M36/321: EASTERN RECLAMATION (1879)

In 1879 further land was reclaimed between No. 2 Jetty and Gladstone Wharf (*Timaru Herald* 20/5/1879: 2, Figure 13). Plans and specifications had been prepared by the provincial engineer in 1878 (*Press* 14/9/1878: 2). The reclaimed land was intended to be leased by the Lyttelton Harbour Board for large warehouses and stores (*Press* 8/9/1879: 2).

Work on the reclamation was underway by September 1879 under contractors Hawkins and Martindale (*Press* 8/9/1879: 2). Stone for the reclamation was primarily bluestone, quarried from the "point of high land known as Officers' Point," formerly the headland of Erskine Bay (*Press* 8/9/1879: 2). The new reclamation, or breastwork, was completed by February 1881 (*Star* 4/2/1881: 3).

Trenching for the 11Kv stage 5b project had potential to encounter the Eastern Reclamation. In accordance with archaeological authority 2015/600, trenching within the vicinity of the site was monitored by an archaeologist. Trenching involved excavation up to 1300 mm wide and to an average depth of 1400 mm.

Earthworks took place from the 20 June to the 21 July 2017. The Eastern Reclamation was visible, near continuously, throughout the trench. It was largely evident beneath a layer of modern aggregate fill, put in place during resurfacing activity. Variation in the stratigraphy was evident where services or structures were or had been located. Where services and structures had been removed, hard fill had been placed to infill the area. The stratigraphy was recorded via photographs in each section of the trench. A GPS point was taken at each point and the location of each stratigraphic image is shown in the site plan.

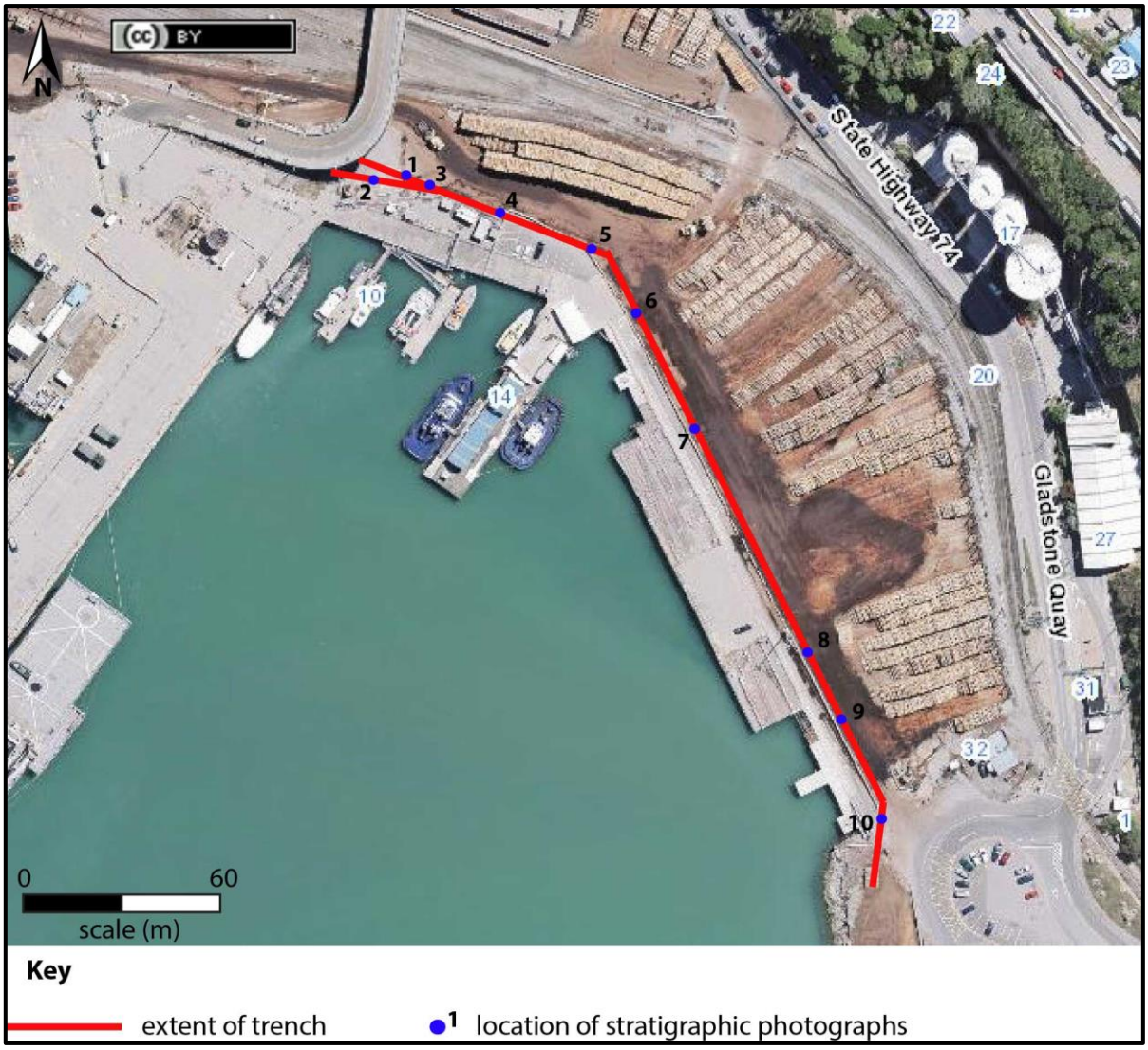

Figure 1. The location of the stratigraphic images along the 11kV stage 5b trench through Lyttelton Port. Image based on aerial view from Canterbury Maps n.d.

