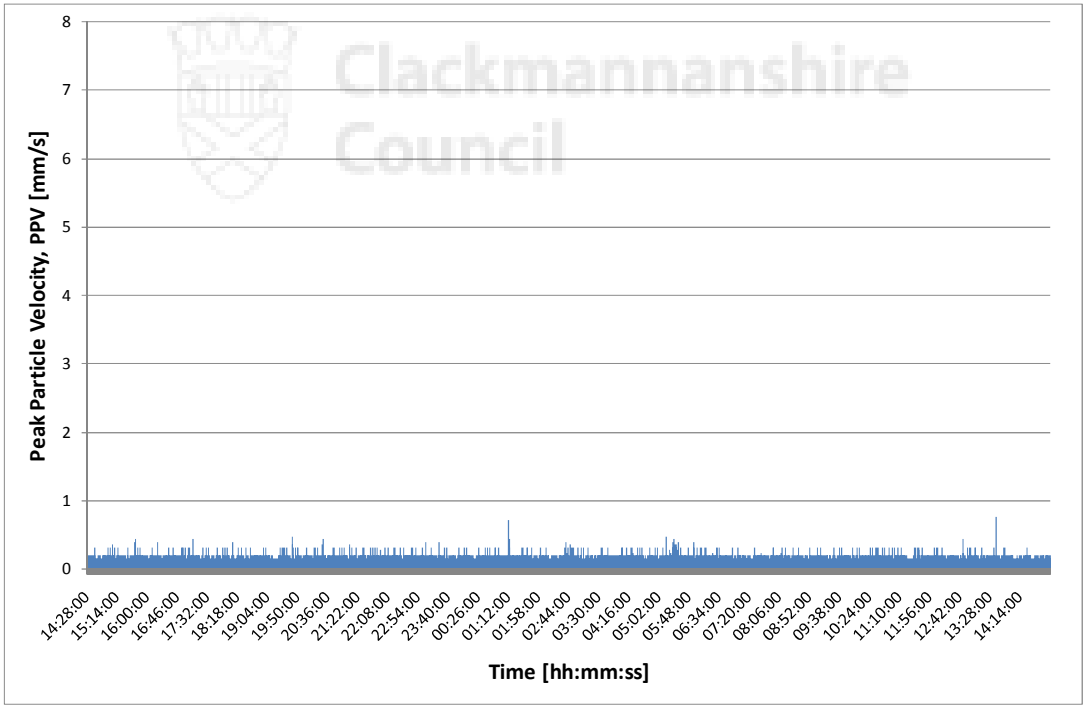
Figure 5.37: Photograph of Vibration Monitoring Equipment at Bracken Brae, Kennet

5.75 There are believed to have been intermittent periods of rain during the measurement period. Winds may have reached gale force on Friday afternoon, but by Monday these had reduced to a fresh breeze.

5.76 Figure 5.38 shows the time history of the measured PPVs. Some sporadic peaks are visible, but these are unlikely to be the result of train pass-bys. Measurements at 16 Ochil View, Kincardine (paragraph 5.18) provide clearer insight into the rail movements. Since Kennet is less than 3 miles from Kincardine, train vibration events are likely to be offset by no more than 5 minutes. This is not apparent in the Bracken Brae data. It is therefore likely that the highest levels were caused by other events, possible wind-induced.

