BG&E Ref St Maroun;s College- Heritage Wall-LTR-ST-0001.docx

10 February 2025

Greg San Miguel

Email: Greg San Miguel <gsm@lotj.com>

Dear Greg,

Re: St Maroun's College- Heritage Boundary Wall

BG&E Pty Limited, a chartered consulting engineering firm and member of Consult Australia, has been requested to review the Heritage Boundary Wall located on the northern boundary at the rear of properties 29 and 31 Challis Ave, Dulwich Hill. A visual inspection was also carried out by Vince Betro- Director at BG&E Pty Limited. The following documents have been provided to be reviewed.

- Structural Soundness Certification Letter produced by ROC Engineering Design dated 06/05/2024
- Maintenance Plan drawing produced by ROC Engineering Design dated 06/05/2024- drawing number S01/Rev A
- Development Application Conditions -29 March 2023. Condition 35
- Modified DA Condition 35- MOD 2024/0380 – 06.02.2025
- 24082 ST-ST MAROUNS WALL.pdf- Wall Strengthening Drawings- ROC Engineering Design Drawing S00/R2, S01/R2, S10/R2, S11/R2, S12/R2 and S15/R2- Issued "For Tender" dated 30/09/2024

Visual Site Inspection

A visual site inspection was carried out by Vince Betro on 4th February 2025 of the Heritage Wall located at the rear of properties 29 and 31 Challis Ave, Dulwich Hill. It is evident to see that the wall has experienced significant rotation towards the properties and is leaning significantly towards the properties. Temporary strutting supports have been previously provided into property at 31 Challis Ave to support the wall. The two supports have been provided at the two boundaries adjacent to the heritage wall.

The heritage wall is approximately 3.3m in height and we understand is 230mm thick. There is no detailed information provided on the foundations. We understand that in some areas the wall has a series of buttresses located within the St Maroun's site to stabilise the wall however it is predominantly a cantilever self-supporting wall. It also appears that the wall is not retaining any soil and is solely acting as a boundary wall.

Structural Soundness Certification Letter produced by ROC Engineering Design dated 06/05/2024

A certification letter has been produced by ROC Engineering Design that states the following:

"ROC Engineering Design, being professional engineers, certify that the existing heritage boundary brick wall is structurally sound subject to the maintenance plan on ROC document 24082 S01 [A].

This certificate shall not be construed as relieving any other party of their responsibility."

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This certification is reliant on the remediation of the heritage wall based on maintenance plan developed by ROC Engineering Design dated 06/05/2024- drawing number S01/Rev A. This certification in our professional opinion does not cover the temporary case prior to the remediation works being carried out. We highlight that the remediation works proposed are to be carried out up to 5 years after the issue of drawings dated 06.05.2024.

It is unclear how ROC Engineering Design has come to the conclusion that the heritage wall is structurally sound.

We are not aware of any detailed investigation works having been carried out on the wall, including exposing of footings to determine the size and depth of footings. We have not been provided with any geotechnical testing results on the founding ground material of the wall. We are unclear about any monitoring of the wall that may have taken place over the last few years. All the above items are crucial when providing statements or opinions about the structural soundness of the wall. In our professional opinion we would not be able to provide a certification without having information of the above items.

Maintenance Plan drawing produced by ROC Engineering Design dated 06/05/2024- drawing number S01/Rev A

A structural remediation plan has been produced by ROC Engineering Design that outlines their recommendations to remediate the wall.

The drawing has been "Issued for Construction –(IFC)". In our professional opinion this drawing appears to be a costing drawing. There is information provided about costing of piering that typically would not be provided on an IFC drawing. There is also some crucial information regarding the existing foundations of the heritage wall that appear to have been assumed which we believe will need to be confirmed on site. The drawing also depicts strengthening details that are idealistic and do not reflect the on-site condition of the wall, in particular its significant lean. The details of fixing into the existing wall would need to be modified to accommodate the increased offset of the wall at the top of the wall.

The strengthening works require cutting out of the exiting foundations and installing piers hard up against heritage wall. Carrying out such works significantly increases the risk of further damage of the wall, especially piering so close to the existing wall. We note that temporary supports are required either side of the wall prior to carrying out the works. It is our understanding that these works have not been the subject of consultation with the neighbours to get access to their properties to carry out these temporary works.