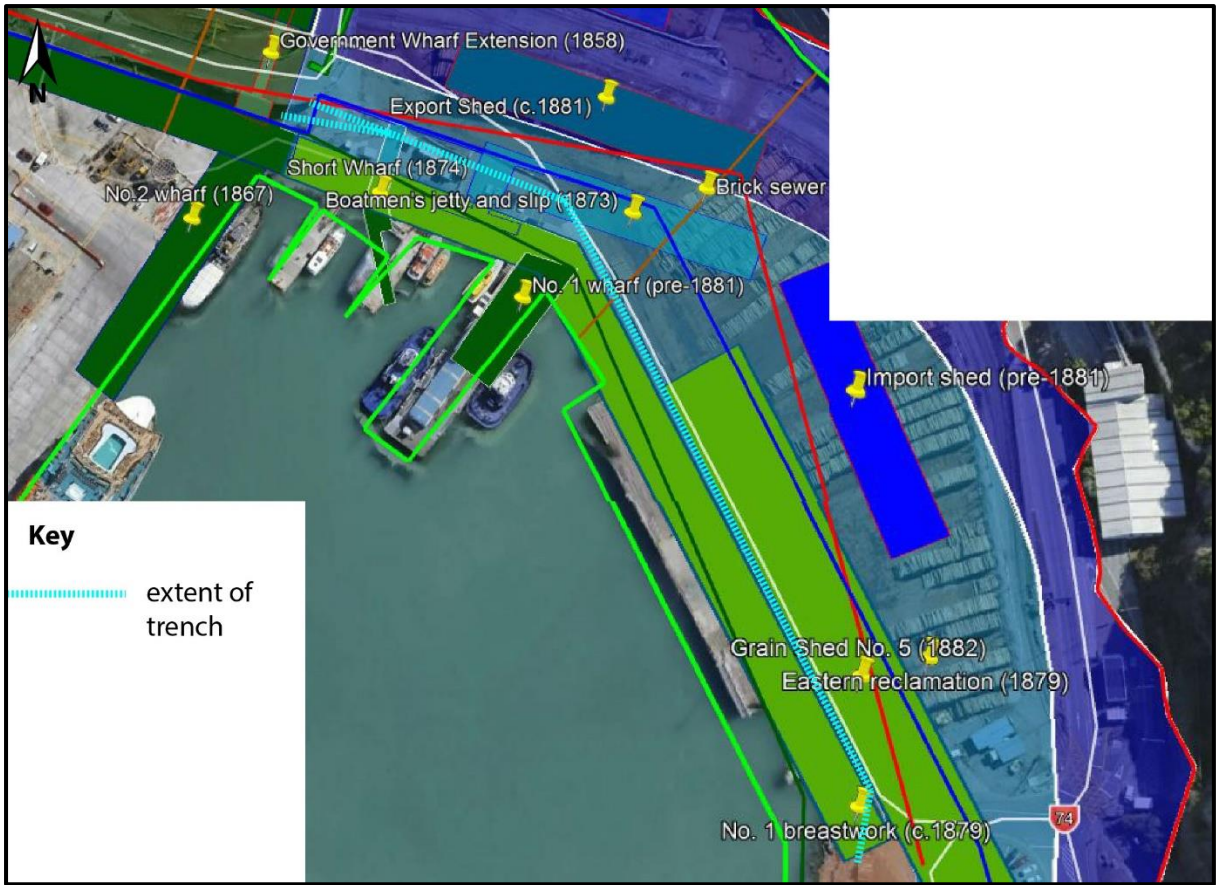

Figure 2. The location of the trench through the recorded archaeological sites, including Eastern Reclamation.

The stratigraphy recorded at each point is as follows:

<u>Location 1 (northeast baulk):</u>

1) A 100 mm thick layer of asphalt. This formed the modern ground surface.
2) A 200-900 mm thick layer of hard fill. This layer formed ground levelling fill for the modern ground surface above.
3) A 220 mm thick layer of dark coloured fill. This material seemed to be fill material placed sometime between the 19th century reclamation layer and the modern fill. The cause of the dark staining is unclear and no archaeological material was found.
4) A 150 mm layer of clay reclamation. This formed part of the 19th century reclamation fill.
5) A 300 mm layer of clay and volcanic rock reclamation. This formed part of the 19th century reclamation fill.

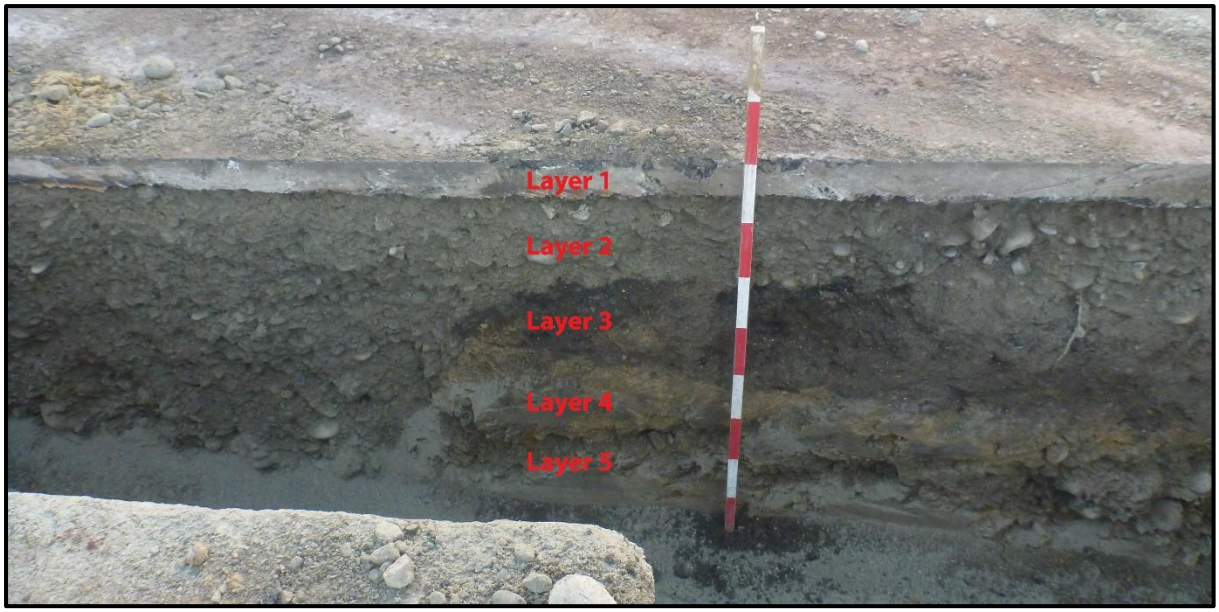

Figure 3. The labelled stratigraphy exposed in the northeast baulk at Location 1. Image: M. Hickey 20 June 2017.

