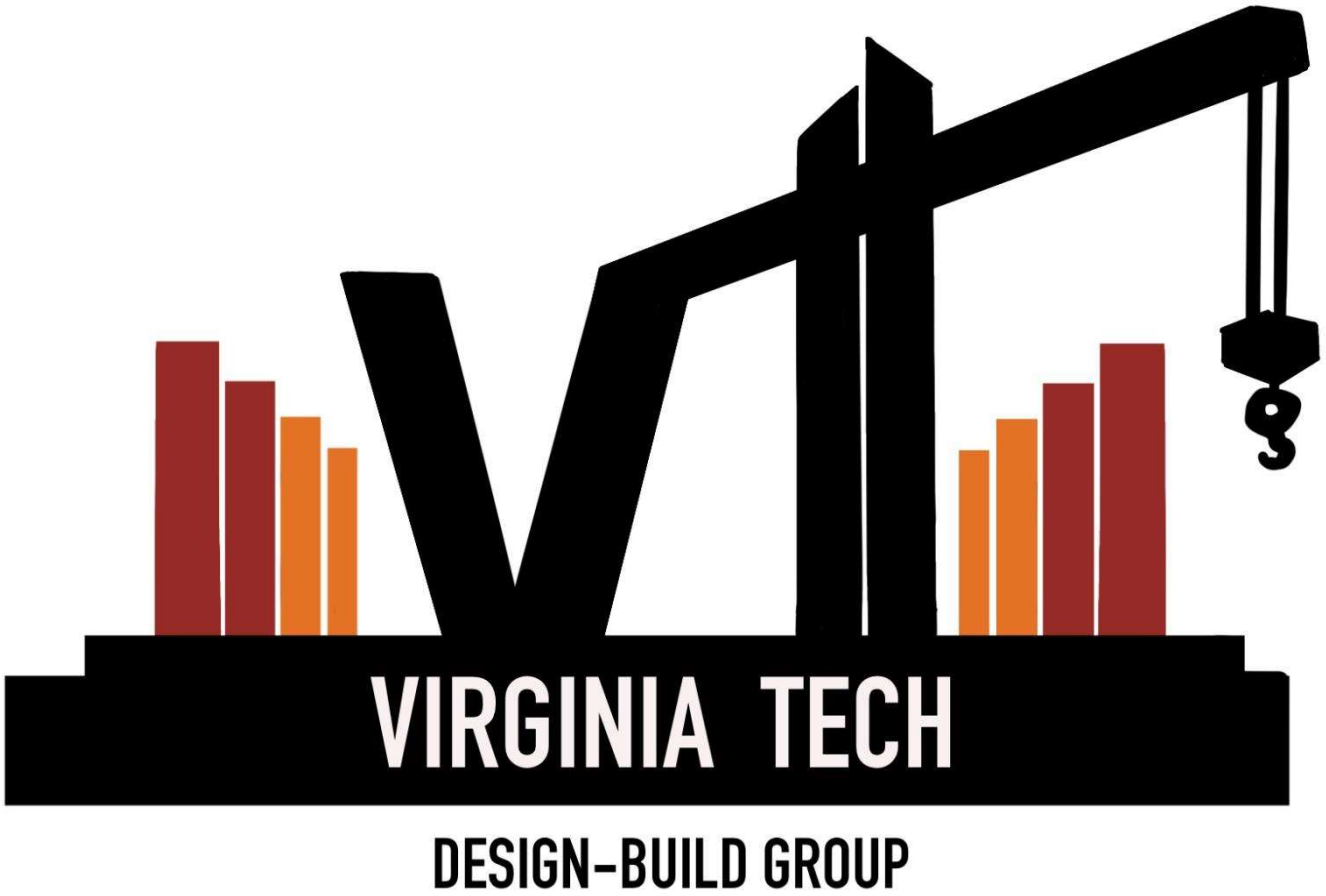

SONEYBATTER PLACE

New Student Accommodation in Dublin

Virginia Tech
Design-Build
Group

Executive Summary

The Stoneybatter Student Accommodation project represents a critical development aimed at addressing Dublin's increasing need for student housing, while showcasing a commitment to sustainable building practices, community involvement, and architectural harmony. This proposal, led by Virginia Tech Design-Build Group, outlines a comprehensive plan to deliver a state-of-the-art, environmentally responsible, and community-focused student accommodation facility within a 450-day timeline and a budget of €14.9 million. Our approach is centered on balancing functional excellence with aesthetic respect for Stoneybatter's historical character, aiming to create a vibrant and inclusive living environment for Dublin's student population.

