

Before the Hearings Commissioners at Wellington City Council

under: the Resource Management Act 1991

in the matter of: an application by Ryman Healthcare Limited for resource consent to construct, operate and maintain a comprehensive care retirement village at 26 Donald Street and 37 Campbell Street, Karori, Wellington

between: **Ryman Healthcare Limited**
Applicant

and: **Wellington City Council**
Consent Authority

Statement of evidence of **Paul Edward Walker** on behalf of
Ryman Healthcare Limited

Dated: 29 August 2022

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STATEMENT OF EVIDENCE OF PAUL EDWARD WALKER ON BEHALF OF RYMAN HEALTHCARE LIMITED

INTRODUCTION

- 1 My full name is Paul Edward Walker.
- 2 I am a Technical Director for Contaminated Land at Tonkin & Taylor Ltd (*T+T*).
- 3 I hold a Bachelor of Science (Honours) specialising in Physical Geography from the University of Leicester, and a Master of Science specialising in Soils and Environmental Pollution from the University of Reading.
- 4 I have 23 years' experience in contaminated land assessment and remediation both in New Zealand and the United Kingdom. I have worked in New Zealand since 2005 and have been involved in numerous ground contamination investigations of large brownfield sites for redevelopment in New Zealand, including:
 - 4.1 Four 'Superlot' residential developments within the Christchurch CBD for Fletcher Living Limited;
 - 4.2 Land owned by Canterbury Regional Council for potential subdivision and redevelopment in north-east Christchurch;
 - 4.3 Ryman Healthcare Limited's (*Ryman*) sites in Northwood, Park Terrace and Riccarton in Christchurch, and Kohimarama in Auckland;
 - 4.4 Land acquired by the Ministry of Education for the construction of a school in Gisborne;
 - 4.5 CBD land for the construction of Ao Tawhiti school in Christchurch;
 - 4.6 The former 'Glassworks' site in Hornby, Christchurch; and
 - 4.7 The site of the proposed Canterbury Multi Use Area in Christchurch.
- 5 I am a Certified Environmental Practitioner, as certified by the Environmental Institute of Australia and New Zealand.
- 6 I am familiar with Ryman's resource consent application to construct and operate a comprehensive care retirement village (*Proposed Village*) at 26 Donald Street and 37 Campbell Street, Karori, Wellington (*Site*).
- 7 I prepared the Ground Contamination Assessment of Environmental Effects dated August 2020 (*Contamination Report*).

- 8 I have visited the Site and its surroundings once, on 16 June 2022. Site visits were made by other T+T staff during the geotechnical and ground contamination investigations completed in 2017 (prior to my direct involvement). The Contamination Report is based on the visual observations and data (including soil contaminant data and Site photographs) collected by those T+T staff.

CODE OF CONDUCT

- 9 Although these proceedings are not before the Environment Court, I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note (2014), and I agree to comply with it as if these proceedings were before the Court. My qualifications as an expert are set out above. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

SCOPE OF EVIDENCE

- 10 I have been asked to provide evidence in relation to the potential for, and management of, ground contamination as part of an application by Ryman for a land use consent for the Proposed Village. My evidence sets out the following:
- 10.1 A summary of the Contamination Report;
 - 10.2 My response to the contamination issues raised in submissions;
 - 10.3 My response to the contamination matters addressed in the Council Officer's Report (*Officer's Report*), and particularly the report titled 'Contaminated Land Assessment of Application SR471670, 26 Donald Street, Wellington', prepared by Suzanne Lowe of AECOM New Zealand Limited (dated 2 August 2022).
 - 10.4 My comments on the draft conditions; and
 - 10.5 My conclusions.

SUMMARY OF EVIDENCE

- 11 The construction of the Proposed Village will require earthworks across the majority of the Site. Cut to fill earthworks will be required to establish the building platforms, with depths greater than 3.5 m required in some locations. Approximately 34,500 m³ of soil will require off-site disposal as excess.

