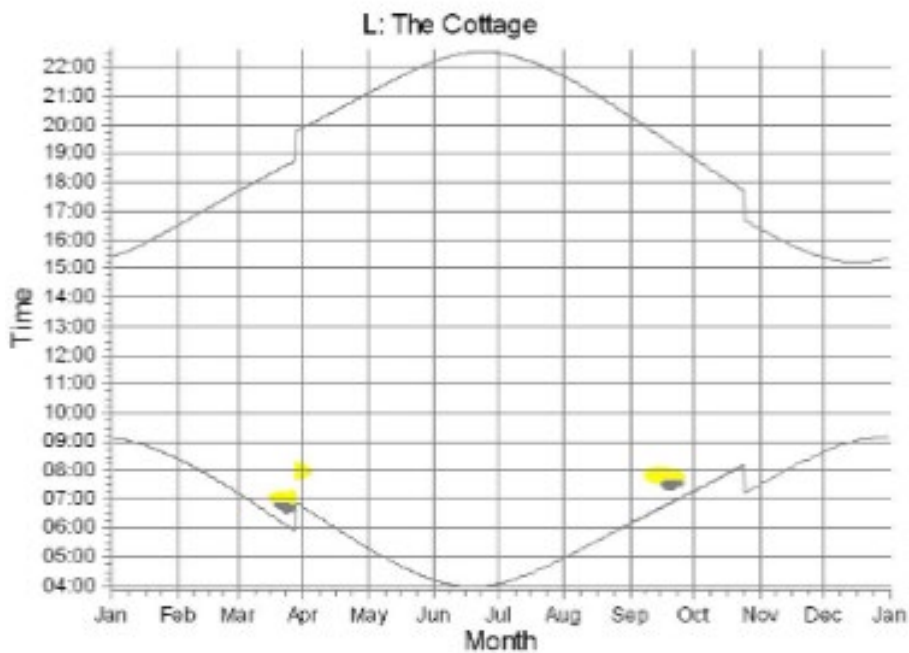


Figure 15.2.11 Shadow Periods at Receptor L, Worst-case

There is potential for Turbines 2 and 4 to cause shadow flicker at Receptor L in the early mornings of September and March.

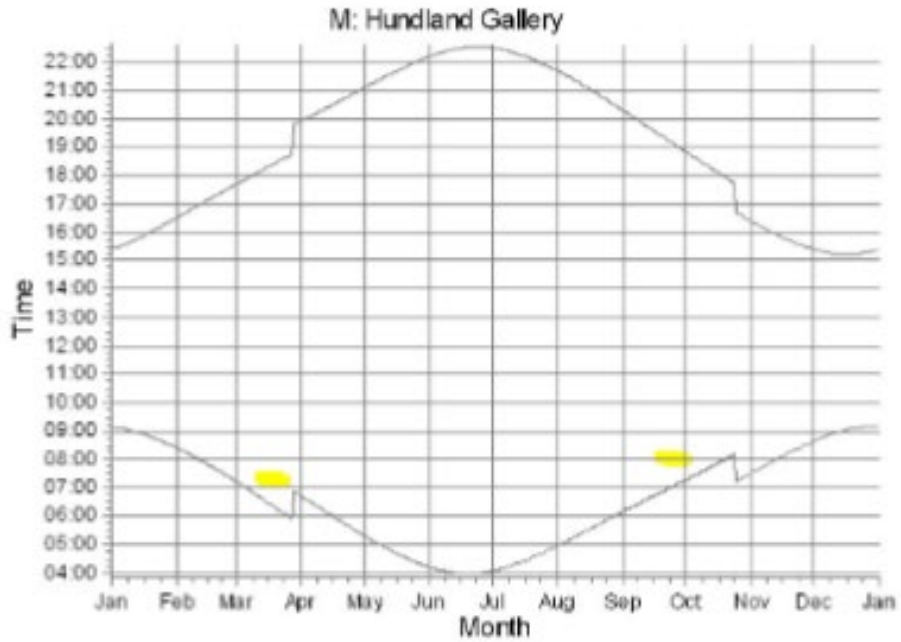


Figure 15.2.12 Shadow Periods at Receptor M, Worst-case

There is potential for Turbine 2 to cause shadow flicker at Receptor M in the early mornings of September and March.

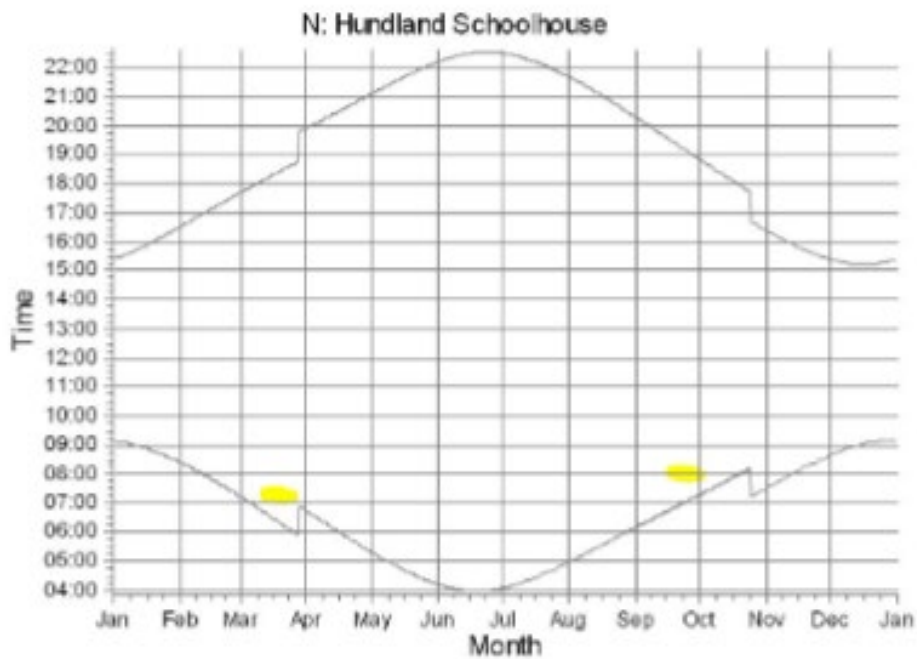


Figure 15.2.13 Shadow Periods at Receptor N, Worst-case

There is potential for Turbine 2 to cause shadow flicker at Receptor N in the early mornings of September and March.

