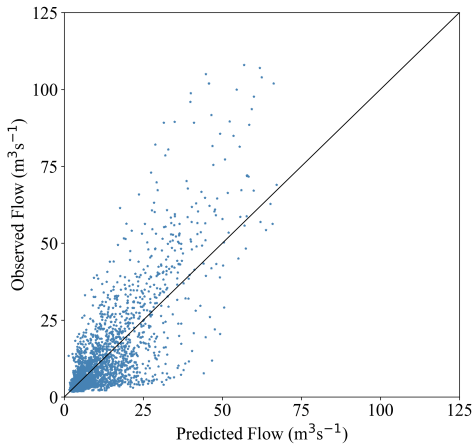
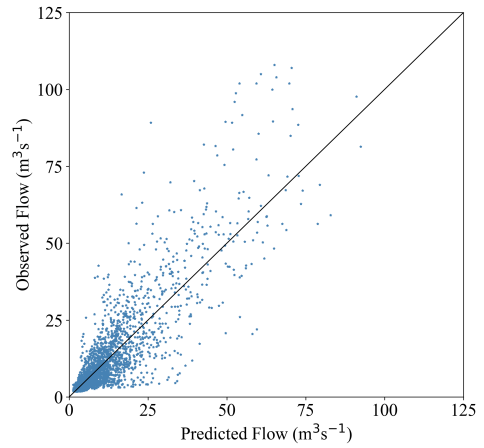


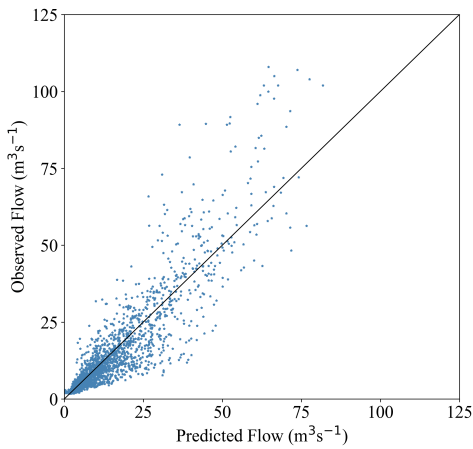
A. Supplementary Figures



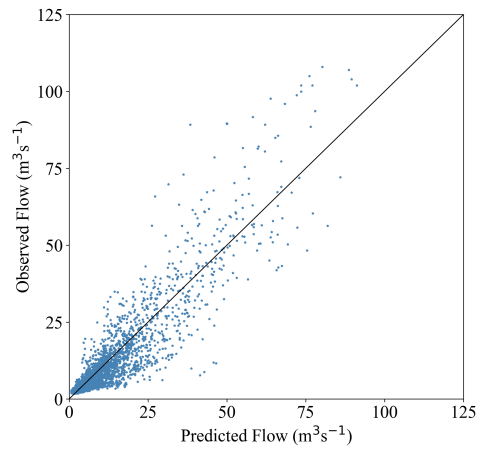
(a) Meteorological variable input sequence length of 7 days



(b) Meteorological variable input sequence length of 28 days

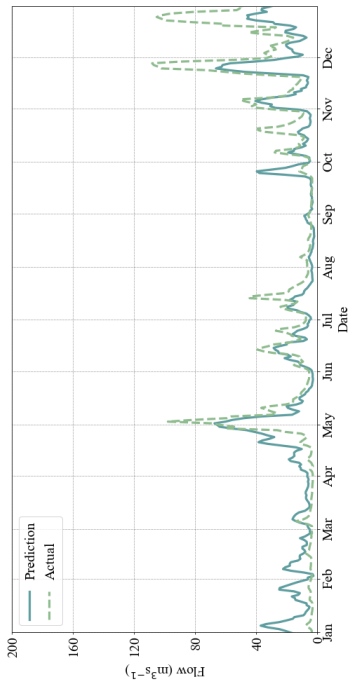


(c) Meteorological variable input sequence length of 7 days with soil moisture variables

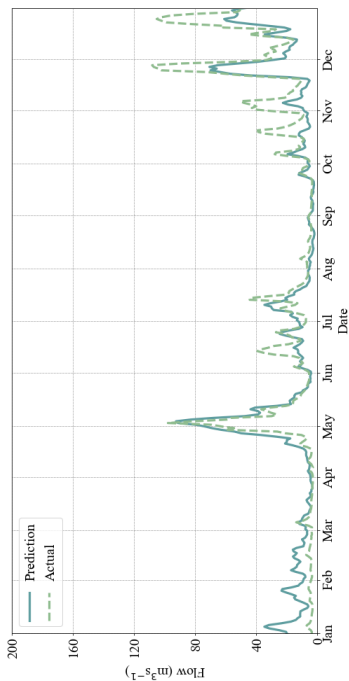


(d) Meteorological variable input sequence length of 7 days with antecedent proxy variables