- 12 A ground contamination investigation has been completed at the Site in accordance with the relevant guidelines and standards, which are listed in paragraphs 22.1-22.6.
- 13 The investigation identified the presence of contamination in soil (including asbestos) that will be excavated during earthworks. Only asbestos has been detected at concentrations that exceed an applicable guideline value or standard. Accordingly, asbestos is the only contaminant that I consider requires mitigation and management to protect human health.
- 14 I recommend that standard and proven control measures be implemented during earthworks and construction on the Site, including dust controls and the disposal of excavated material to authorised facilities and encapsulation on-site. These controls will be consistent with industry good practice and will comply with the New Zealand Guidelines for Assessing and Managing Asbestos in Soils (2017), Approved Code of Practice: Management and Removal of Asbestos (2016) and Health and Safety at Work (Asbestos) Regulations (2016).
- 15 These controls should be set out in a Site Management Plan (*SMP*), which should also be certified by the Wellington City Council (*Council*) prior to the commencement of ground disturbance on the Site.
- 16 A Site Validation or Works Completion Report should also be submitted to Council following the completion of ground disturbance works.
- 17 These controls are addressed in the draft consent Conditions (29 and 33).
- 18 It is my opinion that, by implementing these standard controls, potential contamination-related risks to human health and the environment will be low and suitably avoided or mitigated during and following the construction of the Proposed Village.
- 19 I note that Draft Condition 31 requires that further sampling for asbestos in soils must be undertaken. I consider it unnecessary to require further sampling as a condition of consent on the basis that the existing information is sufficient to identify the controls necessary to protect human health during site development. I consider that Draft Condition 31 should therefore be deleted.

ASSESSMENT OF GROUND CONTAMINATION EFFECTS

Site history

- 20 The history of the Site has been established from the review of several information sources, including historical aerial photographs,

historical certificates of title and the Greater Wellington Regional Council (GWRC) Selected Land Use Register (SLUR). In summary:

- 20.1 The Site is the former location of the Victoria University Teachers' Training College (*Teachers' College*). The Teachers' College was first developed in the mid-1960s, with further development in the 1970s and a number of minor additions since then.
- 20.2 Prior to the 1960s, the Site was largely vacant, with individual houses near the southern, eastern and western boundaries. Based on aerial photographs and the current Site surface form, there was significant earth working (cut to fill operations) during the development of the Teachers' College.
- 20.3 Lectures ceased at the Teachers' College in 2016. The Site continued to be used by the public accessing the tennis courts and lower field/cricket nets.
- 20.4 The deconstruction of the Teachers' College buildings has been completed, with the former Oldershaw, Tennant and Allen Ward buildings retained for repurposing within the Proposed Village.

Potential for contamination

- 21 Based on the history of the Site, it is my opinion that the potential for contamination to be present relates to the following:
 - 21.1 Pesticide use on playing fields and gardens;
 - 21.2 Demolition of residential houses (on the southern, eastern and western boundaries of the Site) and levelling works on the Site prior to the Teachers College development; and
 - 21.3 Use of asbestos-containing materials and lead-based paints in the Teachers' College buildings.

Site investigations

- 22 In 2017, and prior to my direct involvement in the project, T+T completed a ground contamination assessment at the Site. The assessment was undertaken in accordance with the following guidelines and standards:
 - 22.1 Contaminated Land Management Guidelines No.1: Reporting on Contaminated Site in New Zealand. Ministry for Environment (revised 2011);
 - 22.2 Contaminated Land Management Guidelines No.5: Site Investigation and Management of Soils. Ministry for the Environment (revised 2011);

- 22.3 Guidelines for the Assessment Remediation and Management of Asbestos-Contaminated Sites in Western Australia. Western Australia Department of Health, 2009;
 - 22.4 Soil Contaminant Standards (SCS) for high-density residential and commercial/industrial land uses as defined in: Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health, Ministry for the Environment, June 2011;
 - 22.5 New Zealand Guidelines for Assessing and Managing Asbestos in Soils. BRANZ, November 2017; and
 - 22.6 Australian and New Zealand Guidelines for fresh and marine water quality.
- 23 The assessment included soil sampling at approximate 40 m spacings in accessible areas of the Site to assess contamination associated with historical cut to fill activities, whilst targeted sampling was undertaken to assess contamination from use of persistent pesticides in gardens and sports fields. Soil samples were also collected from around the vicinity of buildings for asbestos in soils analysis. Groundwater samples were also collected from three monitoring wells installed on the Site and analysed for a range of potential contaminants.
- 24 The sampling locations are identified at Figure 6.1 of the Contamination Report.

