



Andrew Laughton <laughton.andrew@gmail.com>

#11b Keble Heights, College Grove

12 messages

Kylie Heydon <kheydon@strucsterre.com.au>

20 November 2012 at 11:33

To: laughton.andrew@gmail.com

Kylie Heydon | Office Clerk

Office Hours Monday to Friday 9.00am - 5.00pm

STRUCterre
consulting engineers

Bunbury Office
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Residential Commercial Site Compliance Geotechnical Civil Sustainability Infrastructure

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 **S598518 #11B KEBLE HTS COLLEGE GROVE.pdf**
572K

Andrew Laughton <laughton.andrew@gmail.com>

20 November 2012 at 11:44

To: Mary Verboom <mary.verboom@gmail.com>

----- Forwarded message -----

From: Kylie Heydon <kheydon@strucsterre.com.au>

Date: 20 November 2012 14:33

Subject: #11b Keble Heights, College Grove

To: laughton.andrew@gmail.com

Kylie Heydon | Office Clerk

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Andrew Laughton <laughton.andrew@gmail.com> 20 November 2012 at 13:13
To: Kylie Heydon <kheydon@strucsterre.com.au>
Cc: Mary Verboom <mary.verboom@gmail.com>, Marion 11 Keble
<mazzalewis@westnet.com.au>

Hi Kylie

The report mentions that a suckling tree, on the lower side, has been secured via I-bolt directly to the top block of the boundary wall. And that; Finally, the tightly secured tree, due to growth restraint and wind loading, would likely contribute to the movement and cracking of the

boundary wall.

Could someone please indicate how much it would contribute to the movement and cracking of the boundary wall given that the crack is some distance from the tree, and that the tree is sheltered from the wind by the house on one side, a retaining wall / solid fence on the other side and a 6' trellis fence / gate on a third side. The gap between the house and the fence is less than about 3 meters. It would appear to me that either the I Bolt, or the string holding the tree would give way before it caused any damage to the retaining wall, and that there would not be much pressure on it in the first place.

If this could be expressed as a % liable for the damage to the retaining wall it would be ideal.

When I spoke with the assessor before he made the report, he indicated that he would state what would need to be done if the additional 700mm of sand were to remain where it is.

IE, what is needed to make the retaining wall high enough to hold an extra 700mm of sand.

It is not clear if this can be achieved by cement injection grouting, or if the cement injection is simply to stabilise the fence.

Regards Andrew Laughton.

[Quoted text hidden]

 **S598518 #11B KEBLE HTS COLLEGE GROVE.pdf**
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Greg Hamilton <ghamilton@strucsterre.com.au> 20 November 2012 at 15:01
To: laughton.andrew@gmail.com, mary.verboom@gmail.com,
mazzalewis@westnet.com.au
Cc: Daniel Goodall <dgoodall@mail.strucsterre.com.au>, Kylie Heydon
<kheydon@strucsterre.com.au>

Hello Andrew

Having read your response to our report, I can add by way of clarification.

Firstly, lets assume no work had been carried out by your neighbour. The wall as it stood for some period, is under-designed by our minimum standard. As can be seen by the attached detail to the report, the base width needs to be in the order of a dimension not less than half the height plus 200mm. This would make the base of your boundary wall around 1100mm wide extending back into the neighbouring property, which we found no evidence of. Because this wall is

under-designed, relying for the best part, only on one block width for strength to retain at least the top 1000mm of fill, any additional load from outside sources are likely to only make things worse. Hence a young tree tightly secured with layered rope (not string), even somewhat off centre to the bulging section of the wall will cause additional loads - either through growth restraint or wind (the fence failed during a storm did it not). The fence would also have been adding wind pressure to this wall.

The extent of liability, as noted, is essentially impossible to attribute without elaborate strain/ strength gauges to allow measurement of load. However, it must be noted that without any work from the neighbour, this wall appeared to be under-designed to carry 1800mm of sand and a fence. Having said that, it is possible that it may never have failed if left alone.

