

Generic Magnatech 18m Steel Light Pylon Design

Building Consent Submission Pack

for: Magnatech LED Limited

EXAMPLE ONLY



Job No: 66865

Version: Rev C

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DOCUMENT APPROVAL AND REVISION HISTORY

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	Building Consent Submission Pack
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1	24/01/2024	Rev A	SW	NMC
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EXAMPLE ONLY

1 PRODUCER STATEMENT – PS1 - DESIGN

BUILDING CODE CLAUSE(S): B1

JOB NUMBER: 66865

ISSUED BY: Babbage Consultants Limited

(Engineering Design Firm)

TO: Magnatech LED Limited

(Owner/Developer)

TO BE SUPPLIED TO: Various Councils within New Zealand

(Building Consent Authority)

IN RESPECT OF: 18m Magnatech LED light pylon with reinforced concrete foundation

(Description of Building Work)

AT: Various Locations within New Zealand

(Address, Town/City)

LEGAL DESCRIPTION:

N/A

We have been engaged by the owner/developer referred to above to provide (Extent of Engagement): **Design of 18m height steel light pylon, reinforced concrete footing and associated fixings. Refer to the Babbage structural drawings No.66865 for the site and geotechnical requirements.**

in respect of the requirements of the Clause(s) of the Building Code specified above for **Part**, as specified in the schedule, of the proposed building work.

The design carried out by us has been prepared in accordance with:

- Compliance documents issued by the Ministry of Business, Innovation & Employment (Verification method/acceptable solution B1/VM1 and/or
- Alternative solution as per the attached Schedule.

The proposed building work covered by this producer statement is described on the drawings specified in the Schedule, together with the specification and other documents set out in the Schedule.

On behalf of the Engineering Design Firm, and subject to:

- Site verification of the following design assumptions: **Refer Babbage structural drawings No. 66865 dated 24/07/2024.**
- All proprietary products meeting their performance specification requirements;
- Conditions per the attached schedule at Section 2.

I believe on reasonable grounds that

- the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the Schedule, will comply with the relevant provisions of the Building Code and that;
- the persons who have undertaken the design have the necessary competency to do so.

I recommend a CM2 level of construction monitoring.

I, **Nick Calvert**, am:

(Name of Engineering Design Professional)

- CPEng number **242062**

And hold the following qualifications **BE(Hons), CMEngNZ, IntPE**

The Engineering Design Firm holds a current policy of Professional Indemnity Insurance no less than \$200,000

The Engineering Design Firm is a member of ACENZ.

SIGNED BY (Name of Engineering Design Professional): **Nick Calvert**

(Signature below):

ON BEHALF OF (Engineering Design Firm): **Babbage Consultants Limited** Date: **24 July 2024**

Note: This statement has been prepared solely for the Building Consent Authority named above and shall not be relied upon by any other person or entity. Any liability in relation to this statement accrues to the Engineering Design Firm only. As a condition of reliance on this statement, the Building Consent Authority accepts that the total maximum amount of liability of any kind arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in tort or otherwise, is limited to the sum of \$200,000.

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

2 SCHEDULE TO PS1

Please include an itemised list of all referenced documents, drawings, or other supporting materials in relation to this producer statement below:

The attached PS1 is subject to:

1. The ground at the site providing an ultimate bearing capacity of 150 kPa minimum, and
2. all reinforced concrete work being carried out in accordance with NZS 3109 and NZS 3114, and
3. all structural steelwork work being carried out in accordance with NZS 3404, and
4. site geotechnical hazards suitable for the indicated foundation,
5. ULS design wind speed limit less than or equal to 45.05m/s
6. Corrosion zone less than or equal to C3
7. Engineer supplied letter confirming that the generic PS1 can be used for the site, and
8. the engineering work covered by this statement being inspected at appropriate times during construction by a representative of Babbage Consultants Ltd

