



ABN 23 039 013 724
Level 2, Building 8
Forest Central Business
49 Frenchs Forest Road East
Frenchs Forest NSW 2086

PO Box 652
Forestville, NSW, 2087
PH: (02) 9451 3455
FX: (02) 9451 3466
Email: info@dbce.com.au

Ref: 21254

8th December 2022

Brett Hutton
JCDecaux
Unit 2-3, 182-190 Euston Rd,
Alexandria NSW 2015

RE: RE: Saunders St and Miller st, Pyrmont, Sydney, 2009
Footings for the proposed Portrait 50 Digital Signage
Structural Feasibility Statement

This Structural Feasibility Statement has been conducted by Dennis Bunt Consulting Engineers Pty Ltd (DBCE) at the request of JCDecaux.

The purpose of this statement is to investigate the structural feasibility of the footing for the proposed digital Portrait 50 sign at Saunders St and Miller St, Pyrmont, Sydney.

The proposed sign is documented in DA drawings by DBCE 21254 / DA01(D), DA02(F) and DA03(B).

A preliminary Geotech assessment has been produced by Douglas Partners for Hanlon Industries, their ref 218669.00 on the 27th of October 2022.

Site Description

The site is located between the footpath on Saunders st to the west and the Sydney trains track to the east. The ground from the footpath is fairly flat for about 8m and then drops almost vertically at a rail cutting about approximately 3 m to 6 m high to the level of the track.

According to the Geotech report the most likely subsurface material is

- Imported fill up to 1 m in depth;
- Very low strength sandstone with extremely low strength bands and seams to about 1 m depth; over
- Medium to high strength sandstone.

Footing

Based on the assumption of relatively shallow sandstone DBCE recommend a pad footing. A footing 2.5m x 3m x 1.2m deep will be structurally acceptable. A 1.2m x .3m deep plinth above the footing with the top of the plinth at ground level is also recommended as it would enable most of the footing to be covered in soil and plants.

The Geotech assessment recommends embedding the footing into the rock to improve its passive resistance. Therefore, if the rock depth is less than 2m DBCE recommend embedding the pad approximately 300mm into the rock which may require increasing the pad depth. If the rock depth is greater than 2m DBCE recommend using concrete piles under the pad and socketing them 300mm into the rock.

The Geotech assessment also recommends further investigation is required ie:

- Drilling a cored borehole at the structure location to determine the strata depths. The borehole should extend at least 4 m into rock;
- Mapping of the existing rock cutting to identify any areas of potential instability. Any such mapping would have to be carried out during a track possession; and
- Stability assessment of the rail cutting.

Two options that DBCE recommend if the loads from the sign cause issues with the stability of the existing rail cutting are

1. Adding rock anchors in the face of the cutting locally near the sign footing to strengthen the rock face
2. Drilling down through the rock to a depth of approximately 4m below the base of the cutting with either a single 1000 diameter concrete pile and adopting a 1.5m square pile cap or 4/600mm diameter plies beneath the pad so the vertical and lateral loads from the sign on the rock act beneath the level of the cutting.

Either option would be done in consultation with a geotechnical engineering report.

Recommendations

A services search is undertaken in the area of the footing.

Further investigation by a geotechnical engineer, regarding the soil/rock profile which will include a cored bore hole extending at least 4m into rock and assessment of the stability of the existing rock face when subjected to the loads of the proposed signage.

If there are no issue with the stability of the rock face due to the proposed sign DBCE recommend

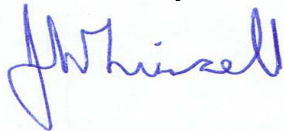
1. a 1.2m deep pad footing with a .3m deep plinth is adopted that is socketed 300mm into the rock.

If there are issues with the stability of the rock face due to the proposed sign DBCE recommend either

1. a 1.2m deep pad footing with a .3m deep plinth is adopted and rock anchors are used to stabilise the rock face.
2. drilling down through the rock to a depth of approximately 4m below the base of the cutting with either a single 1000 diameter concrete pile and adopting a 1.5m square pile cap or 4/600mm diameter plies beneath a concrete pad.

If you have any questions, please do not hesitate to ring the undersigned on 9451 7757

Yours Faithfully,



John Linsell BE(Hons), MIEAust, CPEng, NPER(Struct)
for Dennis Bunt Consulting Engineers Pty Ltd.