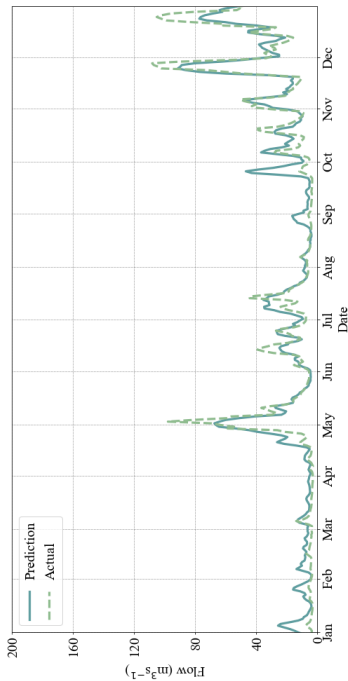
Figure A.1: Predictions against observations for the Bedford Ouse at Roxton from the test set of predictions generated using different feature sets as inputs to the Multi-Layer Perceptron (MLP) model.



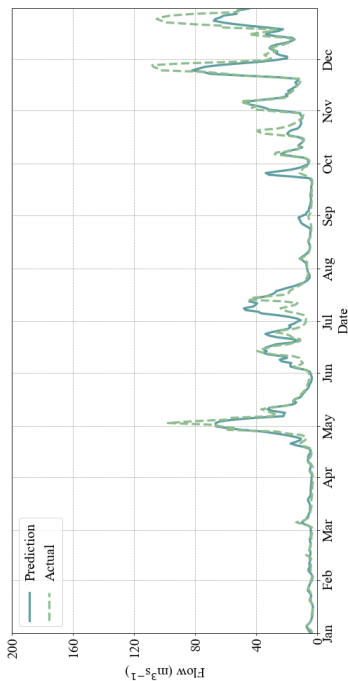
(a) Meteorological variable input sequence length of 28 days



(b) Meteorological variable input sequence length of 7 days

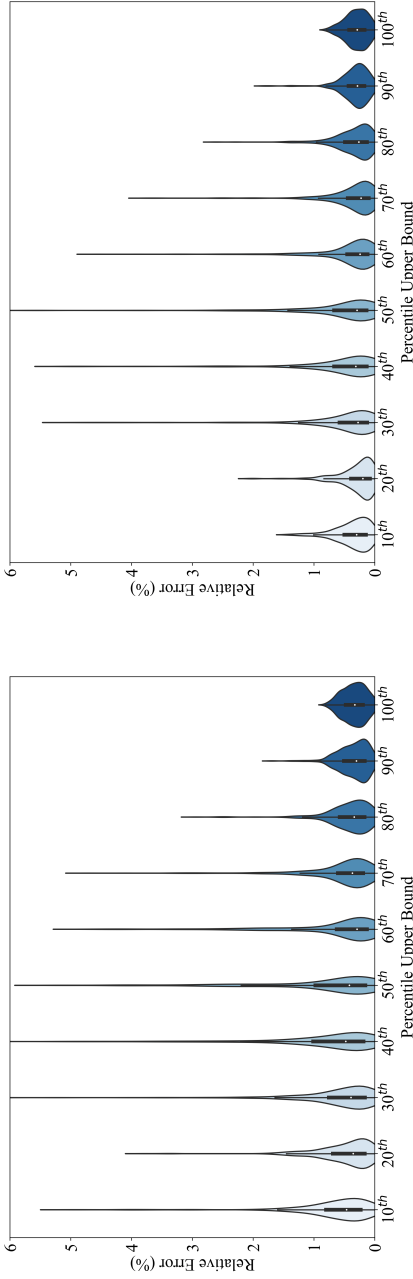


(c) Meteorological variable input sequence length of 7 days with soil moisture variables