Referenced documents: Babbage Drawings numbered 66865, Rev D, dated 08/07/2024

Alternative Solutions: None

3 B2 (DURABILITY) COMPLIANCE

To the Building Official,

Generic Magnatech 18m Steel Light Pylon Design at various locations within New Zealand

Compliance with Building Code Clause B2 – Durability

The purpose of this letter is to demonstrate how compliance with Clause B2 (Durability) of the Building Code will be achieved for the above project. We can confirm that for specifically designed structural elements that are included within our design documentation:

We have provided a Producer Statement for Design (PS1) for clause B1 of the Building Act - Structure. Our PS1 does not cover clause B2 of the Building Act – Durability because there is no effective means of compliance for structural durability in the Building Code. However, we can confirm that the structural elements shown in our documentation have been treated as noted below:

3.1 Concrete

Compliance with cover and concrete quality requirements for B2/AS1 are in accordance with NZS3101:2006 Section 3.

3.2 Mild Steel

Protective coatings have been specified in accordance with AS/NZS 2312:2014 and SNZ TS 3404:2018 on a life to first major maintenance basis. The design life does not commence until the building is complete and so all damage before handover must be repaired immediately to ensure the durability of the structure is not adversely affected.

The design life will not be achieved without cleaning and maintenance being undertaken; a recommended maintenance plan is attached.

The quality of mild steel protective coatings is dependent on:

- Steel preparation
- Quality and production consistency of the coating products
- QA of the application and curing
- QA of the handling, protection and repair

The following documents will be provided by others following construction:

- Contractor's and sub-contractor's PS3s and QA records where available
- Third-party inspection and test results

Yours faithfully,

Nick Calvert

For and on behalf of Babbage Consultants Limited

4 STRUCTURAL MAINTENANCE SCHEDULE

This schedule of ongoing inspection and maintenance of structural elements shall be included with the Operations and Maintenance manuals and provided to the Owner/Body Corporate and building managers.

Inspection/maintenance timeframe and item	
a) 10 yearly	Inspect and repaint protective coating/paint
b) 25 yearly	Inspect all steelworks. Repair as required.
	Inspect all reinforced concrete for signs of spalling or cracking. Repair as required.
Following seismic shaking or wind events greater than 80% ULS wind > SLS1 event	Inspections and repair as per section a) and b) above.

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5 INSPECTION SCHEDULE

Job Number: 66865
Date: 24 July 2024
Job Description: 18m steel light pylon with reinforced concrete foundation
Job Location: Various locations within New Zealand
Client: Magnatech LED Limited

- As per ENGNZ recommendation we require the below inspections which will enable a degree of assurance as to the compliance of the structural works undertaken.
- On completion of the inspections and the satisfactory completion of the work on site, we will issue a Producer Statement for Construction Review covering the work inspected.
- If we are not notified of an inspection, or our engagement is terminated, or our ability to issue a Producer Statement for Construction Review is otherwise affected, then we will notify the controlling Territorial Authority.
- If we are unable to issue a Producer Statement for Construction Review, then the controlling Territorial Authority will not be able to issue a Code Compliance Certificate for the works until they are satisfied that the work complies with the New Zealand Building Code.

INSPECTION SCHEDULE			
No	Description	Date Inspected	Carried Out By
1.	Excavation inspection of the foundation pad	TBC	Geotechnical Engineer
2.	Pre-pour inspection of all foundation pours	TBC	Structural Engineer
3.	Final inspection of all structural elements	TBC	Structural Engineer

Appendix A

Structural Calculations

EXAMPLE ONLY

Auckland

Address | Level 4, 68 Beach Road, Auckland 1010

Post | PO Box 2027, Shortland Street, Auckland 1140, New Zealand

Ph | 64 9 379 9980

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Email | contact-us@babbage.co.nz

Hamilton

Address | Unit 1, 85 Church Road, Pukete, Hamilton 3200

Post | PO Box 20068, Te Rapa, Hamilton 3241, New Zealand

Ph | +64 7 850 7010

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Christchurch

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