Figure 5.38: Time History of 30 second PPVs Measured at Bracken Brae, Kennet



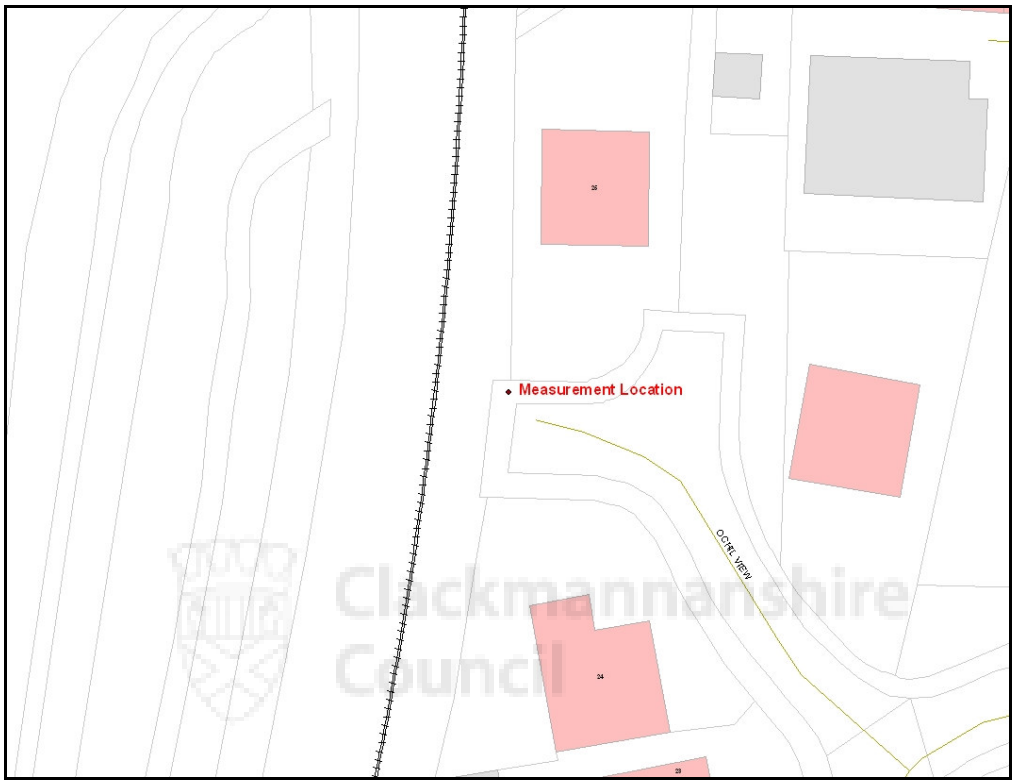
5.77 The highest measured PPV was 0.763 mm/s. This level occurred between 13:36:00 and 13:36:30 on Saturday 20 November. It can be concluded that train vibration events would not have exceeded this value and, for the aforementioned reasons, are in fact likely to be well below. There is minimal risk of structural damage of any kind as levels are well below the criteria.

25 Ochil View, Kincardine, Fife

5.78 Continuously logged measurements were made from 12:35 on 17 November 2010 until 13:44 on 19 November 2010.

5.79 Ochil View is a cul-de-sac located off Kilbagie Street, with low levels of local access traffic traffic. The SAK railway line, to the west of the measurement location, is the only significant source of vibration within the locale. Figure 5.39 illustrates the measurement location in relation to the surrounding area.

Figure 5.39: Plan of Measurement Location at 25 Ochil View, Kincardine



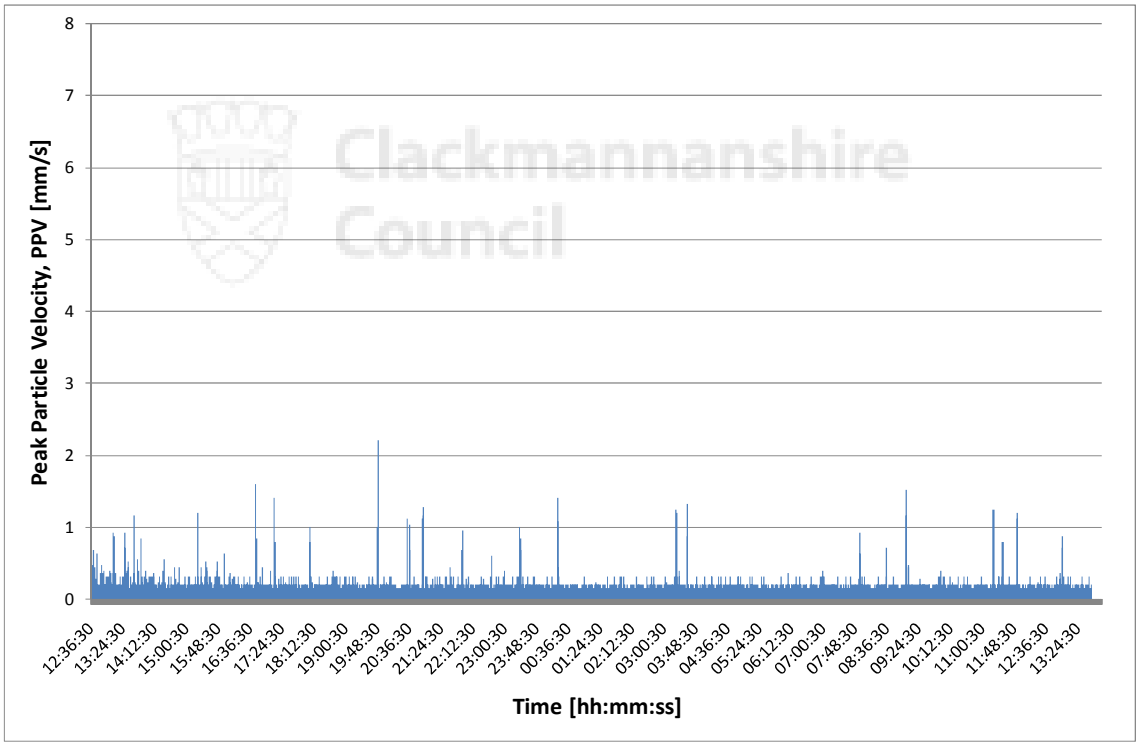
5.80 The measurement equipment was located approximately 6 m to the east of the nearside of the SAK railway track and approximately 12 m to the south of the facade of 25 Ochil View. Figure 5.40 illustrates.

