

## **APPENDIX A. Odour Contours for 99.5 percentile Frequency**

*The EPA advised that the best estimate of odour impact causing annoyance will be obtained by modelling odour on a 1-hour average and the 99.5 percentile frequency. The Water Corporation has followed this advice and modelled the odour contours before and after the odour upgrade using the 99.5 % frequency. The same odour model (Ausplume) and wind file (Woodman Point onsite file) were used as for the 99.9 % frequency modelling presented in the SER.*

*Figure A1 shows the predicted odour contours at 99.5 % frequency. The odour complaints, field and phone survey results are also shown in the figure. It can be seen that with the 99.5 % frequency, the predicted 2.5 OU contour encompasses virtually all of the complaints (although perhaps is a little short of the complaints to the east of the plant).*

*Figure A2 shows the predicted odour contours at 99.5 % frequency after all the proposed Stage 1 to Stage 3 odour improvements have been completed and commissioned, and the plant is augmented to a capacity of 240 ML/d. It can be seen that at 99.5 % frequency, the predicted 2.5 OU contour extends just inshore of the eastern side of Lake Coogee.*

*For comparison, Figure A3 shows the predicted odour contours at 99.9 % frequency (as in the SER) after all the proposed Stage 1 to Stage 3 odour improvements have been completed and commissioned, and the plant is augmented to a capacity of 240 ML/d. It can be seen that at 99.9 % frequency, the predicted 5 OU contour (a high odour level applied with a higher frequency) also extends just inshore of the eastern side of Lake Coogee but slightly less to the north.*

*Considering the quoted accuracy of the predictions (a band of 100 m or more either side of the odour contours) there is little difference between the outcome predicted using 99.5 % frequency and the outcome predicted using 99.9 % frequency.*