Following the construction of the neighbouring retaining walls, as stated in the report, we now have a revised loading condition. Both the above walls and the excess sand build up behind the wall/fence are producing additional surcharge on your boundary retaining wall, all trying to rotate the wall towards your house.

If left untouched, it is likely that at some time in the future this wall will collapse. All loads, where possible, should be taken off the wall.

As for cement grout injection, this is a method of permanently solidifying the sand behind the wall such that the wall in question is not retaining anything at all. The solidified sand acts as an immovable retaining block to help support the above built additional walls.

The cost cannot be assessed until the depth and extent of grouting can be calculated, hence the reason for discussion prior to proceeding with design.

I hope this further clarifies our observations.

Regards

Greg

Greg Hamilton | Senior Engineer
Bunbury Manager

STRUCterre
consulting engineers

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On 20/11/2012, at 1:14 PM, Kylie Heydon wrote:

Begin forwarded message:

From: Andrew Laughton <laughton.andrew@gmail.com>
Date: 20 November 2012 1:13:02 PM
To: Kylie Heydon <kheydon@strucsterre.com.au>
Cc: Mary Verboom <mary.verboom@gmail.com>, Marion 11 Keble <mazzalewis@westnet.com.au>
Subject: Re: #11b Keble Heights, College Grove

[Quoted text hidden]

<S598518 #11B KEBLE HTS COLLEGE GROVE.pdf>

Andrew Laughton <laughton.andrew@gmail.com> 20 November 2012 at 15:34
To: Greg Hamilton <ghamilton@strucsterre.com.au>
Cc: mary.verboom@gmail.com, mazzalewis@westnet.com.au, Daniel Goodall <dgoodall@mail.strucsterre.com.au>, Kylie Heydon <kheydon@strucsterre.com.au>

Hi Greg

Yes the wall sheltering the tree did collapse, after 700mm of sand was piled against it.

I would think the fence would of added one or two or even three orders of magnitude more wind loading than the tree, however so be it.

I think the wall has already moved again.

So what is the next step ?

What information do you need to determine how much cement needs to be injected ?

At the minute I do not know if the neighbour intends to leave the extra 700mm of sand there, but I think he does.

Where you say "our" minimum standard, is that Australian standards or your company standards ?

Andrew.

[Quoted text hidden]

Greg Hamilton <gghamilton@strucsterre.com.au> 20 November 2012 at 16:12
To: Andrew Laughton <laughton.andrew@gmail.com>

Hi Andrew

Yes you are absolutely right - the sand and wind loads on the fence and wall are the dominant loads by a considerable degree.

Once the wall begins to move and the ground settles behind the wall into the movement gap, the loads become more enhanced with each movement - so we would expect conditions to gradually get worse and not stabilise.

The next step is for me to engage our Perth Geotech office to quote the grouting design option.

Please indicate if you would like me to proceed with this Quote.

Our minimum standard is shown in the previously attached HOR detail. It is based on our design to Australian standards and is the accepted norm across most Limestone Retaining Wall construction suppliers in WA.

Regards Greg

Greg Hamilton | Senior Engineer
Bunbury Manager

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consulting engineers

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[Quoted text hidden]

Andrew Laughton <laughton.andrew@gmail.com> 20 November 2012 at 16:16
To: Greg Hamilton <ghamilton@structerre.com.au>

Hi Greg

Yes please, I would like a quote for the grouting design option.

Andrew.

[Quoted text hidden]

Andrew Laughton <laughton.andrew@gmail.com> 10 May 2013 at 15:01
To: mborthwick@bunbury.wa.gov.au

----- Forwarded message -----

From: "Andrew Laughton" <laughton.andrew@gmail.com>

Date: 20/11/2012 1:13 PM

Subject: Re: #11b Keble Heights, College Grove

To: "Kylie Heydon" <kheydon@structerre.com.au>

Cc: "Mary Verboom" <mary.verboom@gmail.com>, "Marion 11 Keble" <mazzalewis@westnet.com.au>

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572K

Murray Borthwick <mborthwick@bunbury.wa.gov.au> 15 May 2013 at 13:34
To: Andrew Laughton <laughton.andrew@gmail.com>

Hi Andrew,

Sorry it has taken a while before I could get back to you. As I explained it could take a few days before I could get the records from our archives.