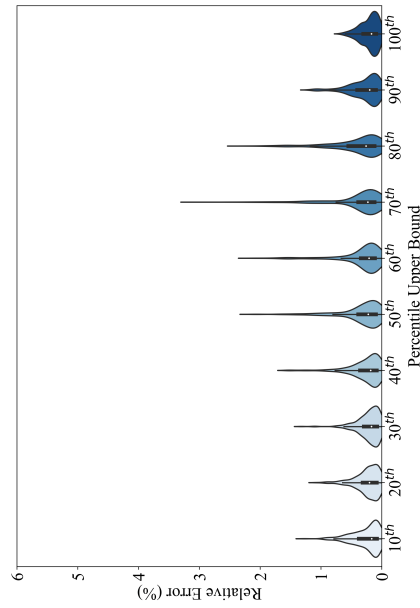
(d) Meteorological variable input sequence length of 7 days with antecedent proxy variables

Figure A.2: Comparative streamflow time series for the Bedford Ouse at Roxton in the year, 2012, with both predictions and observations using different feature sets as inputs to the Multi-Layer Perceptron (MLP) model.

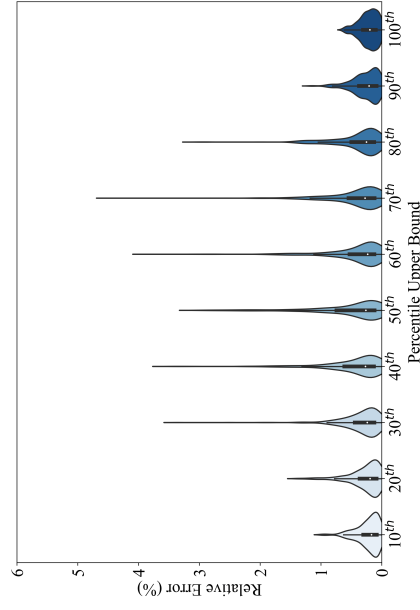


(a) Meteorological variable input sequence length of 28 days

(b) Meteorological variable input sequence length of 7 days

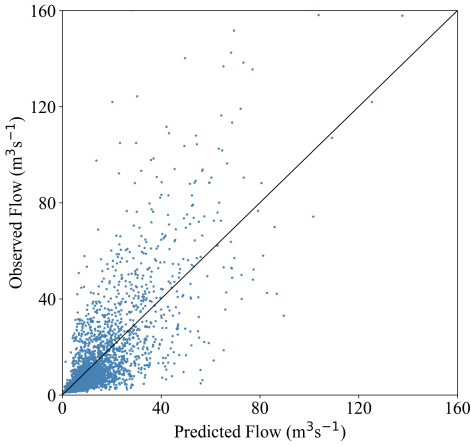


(c) Meteorological variable input sequence length of 7 days with soil moisture variables

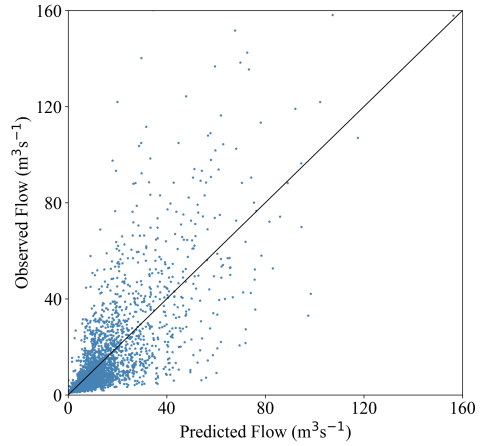


(d) Meteorological variable input sequence length of 7 days with antecedent proxy variables

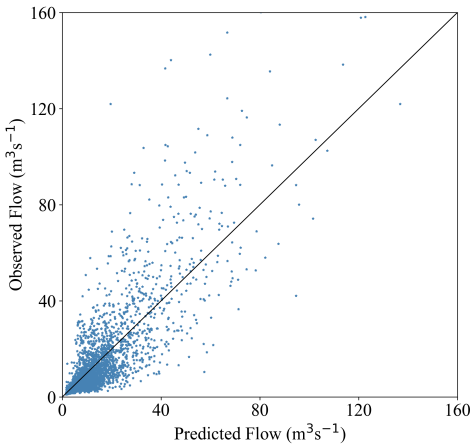
Figure A.3: Violin plots of percentage relative error for each of the 10th percentile bands of flow magnitude (with the upper bound marked on the scale and the lower bound being the preceding upper bound to the left) between observations and predictions for the Bedford Ouse at Roxton using different feature sets as inputs to the Multi-Layer Perceptron (MLP) model.