Figure 5.40: Photograph of Vibration Monitoring Equipment at 25 Ochil View, Kincardine

5.81 Winds of near gale force were found to occur throughout the measurement period. There is unlikely to have been any precipitation.

5.82 Figure 5.41 shows the time history of the measured PPVs. Peaks around 1 mm/s are likely to correspond with train movements. Peaks around 0.5 mm/s are likely to be due to local road traffic or wind-induced events.

Figure 5.41: Time History of 30-Second PPVs Measured at 25 Ochil View, Kincardine



5.83 The highest measured PPV was 2.209 mm/s. This level occurred between 19:47:30 and 19:48:00 on Wednesday 17 November. The peak is likely to correspond with a train event, as it is in evidence in the datasets for other properties. This level does not exceed the criteria, even when the effects of dynamic magnification are taken into account. Structural damage to the property as a result of train movements is therefore unlikely.

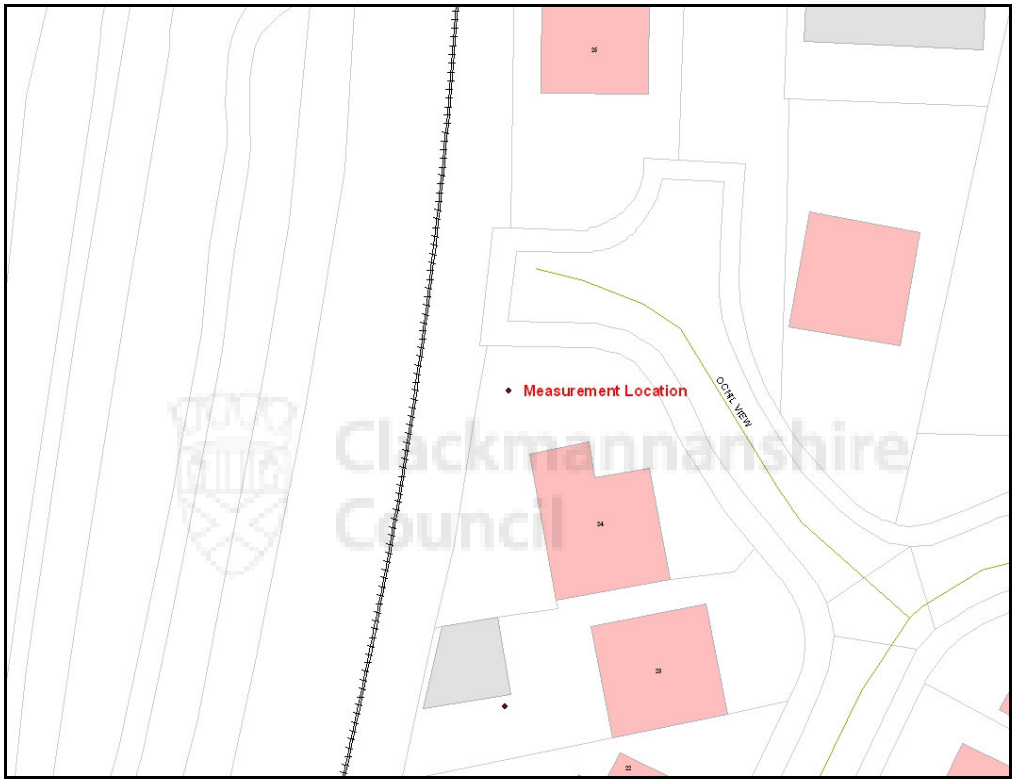
5.84 AECOM previously undertook measurements at 25 Ochil View in July 2009. This was done at virtually the same measurement location. On this occasion, the measured PPV was 1.410 mm/s.

