Level 17, 123 Pitt Street
Sydney NSW 2000
info@bhmgeo.com.au
www.bhmgeo.com.au

Our Ref: HNL 2310 – AA Rev. 1

15 August 2023

Hanlon Industries Pty Ltd
Via email dean.j@hanlonindustries.com.au

Attention: Mr. Dean Johns

Re: **Digital LED Sign Development**
Western Distributor, Pyrmont NSW 2009
ROCK STABILITY INSPECTION

1. Introduction

Mr. Dean Johns commissioned BHM Geotechnical Pty Ltd on behalf of "Hanlon Industries" ("the client") to undertake a site inspection at "Western Distributor, Pyrmont NSW" ("the site") in accordance with our emailed proposal dated 7 August 2023 and emailed commission by the client dated 7 August 2023. The work was conducted at the above site by a geotechnical representative working on behalf of BHM Geotechnical Pty Ltd on the 8th of August 2023.

This report discusses the following works:

- A response to the following instructions from the client: To provide a structural adequacy report noting that the sandstone cutting is able to withstand pressure from any core drilling required to install the signage structure as well as live load pressures after the sign has been erected. Based on this report would you be able to provide confirmation that the embankment has sufficient structural adequacy noted above.

2. Site Description

The proposed development lies in the light rail corridor towards the northeastern section of the Western Distributor, Pyrmont. It is positioned on the northern portion of Pyrmont Bridge Road. This arrangement rests atop of a tiered sandstone shelf covered in low ground vegetation, situated between the boundary fence of the light rail corridor and the brink of the rock cutting. Some minor trees, woody weeds, and grass can be seen from both the road and the nearby Fish Market light rail station. Management of vegetation is subject to the recommendations in the arborist report by Matthew Reed Trees. Additionally, a sandstone rock cutting is noticeable from the Fish Market light rail station.

3. Methodology

Field work was carried out by our BHM representative and comprised a visual assessment of the foundation material and a walkover of the immediate surroundings. Field assessment of soils was done by a suitably qualified geotechnical engineer in accordance with Australian Standards AS 1726:2017 – "Geotechnical Site Investigations".

Field assessment of visible rock face were undertaken by a suitably qualified geotechnical engineer in accordance with field assessments performed on rock as per tables 19 and table 20 of the Australian Standards AS 1726:2017 – "Geotechnical Site Investigations".

4. Response to Instructions

During our assessment, we identified a concrete retaining wall or similar structure on the face of the batter. It is important to note that the extent of this structure and its connection to the natural sandstone bedrock could not be fully determined due to access limitations presented by vegetation and debris. Additionally, we observed the presence of sandstone boulders in the area. The stability of these boulders must be carefully addressed following the removal and clearing of existing ground vegetation and debris. Removal and management of vegetation is subject to the recommendations provided in the arborist report by Matthew Reed Trees.

Nevertheless, we want to emphasise that the construction of the proposed signage structure is geotechnically complex but ultimately feasible. If subject to meticulous and professional management, it is anticipated that there will be no damage or disruption, visual or otherwise to the surround sandstone embankment. BHM Geotechnical (BHM), has well-established in-house procedures to ensure the safety and stability of the ground during geotechnical drilling and investigative works. To elaborate on this process, we have introduced a hold point that will be implemented before relocating the drill rig to its final setup location. This precautionary measure aims to prevent any subsidence or landslip of the underlying soil profile, thus mitigating the risk of any equipment toppling.

Furthermore, our supervising engineer will conduct a comprehensive site walkover, assessing both the immediate surroundings and the site location. To supplement this assessment, additional field tests may be conducted, including the use of Dynamic Cone Penetration (DCP) testing to ascertain the depth of the underlying bedrock.

Once our geotechnical investigation has been completed, we would be in a position to provide detailed recommendations on the stability of the signage structure, both on a temporary basis (during construction) and a permanent basis. Our recommendations will encompass the necessary measures to ensure the structural integrity and safety of the signage structure throughout its lifecycle.

In summary, we believe that with proper implementation of our established procedures and diligent adherence to safety protocols, the construction of the proposed signage structure can proceed safely. Furthermore, if managed appropriately and with professional engineering oversight, it is expected that there will be minimal to no disturbance, whether visual or otherwise, to the surrounding sandstone embankment.

If site conditions change or differ in any way to the information presented in this report, BHM should be contacted for a reassessment and/or further advice.

5. Limitations

The recommendations and conclusions presented in this report are only valid when read in its entirety, no part or section of this report should be read on its own. In the event that any recommendations made in this report are not implemented, this report becomes inapplicable and BHM accepts no responsibility whatsoever for the performance of the structure where recommendations are not implemented in full, properly tested, inspected and documented.

This report has been prepared for the project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose. If there is any change in the proposed development described in the report, then all recommendation should be reviewed.

Should you have any queries relating to this report, please do not hesitate to contact the undersigned.