Our design approach combines sustainable innovations with student-centered amenities that enhance the overall quality of life. The proposed facility will feature a variety of accommodation options, including en-suite rooms and studio apartments, along with shared communal spaces that foster social engagement and academic collaboration. Each unit has been designed with energy efficiency and comfort in mind, meeting modern standards for insulation, natural lighting, and ventilation. These elements, along with renewable energy systems, water-saving installations, and sustainable material choices, are integral to our plan to achieve BREEAM Excellent certification—a benchmark of sustainability that aligns with Dublin's green building objectives.

Beyond the physical structure, our proposal underscores a commitment to community engagement and partnerships with local academic institutions and trade schools. By offering apprenticeships and skill-building opportunities, we aim to address Ireland's skilled labor shortage while supporting the career development of local students and tradespeople. Additionally, we will work closely with the community through regular open forums, informational sessions, and collaboration with local organizations, ensuring that Stoneybatter residents are well-informed and engaged in each phase of the project. Our intention is to create an asset that is not only beneficial for Dublin's student population but also positively impacts the local economy, from supporting small businesses to fostering social connectivity.

To maintain budget adherence and ensure project delivery within the 450-day schedule, we have developed a comprehensive cost management and risk mitigation strategy. This includes establishing fixed-price contracts with key suppliers to guard against market volatility, employing just-in-time delivery for materials to reduce storage needs, and implementing thorough regulatory compliance checks to avoid delays. A 15% contingency fund has been included to cover any unforeseen expenses, such as unexpected site conditions or regulatory adjustments. Our cost management approach is paired with a rigorous risk assessment process that addresses potential construction challenges associated with the urban setting, proximity to sensitive areas like schools, and the presence of buried utilities.

The Stoneybatter Student Accommodation project is more than a construction endeavor—it is a commitment to creating a sustainable, socially responsible, and thoughtfully designed space that benefits both the student and local communities.

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Company Overview

Virginia Tech Design-Build Group, founded in 2012, has emerged as a leader in construction management within the Irish and UK markets, driven by a strong commitment to innovation and excellence. With annual revenues of €730 million, the company specializes in student housing and multifamily commercial projects, bringing a unique blend of expertise and creativity to each development. Under the guidance of a skilled leadership team with decades of combined industry experience, Virginia Tech Design-Build Group has consistently delivered high-quality projects that meet and often exceed the needs of clients and residents. This dedication to setting new standards is evident in the company's approach to combining cutting-edge design with operational efficiency.

The company's specialization in student housing and multifamily commercial projects reflects a strategic focus on sectors that require not only functional spaces but also environments that foster vibrant communities. Virginia Tech Design-Build Group is recognized for its ability to deliver tailored solutions that address the distinct needs of universities, students, and property investors across Ireland and the UK. By leveraging its design-build model, the company offers seamless integration across design and construction phases, resulting in cost-effective and highly adaptable solutions. Industry veterans commend the group for its deep understanding of this niche, positioning Virginia Tech Design-Build Group as a preferred partner for complex projects that demand both technical excellence and a forward-looking vision.

At the core of Virginia Tech Design-Build Group’s success is a culture of innovation, evident in its use of advanced construction technologies and sustainable practices. The company’s emphasis on efficiency and adaptability has enabled it to thrive in a competitive market, consistently delivering projects on time and within budget. Virginia Tech Design-Build Group’s reputation as a reliable, progressive partner is built on its commitment to quality and client satisfaction. As it continues to grow, the company remains dedicated to redefining the standards of construction management within its specialized markets, ensuring every project contributes positively to the communities it serves.

ESG Commitment

At Virginia Tech Design-Build Group in Dublin, Ireland, we recognize that construction projects must contribute positively to the environment, support social progress, and adhere to high governance standards. Inspired by leading ESG practices and frameworks, such as those outlined by the Grafton Group, our sustainability approach focuses on creating lasting value for our communities, advancing sustainable practices, and upholding transparency and accountability in all operations.

We are committed to minimizing our environmental impact. In alignment with best practices, our projects incorporate energy-efficient systems, eco-friendly materials, and renewable energy solutions, including solar power. Our goal is to secure certifications such as BREEAM and Fitwel®, demonstrating our commitment to sustainable building design. Moving forward, we aim to increase waste diversion rates and explore further carbon reduction strategies.