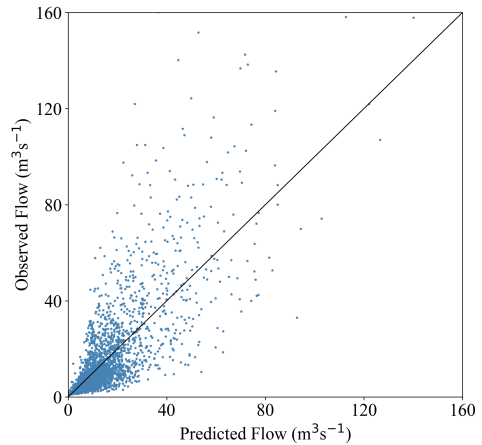
(a) Meteorological variable input sequence length of 7 days



(b) Meteorological variable input sequence length of 28 days

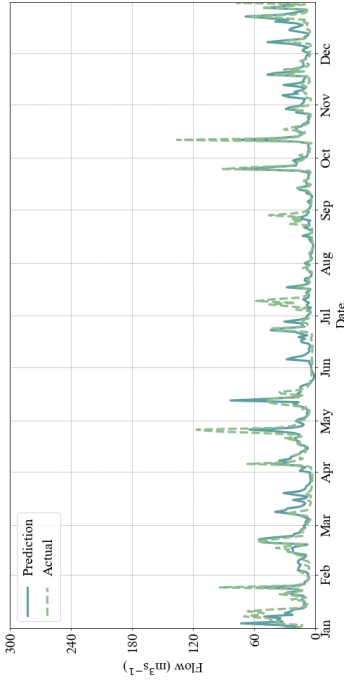


(c) Meteorological variable input sequence length of 7 days with soil moisture variables

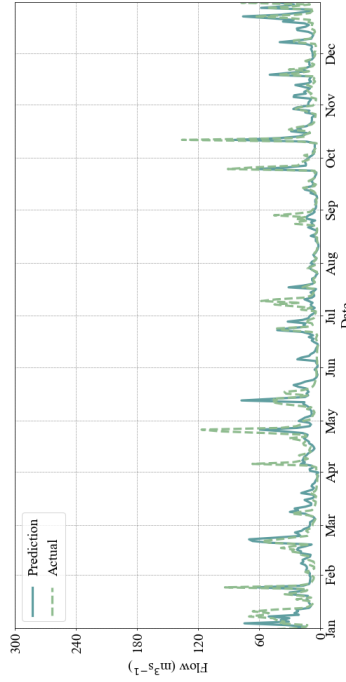


(d) Meteorological variable input sequence length of 7 days with antecedent proxy variables

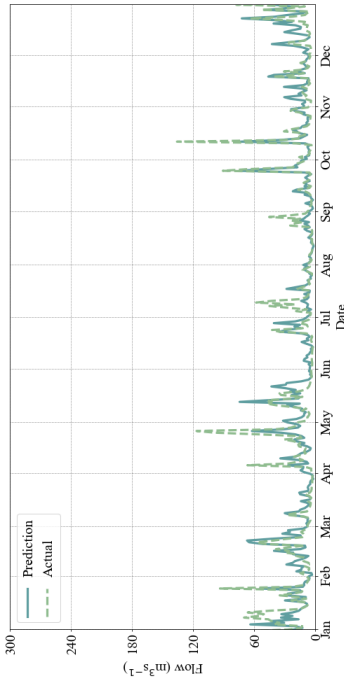
Figure A.4: Predictions against observations for the Findhorn at Shenachie from the test set of predictions generated using different feature sets as inputs to the Multi-Layer Perceptron (MLP) model.



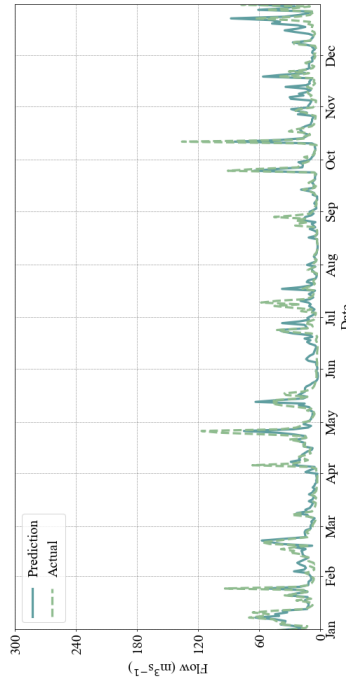
(a) Meteorological variable input sequence length of 28 days



(b) Meteorological variable input sequence length of 7 days



(c) Meteorological variable input sequence length of 7 days with soil moisture variables



(d) Meteorological variable input sequence length of 7 days with antecedent proxy variables

Figure A.5: Comparative streamflow time series for the Findhorn at Shenachie in the year, 2012, with both predictions and observations using different feature sets as inputs to the Multi-Layer Perceptron (MLP) model.