For and on behalf of
BHM Geotechnical Pty Ltd

Digitally signed by BHM
Date: 2023.08.15 15:07:25 +10'00'

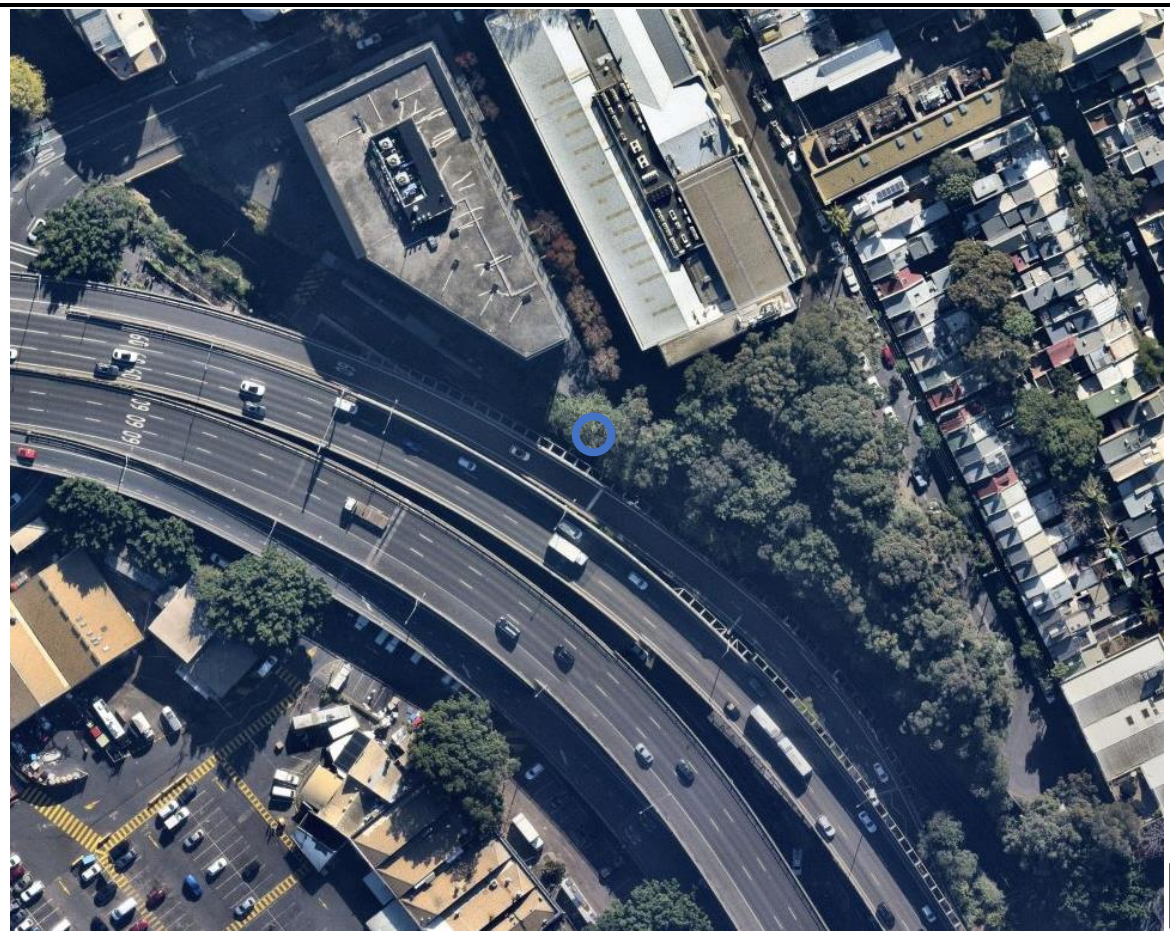
Manney Bandara
Associate|Geotechnical Engineer

Reviewed by

Stephen Muscat
Associate|Geotechnical Engineer

In Encl.
Appendix A – Authentication Token
Appendix B – Proposed Site Plan by Tzannes Architect

6. Site Plan



= Approximate location of sign

BHM Geotechnical	Drawn:	DZ	**Digital LED Sign Development Western Distributor, Pyrmont NSW**	Job No:	HNL 2310 – GEO AA
	Approved:	MB			
	Date:	15/08/2023		Drawing No:	**HNL 2310 – GEO AA plan 1**
	Scale:	NTS			

