FPD Pty Ltd
File Planning & Development Services

9 December 2021

Amy Watson
Team Leader
Key Sites Assessments
Department of Planning, Industry and Environment
4 Parramatta Square, 12 Darcy Street
Parramatta NSW 2150

Sirius Building (SD-10384-Mod-1) – Response to request for further information

Dear Amy,

I refer to your letter dated 18 November 2021 seeking further information on the proposed modification and your subsequent letter seeking a response to submissions. These matters are addressed within this letter which is supported by the following documents.

The overwhelming objective of the project is the retention and adaptive reuse of the Sirius building and to ensure that the building has an ongoing viable use that contributes to the surrounding area. In this regard the activation provided by the approved development along Gloucester Walk and the approved through site link are significant contributors to these aims.

The proposed tree planting in the approved development and further compensatory planting will ensure good amenity and safety on the site and surrounds across the short, medium and long term.

This response is supported by the following documentation:

- Attachment A – Additional structural engineering advice from SCP Engineers (9 December 2021)
- Attachment B – Additional structural engineering advice from SCP Engineers (25 November 2021)
- Attachment C – Additional arborist advice from Landscape Matrix (9 December 2021)
- Attachment D – Additional arborist advice from Landscape Matrix (22 November 2021)
- Attachment E – Updated previous arborist advice from Landscape Matrix (29 November 2021)
- Attachment F – Advice from Richard Crookes Constructions (6 December 2021)
- Attachment G – Landscape Architect advice from 360^0 (8 December 2021)
- Attachment H – Landscape Architect advice from 360^0 (25 November 2021)
- Attachment I – Landscape Architect response from 360^0 to City of Sydney submission (3 December 2021)
- Attachment J – Updated landscape plans from 360^0
- Attachment K – Updated heritage assessment from Urbis (11 November 2021)
- Attachment L – Updated proposed changes to conditions.

1. Identify alternative options that have been investigated to retain the two existing Plane Trees

The original SSD proposal sought to retain the two existing trees along Gloucester Walk, however further engineering investigations has been undertaken by SCP Engineers as part of the detailed design which has determined that this will not be possible due to the condition of the retaining wall along Gloucester Walk.

SCP engineers has advised that to certify the completed project to the current BCA and that due to its current condition the existing retaining wall at Tree T50 and Tree T51 cannot currently be certified. A range of options to address this have been explored by Dedico in consultation with SCP Engineers (Attachment A), Landscape Matrix Arborists (Attachment C) and Richard Crookes Constructions (Attachment F). This advice concludes that the only feasible option to enable the certification of the wall would be the option which has been presented previously, being to replace the existing failed wall with a new code compliant wall in its current location (see option 3 below).

The options and findings are summarised below.

Option 1: Install rock anchors into the existing retaining wall at Tree 50 and 51

This option would involve the existing wall being retained in place and be anchored beyond the site boundary with permanent rock anchors. The anchors would extend through the existing wall and root system and would require a permanent easement under Gloucester Walk across Place Management NSW land.

However, SCP Engineers has advised that that this option cannot be supported as outlined below.

> *There are a number of geometric and engineering issues in relation to this option that render this option not feasible from an engineering standpoint:*
>
> - *The anchor length required is more than the overall width of Gloucester Walk. That is 6 to 7m of overall horizontal projection length is required and only 5 to 6m is available*
> - *The existing retaining wall does not have front face reinforcement (only rear face reinforcement is installed) thus stressing of the installed anchor can fail the existing wall at the base on the basement side causing a catastrophic failure of the existing wall*
> - *There is also potential to damage the rock on the eastern side of Gloucester Walk as grout can ingress through rock defects or other voids in Gloucester Walk whilst being installed under pressure, causing potential blow out on the east side of the rock cliff face.*

The Arborist has further advised that:

> *Without further detailed design information and investigation (including root mapping) it is not possible to accurately identify the impacts to the trees arising from this option. However, given the extent of works required and proximity to the trees, it is considered probable this option would have a significant impact on the trees.*
>
> *To investigate this option further from a tree perspective, root mapping would need to be undertaken using an 'air-knife' or water jet under supervision of an AQF Level 5 arborist. This would involve carefully removing the soil around the proposed location of all of the anchors to identify the location, depth, dimensions etc of any roots that would be impacted by the works.*
>
> *Following the collection of data through the root mapping an analysis would be undertaken to assess the likely impacts of the works.*
>
> *However, I confirm my advice that there would be no justification to undertake the disturbance associated with this investigation if the option of rock anchors is not a viable option from an engineering perspective.*

On the basis of the advice provided it is determined that this option would not be feasible given the limited space available and significant risks and as a result there would be no benefit of undertaking further root mapping in this location.

