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16 November 2015

Jason Adams General Manager CDL Land New Zealand Limited PO Box 3248 **AUCKLAND**

Dear Jason

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PRESTONS PARK RESIDENTIAL DEVELOPMENT - RESIDENTIAL STAGE 1(M)

At the request of CDL Land New Zealand Limited, this letter has been prepared by Pattle Delamore Partners Limited (PDP) to provide a brief summary of the site history and soil testing investigations that have been carried out on the Prestons Road residential subdivision, and in particular, in the vicinity of Prestons Park residential Stage 1(M). Plans showing the residential Stage 1(M) development (i.e. south of Prestons Road), within the overall Prestons Park development¹ are appended (i.e. identified by the individual coloured lots).

Prior to the development of Prestons Road residential subdivision, and in particular, Prestons Park Stage 1(M), a site history assessment was carried out, followed by a series comprehensive soil sampling investigations. The purpose of the site history assessment was to determine any likely historical and/or current sources of contaminants (e.g. market garden or orchard pesticide sprays² remaining in soils) that could potentially affect the land for residential land use.

The site history assessment report was prepared by Connell Wagner Limited (*Stage 1 – Environmental Assessment Report, Prestons Road Development Area, Christchurch,* dated August 2008). With regard to the Stage 1(M) residential development, the Connell Wagner report did not identify any obvious possible sources of contaminants (i.e. obvious use of the land for intensive agricultural purposes, such as market gardening and/or orchards) and that the risk level to humans was identified as 'low'. As a prudent approach, Connell Wagner collected a series of 16 surface soil samples from the northern half of the Prestons Park development for laboratory analysis. The results of this investigation showed soil arsenic concentrations in two surface samples slightly above the standard presented in the Ministry for the Environment (MfE, 2011) document entitled *Methodology for Deriving Standards for Contaminants in Soil to Protect Human Health* for residential land use, assuming the consumption of 10% home-grown produce.

Based on the findings of the Connell Wagner report, PDP undertook a series of further soil sampling investigations over the entire Prestons Road development, including within Prestons Park and in particular



¹ Note that Prestons Park has previously been referred to as Prestons South, including environmental site assessment reports previously prepared by PDP.

² Possible historical contaminants associated with these activities include heavy metals and persistent organochlorine pesticides.



residential Stage 1(M). The sampling investigations undertaken by PDP were approved by Environment Canterbury and soils were tested for the most likely contaminants (heavy metals including arsenic, organochlorine pesticides and organonitrogen/organophosphorous pesticides).

As part of the PDP detailed site investigations, the lateral and vertical extents of the arsenic concentrations initially identified in two soil samples following the Connell Wagner investigation were delineated. As a result, PDP supervised the removal of these soils to another part of the residential development, where they were to be temporarily stockpiled on plastic sheeting and grassed prior to relocation within recreational areas of the Prestons Park development. This was because the measured concentrations were sufficiently low that they complied with the MfE criteria for recreational land use.

In summary, the results of the Connell Wagner and PDP investigations undertaken within the residential Stage 1(M) development of Prestons Park have shown that remaining soils comply with New Zealand and international standards/guidelines for residential land use. These standards and guidelines also include residents who grow their own produce, which accounts for up to 10% of their overall diet.

Limitations

This letter has been prepared by Pattle Delamore Partners Limited (PDP) on the basis of information provided by CDL Land New Zealand Limited and others (not directly contracted by PDP for the work). PDP has not independently verified the provided information and has relied upon it being accurate and sufficient for use by PDP in preparing the letter. PDP accepts no responsibility for errors or omissions in, or the currency or sufficiency of, the provided information.

This letter has been prepared by PDP on the specific instructions of CDL Land New Zealand Limited for the limited purposes described in the letter. PDP accepts no liability if the letter is used for a different purpose or if it is used or relied on by any other person. Any such use or reliance will be solely at their own risk.

Yours sincerely

PATTLE DELAMORE PARTNERS LIMITED

Prepared by

Guy Knoyle

Technical Director - Contaminated Land



	PROPOSED MEMORANDUM OF EASEMENTS				
	NATURE	SERVIENT	1	DOMINANT	
		LOT NO	SHOWN	TENEMENT	
	RIGHT OF WAY & SERVICES	23	A	LOT 24	
<u></u>				GRANTEE	
	RIGHT TO DRAIN WATER IN GROSS	3030	z	CCC	
	RIGHT OF WAY	3030	x	CHORUS NZ	
<u> </u>	IN GROSS			LTD	
RESTONS	RIGHT TO CONVEY	3000	Y	ORION NZ LTD	
	ELECTRICITY IN GROSS				
	SCHE	DULE OF PRO	POSED EAS	EMENT	
R	NATURE	SERVIENT	TENEMENT	DOMINANT	
ROAD	NATURE	LOT NO	SHOWN	TENEMENT	
	RIGHT OF WAY & SERVICES	151	В	LOT 3 DP 346816	
	RIGHT TO DRAIN			LOTS 32,33,55,57,58,	
	WATER	56	С	LOTS 1 & 2 DP 24593, LOT 2 DP 346583	
58 TO D				LOTS 32,33,55,56,58,	
		57	D	LOT 2 DP 24593, LOT 2 DP 346583	
LOT 3501		E 9	E	LOTS 32,33,55,56,57,	
RECREATION		58	E	LOT 2 DP 24593, LOT 2 DP 346583	
RESERVE		450	-	LOTS 151,152,	
7575m²		150	F	LOT 2 DP 346583	
1 / 1			-	LOTS 150,152,	
		151	В	LOT 3 DP 346816, LOT 2 DP 346583	
		151	G	LOTS 150,152,	
		171		LOT 2 DP 346583	
		152	н	LOTS 150, 151, LOT 3 DP 346816	
				LOTS 33,55,56,57,58,	
М		32	1	LOTS 1 & 2 DP 24593,	
				LOTS 32,55,56,57,58,	
		33	J	LOTS 1 & 2 DP 24593,	
				LOTS 32,33,56,57,58,	
		55	к	LOTS 1 & 2 DP 24593,	
	CLIENT	TO 1		DN PARK	
	REV DATE REV			APPROVED	
	H 02/02/15 EASE	EMENTS REMO	OVED	K ASHBY	
$\Box \vdash + \land \models \mid$	G 23/01/15 EASE				
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\checkmark \land \land \land \land \land \land	C 24/09/14 REIS	SUE FOR VAR	RIATION	K ASHBY	
$/ \land \checkmark$	B 30/04/14 ISSU				
	A 07/06/13 ISSU			ON KASHBY	
$\land \lor \land \land$		PRO	JECT		
	DD	RESTOR		2K	
		2010		VI V	
	DDOD	TITLE PROPOSED SUBDIVISION OF			
PTS RS 1778, LOTS 1 & 2 DP 27786, LOT 2 DP 395420, LOT 2 DP 386864,					
9K/366,CB9K,367,CB392/100, 59, CB217/237, CB4A/1261 &	LOTZDP	395420, & LOT 1 I	LOT 2 L	76 300004,	
381181					
		ESIGNED KASHBY	FO	R CONSENT	
	R DAWSON P		PI	ROJECT No.	
IRV	A GREIG			223488	
IBY	APPROVE	D		CALE SIZE	
013	K.A.Ashby	DATE 06/06/13	1:	:2500 A1	
			-	VING No. REV	
	K ASHBY		50-MP-	S1-SP-01.1 H	

