


From: Jaimee Cannon s 9(2)(a) 
Subject: FW: [#Landpro18062] Proposed sampling plan for 2 Johnston St
Date: 1 June 2022 at 3:01 PM
To: Zen Gerente s 9(2)(a)
Cc: Graeme Proffitt s 9(2)(a), Kathryn Hooper s 9(2)(a)

JC

Hi Zen

Please see below email from Graeme which should have also been provided with the feedback I provided earlier today. These are Graeme's initial comments.

Thanks

Jaimee

From: Graeme Proffitt s 9(2)(a)
Sent: Tuesday, 31 May 2022 1:54 pm
To: Jaimee Cannon s 9(2)(a)
Subject: RE: [#Landpro18062] Proposed sampling plan for 2 Johnston St

Hi Jaimee

Sorry, I have been flat out and while I managed to go through the report, I got side-tracked and did not manage to email.

I may send some more thoughts after I give the report a further read, but the main issues are:

1. The site history could have been better. I'm surprised that the report said there were no historical aerial photographs from Retrolens, because there are several relevant photographs from at least 1949 until the early 1980s. Perhaps that was a timing issue and the photographs were not available on Retrolens back in 2018, but the same photographs could have been obtained from other sources. I agree that the land was farm land for much of its early life, but the report suggesting in Section 4.1 that the site was "... a dairy farm or a similar agricultural operation ..." fails to consider the possibility the farm was a sheep farm. A potential HAIL activity for a sheep farm is an animal dip. Given all the available aerial photographs were not examined, there is still a need to check whether an animal dip existed at some point in the life of the farm. Confirmation that there was no animal dip would be helpful.
2. Farms often had fuel storage, often a tank on an elevated stand. No consideration has been given to this possibility. Typically it would be near the implement shed(s) that probably existed when the land was used for farming.
3. There appears to have been no realisation that a horticultural operation that commenced sometime in the 1980s would not have used the persistent pesticides used earlier such as lead arsenate or organochlorine pesticides such as DDT or dieldrin. The more modern pesticides, except some fungicides containing copper or zinc, break down relatively quickly and do not fall into the definition of persistent. Copper and zinc are not of concern from a human toxicity point of view.
4. However, a horticultural operation would most likely have had somewhere for storing the concentrated pesticides before mixing for use on crops (in earlier times this was often known as the spray shed). This has not been considered in the report. Even though modern pesticides break down relatively rapidly when applied at the correct

rates on crops, if the concentrated chemical was spilled, causing high concentration in soil, the high concentrations inhibit breakdown and may persist for extended periods of time. Sampling the footprints and around possible storage locations for more modern pesticides should be considered.

5. I am not surprised at the generally low DDT concentrations. DDT would not have been used on the horticultural crops but may have been used on pasture to control grass grub or other soil pests in earlier times. Unless used very intensively on pasture, DDT will not be particularly elevated given it will have degraded in the many years since DDT was last used.
6. Again, I would not expect cadmium to be particularly elevated unless the land was very intensively farmed and a lot of superphosphate fertiliser was used. Cadmium is a contaminant of the phosphate rock used to produce superphosphate, although low cadmium sources of rock are now used.
7. Given the horticultural use occurred after the use of arsenic-based pesticides ceased, I would not generally expect to see elevated arsenic. The two elevated concentrations are therefore a little surprising and may be related to treated timber. The report mentions storage of pellets (sic) and beams. Wooden pallets would most likely not be treated but if treated timber had been stored uncovered, that could result in elevated arsenic at the location. It is not clear whether the elevated arsenic was found where the timber storage was identified on aerial photographs. I agree with the report recommendation that further investigation is required around samples S3 – S5.
8. Lead was also elevated in some of the samples from around the yard area. This may be related to building materials (lead-based paint). Typically, lead from lead-based paint would be in a relatively narrow “halo” around existing or former buildings built pre-1980s. The report recommends further sampling for lead. Further sampling should target halo areas.
9. I can’t comment on the further sample numbers proposed by Landpro below. That depends on the locations and number of buildings or storage areas that the elevated lead and arsenic may be related to. This requires further information review to determine.
10. While no asbestos was detected, again asbestos would tend to be in halo areas around buildings, unless demolition of buildings has occurred, in which case asbestos building materials could be spread further. The report mentions buildings falling into disrepair. Buildings containing asbestos products in deteriorated condition is a HAIL activity (category E1). It was common for older buildings to have some asbestos building materials, e.g. under the eaves or as roofing material, and asbestos-cement cladding was commonly used in the 1960s to early 1980s. The absence of detected asbestos could mean improperly targeted samples rather than no asbestos being present.
11. I have no concern for the other heavy metals tested for.

Overall the property appears suitable for residential use but at some point consideration should be given to further testing around existing or former buildings and associated yard areas, as mentioned above. That should include examining the available aerial photographs for a sheep dip and fuel storage, and also consider potential location(s) for chemical storage from the time of the horticultural operation. That would then define what further testing may be required.