= Approximate location of sign

BHM Geotechnical	Drawn:	DZ	**Digital LED Sign Development Western Distributor, Pyrmont NSW**	Job No:	HNL 2310 – GEO AA
	Approved:	MB		Drawing No:	**HNL 2310 – GEO AA plan 2**
	Date:	15/08/2023			
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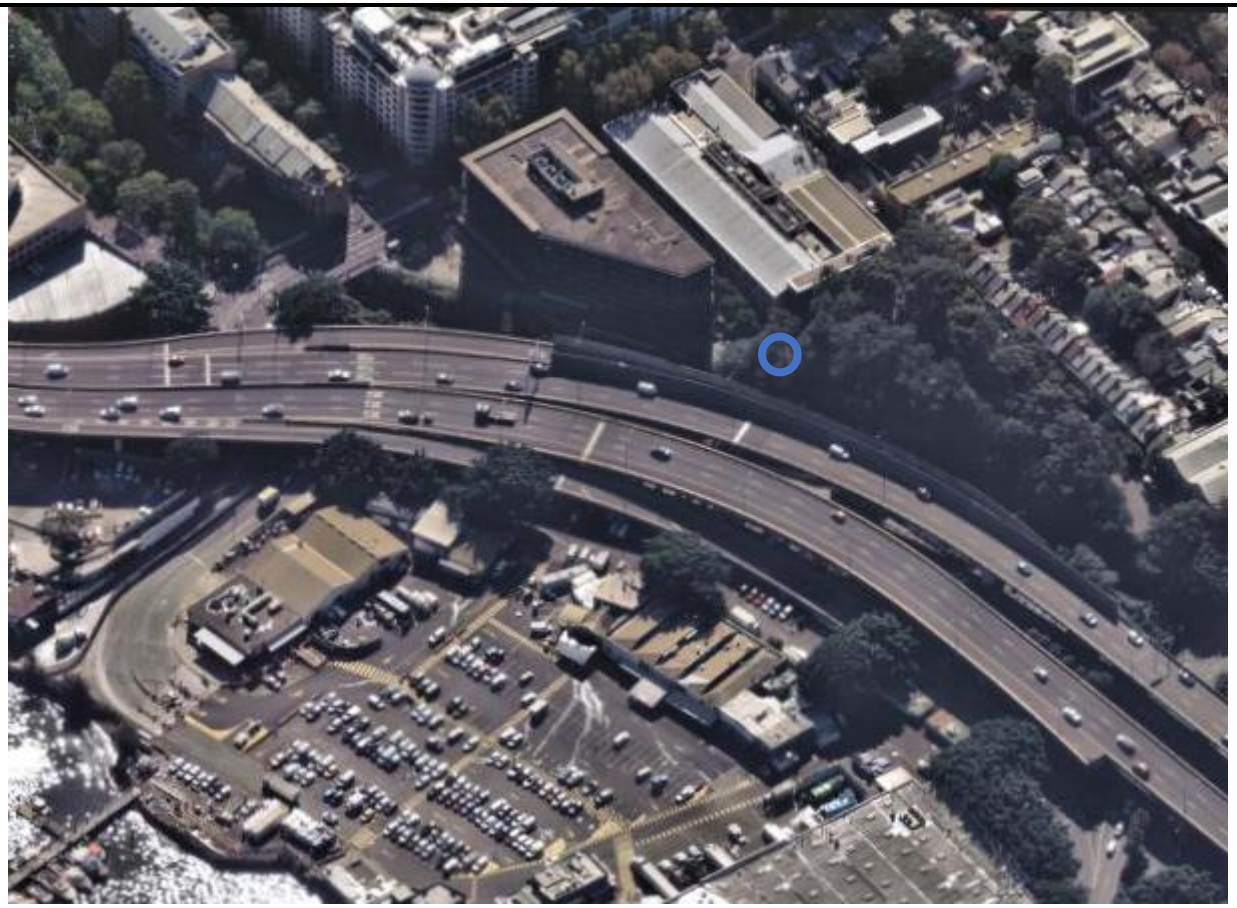

= Approximate location of sign

BHM Geotechnical	Drawn:	DZ	**Digital LED Sign Development Western Distributor, Pyrmont NSW**	Job No:	HNL 2310 – GEO AA
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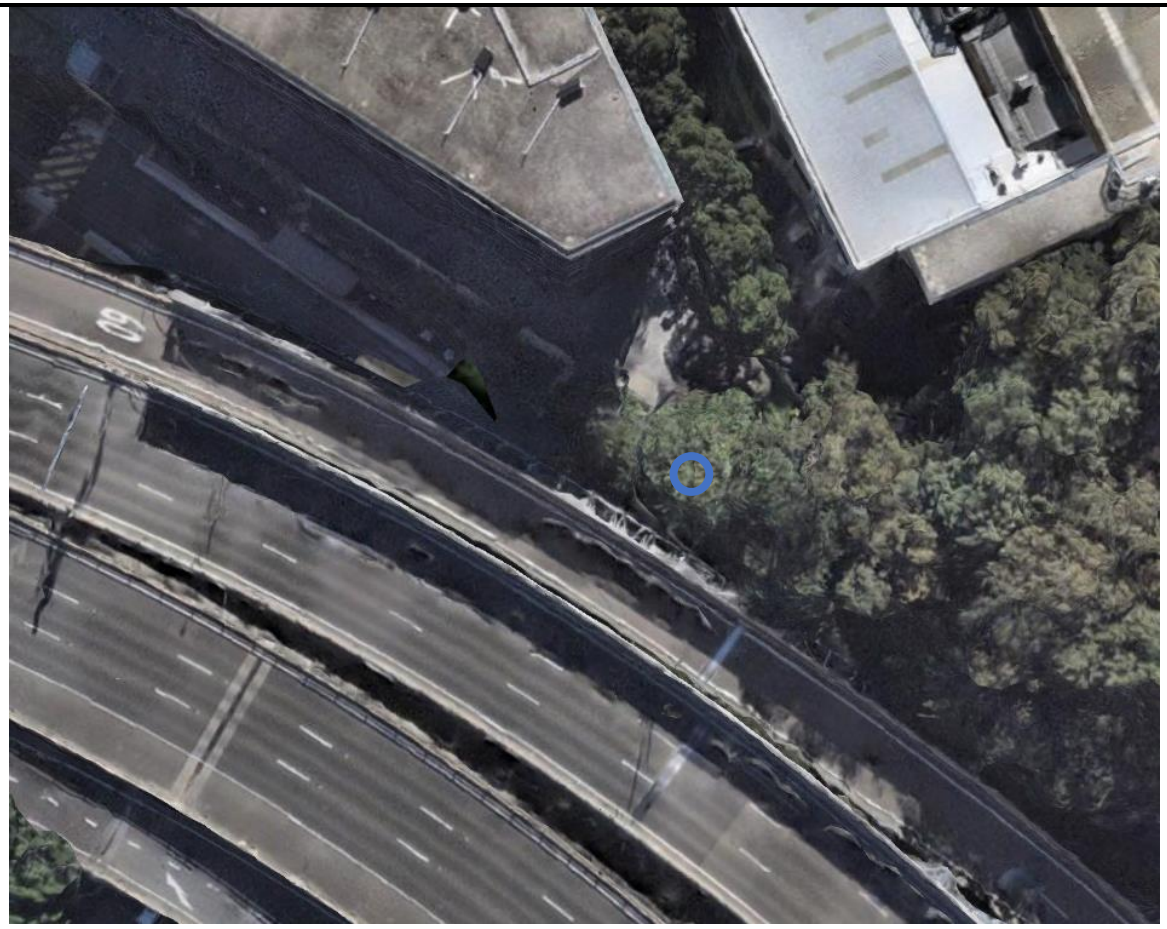