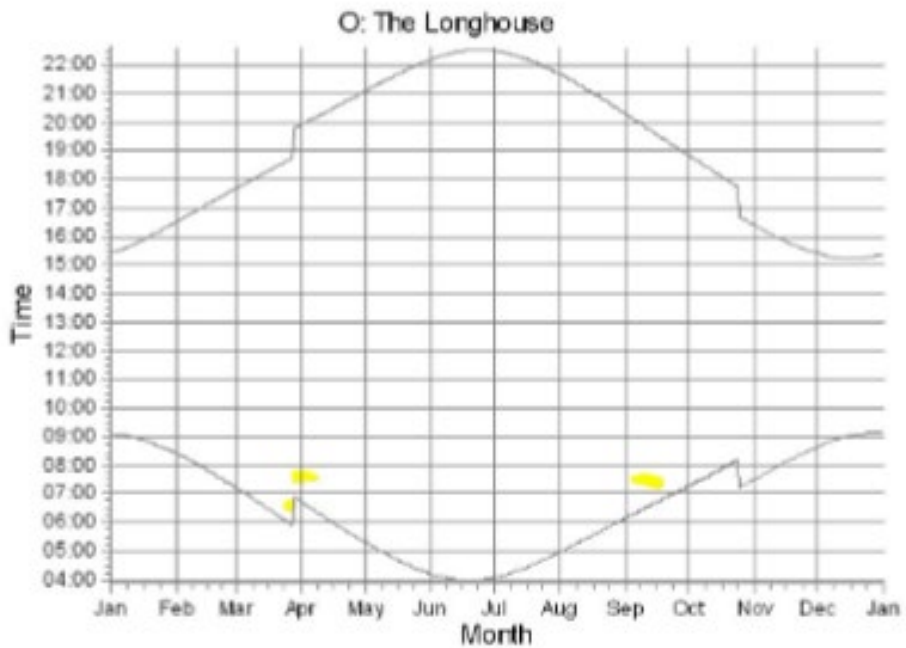


Figure 15.2.14 Shadow Periods at Receptor O, Worst-case

There is potential for Turbine 2 to cause shadow flicker at Receptor O in the early mornings of September and late March through to early April.

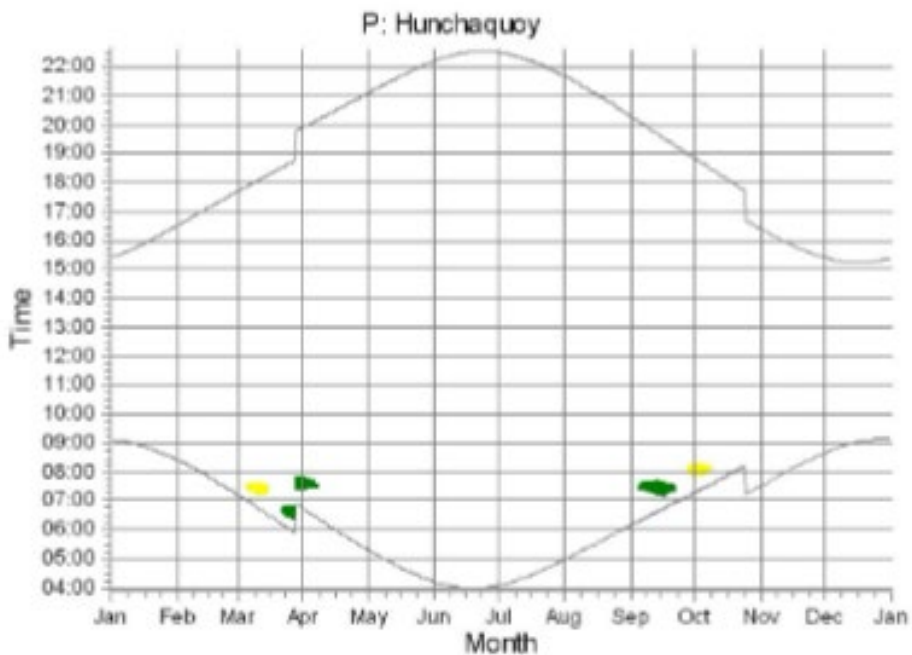


Figure 15.2.15 Shadow Periods at Receptor P, Worst-case

There is potential for Turbines 1 and 2 to cause shadow flicker at Receptor P in the early mornings of September through to early October and March through to early April.

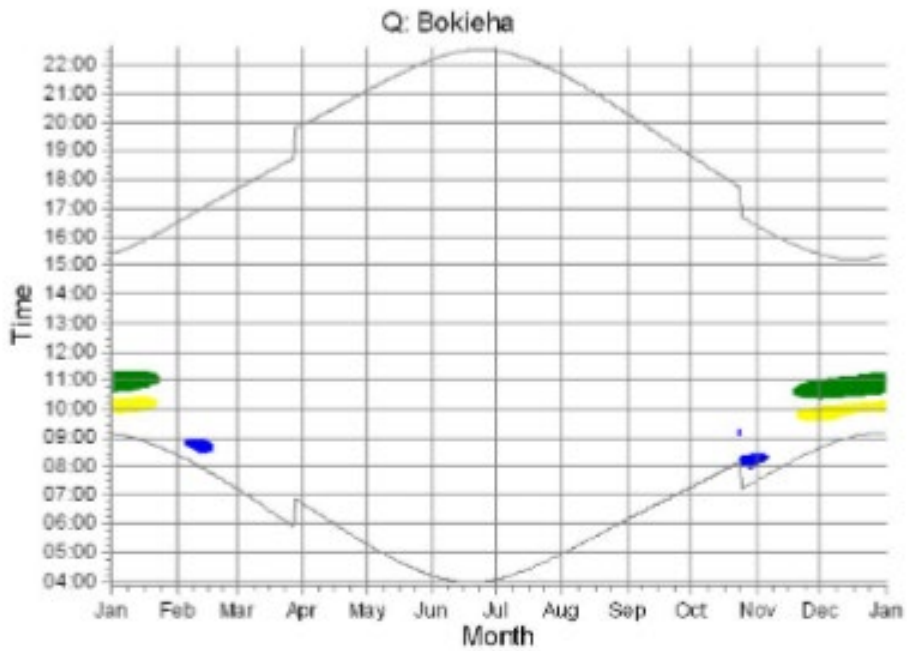


Figure 15.2.16 Shadow Periods at Receptor Q, Worst-case

There is potential for Turbines 1, 2 and 3 to cause shadow flicker at Receptor Q in the mornings of October through to February.