Firstly, I don't think I can be of any great help to you as it looks like it will be a civil matter between you and the adjoining property owner.

I have found the 2 building permits issued for retaining walls to your property.

- B/ 11335 is to do with the retaining wall to the west or lower part of your property.
- B/ 11489 is the wall in question. If this is the wall, it is your wall. Unfortunately the documents are a bit vague as in some of the documentation refers to it as a retaining wall. Written on the site plan (and not clearly marked) is reference to a limestone block wall. 1 block below ground level and 1.750 above ground. There are engineers details for a retaining wall in the pack. However it is not clear to what level the wall was built to.

Reading the engineers report you had done, it looks like there could be a combination of factors affecting movement in the wall. Such as;

- Extra surcharge from the above works and extra sand.
- Some doubt to what standard the wall was built to in the first place.
- The 'I' bolt steadying the tree.

It shows on our mapping that there is a sewer line behind that wall. Unless there has been any structural movement in that line/trench. I don't know if there would be any consequences to your wall.

I suggest the only real plan of action is mediation with your neighbour and consultation with the engineer for the best course of action.

If the fence was intact prior to the event. It would seem the placement of sand against the fence caused the fence to fail?? However if you can negotiate, without appointing blame, get the whole wall/fence jointly rectified would be the best outcome.

Regards

Murray Borthwick

Technical Officer

Development Services (Building)

City of Bunbury

Phone: [08 9792 7068](tel:0897927068)

Fax: [08 9792 7184](tel:0897927184)

TTY: 133 677

PO Box 21 Bunbury, WA 6231

www.bunbury.wa.gov.au

From: Andrew Laughton [mailto:laughton.andrew@gmail.com]

Sent: Friday, 10 May 2013 3:01 PM

To: Murray Borthwick

Subject: Fwd: Re: #11b Keble Heights, College Grove

[Quoted text hidden]

Andrew Laughton <laughton.andrew@gmail.com> 15 May 2013 at 14:45
To: Murray Borthwick <mborthwick@bunbury.wa.gov.au>
Bcc: "mailto:Marion 11 Keble" <mazzalewis@westnet.com.au>

Hi Murray

Thank you for that.

What do I need to do to get a copy of building permit [B/ 11489](#) ?

[Andrew](#).

[Quoted text hidden]

Murray Borthwick <mborthwick@bunbury.wa.gov.au> 15 May 2013 at 15:15
To: Andrew Laughton <laughton.andrew@gmail.com>

Hi Andrew,

You need to get a ' Building Plan Request' form off our web site. Follow path Residential- Building Services- Building Forms & costs or charges. And find the form.

The cost is \$67.05

When you get it and want me to go over it with you, ask for me at counter.

Regards

Murray Borthwick

Technical Officer

Development Services (Building)

City of Bunbury

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Fax: [08 9792 7184](tel:0897927184)

TTY: 133 677

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www.bunbury.wa.gov.au

From: Andrew Laughton [mailto:laughton.andrew@gmail.com]

Sent: Wednesday, 15 May 2013 2:45 PM

To: Murray Borthwick

Subject: Re: Re: #11b Keble Heights, College Grove

[Quoted text hidden]

Andrew Laughton <laughton.andrew@gmail.com>
To: Steve Woodhouse <swoodhouse@wml.com.au>

1 August 2014 at 18:39

Hi Steve.

Here is an email that might be of interest to you.
I did try to find an original scan that might of been emailed to me, but I must of just picked up a photo copy.
These are scans of what I have, so you have third hand copys.

The Builders name is J Basile.

Andrew Laughton.
[Quoted text hidden]

2 attachments



ApprovalToBuild1994-07-07.jpg
251K



Envelope.jpg
332K