The maintenance plan also refers to the remediation works being carried out in stages 1, 2 and 3. The timing of the stages is referenced back to the issue date of the drawing. Stage 1 remediation is required to be carried out within 6 months of the drawing being issued, Stage 2- 24 months and Stage 3- 5 years. Based on this information Stage 1 should have already been carried out, however we understand that no remediation works have been carried out. We also note that for each stage of the remediation works, inspections and monitoring of the wall have been requested prior to the works being carried out. Stage 1- 2 months prior, Stage 2- 6 months prior and Stage 3-12 months prior. We are not aware of any inspections or monitoring that has been undertaken on the heritage walls as part of Stage 1 remediation.

BG&E have concerns regarding the staging and timing of works and how these timeframes have been determined especially if there is no survey data on the movement of walls and if stage 3 remediation is not being carried out until 5 years after the issue of drawing i.e. July 2029.

Carrying out the construction works for the proposed development prior to carrying out the remediation works will significantly increase the risk of the wall rotating further or even collapsing into the neighbouring properties. The heritage wall has obviously experienced significant movement to the point that temporary supports have been provided into neighbouring properties to support the wall.

Wall Strengthening Drawings- ROC Engineering Design Drawing S00/R2, S01/R2, S10/R2, S11/R2, S12/R2 and S15/R2- Issued "For Tender" dated 30/09/2024

Wall strengthening drawings have been produced by ROC Engineering Design that outlines their recommendations to remediate the wall which were "Issued for Tender" 30/09/24.

These drawings seem to replicate similar information that has been produced as part of the Maintenance Plan drawings which has previously been issued "For Construction", 06/05/24. It is unclear if these drawings supersede the Maintenance Plan drawings. Similar to comments provided above, the rectification details provided do not reflect

the on-site condition of the wall, in particular its significant lean. We also have concerns about piering so close to the existing heritage wall as indicated on the alternative footing detail for wall strengthening.

Development Application Conditions -29 March 2023. Condition 35

"35. Structural Adequacy of Heritage Boundary Wall
Prior to the issue of a Construction Certificate, the Certifying Authority is to be provided with evidence from a suitably qualified structural engineer that the existing heritage brick boundary fence is structurally sound."

In reviewing this condition, the certification provided by ROC Engineering Design in our opinion does not satisfy this requirement because it is conditioned on rectification works being carried out.

Modified DA Condition 35

> **35. Structural Adequacy of Heritage Boundary Wall**
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> Prior to the issue of a Construction Certificate in relation to the relevant stage of development, as referred to in the approved Overall Staging Diagram (21049 DA-915 Issue F prepared by Leaf Architecture and dated 02/10/2024), the Certifying Authority is to be provided with evidence from a suitably qualified structural engineer that the existing heritage brick boundary fence is structurally sound.
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> ***(Condition amended – MOD/2024/0380 – 6/02/2025)***

In reviewing the updated condition, BG&E are still of the opinion that the certification provided by ROC Engineering Design does not satisfy this updated requirement because it is conditioned on rectification works being carried out.

Also, based on the lack of evidence to demonstrated structural soundness of the existing heritage wall and ROC Engineering Design proposing that remedial works be carried out to achieve structural soundness, it's clear that no works as part of the new development can be carried out until these works are completed.

Conclusion

Based on the above information that has been provided to us to review, in our professional opinion we would firstly recommend that remediation works for the heritage wall are carried out prior to any building works being carried out on St Maroun's site as part of the new development. Any proposed building works that are carried out could pose a potential risk to the existing heritage boundary wall that has a significant lean into the neighbouring properties. The risks include further movement and damage to the wall or even collapse of the wall.

We would recommend that detailed investigation be carried out on the heritage wall especially the foundations/founding material and including a detailed survey drawing of the wall's verticality. Installation of survey monitoring points as soon as possible will also assist in providing data on the wall's possible movement. Remediation details and plans must be developed that reflect the onsite condition of the heritage wall.

The heritage boundary wall is an externally high wall that is showing signs of significant lean and in our opinion the current proposed remediation and timing of works does not mitigate the risk of potential further damage/movement or collapse of the heritage wall causing serious injury or even death.

We trust the above is sufficient for its intended purpose, please do not hesitate to contact the undersigned if you have any questions.

Yours sincerely

BG&E

Vince Betro
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