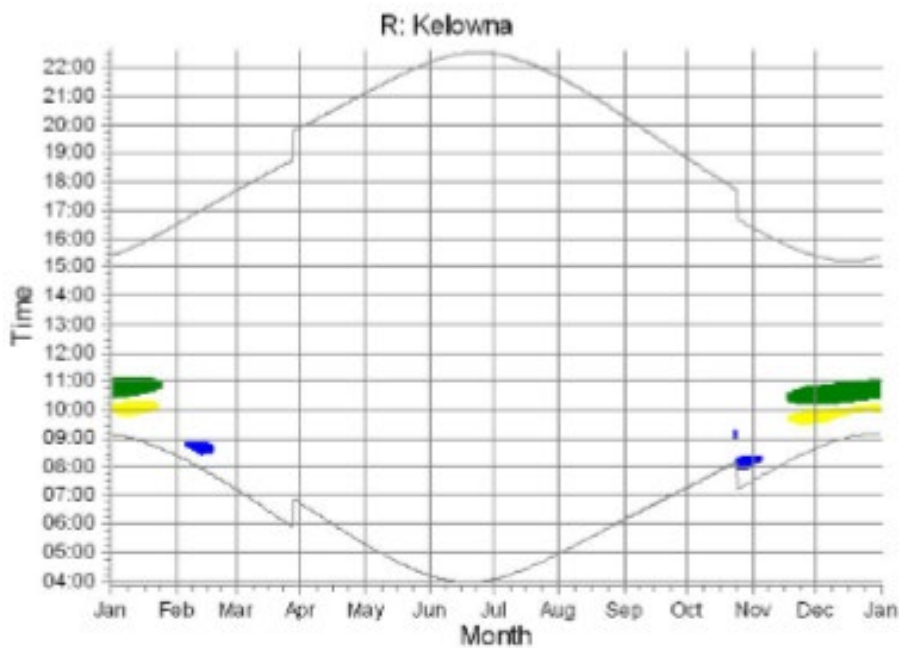


Figure 15.2.17 Shadow Periods at Receptor R, Worst-case

There is potential for Turbines 1, 2 and 3 to cause shadow flicker at Receptor R in the mornings of October through to February.

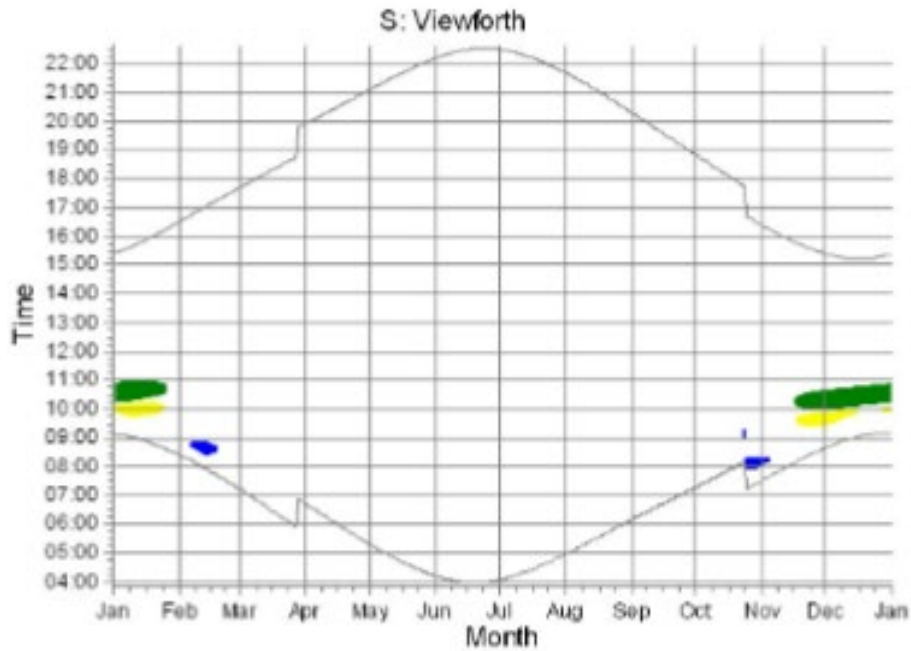


Figure 15.2.18 Shadow Periods at Receptor S, Worst-case

There is potential for Turbines 1, 2 and 3 to cause shadow flicker at Receptor S in the mornings of October through to February.

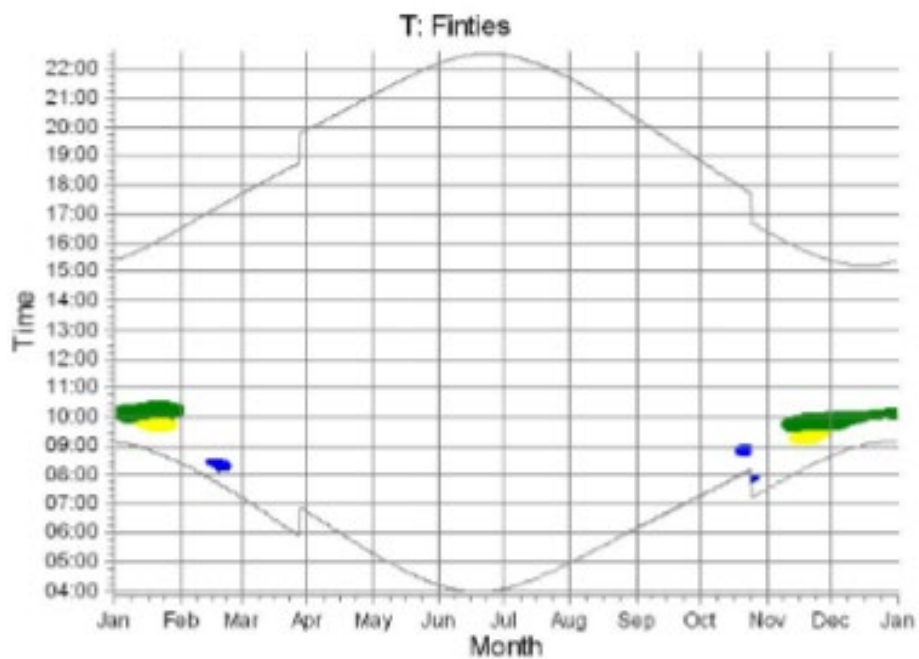


Figure 15.2.19 Shadow Periods at Receptor T, Worst-case

There is potential for Turbines 1, 2 and 3 to cause shadow flicker at Receptor T in the mornings of October through to February.