**Figure A1 Predicted Odour Contours for Existing Woodman Point WWTP  
99.5 percentile**

**Woodman Point WWTP - Existing Conditions - 120 ML/d**

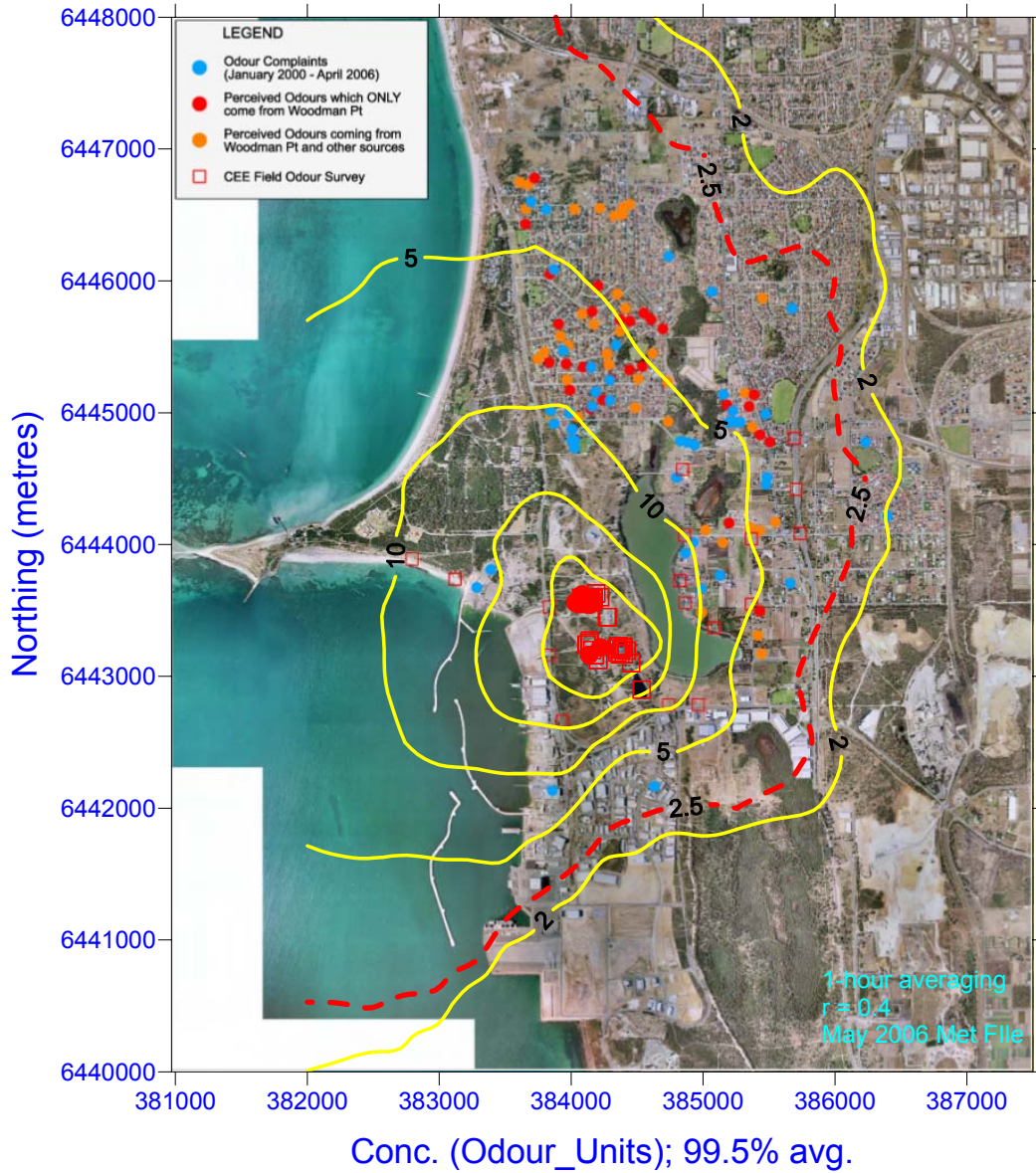


Figure A2 Predicted Odour Contours for Future Woodman Point WWTP  
99.5 percentile