Ground contamination conditions

- 25 Based on the ground contamination investigations undertaken in 2017, I summarise the ground contamination conditions at the Site as follows:
- 25.1 Asbestos was detected in five of thirty soil samples analysed, collected from three locations. Four of the five samples, from two locations, contained asbestos levels in the soil above the currently applied risk-based human health assessment criterion (for a high-density land use). These samples were collected from (refer Fig 6.1 of the Contamination Report):
 - (a) Sample location SS04 (next to the childcare centre on the western Site boundary).
 - (b) Sample location SS06 (next to the playing fields where buildings had previously been removed).
 - 25.2 Other contaminants of concern (including polyaromatic hydrocarbons (*PAHs*), metals and organochlorine pesticides (*OCPs*)) were detected above published background concentrations but were not detected above SCS for a high-density land use (refer paragraph 22.4);

- 25.3 With one exception, groundwater samples did not contain contaminants above environmental assessment criteria (refer paragraph 22.6). Copper was detected marginally above the environmental assessment criterion in one well. However, this well is inferred to be on the up-hydraulic gradient (effectively 'upstream') part of the Site and the detected copper concentration is therefore unlikely to be associated with Site activities.
- 26 Based on the data available, there is no clear explanation for the source of the asbestos detected in soil at the Site. Potential sources are:
- 26.1 Loss from buildings due to the degradation or maintenance of exterior asbestos-containing cladding; or
- 26.2 Historic building demolition (i.e. the former residential buildings on the southern, eastern and western boundaries of the Site) and rework of fill during construction.
- 27 The uncertainty regarding the source(s) of asbestos detected in soil means that there is also uncertainty regarding the spatial and vertical extent of asbestos contaminated soil on the Site. As a result, I consider it possible that asbestos could be present in soil across the Site, though I note a lower potential for asbestos to be present in the following areas which do not appear to have been developed or contained buildings:
- 27.1 The playing fields; and
- 27.2 The southeast gardens.
- 28 Although the spatial and vertical extent of asbestos in soil at the Site is uncertain, it is my opinion that the current investigation data characterises the range of asbestos concentrations that are likely to be present in soil. As such, I consider the current investigation data is sufficient to identify the controls necessary to mitigate and manage risk to human health, in accordance with the New Zealand Guidelines for Assessing and Managing Asbestos in Soils.
- 29 I understand that Ryman proposes to undertake additional investigation to refine its understanding of the spatial and vertical distribution of asbestos in soil prior to the commencement of construction. This investigation will be undertaken to quantify construction costs, but will also provide additional data to confirm the current assumptions regarding the level of asbestos present in soils.
- Proposed Village**
- 30 I understand that construction of the Proposed Village will result in the excavation of the majority of the Site, with excavation predominately associated with the footprint of the new buildings.

Cut to fill will occur, meaning that excavated and suitable soils will be reused onsite. However, I understand that approximately 34,500 m³ of excavated material will be excess and will require off-site disposal.

- 31 It is possible that some of the asbestos contaminated soil currently on the Site will remain post-development. This material would be encapsulated under roads, buildings or other sealed areas, which means it will not be accessible to (or pose a risk to) future Site occupants.

NES Soil matters of discretion

- 32 As asbestos has been detected above the applicable standard for the future use of the Site (high-density residential land use), and as the Proposed Village will not comply with the permitted activity thresholds for earthworks volumes (Regulations 8(3)(d) and 9(1)(c)), Ryman is applying for consent to disturb contaminated soil as a restricted discretionary activity under the Resource Management (National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations, 2011 (*NES Soil*).

- 33 Regulation 10 of the NES Soil specifies the matters over which the Council has discretion. I provide my assessment against the key matters of discretion as follows:

The adequacy of the detailed site investigation

- 33.1 The investigations undertaken at the Site were completed in accordance with New Zealand guidelines which are listed in paragraphs 22.1-22.6 above.
- 33.2 Although additional investigations will be undertaken to refine the understanding of the distribution of asbestos in soils, I consider the investigations undertaken to date adequately characterise soil contaminant conditions at the Site for the purposes of assessing risk to human health and management options.
- 33.3 As such, it is my opinion that the investigations completed to date follow the requirements of the NES Soil (and the New Zealand guidelines that are incorporated by reference in the NES Soil) and therefore adequately characterise soil contaminant conditions at the Site.