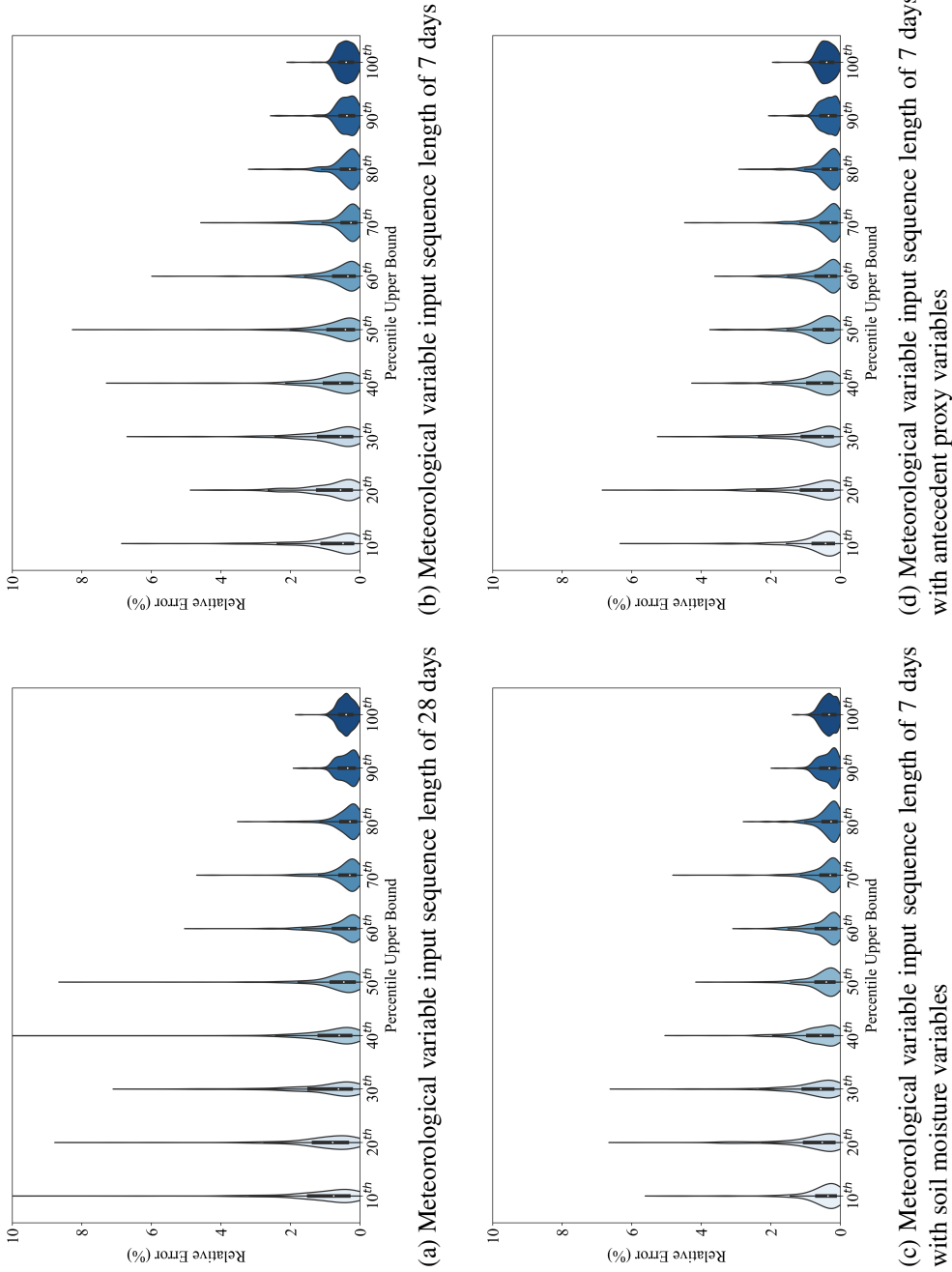


Figure A.6: Violin plots of percentage relative error for each of the 10th percentile bands of flow magnitude (with the upper bound marked on the scale and the lower bound being the preceding upper bound to the left) between observations and predictions for the Findhorn at Shenachie using different feature sets as inputs to the Multi-Layer Perceptron (MLP) model.