<u>Location 2 (southwest baulk):</u>

1) A 50 mm thick layer of asphalt. This formed the modern ground surface.
2) A 350 mm thick layer of hard fill. This layer formed ground levelling fill for the modern ground surface above.
3) A 150-200 mm thick layer of dark fill. This material seemed to be part of the modern fill. The cause of the dark staining is unclear and no archaeological material was found.
4) A 300 mm layer of hard fill. It was unclear whether this layer was a part of the fill layers above or if it was a different modern fill layer.
5) A 300-500 mm thick layer of clay reclamation. This formed part of the 19th century reclamation fill.

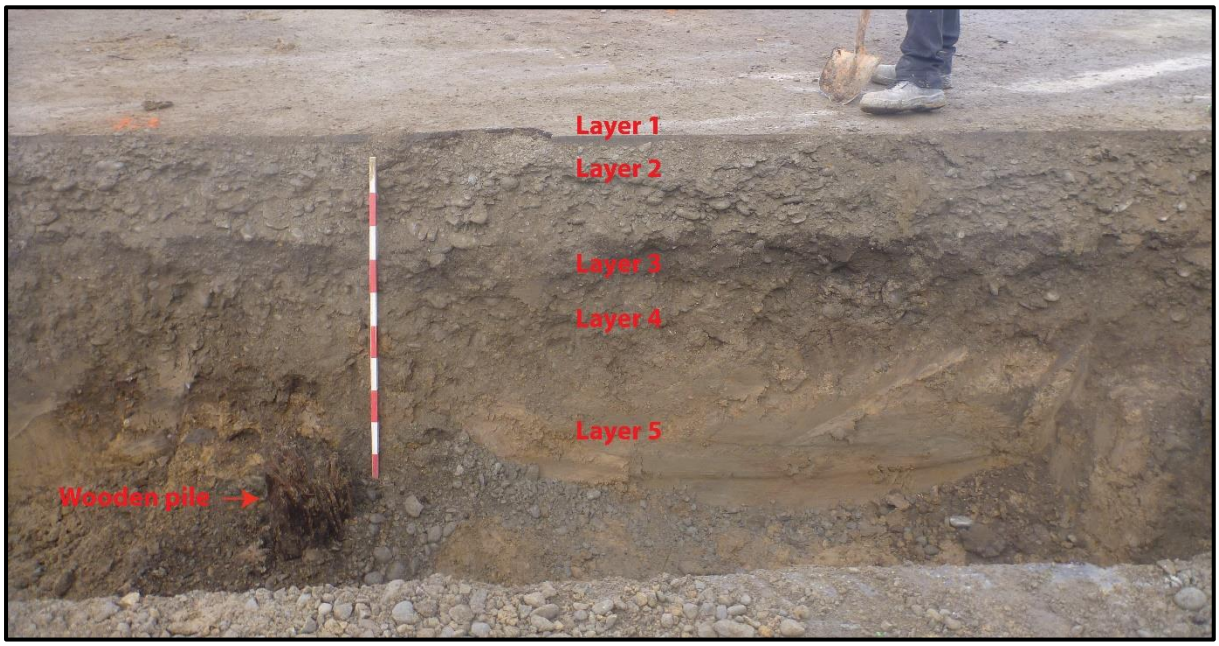

Figure 4. The labelled stratigraphy exposed in the northeast baulk at Location 2. Image: M. Hickey 21 June 2017.

Location 3 (northeast baulk):

1) An 80-100 mm layer of asphalt. This formed the modern ground surface.
2) A 300 mm layer of hard fill. This layer formed ground levelling fill for the modern ground surface above.
3) A 200-300 mm layer of dark fill. This material seemed to be fill material placed sometime between the 19th century reclamation layer and the modern fill. The cause of the dark staining is unclear and no archaeological material was found.
4) A 1000 mm thick layer of clay and volcanic rock reclamation. This formed part of the 19th century reclamation fill.

