

Kyle Park, Hornby Summary Report - Site wide ground contamination assessment



Introduction and objectives

The purpose of this summary report is to provide an overview of ground contamination investigations completed by T+T at Kyle Park. This summary report also identifies what has been done to manage ground contamination-related health risks at Kyle Park.

This summary report is based on the information in the following investigation reports, which should be read for further information:

- Ground Contamination Assessment, Kyle Park, Hornby. T+T reference 1003207.v2 (November 2018).

- Additional asbestos investigation in soil - Kyle Park, Hornby. T+T reference 53404.004 (7 December 2015).
- Asbestos in air sampling results - Kyle Park, Hornby. T+T reference 53404.004 (23 November 2015).
- Kyle Park, Hornby - Investigation of asbestos in landscaped garden areas. T+T reference 53404.003 (18 November 2015).
- Kyle Park, Hornby - Desktop Ground Contamination and Geotechnical Study. T+T reference 53404.002 (September 2015).

Site history

Until the late 1960s Kyle Park was a gravel extraction pit that was purchased by the then Paparua County Council. Paparua County Council then operated the site as a commercial and domestic landfill. Landfilling ceased in the 1980s and the site was then developed as a public park.



1960s Gravel extraction pit.



1980s Public park.

Overview of investigations

In September 2015 T+T completed a desk based assessment of Kyle Park. During a site walkover undertaken as part of that assessment, material that was confirmed to contain asbestos was observed in landscaped areas in the south west of the park. In November 2015 T+T collected samples in the landscaped areas to attempt to identify the source of the asbestos and also to assess how these areas should be managed to reduce the potential for users of the park to be exposed to asbestos.

The samples were collected from mulch materials that were present across the majority of the landscaped areas, from exposed surface soil and from sub surface soil. Asbestos was detected within samples of the mulch, surface soil and subsurface soil. The levels of asbestos detected in the samples was above guideline levels designed to protect human health. This meant that if these materials were disturbed and subsequently generated dust, those exposed to the dust could potentially be exposed to asbestos fibres.

Later in November 2015, T+T completed asbestos in air monitoring within and around the landscaped areas to assess whether asbestos fibres were present in air. The air monitoring indicated that asbestos fibres were not present above guideline values. By this time the landscaped areas had been fenced off to prevent access. Therefore, the air monitoring results indicate that users of the park were unlikely to be exposed to asbestos fibres present in the landscaped areas above guideline levels when using the park.

In December 2015 T+T completed additional soil sampling across the grassed areas of Kyle Park. Soil samples were collected from the soil surface and from subsurface soils to assess whether asbestos was present in soils associated with former landfill activities. Asbestos was identified slightly above guideline values in a small proportion (less than 10%) of surface soil samples.

In November 2018, T+T undertook soil sampling to support an assessment of Kyle Park for the development of a community hub, library and swimming pool. That sampling indicated that the site was covered with a 'cap' of predominantly soil material over mixed landfill waste. The landfill waste contained a range of contaminants including asbestos.



Contamination Risks and Management

The sampling undertaken within landscaped area indicated that controls to minimise contact with mulch and soil in those areas was required. Following the T+T investigation of November 2015, the Christchurch City Council installed temporary fencing around the landscaped areas and applied a dust suppressant polymer to these areas. The temporary fencing was later replaced with permanent fencing. Additional mulch has also been placed in the landscape areas to provide a soft barrier over the pre-existing mulch and soil. With these measures in place, the public would not be expected to be exposed to asbestos present in the landscaped areas during normal use of the park.



Additional health and safety controls have been developed to protect Christchurch City Council contractors and staff that undertake work within the landscaped areas (for example vegetation maintenance). These controls include the use of personal protective equipment and keeping the ground surface damp.

The sampling undertaken within the grassed areas of the parks indicate that there is a low potential for the public to be exposed to asbestos in soils in these areas during normal use of the park. This means that the public do not need to take any special precautions when using the park, including playing sports. However, Christchurch City Council has restricted those activities with the potential to disturb the grass surface and expose underlying soils (for example restricting vehicular access).

In addition, health and safety controls have been developed to protect Christchurch City Council contractors and staff that undertake work within the grassed areas that could disturb and expose soils. These controls include placing barriers around work to prevent public access, keeping the ground surface damp, and making sure that contaminated material is correctly disposed.