= Approximate location of sign

BHM Geotechnical	Drawn:	DZ	**Digital LED Sign Development Western Distributor, Pyrmont NSW**	Job No:	HNL 2310 – GEO AA
	Approved:	MB			
	Date:	15/08/2023		Drawing No:	**HNL 2310 – GEO AA plan 4**
	Scale:	NTS			

= Approximate location of sign

BHM Geotechnical	Drawn:	DZ	**Digital LED Sign Development Western Distributor, Pyrmont NSW**	Job No:	HNL 2310 – GEO AA
	Approved:	MB			
	Date:	15/08/2023		Drawing No:	**HNL 2310 – GEO AA plan 5**
	Scale:	NTS			

= Approximate location of sign

BHM Geotechnical	Drawn:	DZ	**Digital LED Sign Development Western Distributor, Pyrmont NSW**	Job No:	HNL 2310 – GEO AA
	Approved:	MB			
	Date:	15/08/2023		Drawing No:	**HNL 2310 – GEO AA plan 6**
	Scale:	NTS			

This the document described as

Appendix A

BHM Geotechnical

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If you receive this message, make sure that you are properly connected to the internet. If you have a connection and you still cannot validate the digital certificate online, reject the document.

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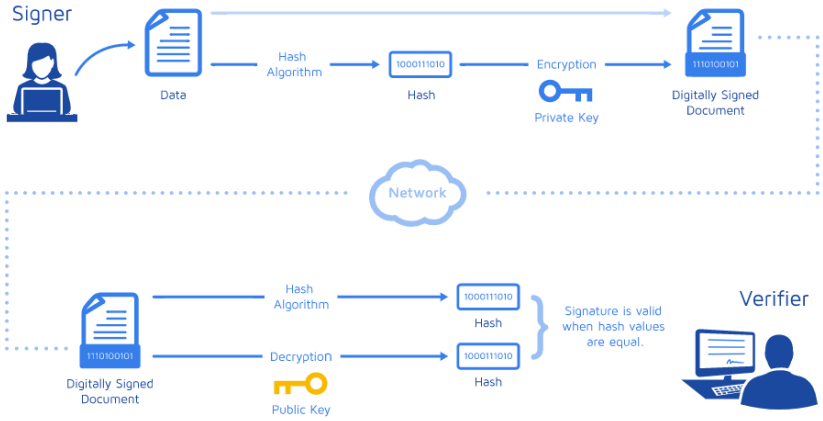

This is the document described as

Appendix B

DRAWING LIST

Drawing No.	Drawing Title	Revision
000	Proposed Site Plan	B
100	Plans	B
200	Elevations	B
300	Sections + Details	B
900	Materials and Finishes	B

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Surry Hills NSW 2010
Sydney, Australia

Nominated Architect

Alec Tzannes 4174
Amy Dowse 8926

General Notes

Verify dimensions on site prior to commencement of work. Check existing RL's on site. Advise Architect of any discrepancies before commencement. Allow for adjustments to suit discrepancies. Comply with relevant authorities requirements. Comply with Building Code of Australia requirements. Comply with relevant Australian Standards for materials and construction practice. Comply with Basix Certificate. Do not scale from drawings.

Rev	Date	For
A	09.05.22	FOR DEVELOPMENT APPLICATION - DRAFT
B	16.05.22	FOR DEVELOPMENT APPLICATION - DRAFT

Client

JCDecaux
02 8066 9100 damien.rath@jcdecaux.com

Structural Engineer

Dennis Bunt Consulting Engineer
02 9451 3455 john@dbce.com.au

Legend

- Protected street trees.
- Protected park trees.
- Unprotected trees on site.
- Site access ladder and landings area

Refer to arborist report.
All other park trees indicatively shown.