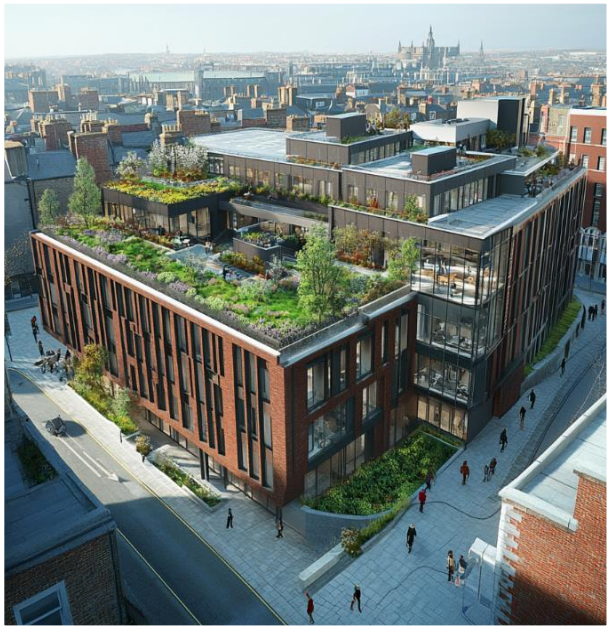
Our mission is to create value beyond our construction sites. We engage directly with the communities where we operate, providing construction site tours for local students and organizing open forums to keep residents informed and involved. Our team partners with local trade schools, offering apprenticeships that equip aspiring tradespeople with skills that are essential to the construction industry. Additionally, we collaborate with academic institutions to bridge theory and practice, fostering innovation in construction while nurturing the next generation of industry leaders.

Our governance structure ensures that sustainability goals are embedded at every level of the organization. We maintain open communication with stakeholders to ensure alignment with ESG priorities and have established regular sustainability reviews to monitor progress. To enhance accountability, we are implementing internal targets and benchmarks aimed at continuous improvement across all ESG areas. By 2050, we are committed to achieving net-zero emissions, working closely with partners and suppliers to meet this goal.

Virginia Tech Design-Build Group is dedicated to creating sustainable, community-centered projects that leave a positive legacy. Through responsible environmental management, meaningful community engagement, and robust governance, we aim to set new standards in the Irish construction sector.

Past Projects

Urban Heights Student Housing



Urban Heights represents a visionary approach to urban living, combining dynamic student accommodation with upscale residential spaces in the heart of Liverpool. This mixed-use development features a harmonious blend of private residences and vibrant student housing, fostering a unique sense of community and inclusivity within the city. Designed with a focus on sustainability and modern aesthetics, Urban Heights offers expansive green rooftop terraces, integrated gardens, and innovative building materials that minimize environmental impact. Strategically located within walking distance of Liverpool's educational institutions and city landmarks, Urban Heights is perfectly positioned to serve as a hub for both students and professionals seeking a balanced urban lifestyle.

Campus Haven Student Living

Campus Haven offers a vibrant, modern student living experience tailored to the needs of Dublin's thriving academic community. This state-of-the-art residential complex provides students with a comfortable, secure, and engaging environment designed to enhance their university experience. Featuring contemporary architecture with communal courtyards, green spaces, and dedicated study areas. Strategically located within proximity to major educational institutions, the building promotes a balance of study and social life. The project incorporates sustainable design elements and fosters connections to local amenities and public transport. With a commitment to supporting local trade schools and addressing Dublin's skilled labor shortage, Campus Haven embodies a forward-thinking approach to student housing in Ireland’s vibrant capital.

Team Overview

Nathan Herrick – *Design Build Project Executive*

Nathan has extensive experience in managing large-scale residential projects, consistently delivering them on schedule and within budget. His skill in coordinating multidisciplinary teams and handling complex project requirements will be crucial to overseeing effective design and construction.

Adrianna Mondello – *Principal Architect*

Adrianna brings extensive experience in designing senior living facilities, with an emphasis on creating spaces that are both functional and visually appealing. Her expertise in integrating accessibility features and sustainable materials will be instrumental in developing student housing that is inclusive and eco-friendly.

Sarayu Buchireddygari – *Project Architect*

Sarayu specializes in designing community-centered student housing, with a focus on accessibility and social spaces. Her skill in balancing functionality with aesthetics will help create a welcoming, inclusive environment for the students.

