



## **Horniman Aquarium Chiller Enclosure Building Works**

### **Minimum Requirements of Designers Submitting Structural Calculations to Harley Haddow**

#### **OVERVIEW**

Structural calculations should be prepared by an Engineer experienced in the type of design proposed.

They may be submitted in typed or hand written form and must;

- Be clear, legible and accurate;
- Contain a table of contents;
- Have all pages titled, numbered and signed;
- Provide in-text clauses to the relevant British Standards and or text references; and
- Contain sketches and drawings as relevant.

The calculations should contain the following information: -

#### **Description of the Building**

The calculations should contain a detailed description of the building or Structural elements of the building being designed.

Where appropriate this should highlight the classification of the building for disproportionate collapse in accordance with the Building Standards Technical Handbook.

#### **Design Requirements**

The calculations should provide a list of components that are required to be designed and, which has been included in the calculations document. This should highlight any specific design requirements of the various structural elements.

#### **Design Methodology/ Structural Function.**

A detailed Methodology as to how the building/structural elements will be analysed and designed must be provided. An account of how the building/structural elements will function structurally to withstand vertical and horizontal loads must also be provided.

## **Standards and Specifications**

The design should conform to the current and relevant British Standards and Building Regulations 1.1 (Design Loadings) and 1.2. (Prevention of Disproportionate Collapse).

References to specific standards must be included within text wherever relevant.

The specification of materials must be detailed in the document and in drawings submitted to the CA for comment/approval.

## **Loading Calculations**

A breakdown of all permanent and imposed vertical and lateral loading must be provided. References to the relevant British Standards and other relevant documents where characteristic loads were obtained must be listed and referred to where used.

The site wind load calculations must be provided where applicable.

## **Structural Analysis**

The Structural analysis can be done manually or by the use of computer software. Analysis calculations done by software must be checked and validated by the designer and submitted for comment/approval..

## **Design Calculations**

Design calculations should be done in accordance with the relevant British Standards. The location of each structural component being designed must be shown in a drawing and sketches of the relevant details must be provided. The design must take into account the practical issues relating to construction and health and safety issues.

## **Detailed Drawings**

Detailed drawings of the designed structural components must be provided illustrating all relevant design components. All drawings must have a title block, all relevant information and must be signed.