Tzannes

Scale

As indicated @ A1

North

Project

JCDecaux Fish Market Light Rail Station

Address

Lot 1012 DP870307
Pyrmont Sydney NSW 2009

Status

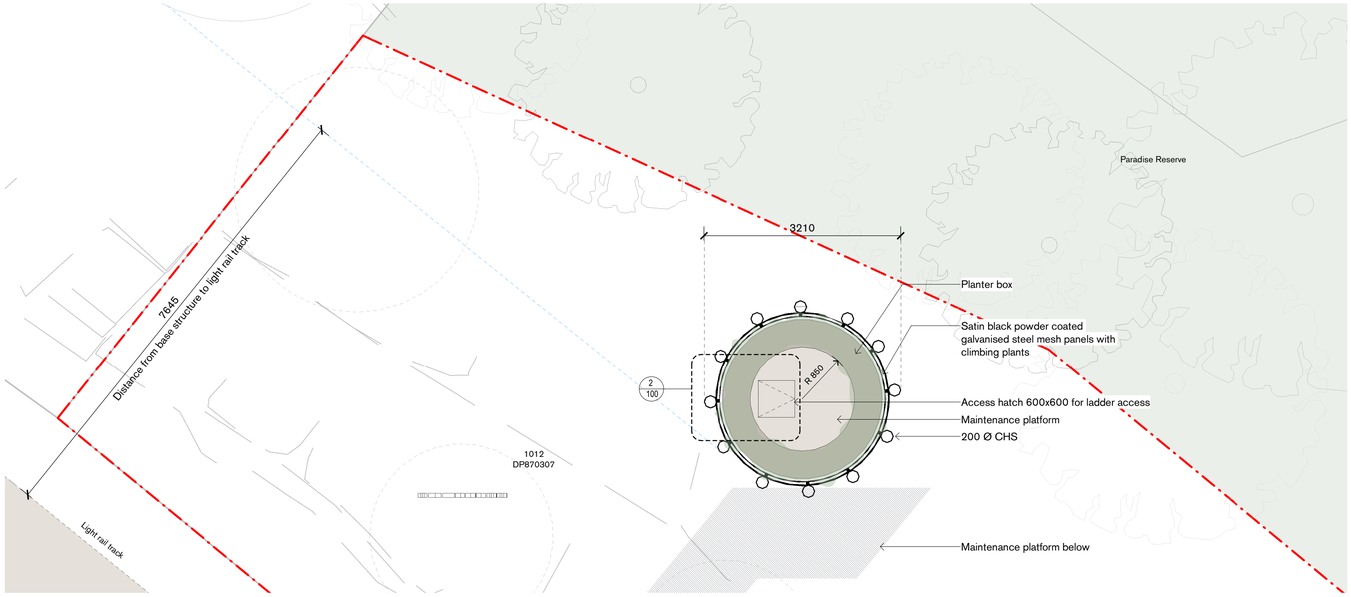
NOT FOR CONSTRUCTION

Drawing

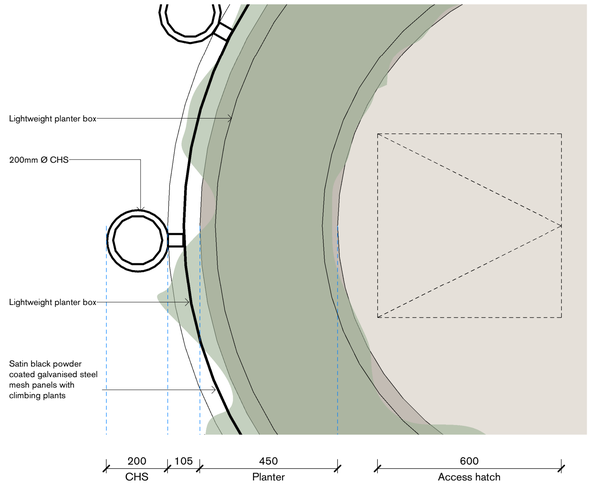
Proposed Site Plan

Date Created	Drawn	Checked
05/05/22	SB	TZ

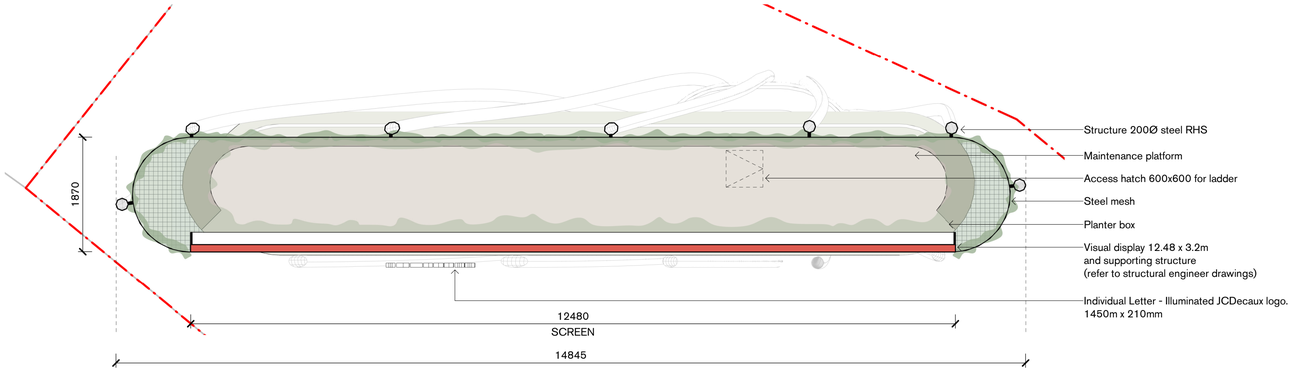
Project No.	Drawing No.	Revision
21034	000	B