Woodman Point WWTP - Future Plant - 240 ML/d

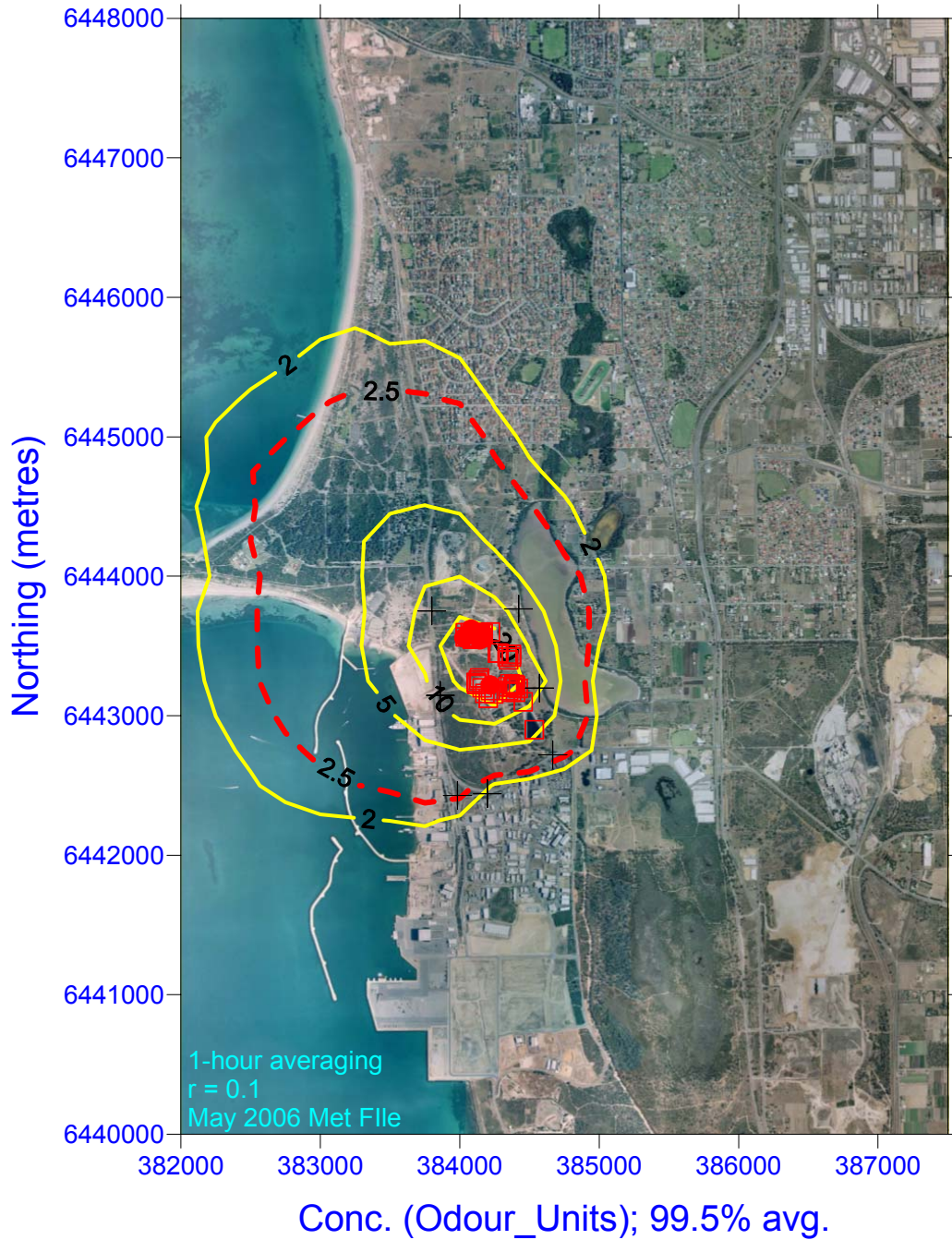
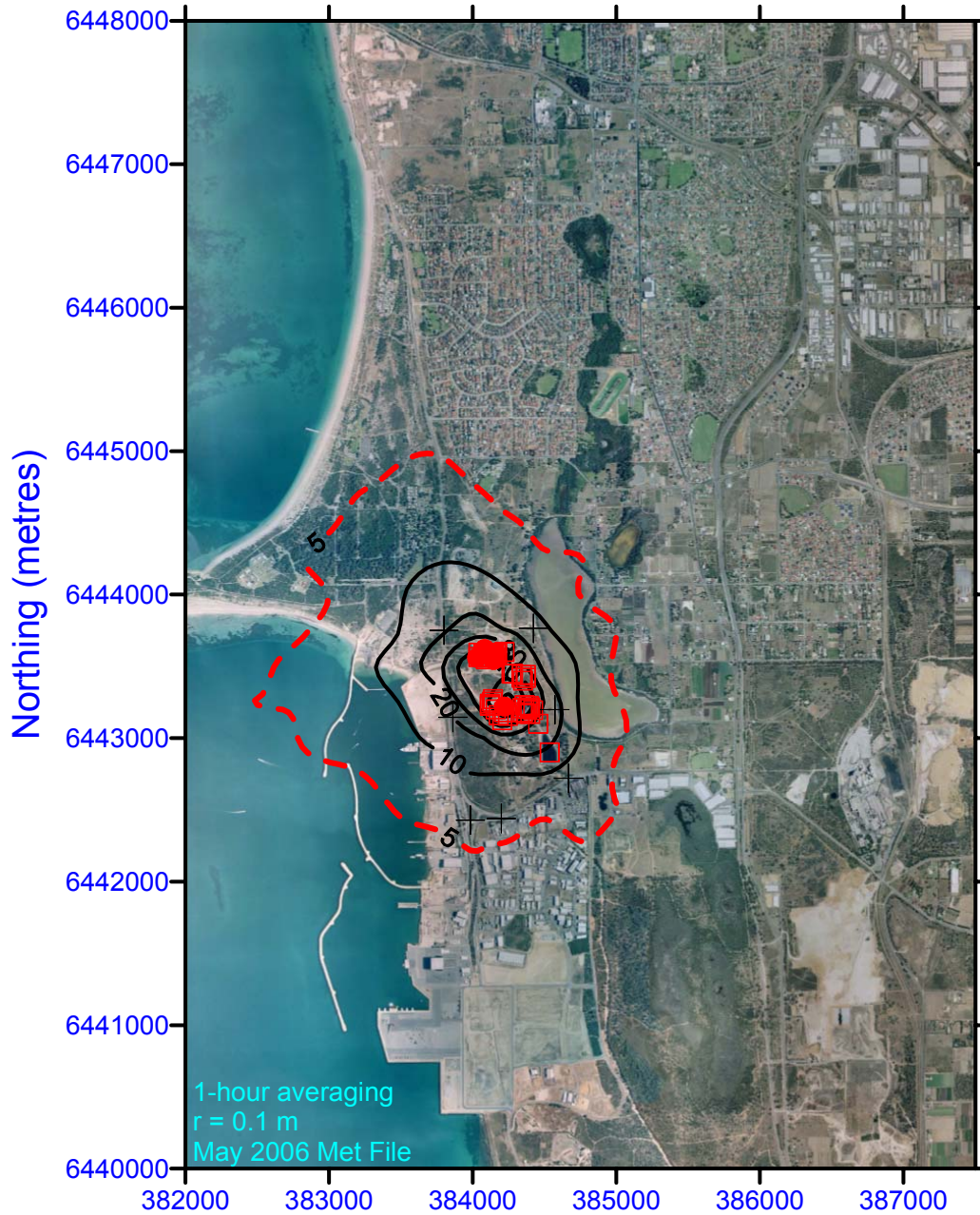


Figure A3 Predicted Odour Contours for Existing Woodman Point WWTP  
99.9 percentile

Woodman Point WWTP - Future Plant - 240 ML/d



Conc. (Odour\_Units); 99.9% avg.