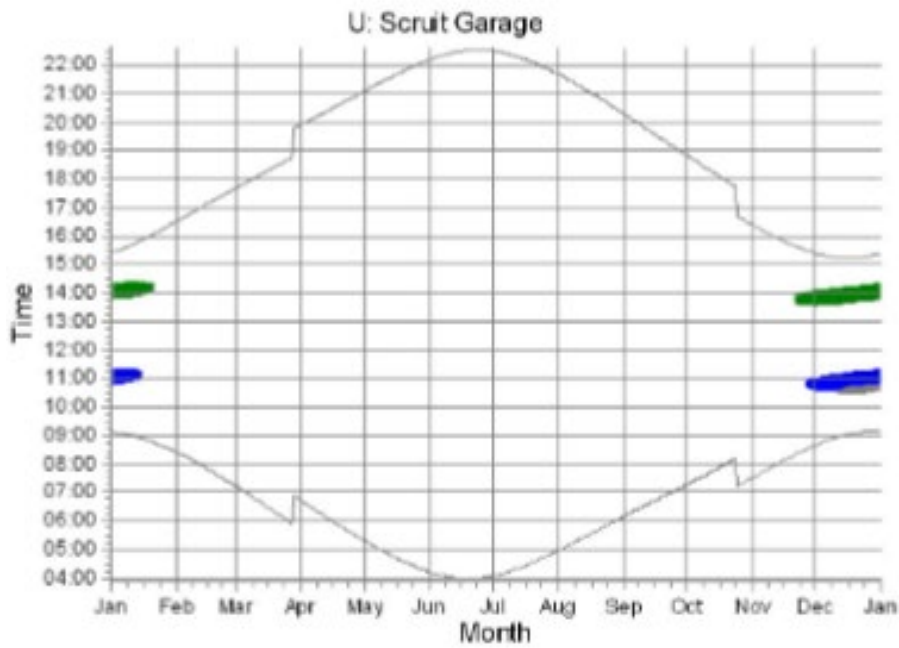


Figure 15.2.20 Shadow Periods at Receptor U, Worst-case

There is potential for Turbines 1 and 3 to cause shadow flicker at Receptor U in the mornings of late November through to January.

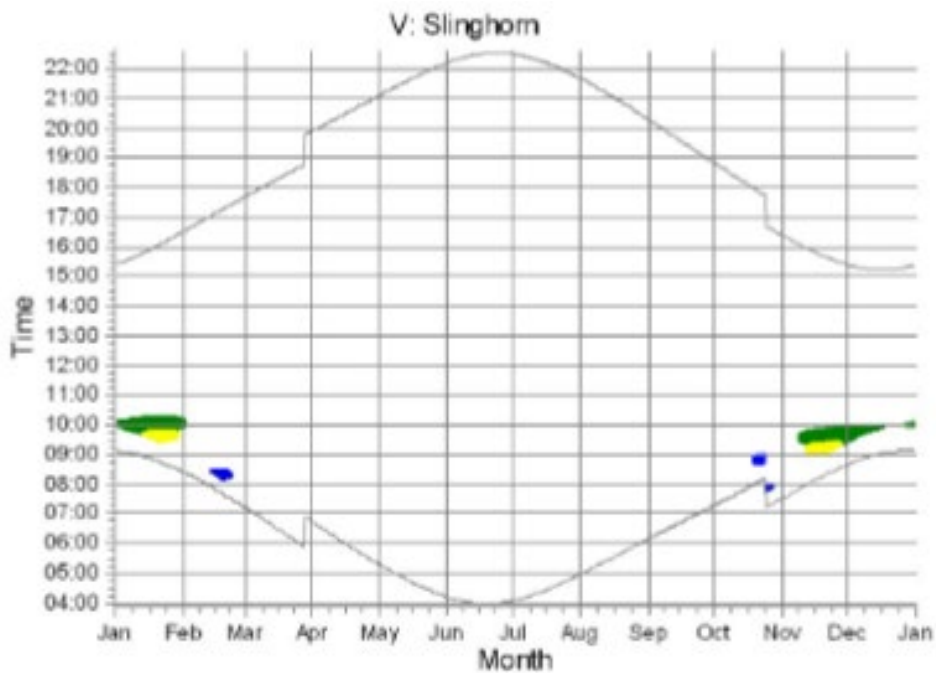


Figure 15.2.21 Shadow Periods at Receptor V, Worst-case

There is potential for Turbines 1, 2 and 3 to cause shadow flicker at Receptor V in the mornings of October through to February.

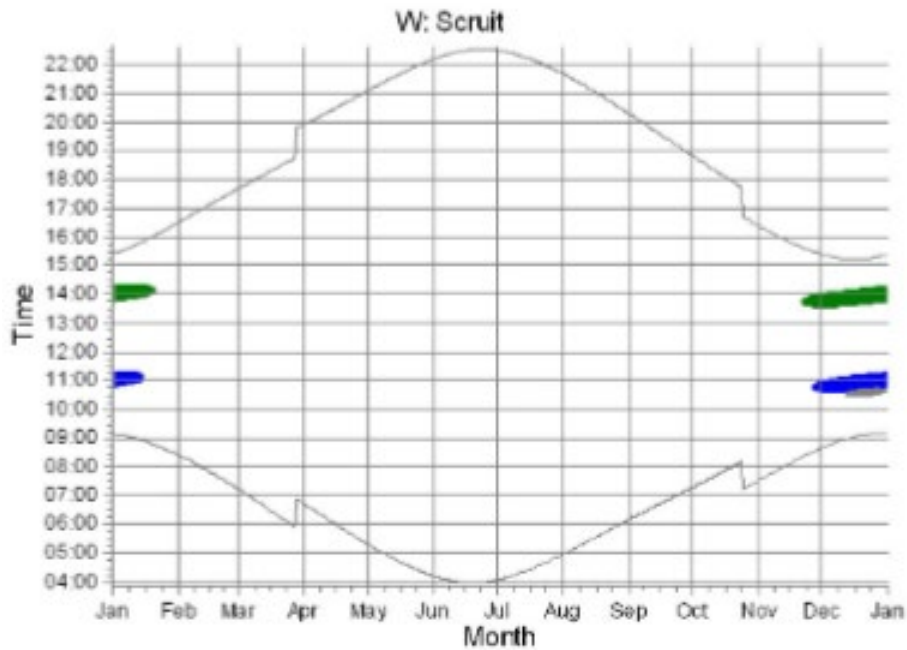


Figure 15.2.22 Shadow Periods at Receptor W, Worst-case

There is potential for Turbines 1 and 3 to cause shadow flicker at Receptor W in the middle of the day of late November through to January.