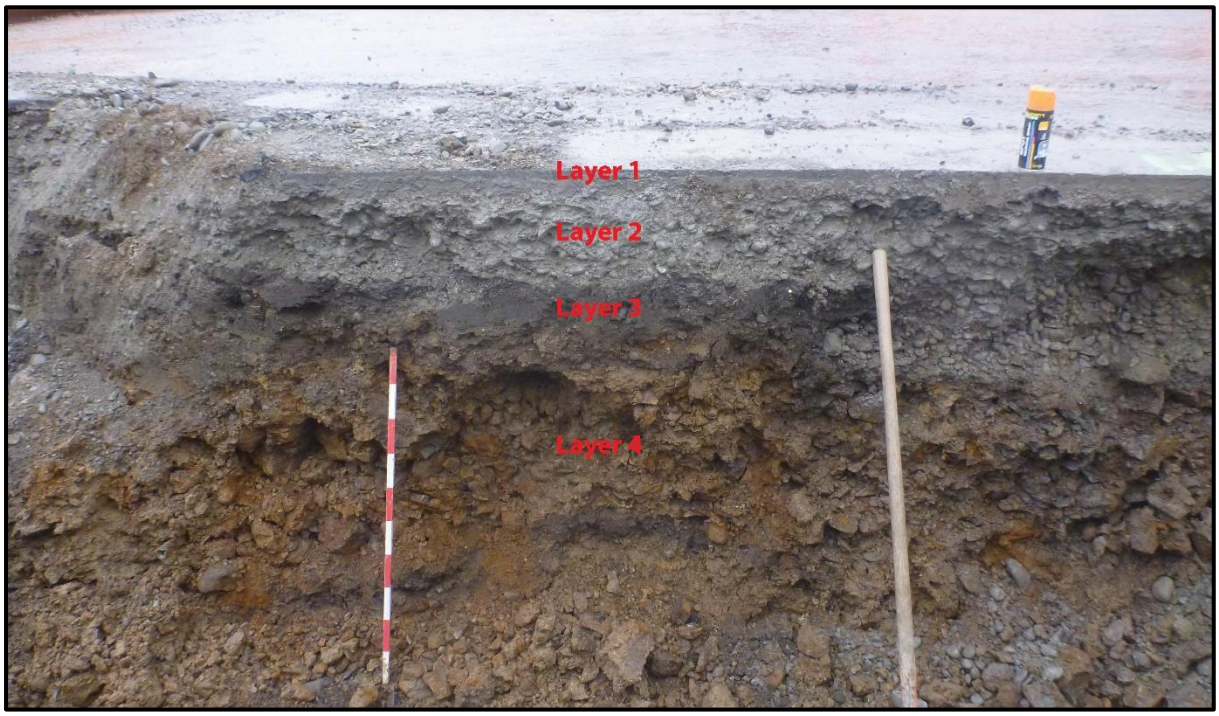

Figure 5. The labelled stratigraphy exposed in the northeast baulk at Location 3. Image: M. Hickey 22 June 2017.

Location 4 (northeast baulk):

1) An 80-100 mm thick layer of asphalt. This formed the modern ground surface.
2) A 250 mm thick layer of compact hard fill. This layer formed ground levelling fill for the modern ground surface above.
3) A 500 mm thick layer of large cobble hard fill. This layer formed infill material in this area, possibly to replace earlier fill layers or structures such as foundations.
4) A 500 mm thick layer of clay and volcanic rock reclamation. This formed part of the 19th century reclamation fill.

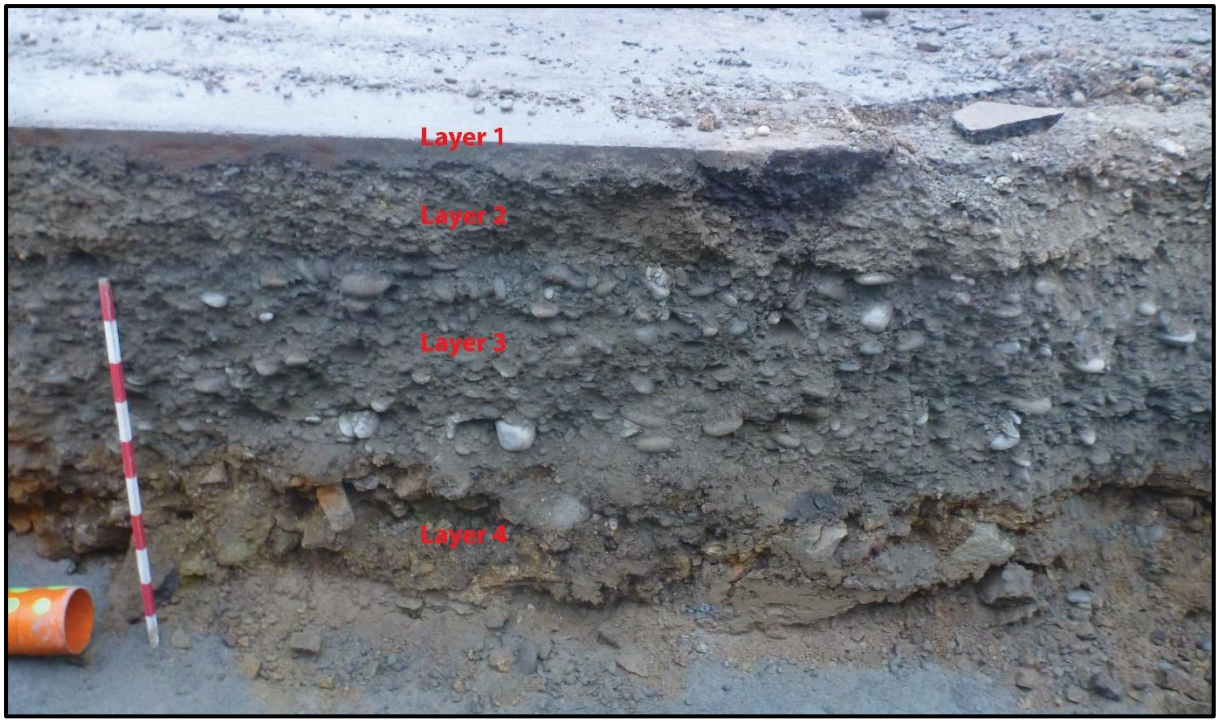

Figure 6. The labelled stratigraphy exposed in the northeast baulk at Location 4. Image: M. Hickey 28 June 2017.

<u>Location 5 (northeast baulk):</u>

1) An 80-100 mm thick layer of asphalt. This formed the modern ground surface.
2) A 400-500 mm thick layer of hard fill. This layer formed ground levelling fill for the modern ground surface above.
3) A 700-900 mm thick layer of clay and volcanic rock reclamation. This formed part of the 19th century reclamation fill.