1 | Plan @ RL 12.00 - Base
1 : 50



2 | Plan @ RL 19.07 - Base - Callout 1
1 : 10



3 | Plan @ RL 28.50 - Screen
1 : 50

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Structural Engineer

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Legend

Tzannes

Scale As indicated @ A1

North

Project
JCDecaux Fish Market Light Rail Station

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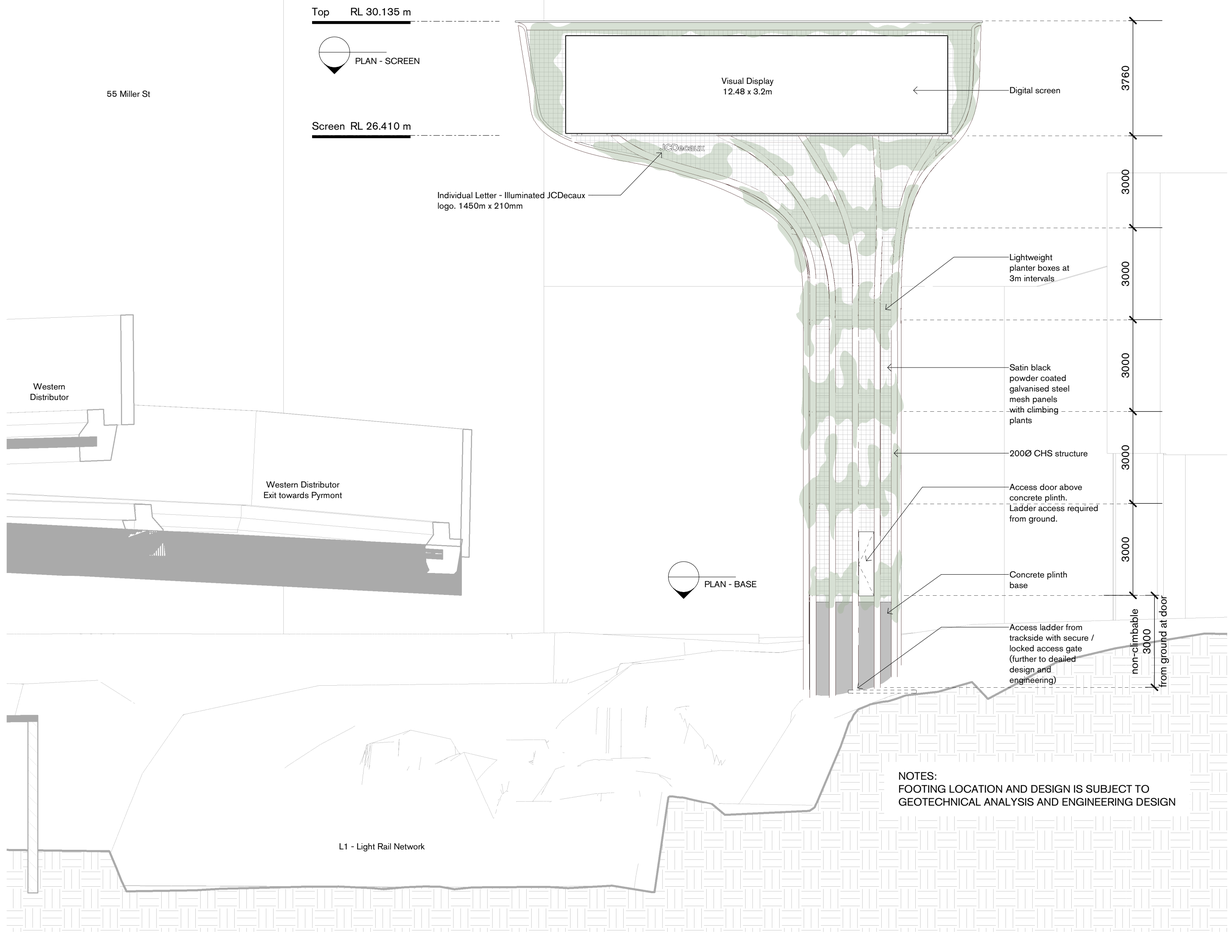
Status
NOT FOR CONSTRUCTION