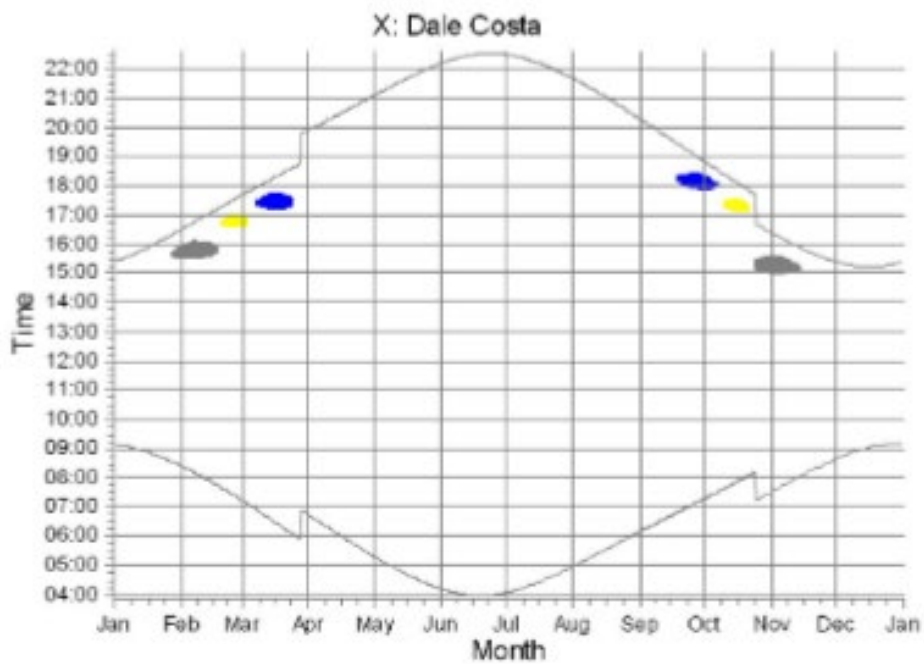


Figure 15.2.23 Shadow Periods at Receptor X, Worst-case

There is potential for Turbines 2, 3 and 4 to cause shadow flicker at Receptor X in the afternoons of late September through to March.

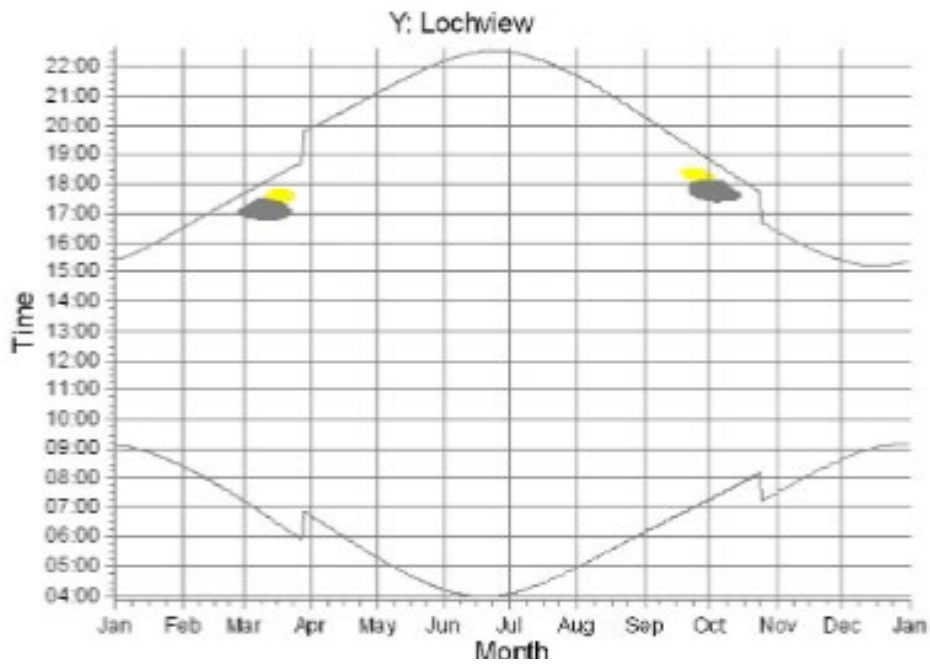


Figure 15.2.24 Shadow Periods at Receptor Y, Worst-case

There is potential for Turbines 2 and 4 to cause shadow flicker at Receptor Y in the afternoons of March and late September to October.

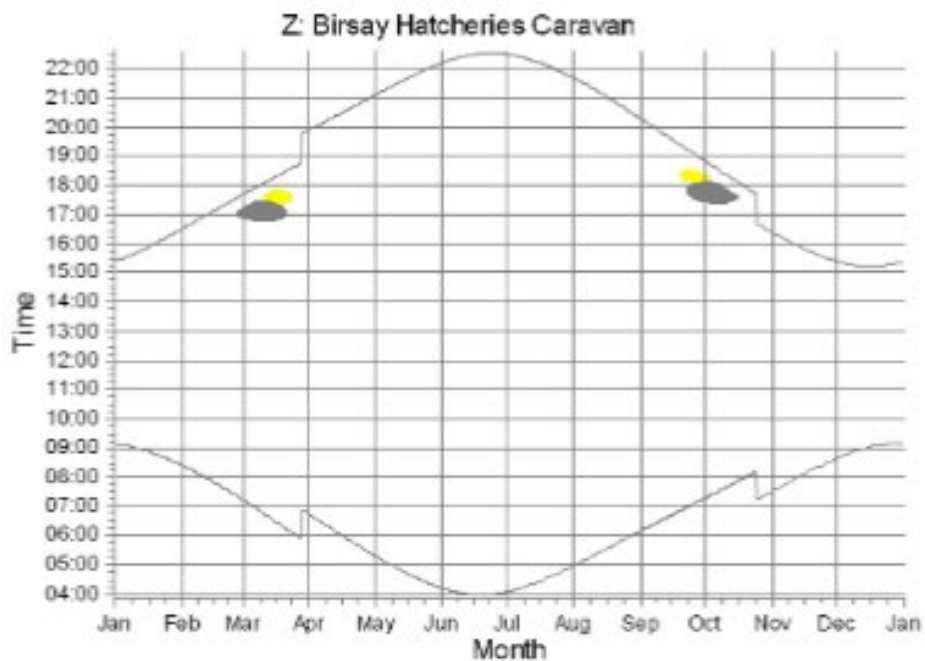


Figure 15.2.25 Shadow Periods at Receptor Z, Worst-case

There is potential for Turbines 2 and 4 to cause shadow flicker at Receptor Z in the afternoons of March and late September to October.