24 Ochil View, Kincardine, Fife

5.85 Continuously logged measurements were made from 14:17 on 18 November 2010 until 14:38 on 19 November 2010.

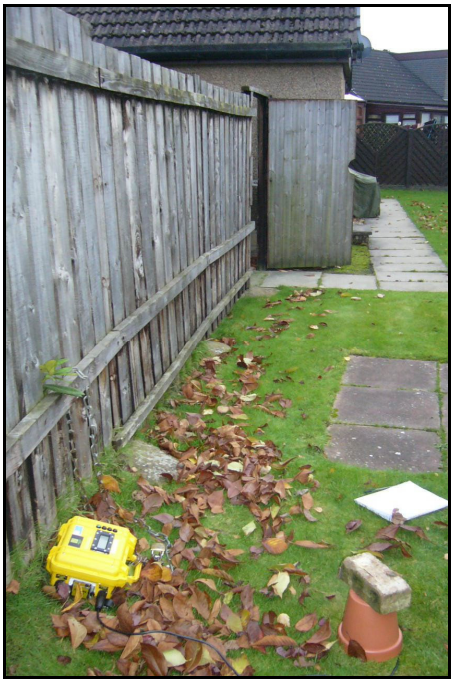
5.86 Ochil View is a cul-de-sac located off Kilbagie Street, with low levels of local access traffic. The SAK railway line, to the west of the measurement location, is the only significant source of vibration within the locale. Figure 5.42 illustrates the measurement location in relation to the surrounding area.

Figure 5.42: Plan of Measurement Location at 24 Ochil View, Kincardine



5.87 The measurement transducer was located approximately 8 m to the east of the nearside of the SAK railway track and approximately 5 m to the north of the facade of 24 Ochil View. Figure 5.43 illustrates.

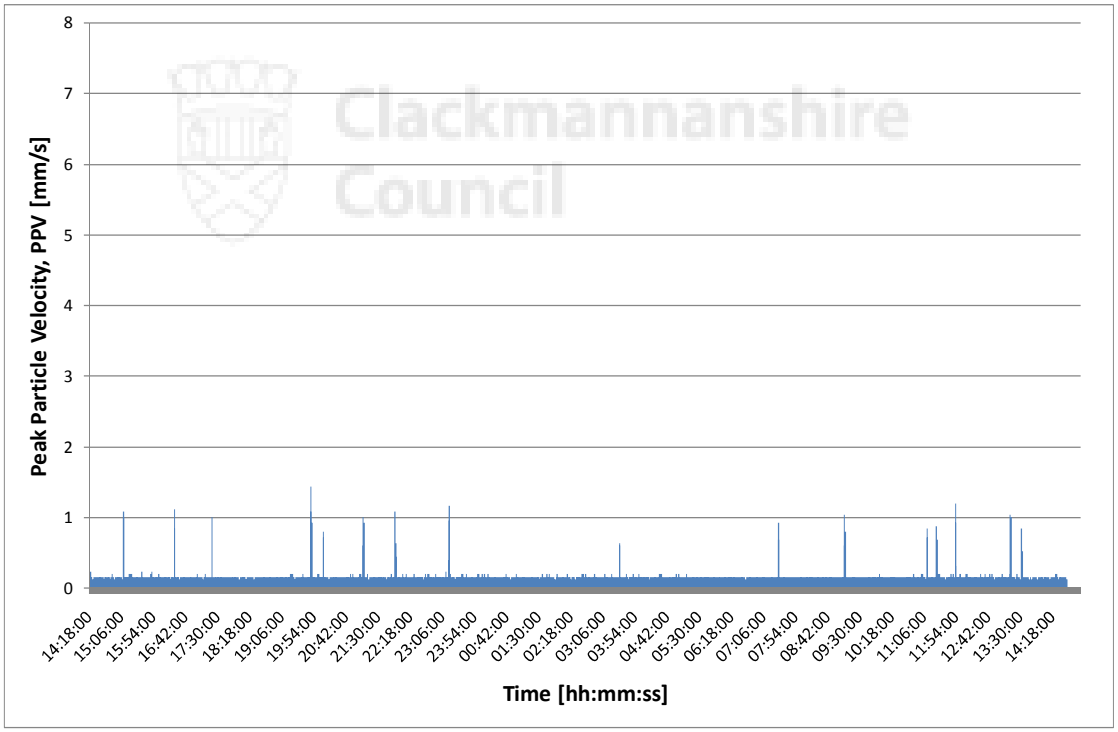
Figure 5.43: Photograph of Vibration Monitoring Equipment at 24 Ochil View, Kincardine



5.88 Winds of near gale force are likely to have occurred throughout the measurement period. There is unlikely to have been any precipitation.