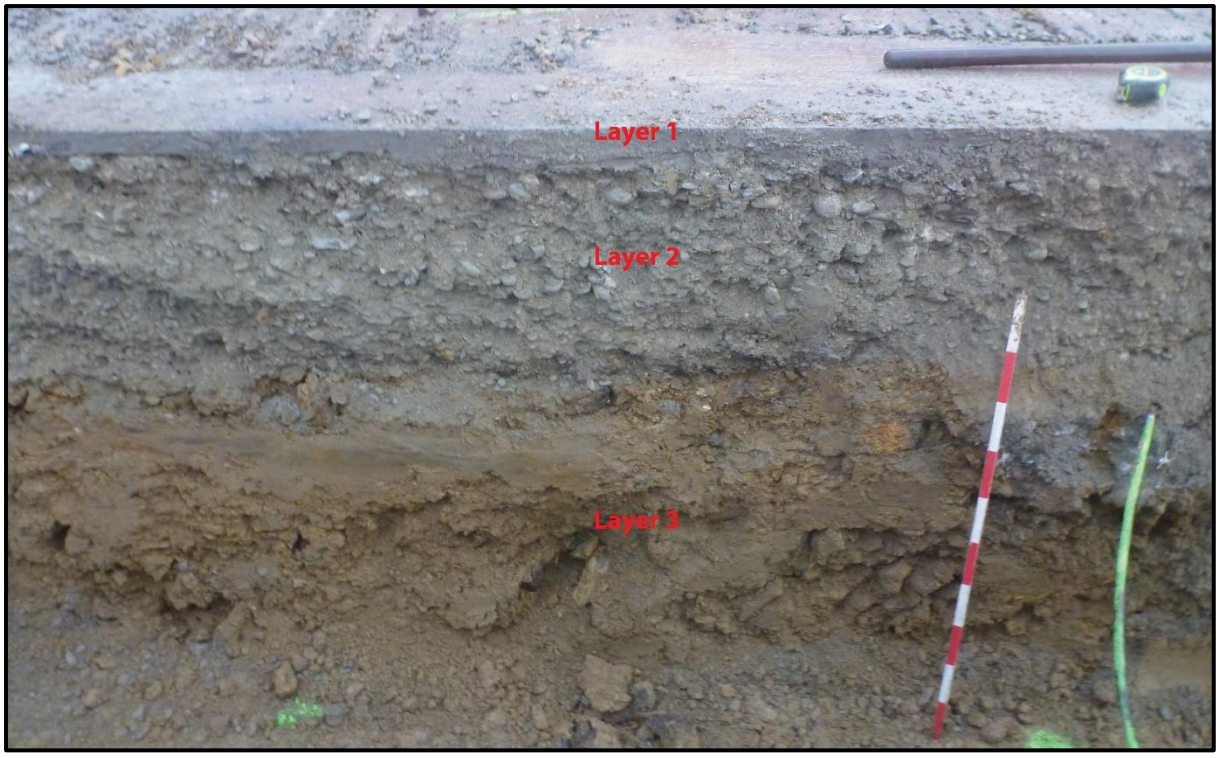

Figure 7. The labelled stratigraphy exposed in the northeast baulk at Location 5. Image: M. Hickey 29 June 2017.

<u>Location 6 (northeast baulk):</u>

1) An 80-100 mm thick layer of asphalt. This formed the modern ground surface.
2) A 400 mm thick layer of hard fill. This layer formed ground levelling fill for the modern ground surface above.
3) At least 200 mm of clay and volcanic rock reclamation. This formed part of the 19th century reclamation fill. Spoil obscured the remainder of the stratigraphy here.

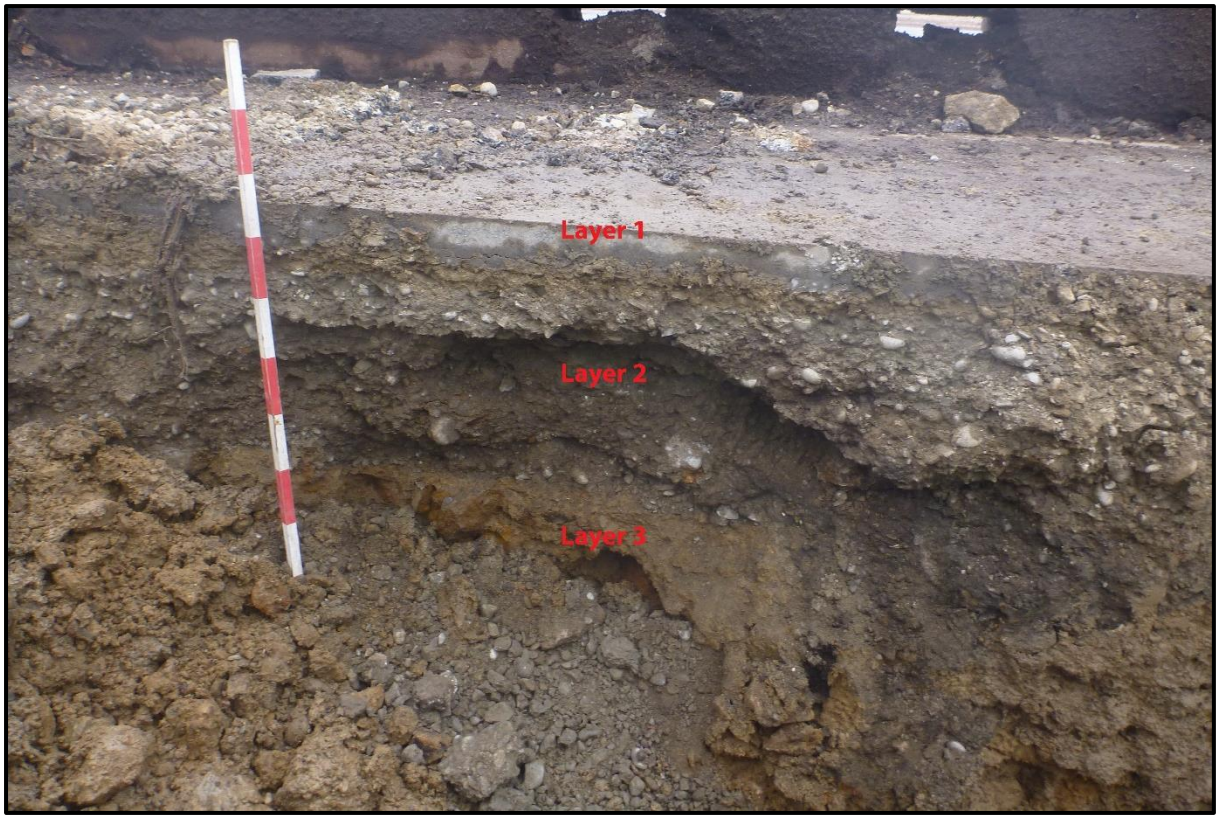

Figure 8. The labelled stratigraphy exposed in the northeast baulk at Location 6. Image: M. Hickey 30 June 2017.