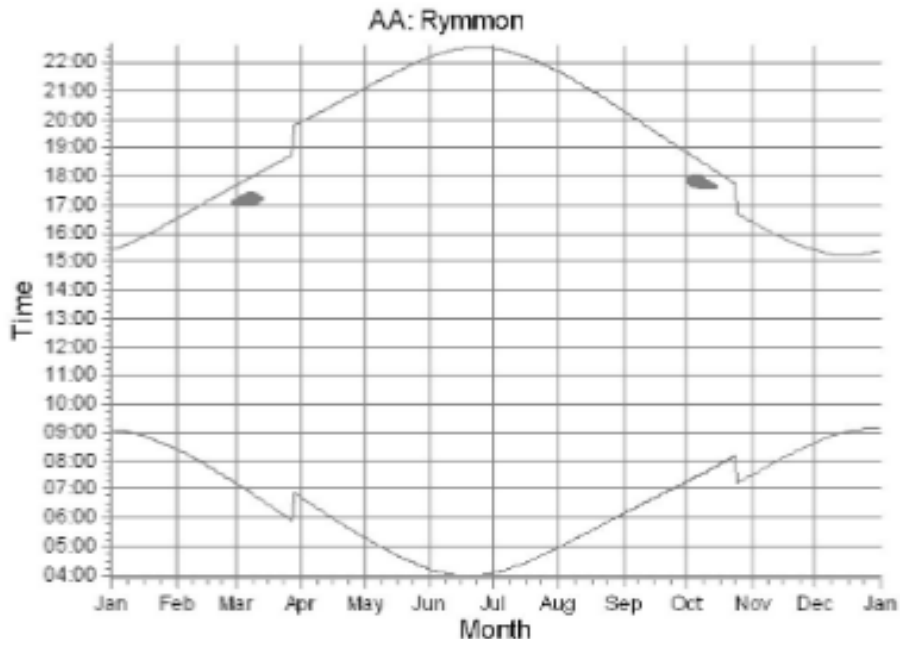


Figure 15.2.26 Shadow Periods at Receptor AA, Worst-case

There is potential for Turbine 4 to cause shadow flicker at Receptor AA in the afternoons of March and October.

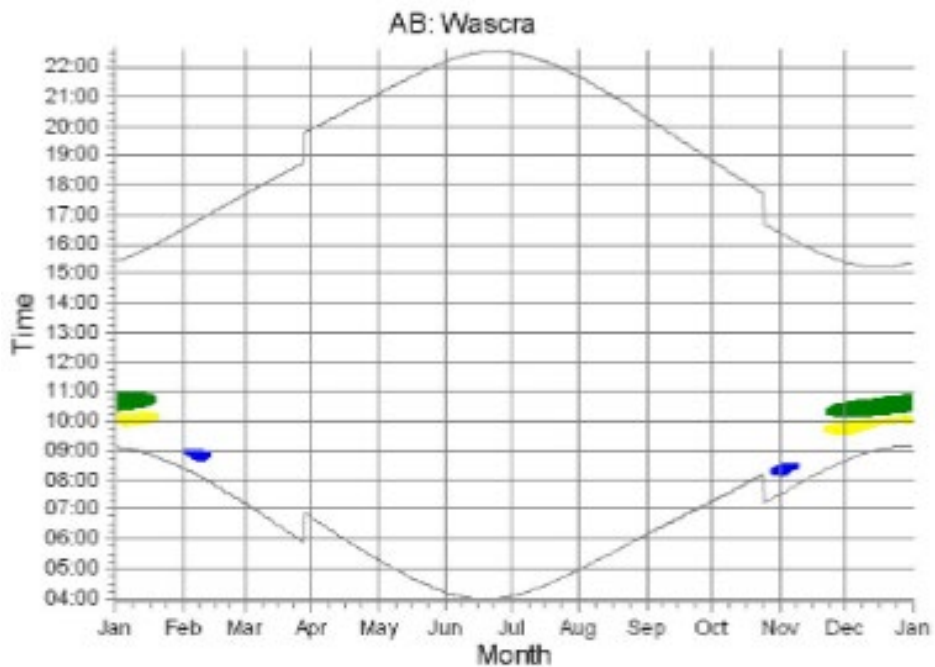


Figure 15.2.27 Shadow Periods at Receptor AB, Worst-case

There is potential for Turbines 1, 2 and 3 to cause shadow flicker at Receptor AB in the afternoons of late October through to February.

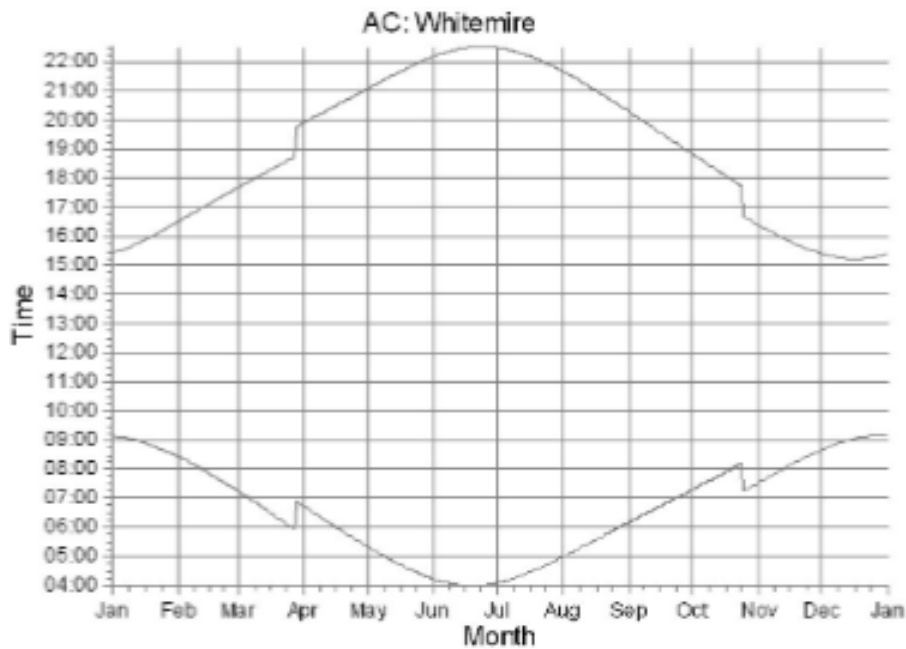


Figure 15.2.28 Shadow Periods at Receptor AC, Worst-case

There is no potential for the turbines to cause shadow flicker at Receptor AC.