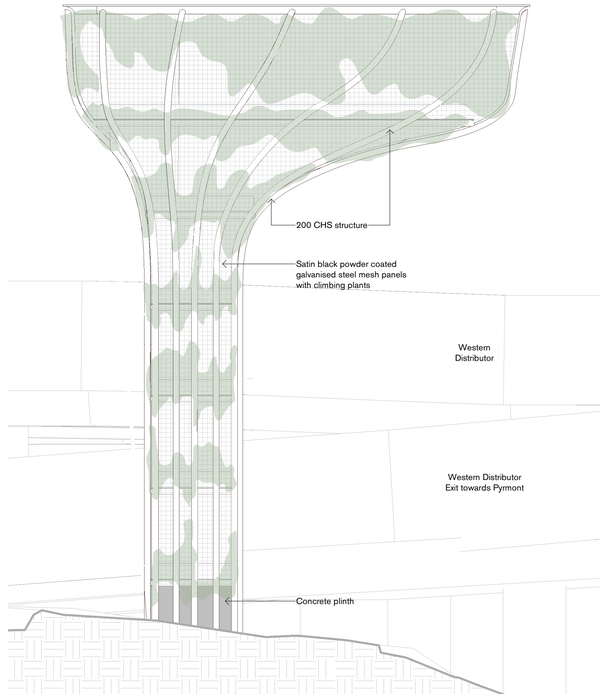
Drawing
Plans

Date Created	Drawn	Checked
05/05/22	SB	TZ

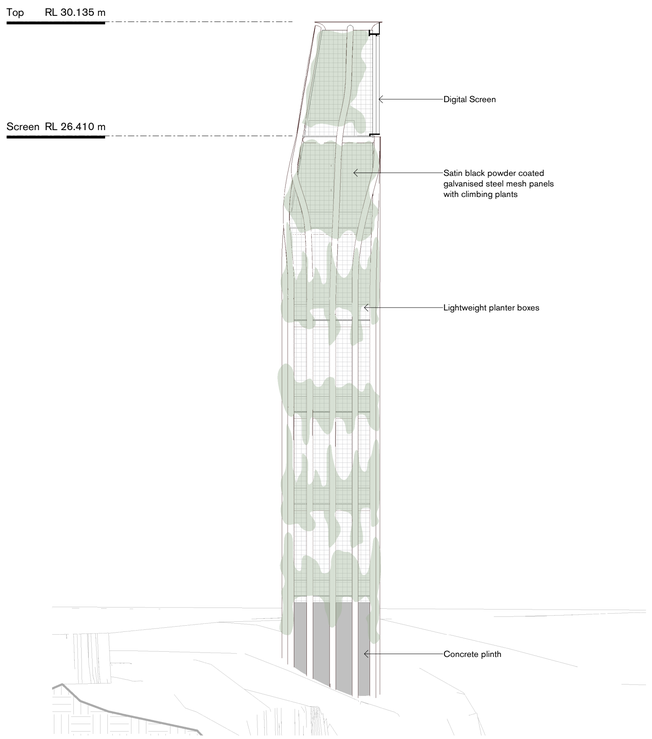
Project No.	Drawing No.	Revision
21034	100	B



1 | Elevation 03_South
1 : 100



2 | Elevation 01_North
1 : 100



3 | Elevation 04_West
1 : 100

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Legend

Tzannes

Scale 1 : 100 @ A1

North

Project
JCDecaux Fish Market Light Rail Station

Address
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Pyrmont Sydney NSW 2009