The suitability of the piece of land for the proposed activity

- 33.4 Any contaminated material which remains at the Site will be encapsulated under roads, buildings or sealed areas, which means it will not be accessible to (or pose a risk to) future Site occupants. On this basis, it is my opinion that from a ground contamination perspective, the Site is suitable for the Proposed Village.

The approach to the remediation or ongoing management of the piece of land

- 33.5 Controls will be implemented to mitigate potential health effects on future residents, workers involved in soil disturbance and the general public from exposure to asbestos in soils.
- 33.6 During excavation and handling, dust suppression and other earthworks controls (for example minimising the extent of unstabilised soil surfaces, covering stockpiles) will be employed to control the generation of airborne asbestos. These controls will be consistent with industry good practice and will comply with the New Zealand Guidelines for Assessing and Managing Asbestos in Soils (2017), Approved Code of Practice: Management and Removal of Asbestos (2016) and Health and Safety at Work (Asbestos) Regulations 2016.
- 33.7 Asbestos containing materials will be excavated and disposed off-site, encapsulated under roads, buildings or sealed areas, or a combination of disposal and encapsulation.
- 33.8 A Long-Term Management Plan (*LTMP*) will be prepared to document ongoing management controls to protect human health (principally future maintenance workers) from exposure to contaminated soil retained on the Site.
- 33.9 It is my opinion that the implementation of these controls will mean that potential contamination-related risks to human health are suitably managed during and following the construction of the Proposed Village.

The adequacy of the site management plan or the site validation report, or both, as applicable

- 33.10 An *SMP* and a site validation report (*SVR*) or Works Completion Report (*WCR*) will be prepared in accordance with the Ministry for the Environment Contaminated Land Management Guidelines No.1: Reporting on Contaminated Sites in New Zealand (revised 2021). A framework *SMP* was provided in Appendix F of the Contamination Report. As the *SMP* and *SVR/WCR* will be required to comply with the relevant guidelines I consider they will be adequate.

The transport, disposal and tracking of soil and other materials taken away in the course of the activity

- 33.11 All materials removed from the Site will be disposed of at a facility that is licensed to accept them. Material disposal and documentation procedures will be set out in the *SMP*. The *SVR/WCR* will report on the nature, volume and destination of materials disposed of off-Site. Accordingly, I consider the transport and disposal of soil will be undertaken in accordance with the requirements of the NES Soil.

- 34 The NES Soil matters for discretion I have listed in paragraph 33 of my evidence are primarily concerned with the characterisation of contaminant conditions and the implementation of management controls to mitigate risk to human health. Based on the above assessment, it is my opinion that with respect to the NES Soil:
- 34.1 Ground contamination conditions at the Site have been adequately characterised by the contamination investigation completed to date;
- 34.2 The Site is suitable for the development of the Proposed Village either because ground contamination will be removed during development or will be managed in place using an LTMP; and
- 34.3 The proposed ground-contamination related procedures to be documented in an SMP and LTMP will comply with New Zealand regulations, guidance and industry practice, and will provide Ryman with the controls to appropriately mitigate contamination-related risk to human health during and following construction.
- 35 In my opinion, providing the measures described in paragraphs 33.6-33.8 above are implemented, the potential for the construction and operation of the Proposed Village to adversely affect human health is low.
- 36 I discuss conditions of consent later in my evidence.

Wellington District Plan matters of discretion

- 37 The presence of asbestos at the Site means that permitted activity conditions of Rule 32.1.3 of the Operative Wellington City District Plan (*Operative Plan*) cannot be met. Ryman is therefore seeking resource consent for the development of the Proposed Village as a restricted discretionary activity in accordance with Rule 32.2.1.
- 38 It is noted that the Wellington Proposed Plan does not contain any rules relating to contaminated land, and instead relies on the NES Soil to manage relevant effects. Nevertheless, I address the Operative Plan matters of discretion below.
- 39 It is my understanding that the matters over which Council has discretion in the granting of that consent are broadly similar to those for the NES Soil. However, in addition to requiring consideration of the measures to be taken to avoid effects on public health, the Operative Plan also requires consideration of the measures to be taken to avoid effects on the wider environment.

Human health effects

- 40 In my opinion, providing the measures described in paragraphs 33.6-33.8 above are implemented, the potential for the construction

and operation of the Proposed Village to adversely affect human health is low for the reasons set out above.