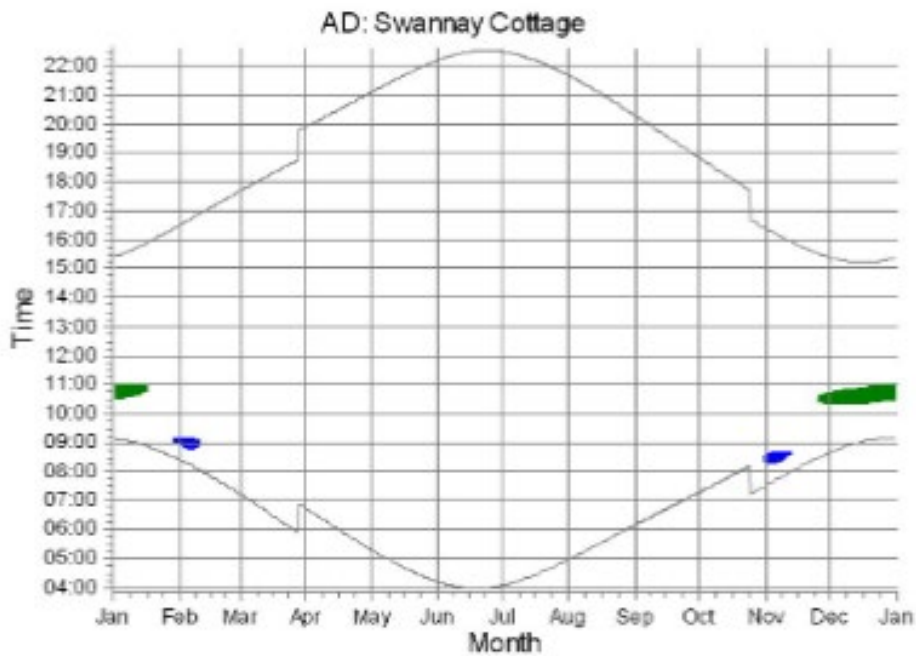


Figure 15.2.29 Shadow Periods at Receptor AD, Worst-case

There is no potential for the turbines to cause shadow flicker at Receptor AC.

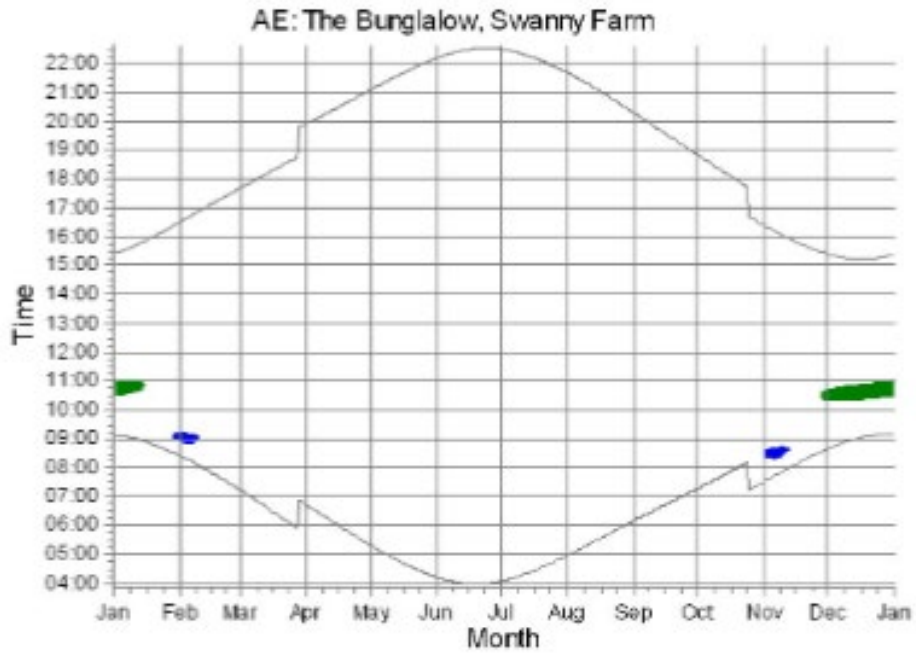


Figure 15.2.30 Shadow Periods at Receptor AE, Worst-case

There is potential for Turbines 1 and 3 to cause shadow flicker at Receptor AE in the mornings of November through to early February.

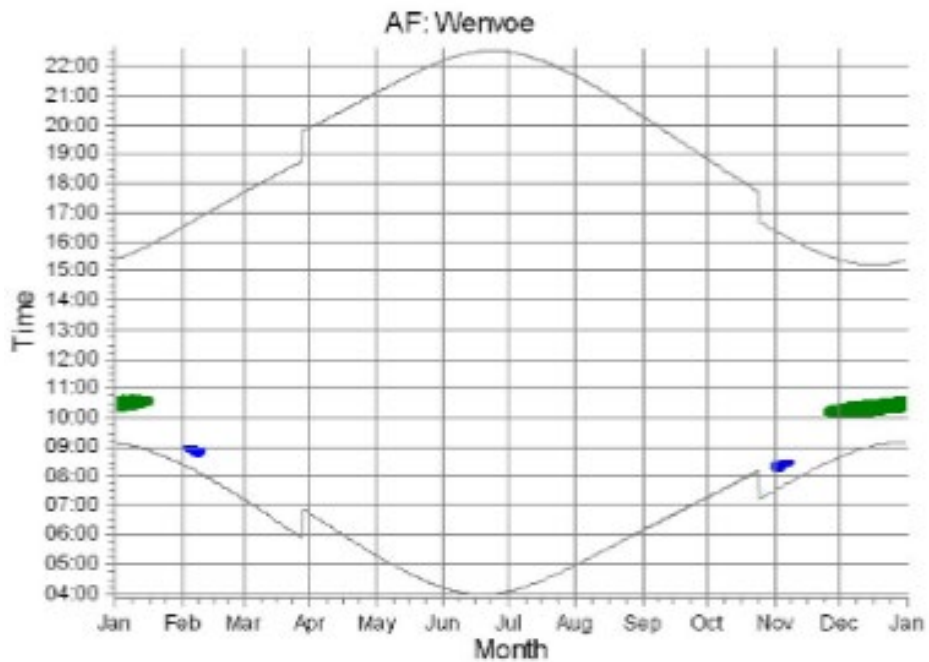


Figure 15.2.31 Shadow Periods at Receptor AF, Worst-case

There is potential for Turbines 1 and 3 to cause shadow flicker at Receptor AF in the mornings of November through to early February.