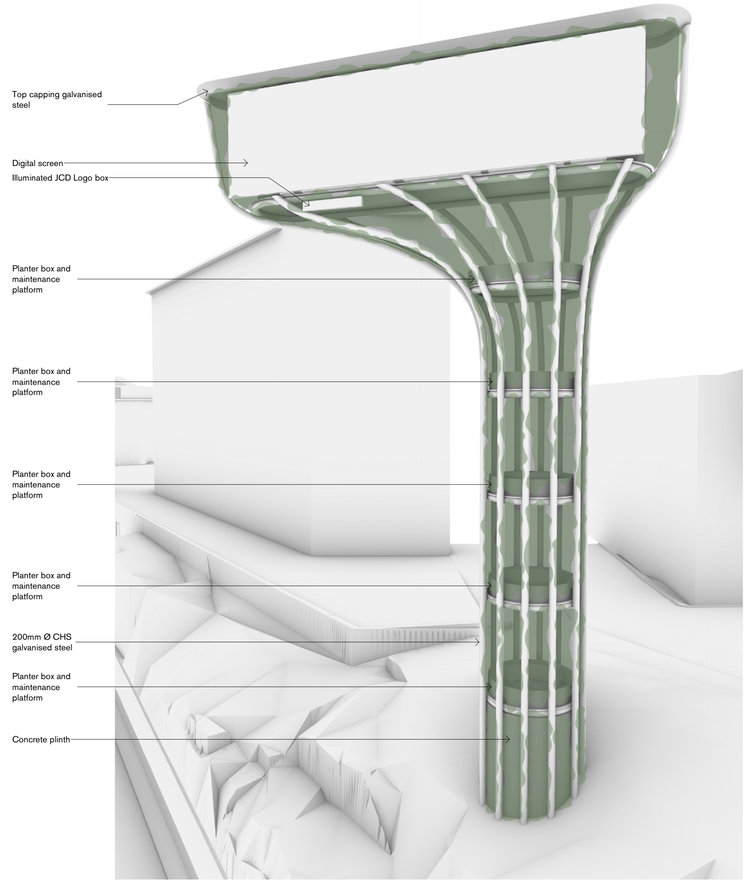
Status
NOT FOR CONSTRUCTION

Drawing
Elevations

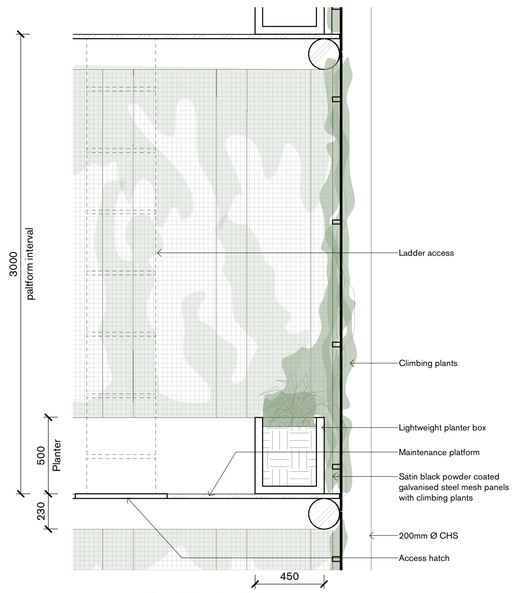
Date Created	Drawn	Checked
05/05/22	SB	TZ

Project No.	Drawing No.	Revision
21034	200	B

1 | Section 1
1 : 100



Axonometric View



4 | Detail Section 01
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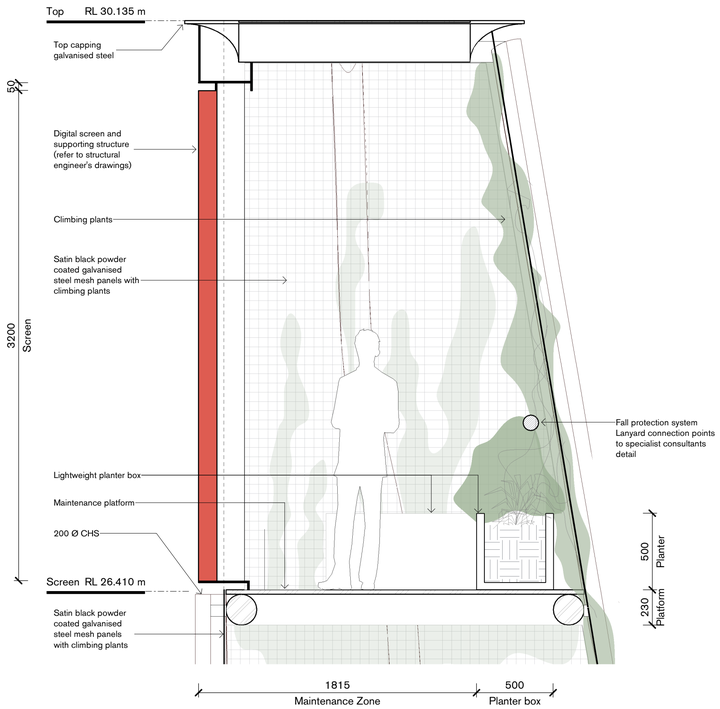

2 | Detail Section 02
1 : 20

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Legend

Tzannes

Scale **North**

As indicated @ A1

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Status

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Drawing

Sections + Details

Date Created	Drawn	Checked
05/05/22	SB	TZ

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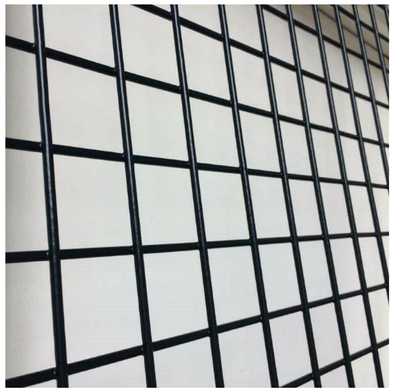
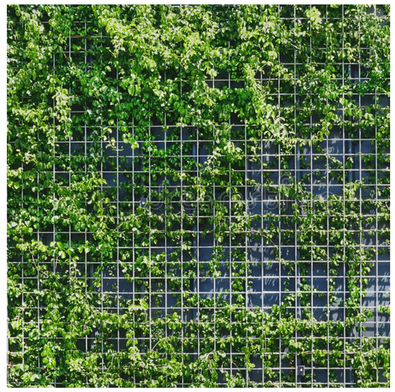
21034	300	B

LED Display Screen

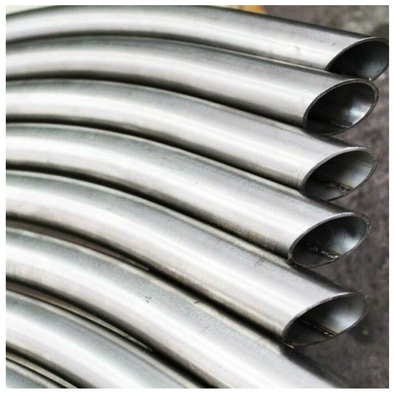
Climbing plants



Satin black powder coated galvanised steel mesh panels



Climbing plants on mesh panel



Galvanised steel pipes 200 Ø External Structure

Exposed Concrete Plinth

Photomontage – Proposed view from Miller Street
Note: This is a computer generated artists impression only. Proposed landscaping illustrated is indicative only and may reveal elements otherwise obscured.

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Materials and Finishes

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21034	900	B