5.89 Figure 5.44 shows the time history of the measured PPVs. Fifteen vibration events of significance can be observed. These are likely to correspond with train pass-bys as they are consistent with the events in other datasets. It is notable that only 15 out of the likely 24 generate significant levels. This may be related to various factors including the type and speed of the trains and their direction of travel.

Figure 5.44: Time History of 30-Second PPVs Measured at 24 Ochil View, Kincardine



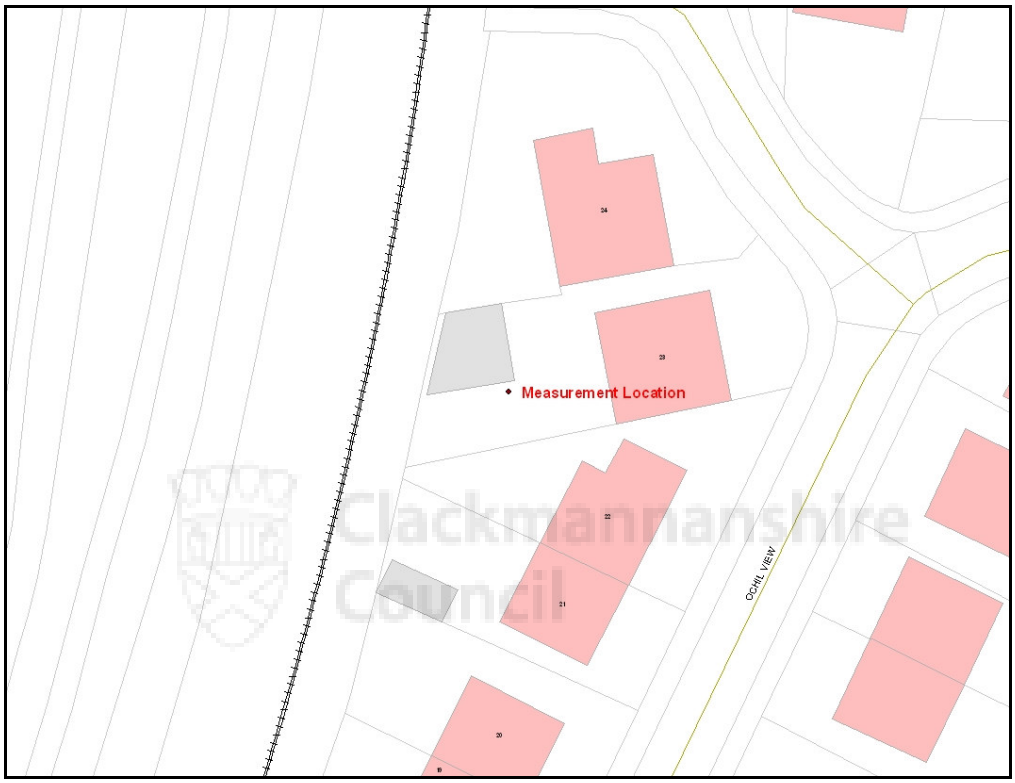
5.90 The highest measured PPV was 1.446 mm/s. This level occurred between 19:48:30 and 19:49:00 on Thursday 18 November. This level is well below criteria and is therefore unlikely to give rise to structural damage to the dwelling.

23 Ochil View, Kincardine, Fife

5.91 Continuously logged measurements were made from 14:01 on 18 November 2010 until 14:03 on 19 November 2010.

5.92 Ochil View is a cul-de-sac located off Kilbagie Street, with low levels of local road traffic. The SAK railway line, to the west of the measurement location, is the only significant source of normally occurring environmental vibration in the area. Figure 5.45 illustrates the measurement location in relation to the surroundings.

Figure 5.45: Plan of Measurement Location at 23 Ochil View, Kincardine



5.93 The measurement equipment was located approximately 12 m to the east of the nearside of the SAK railway track and approximately 8 m to the west of the facade of 23 Ochil View. Figure 5.46 illustrates.