Option 2: Build a new soldier piled wall in front of the existing wall on the basement side

This option would involve construction of a soldier pile wall built in front of the existing wall to retain the wall with piles of 500mm diameter to be cored 3 to 4m below the basement level.

Whilst the Arborist has advised that this option may be feasible in terms of protecting the tree, Richard Crookes Construction have provided supporting documentation to indicate that the machinery required to undertake the piling works cannot be positioned in place to undertake the work as there is insufficient room in the existing basement to manoeuvre the machine in place nor drill the piles due to the restricted head height within the existing basement.

One the basis of the advice provided it is determined that this option would not be suitable due to the construction limitations.

Option 3: Replace the existing failed wall with a new code compliant wall in its current location

This option has formed the basis of the proposed modification presented to date, and involves the removal of the existing wall, battering and rebuilding the wall with a compliant design. The Arborist has advised that:

> *These works would have a significant impact on the trees and would almost certainly render the trees unstable and at risk of failure in the short term. Given the high levels of target (human) activity in the immediate vicinity of the trees their removal, prior to commencement of works, was identified as the only option if the works were to proceed as proposed*

Accordingly, it is understood that this option would enable certification of the new wall but would require removal of the two existing Plane Trees.

Based on the information provided by SCP Engineers, Landscape Matrix Arborists and Richard Crookes Constructions the only feasible option that will enable SCP Engineers to certify the completed structure is the removal and replacement of the wall, which will necessitate the removal of the two existing trees on Cumberland Street.

As outlined previously and in Section 3 of this letter, the applicant has proposed four replacement trees to mitigate the loss of the existing trees and to retain and improve the canopy cover within the public domain surrounding the Sirius Building.

2. Clarify if the existing two Plane Trees are naturally occurring

The existing Plane Trees are exotic species and are not 'naturally occurring'. The two trees did not form part of the original landscaping / planting scheme for the Sirius Building as they are not included in the original landscape plan prepared for the site being Plan No. A61 (Housing Commission of NSW 1977). This plan is included with the additional advice provided by the Arborist (Attachment D).

Accordingly, it is understood that the plane trees would have established sometime after the construction of the Sirius Building. Advice from the arborist indicates the species choice is not the most appropriate for the Gloucester Walk location.

Further, the Heritage Assessment which was submitted with the Modification also confirmed that the trees do not form part of the original site landscaping and that they are not considered to make a significant contribution to the heritage significance of the place.

3. Clarify if the proposed four trees mitigates the proposed tree removal as a canopy cover lost to the proposal, will in time, be restored with better performing and more varied plantings

The existing Plane Trees have aggressive root structures and broad canopies making them unsuitable for their locations. The trees have caused damage to surrounding walls, pavements and pipes which will worsen over time.

The modification proposes to replace the trees with four smaller trees with similar characteristics (*Nyssa sylvatica* – Black Tulepo). The Landscape Architect has provided advice (Attachment G) advising that like Plane

Trees, *Nyssa sylvatica* is a deciduous tree which displays autumn colour yet has a columnar canopy more suitable for tighter spaces. As a smaller and less aggressive tree, its root system will be more suitable than the Plane Tree, and its canopy shape and form more compatible to the space.

Nyssa sylvatica has also been chosen as it has been approved for street tree planting in Cumberland Street. Ten *Nyssa sylvatica* will be planted along Cumberland Street, bringing the total new tree plantings surrounding the Sirius Building to 14 (Refer L-DA-034 Proposed Street Tree Plan Rev I dated 25.11.21). This use of a consistent tree species will link Gloucester Walk with Cumberland Street, enhancing the amenity and identity of the precinct.

The Arborist (Attachment D) has advised that the proposed replacement species is a deciduous species that can be expected to achieve mature heights of around 15m or more and canopy spreads of 8 to 10 metres.

