CUED INSET MASTERPLAN

As you will be aware, over the last couple of years we have been carrying out a masterplan review and consulting on a vision for our West Cambridge site. Our vision includes the creation of a world class, well connected research and development environment.

The number of Academics and Students will grow considerably over the coming years until a total of around 3,800 is reached requiring a total scale of from 100,000m² by 2034. To accommodate the predicted rate of expansion the University of Cambridge, Department Of Engineering will reorganise its entire operation on the West Cambridge site in a phased development over the next 10-15 years. This will require 60,000m² of new buildings on West Cambridge. Buildings will be delivered in a phased manner, the first being the new Civil Engineering building, which will house Civil Engineering research groups.

This is the most significant relocation of the Department of Engineering since the 1920’s. The Department is currently largely housed within the Trumpington Street High and Baker Buildings (built in 1952). These existing buildings are no longer adequate and there is now a strong commitment to move the whole department to a new fully integrated precinct on the West Cambridge site.

CUED - CIVIL ENGINEERING BUILDING

The first project to receive funding is the Civil Engineering Building; this is an initial step in reorganising the engineering department into a single campus. In the Civil Engineering building staff and students will carry out experimental research into infrastructure in the built environment. This cutting edge research will have a positive impact on large scale national infrastructure projects such as bridges, tunnels and road networks.

The UK’s Collaboration for Research in Infrastructure and Cities (UK-CRIC) is a national research programme prioritised and promoted investment for infrastructure in the UK. The Centre at Cambridge will be the National Research Facility for Infrastructure Sensing (NRFIS), focusing on the application and development of advanced sensor technology in constructions to promote better quality and safety, and smarter asset management.

The Civil Engineering building presents an exciting opportunity to create a purpose built Centre for world-leading research in the built environment, and incorporate some of the features of the latest innovations in infrastructure and building monitoring technology within the engineering design. The building has been designed to high environmental standards, including high noise and vibration attenuation, low energy consumption and heating delivered by ground source heat pumps.

Features:
- Workshops
- Laboratories
- Others
- Meeting, seminar and conference facilities
- Informal social and welfare spaces
- Sound Containment “Box In Box” construction

Ground Floor Plan

First Floor Plan

Second Floor Plan

Inset View of the Main Structures Workshop

Legend:
1. Main Structures Workshop (Strong Floor)
2. Service Road
3. Loading Bay
4. Cycle Parking
5. Bin Store
6. Amenity Space
7. Existing Roger Needham Building
8. Existing CAPE building extension
A bit about SDC

SDC is a main contractor that undertakes projects in a variety of construction sectors, including research and development, commercial, manufacturing, automotive, healthcare, and education. Offering such a diverse spectrum of service has enabled us to move with – and adapt to – changing market trends, which has resulted in controlled growth for the business. Our group of companies was established in 1972; is privately owned, and operates under the umbrella of a holding company and Employee Benefit Trust.

SDC have extensive experience of working on the West Cambridge Site, including the following projects:

- **Maxwell Centre Project**
  - Client: Cambridge University
  - Location: JJ Thomson Avenue
  - Value: £16.4 Million

- **EEBDA Cape Building Project**
  - Client: Cambridge University
  - Location: JJ Thomson Avenue
  - Value: £7.8 Million

- **Judge Business School Project**
  - Client: Cambridge University
  - Location: Downing Street
  - Value: £22 Million

**PROJECT DELIVERY & LOGISTICS**

SDC have worked closely with Estate Management and the neighbouring stakeholders to devise a logistics plan which is visibly un-intrusive and minimum impact on neighbouring building users and equipment. There will be some interim arrangements which will be implemented, however please see below the final logistics plan which will be in place for the majority of the scheme.

**PROJECT CONSTRUCTION & OUTLINE METHODOLOGY**

The building is a steel frame, constructed using precast concrete slabs and aluminium curtain walling with a green roof. The basement and foundations are reinforced concrete and the external landscaping is in a mixture of block paving, trees and a berm runway. Within the building is a post-tensioned floor which is situated in the main entrance/works. Additionally there are concrete sensor, structural dynamics and facades engineering laboratories within the building, along with a number of offices and seminar rooms. Each of these spaces requires meticulous planning and stakeholder liaison to ensure the needs of the respective users are met.

The project commences on the 5th June, with a series of infrastructure enabling works to provide power, water, gas and communications supplies for the scheme and the wider masterplan. The construction of the main works will commence with the construction of a reinforced concrete basement and concrete raft slab. This will be constructed using pre-cast plant and concrete pumps. The frame and facade will be erected using a mobile crane and scissor lifts. The graphics adjacent detail the proposed methodology of works.

**Civil Engineering Project**

**SDC’s Commitment to Being a Positive Neighbour**

Although SDC are aware of the potential impact of the building works on the surrounding areas, we can assure you that all necessary steps will be taken with the project to minimise any disturbances. We also consider it paramount to provide answers to your questions on a regular basis. We warmly invite you our neighbours may have about new or existing initiatives we could contribute to. In the past, we have undertaken the following for neighbours:

- Provision of materials or labour to assist with a charitable or local project;
- Facilitation of learning days for school or college students including lecturing;
- Holding coffee to gather money to local charities.

The more interesting and personal the ideas are, the better! We welcome all suggestions and will assist whenever we can to develop any ideas. Please contact me with any ideas by email and we will be sure to contact you to discuss being further.

Tom Fenner
tom.fenner@sdc.co.uk