Location 7 (southwest baulk):

1) A 100 mm thick layer of asphalt. This formed the modern ground surface.
2) A 650 mm thick layer of hard fill. This layer formed ground levelling fill for the modern ground surface above.
3) A 150 mm thick layer of dark fill. This material seemed to be part of the modern fill. The cause of the dark staining is unclear and no archaeological material was found.
4) A 500 mm thick layer of clay and volcanic rock reclamation. This formed part of the 19th century reclamation fill.

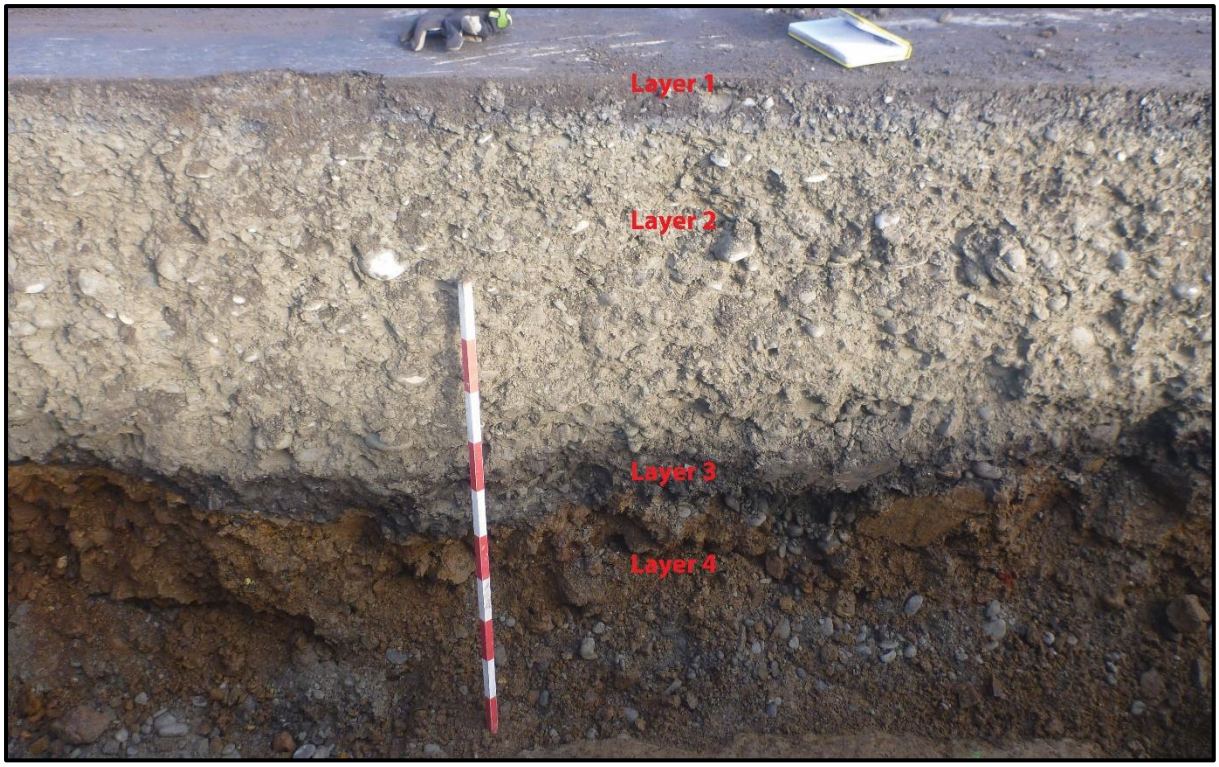

Figure 9. The labelled stratigraphy exposed in the northeast baulk at Location 7. Image: M. Hickey 6 July 2017.

Location 8 (northeast baulk):

1) A 50 mm thick layer of asphalt. This formed the modern ground surface.
2) A 300 mm thick layer of hard fill. This layer formed ground levelling fill for the modern ground surface above.
3) A 280 mm thick layer of a 20th century concrete floor.
4) A 200 mm thick layer of hard fill. The fill material was put in place for the concrete floor.
5) A 200 mm thick layer of clay reclamation. This formed part of the 19th century reclamation fill.
6) A 400-450 mm thick layer of clay and volcanic rock reclamation. This formed part of the 19th century reclamation fill.