Environmental effects

- 41 Although concentrations of contaminants above background levels are present in soil, contaminants in groundwater at the Site comply with guideline values for fresh water quality.¹ As such, it is my opinion that soil contamination present at the Site has not adversely affected groundwater quality, or that groundwater discharging from the Site would result in an adverse environmental effect.
- 42 Further, in my opinion, provided the controls providing the measures described in paragraphs 33.6-33.8 above are implemented, the potential for adverse environmental effects to occur via other mechanisms (eg via stormwater or tracking of soils offsite) is low.

RESPONSE TO SUBMISSIONS

- 43 I have reviewed all of the submissions relevant to my area of expertise. None of the submissions raise concerns specifically relating to contamination. Thirteen submissions² raised concerns regarding dust generation during construction. The following paragraphs address dust control in the context of contamination management.
- 44 Dust control is one of the suite of standard earthworks and construction controls that will be implemented during the construction of the Proposed Village. Dust controls will be documented in the SMP and include:
- 44.1 Managing stockpiles and exposed soil surface to minimise the area of the Site from which dust can be generated;
- 44.2 Frequent inspection of the earthwork areas and site boundaries for signs of dust generation; and
- 44.3 Dust suppression of exposed soils and soil stockpiles, whereby water or other substances are applied to prevent dust becoming airborne.
- 45 As asbestos has been detected in the soils on the Site, dust controls are needed to prevent asbestos fibres becoming airborne. Dust control will be necessary to be consistent with industry good practice and to comply with the New Zealand Guidelines for

¹ Australian and New Zealand Guidelines for fresh and marine water quality. <https://www.waterquality.gov.au/guidelines/anz-fresh-marine>.

² Submission 38 (Carruthers), 39 (McArdle), 43 (Wallace), 46 (Mattlin), 49 (Gestro), 57 (Leikis & Porter), 58 (Moran), 60 (Sprott), 62 (Dunstan), 65 (Responsible Development Karori Inc), 70 (Moore), 72 (Ingham), 74 (Major).

Assessing and Managing Asbestos in Soils (2017), Approved Code of Practice: Management and Removal of Asbestos (2016) and Health and Safety at Work (Asbestos) Regulations 2016.

- 46 Dust suppression is the principal means of preventing asbestos from becoming airborne, and this is supplemented with personal protective equipment to protect on site workers, decontamination procedures to prevent workers and plant inadvertently tracking asbestos off the Site, and encapsulation beneath roads or building footprints.
- 47 In my opinion, the potential risks to human health associated with contaminants in soil that could become airborne will be controlled by the implementation of asbestos related site controls and monitoring as outlined above, which are well established and proven to be effective in minimising risks.

RESPONSE TO COUNCIL OFFICER'S REPORT

- 48 The contaminated land assessment review completed by Suzanne Lowe of AECOM New Zealand Ltd acknowledges that the Contamination Report "*adequately characterises soil contaminant conditions at the site for the purpose of assessing risk to human health and options for the management of this risk*".
- 49 However Ms Lowe also notes that "*additional investigation to refine the understanding of the distribution of asbestos was warranted*". This is reflected in Draft Condition 31.
- 50 Ryman proposes to undertake further investigation of asbestos in soils at the Site for construction costing purposes. Whilst additional investigation data will be useful for that purpose, it is unlikely to alter the proposed contamination controls described in paragraphs 33.6-33.8.
- 51 On the basis that the Ms Lowe and I agree that the Contamination Report is adequate, in my opinion further investigation is not warranted.

COMMENTS ON DRAFT CONDITIONS

- 52 Draft Conditions 29-33 relate to contamination effects. I comment as follows:
- 52.1 Draft Conditions 29 and 33 relate to the preparation of a SMP and SVR/WCR respectively and are consistent with the documents prepared by Ryman and as described in paragraph 33.10 of my evidence.
- 52.2 Draft Condition 31 requires that further sampling for asbestos in soils must be undertaken. For the reasons described in

paragraphs 49 and 50 of my evidence, I consider Condition 31 should be deleted.

52.3 Draft Condition 32 is consistent with the proposed approach to offsite soil disposal as described in paragraph 33.11 of my evidence.

CONCLUSIONS

53 I conclude that there is no contaminated land issue that would preclude the granting of consent for the Proposed Village on the basis of the conditions discussed in this evidence.

Paul Edward Walker
29 August 2022