I don't think there is a need for testing prior to the consent application. A discretionary consent with conditions is appropriate as the potential risks to human health don't seem so great that additional information is needed for the application. Obviously, conditions will be required for this approach. These would include:

- Further information review This could be by updating the PSI, but could be part of preparing a more detailed sampling plan (see next point). However, it would not take much effort to update the PSI prior to the application and the applicant could choose to do this.
- Additional testing at the already identified locations plus other locations identified by further information review. The condition could include submission of a sampling plan for approval, but not absolutely required if the PSI was updated and the council was happy to wait for the sampling results for review and approval. A sampling plan reduces the risk a little that the sampling does not need to go a further round if it later proves inadequate. Something to discuss with the applicant.
- A condition requiring preparation of a remedial action plan (RAP) if the further sampling shows remediation is necessary. A site management plan should also be required to control remedial activities, but in this case, the option of a combined RAP and site management plan should be offered as any remedial work should be straightforward.
- If remedial work is required, a validation report should be required as a condition following the remediation.
- Further investigation should be carried out in accordance with the requirements of Contaminated Land Management Guidelines No. 5 and reported in accordance with Contaminated Land Management Guidelines No. 1. If RAP, SMP and validation reports are required, these should also be in accordance with Guideline No. 1
- There should be a condition that the additional sampling work be overseen and the report certified by a suitably qualified and experienced practitioner (SQEP), with that certification as set out in Guideline No. 1.

I think that should just about cover it. However, please give me a call if you require any clarification or further information.

Regards

Graeme Proffitt | Director
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From: Jaimee Cannon s 9(2)(a)
Sent: Tuesday, 31 May 2022 8:38 AM
To: Graeme Proffitt s 9(2)(a)
Subject: RE: [#Landpro18062] Proposed sampling plan for 2 Johnston St

Hi Graeme

Further to the below, can you please advise me when you are likely to be able to provide some feedback to the applicant for their proposed sampling method before the applicant proceeds with their intended approach?

Thanks

Jaimee

From: Jaimee Cannon
Sent: Monday, 23 May 2022 11:24 am
To: s 9(2)(a)
Cc: 'Rowan Williams' s 9(2)(a)
Subject: FW: [#Landpro18062] Proposed sampling plan for 2 Johnston St

Hi Graeme

Please see attached PSI for background.

Let me know if you have any questions. Otherwise I look forward to receiving your advice to pass onto the applicant.

Thanks

Jaimee

From: Zen Gerente s 9(2)(a)
Sent: Monday, 23 May 2022 11:14 am
To: Jaimee Cannon s 9(2)(a)
Cc: Kathryn Hooper s 9(2)(a)
Subject: RE: [#Landpro18062] Proposed sampling plan for 2 Johnston St

Hi Jaimee

Please see attached PSI for 2 Johnston Street.

Apologies for the delay.

Regards,
Zen

From: Jaimee Cannon s 9(2)(a)
Sent: Monday, 23 May 2022 9:18 am
To: Zen Gerente s 9(2)(a)
Cc: Kathryn Hooper s 9(2)(a)
Subject: RE: [#Landpro18062] Proposed sampling plan for 2 Johnston St

Hi Zen

Just following up on the below – are you able to please send the latest PSI report for Graeme to understand the background before providing advice on your approach?

Many thanks

Jaimee

From: Jaimee Cannon
Sent: Monday, 16 May 2022 8:50 am
To: 'Zen Gerente' s 9(2)(a)
Cc: Kathryn Hooper s 9(2)(a)
Subject: RE: [#Landpro18062] Proposed sampling plan for 2 Johnston St

Hi Zen

Unfortunately Sarah Shephard had limited availability to provide pre-application advice in response to the below, so we have requested the services of Graeme Proffitt (Director and Contaminated Land Specialist at PDP Wellington).

Can you please provide the Most up-to-date PSI Report with site history for Graeme to review, ahead of providing a response to the below queries / approach?

Thanks

Jaimee

From: Zen Gerente s 9(2)(a)
Sent: Wednesday, 4 May 2022 3:20 pm
To: Jaimee Cannon s 9(2)(a)
Cc: Kathryn Hooper s 9(2)(a)
Subject: [#Landpro18062] Proposed sampling plan for 2 Johnston St

Hi Jaimee

I have reviewed the laboratory results from the PSI report before.

Instead of getting one sample from each lot, we are proposing a different approach considering what we know about the history of the site and results of the preliminary sampling.

For the yard area (hot spot area), the results of preliminary sampling showed elevated levels from S1 and S3-S6 (with red delineation) so:

- I am proposing to collect 16 new samples from two depths (surface and subsurface) so we can delineate the area of contamination and the depth (2x16 = 32 samples).

For the rest of the site:

- I am proposing we collect 16 new samples (surface).

Since the samples before have no asbestos detected, I consider that it should be sufficient to exclude asbestos analysis this time. We'll get the samples tested only for HMs and OCPs.

Could you pass this to Sarah for comments before we proceed?

Thanks.

Regards,

Zen Gerente

Senior Planner



s 9(2)(a)

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