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BSc Hons Construction Management

Building Design and Building Science (Module 5)

Student Name

Student ID

Group

Name of Lecturer

Date

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| **You are required to select a case study, consisting of an old existing low-rise housing building, with a date of construction before 1992 (30 years old), and discuss various aspects regarding the construction system, structural characteristics, relevant materials, signs of degradation of materials, existing building defects, and building performance failures.**  **Possible buildings include detached or semi-detached houses or flat buildings up to five stories, built before 1992.** |
| **Introduction**  **Introduction (300 words)**  Encourage the reader's attention, identify the purpose of the report, briefly identify the building selected, and mention the main findings of your building inspection. |
| **Body**  **Identification of the selected building (300 words)**  You have to identify the selected building by indicating and including the following descriptive information:   * Address of the selected building * Location map * Postcode of selected building * Photography of the main Façade (front of the building) * Date of building   It also must include a description of the type of building by   * purpose, * design, * building methods, and * structural materials   Include references from the literature to support your investigation.  **Structural elements**   * Substructure: Description of foundation: foundation system, methods of construction, and materials (in case it is no chance to observe any part of the building foundation, you will need to identify which is the most probable foundation techniques used in this building and elaborate around the selected solution **(300 words)** * Superstructure: Description of the superstructure, its materials, and systems (including walls, loadbearing floors, and roof) **(500 words)**   **Non-Structural elements and materials (650 words)**  Description of structural systems and materials of structural and non-structural elements (including Identification of environmental issues regarding the selection of used materials, and a description of mechanical and thermal characteristics of the identified materials). It should include:  a. Floor’s finishings (wood, carpets, etc)  b. Staircase  c. Windows  d. Ceiling  e. Interior finishings (eg: Tiles, paper walls, etc)  **The behaviour of materials**:  Identification and analysis of any sign of degradation of materials or existing building defects, or building performance failures (such as dampness, mould, corrosion, etc), including a description of the situation, possible causes, and photographs of the detected issues **(650 words). In case the selected building does not present any sign of degradation of materials or existing building defects or building performance failures, you must identify and elaborate on what are the conditions and design characteristics that have prevented these phenomena to occur.** |
| **Conclusion**  **Summary of findings (300 words)**  A short description of lessons learned and the main findings, including detected problems and possible causes. |