The canopy cover diagram prepared for the modification have been updated to include canopy spreads of 8m consistent with the advice of the arborist. These trees had previously been calculated as having 6m canopy spreads.

The updated Landscape Plans (Attachment I) include a comparison of the existing and proposed canopy cover of public domain trees surrounding the site. This concludes that overall canopy cover of public domain trees would increase from 486sqm to 746sqm based on the approved landscaping and the proposed modification. This represents a significant increase of 260sqm. It is also important to note that the existing plane trees provide canopy cover over an isolated portion of Gloucester Walk. The approved and proposed street trees are distributed around the site would provide for a better distribution of canopy cover across the public domain providing for enhanced shading of key pedestrian pathways and delivering improved amenity and reducing the urban heat island effect.

On this basis it is considered that the proposed replacement trees along with approved planting within the public domain would more than mitigate the canopy cover lost as a result of the tree removal and will provide an improved canopy cover and amenity outcome.

4. Clarify if the proposed tree planting will improve the mix of indigenous and native plantings improving biodiversity outcomes

Whilst the proposed replacement trees are not indigenous or native species they are considered a suitable tree species for street and public domain planting.

5. The replacement plantings, together with the extensive other plantings proposed in the current landscape plans, will provide for an improved and diverse range of species.

The proposed replacement trees will compliment the wider landscape planting proposed for the Sirius Building to improve the plant diversity within the local area.

6. Reference the latest architectural and landscape plans.

The following documents have been updated to reference the latest architectural and landscape plans:

- Heritage Impact Assessment (Attachment J)
- Proposed changes to conditions (Attachment K)
- Previous arborist advice (Attachment E).

7. Respond to submissions received during re-notification

Submissions were received from Place management NSW, City of Sydney and Heritage NSW. Heritage NSW did not raise any issues with the proposed modification. Issues raised by City of Sydney and Place Management NSW have been considered and addressed in the table below.

Issue	Response
City of Sydney	
The removal of the high landscape value trees is not supported by the City and modifications to the proposed design are recommended that would involve typical work methods (i.e. tree sensitive methodologies to retain the existing soil/retaining wall) to allow the trees to be retained. This may include a new retaining wall along the existing retaining wall within the carpark and relocation / redesign of the proposed pad footing for the new podium.	All potential options for retaining the existing soil / retaining wall have been explored as outlined in Section 1 of this letter. This has included consideration of construction of a new retaining wall alongside the existing retaining wall, however this cannot be constructed due to access constraints to the existing basement.
The amended Landscape Plans prepared by 360 Degrees dated 29 October 2021 'Revision H' highlights the replacement planting of Trees 50 and 51 as a recent amendment, however, the proposed species has also changed. As an example, an *Ulmus parvifolia* 'Yarralumla' (Chinese Weeping Elm) has been changed to three *Livistona australis* (Cabbage Palm). Some other tree species have been amended in accordance with previous recommendations.	Council is referring to superseded drawings, and not the approved drawings. The Landscape Architect has advised (Attachment H) that the changes the Council is referring to were reviewed with City of Sydney prior to the submission of the final approved set which reflects the outcome of those discussions.
It is recommended that a complete detailed and scaled landscape plan, prepared by a qualified landscape architect or landscape designer be submitted for further consideration. The landscape plan should include: (i) Details of earthworks and soil depths including mounding and retaining walls and planter boxes (if applicable); (ii) Location, numbers, type and supply of plant species, with reference to the relevant Australian Standard; (iii) Details of planting procedure and maintenance; (iv) Details of drainage, waterproofing and watering systems.	These matters will be addressed in accordance with Condition B7 of the approval which requires a detailed site landscape design to be prepared in consultation with Council and PMNSW and approved by the Planning Secretary. The applicant will continue to liaise with DPIE and City of Sydney on these matters.
Place Management NSW	
PMNSW notes that it has issued landowners consent on the basis of the understanding that the trees cannot be retained due to the need to replace the retaining wall to ensure compliance. However, PMNSW raised no objection to further exploration of options as part of the Response to Submission.	PMNSW's response is noted and further exploration of options has been carried out as outlined in Section 1 of this letter.

We trust this addresses your concerns. Please contact Anna Johnston on 0401 330 707 if you require any further clarification.

Regards,

Michael File
Director