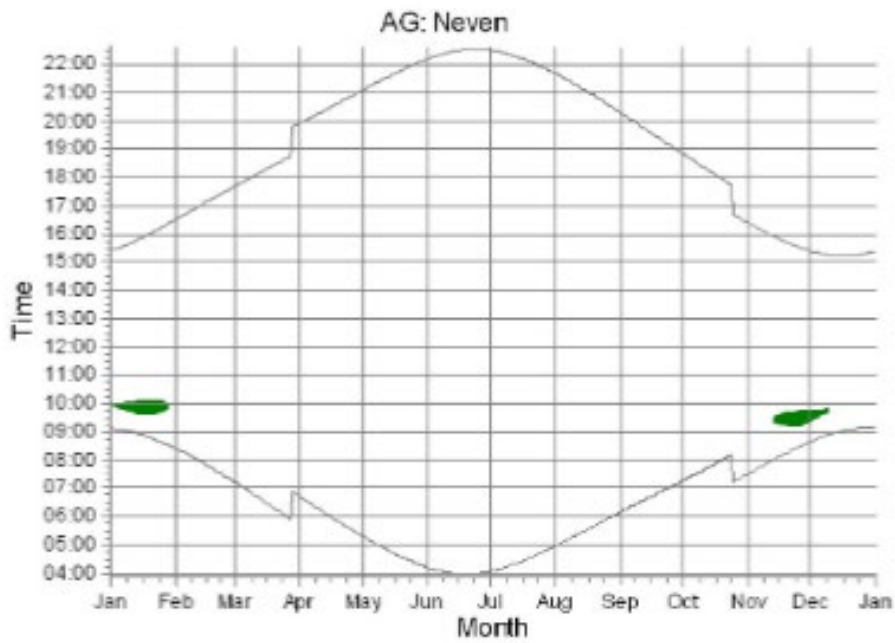


Figure 15.2.32 Shadow Periods at Receptor AG, Worst-case

There is potential for Turbine 1 to cause shadow flicker at Receptor AG in the mornings of November through to January.

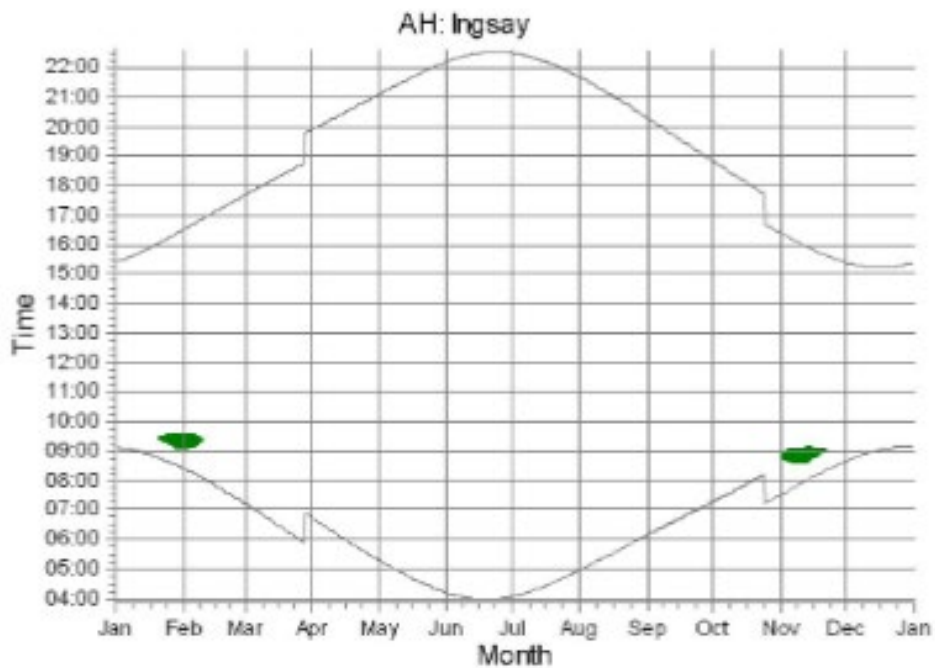


Figure 15.2.33 Shadow Periods at Receptor AH, Worst-case

There is potential for Turbine 1 to cause shadow flicker at Receptor AH in the mornings of November and late January through to early February.

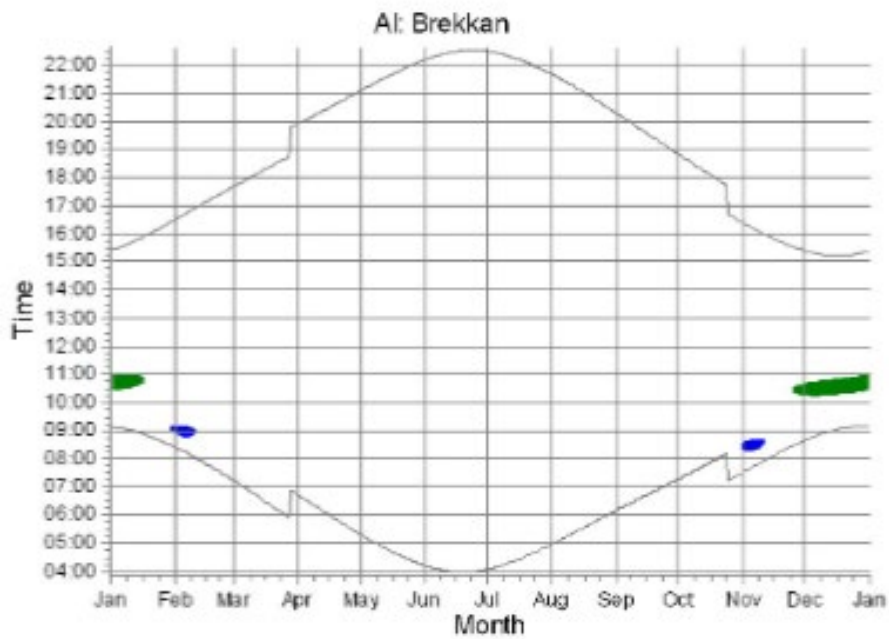


Figure 15.2.34 Shadow Periods at Receptor AI, Worst-case

There is potential for Turbines 1 and 3 to cause shadow flicker at Receptor AI in the mornings of November through to early February.