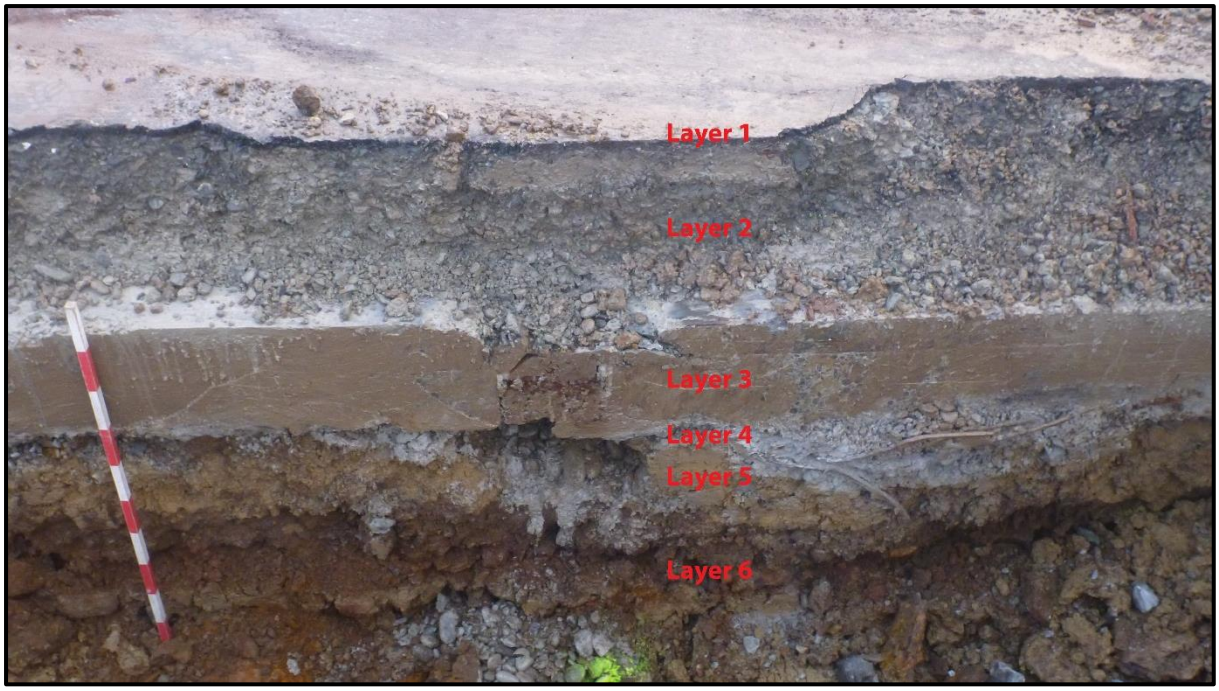

Figure 10. The labelled stratigraphy exposed in the northeast baulk at Location 8. Image: M. Hickey 14 July 2017.

<u>Location 9 (northeast baulk):</u>

1) A 100 mm thick layer of asphalt. This formed the modern ground surface.
2) A 150 mm thick layer of hard fill. This layer formed ground levelling fill for the modern ground surface above.
3) A 50 mm thick layer of asphalt. This layer was an earlier ground surface.
4) A 300 mm thick layer of hard fill. This layer formed ground levelling fill for the earlier ground surface above.
5) A 250 mm thick layer of a 20th century concrete floor.
6) A 150 mm thick layer of hard fill. The fill material was put in place for the concrete floor.
7) A 500 mm thick layer of clay and volcanic rock reclamation. This formed part of the 19th century reclamation fill.

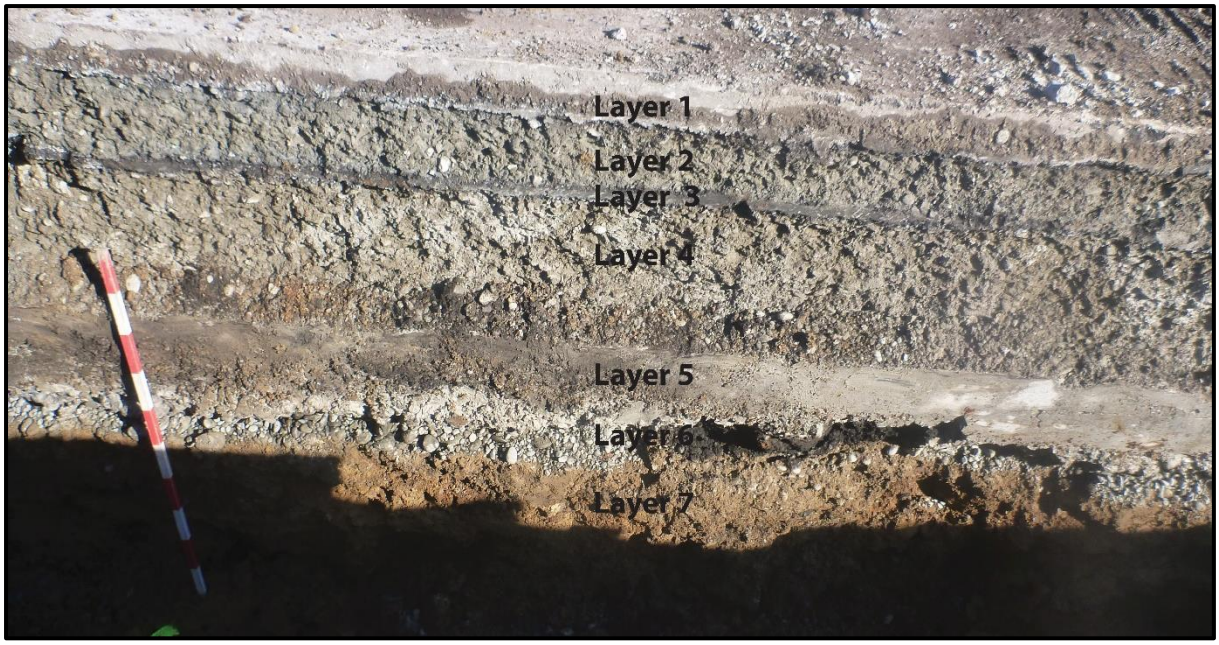

Figure 11. The labelled stratigraphy exposed in the northeast baulk at Location 9. Image: M. Hickey 19 July 2017.

<u>Location 10 (southwest baulk):</u>

1) A 100 mm thick layer of asphalt. This formed the modern ground surface.
2) A 900 mm thick layer of hard fill. This layer formed ground levelling fill for the modern ground surface above.
3) A 400 mm thick layer of clay and volcanic rock reclamation. This formed part of the 19th century reclamation fill. A 20th century concrete foundation was exposed in this layer.

