# 14 Shadow Flicker

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# 14 Shadow Flicker

## 14.1 Executive Summary

14.1.1 This chapter has assessed the difference between the potential for shadow flicker from the 2020 Layout (which was assessed in the 2020 Supplementary Environmental Information (SEI)) compared to the 2021 Layout of the Proposed Development. The differences between the 2020 Layout and 2021 Layout are described in Chapter 3 of this SEI 2. Of most relevance to this chapter is the removal of five turbines in the north-west of the Proposed Development.

14.1.2 The 2020 SEI concluded that there was no potential for shadow flicker effects and thus no residual effects were predicted. The conclusion of the 2020 SEI remain valid and there is no need for any further consideration of shadow flicker and no requirement for mitigation

## 14.2 Introduction

14.2.1 Chapter 14 of the 2019 Environmental Impact Assessment (EIA) Report describes and assesses the potential shadow flicker effects resulting from turbines of the 2019 Layout on neighbouring residential and commercial receptors.

14.2.2 In the 2020 SEI, a re-assessment of the potential shadow flicker effects was undertaken, even though the removal of the most north and north-westerly turbines (T1, T3, T4 and T29) resulted in the exclusion of all possible shadow flicker receptors for the study area, i.e. all turbines were then beyond 1.6 km (10 times rotor diameter) from the receptors. Refer to Figure 14.1 of the 2020 SEI.

14.2.3 The approach taken is presented in Chapter 14 of the 2020 SEI which should be read in conjunction with this chapter. The assessment concluded that *'The removal of turbines from the north-westerly area of the site in the 2020 Layout has removed the potential shadow flicker effects all together'.*

14.2.4 Therefore, it is reasonable to conclude that with the removal of a further 5 turbines (T5, T6, T8, T9 and T10) for the 2021 Layout, all of which are also located in the north-west of the site, the potential for shadow flicker effects is further reduced when compared to the 2020 Layout. As such, the conclusion of the 2020 SEI remain valid and there is no need for any further consideration of shadow flicker and no requirement for mitigation.

## 14.3 Assessment of Residual Effects

14.3.1 With the further removal of five north westerly turbines in the 2021 Layout, there is no potential for shadow flicker effects and thus no residual effects are predicted.

## 14.4 Assessment of Cumulative Effects

14.4.1 There are no receptors within the area of overlap between the study area of the Proposed Development and potentially cumulative developments within 3 km (refer to Figure 14.1 of the 2020 SEI), therefore there is no potential for cumulative shadow flicker effects.

## 14.5 Comparison of Effects

14.5.1 The removal of turbines from the north and north-western areas of the site in the 2020 Layout (T1, T3, T4 and T29) removed potential shadow flicker effects altogether. The changes to the Proposed Development set out in the 2021 Layout make no difference to the likelihood of significant shadow flicker effects at any sensitive receptor. There remain no potential significant effects and therefore no proposed mitigation measures necessary.

**Table 14.1 – Summary of Effects**

| Description of Effect | 2020 Effects | | 2021 Effects | |
|---|---|---|---|---|
| | Significance | Beneficial/ Adverse | Significance | Beneficial/ Adverse |
| Shadow Flicker effects on 7 nearby residential properties | No effect or Negligible (at two receptors) | N/A | No effect | N/A |

**Table 14.2 – Summary of Cumulative Effects**

| Receptor | Effect | Cumulative Developments | 2020 Cumulative Effect | | 2021 Cumulative Effect | |
|---|---|---|---|---|---|---|
| | | | Significance | Beneficial/ Adverse | Significance | Beneficial/ Adverse |
| Receptors 1-7 | Shadow Flicker | Tulac, Uphouse, SW Cullivoe Hall, Niaroo, Dalsetter, Innhouse and Garth | No effect | N/A | No effect | N/A |

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