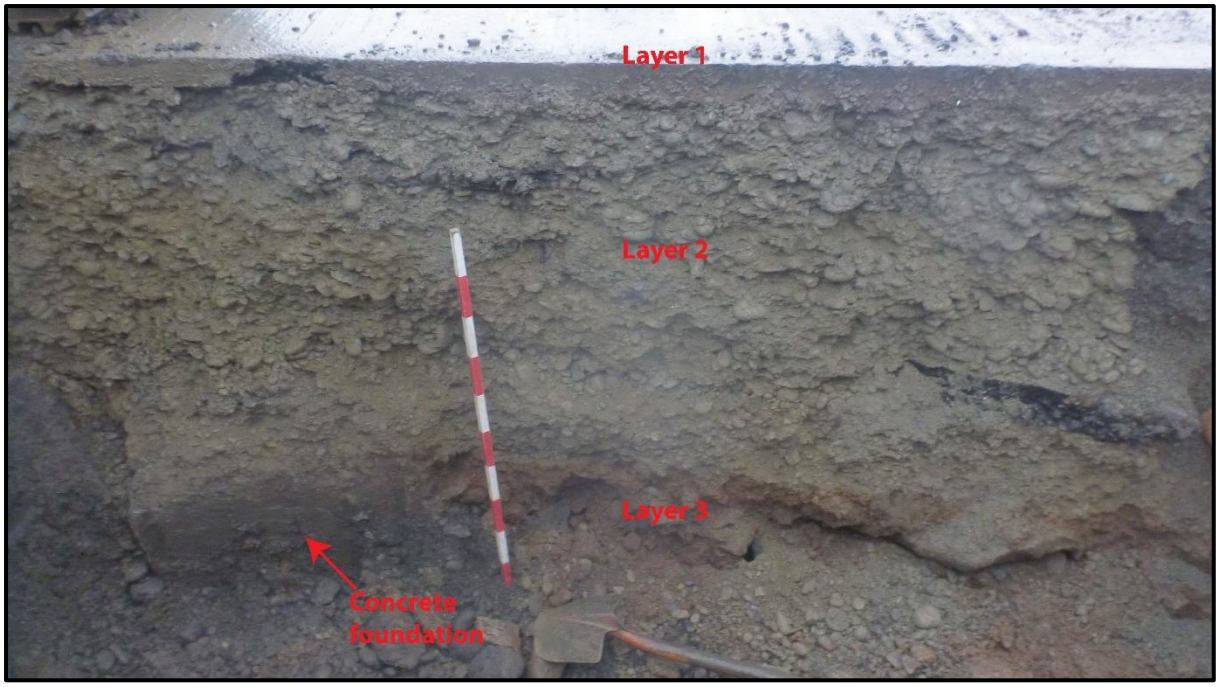

Figure 12. The labelled stratigraphy exposed in the northeast baulk at Location 10. Image: M. Hickey 21 July 2017.

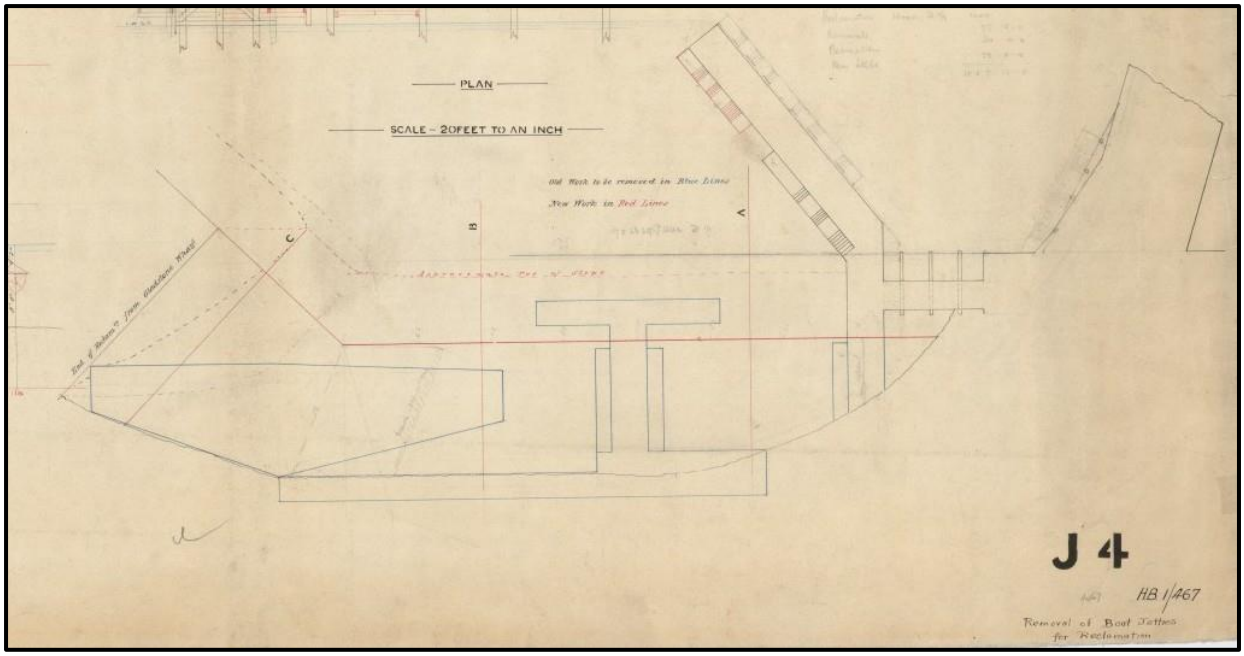

Figure 13. Detail from "Lyttelton Harbour. Removal of Boat Jetties and Reclamation," n.d. [c.1880] (LHB, n.d. 1/467).