Joeseph Candiotti – *Project Manager*

With extensive experience overseeing the on-site construction of multi-story residential buildings, Joseph excels in managing daily operations and enforcing safety standards. His background will ensure seamless coordination of subcontractors and adherence to top-quality standards throughout the project.

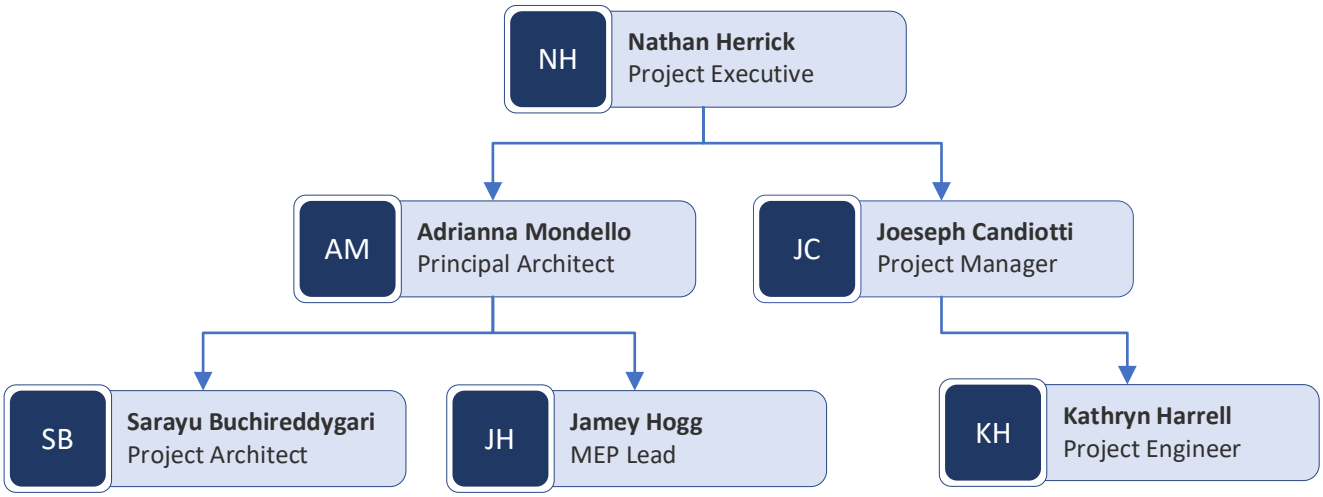
Jamey Hogg – *MEP Lead*

Jamey has managed the mechanical, electrical, and plumbing systems for various residential complexes, focusing on multifamily and student housing. His expertise in implementing efficient MEP systems will contribute to a comfortable, safe, and dependable environment for future residents.

Kathryn Harrell – *Project Engineer*

Kathryn has contributed to multiple large-scale housing projects, offering engineering support through design review and quality control. Her practical experience in technical documentation and problem-solving will be essential in ensuring that construction methods comply with building regulations.

Team Structure



Design

Design Overview

The design overview for the Stoneybatter Place project, a state-of-the-art Purpose-Built Student Accommodation (PBSA) in Dublin, integrates modern design with historical preservation to create a vibrant and sustainable living environment for students. This overview will cover key aspects of the project, including program requirements, site development, architectural elements, structural design, MEP systems, sustainability, and safety.

Stoneybatter Place is designed to provide high-quality living spaces for students, featuring 142 beds in a mix of en-suite rooms, studio apartments, and luxury bedrooms specific within the Gatehouse. The development includes extensive communal areas, such as a central courtyard, rooftop gardens, and a Wellness Hub with a gym and yoga area. The project aims to blend modern amenities with the preservation of historical elements, creating a unique and engaging environment.

The residential component includes various room types to accommodate different needs, including disability access certificate (DAC) bedrooms. Common areas are designed to foster community interaction, with spaces for socializing, studying, and relaxation. The project also includes high-efficiency laundry facilities and a newly constructed Gatehouse for enhanced functionality and aesthetic appeal.

The site is located in the historic area of Stoneybatter, Dublin, surrounded by a mix of residential and commercial properties. The development maximizes the use of the historic courtyard, integrating modern amenities and sustainable features. Key elements include landscaped greenspaces, rooftop gardens, and a new Gatehouse for secure access. The site layout and landscaping strategies aim to create a harmonious blend of tradition and innovation.

The architectural strategy focuses on harmonizing modern design with the site's historical context. The building's L-shaped layout maximizes space within the courtyard, while the new Gatehouse enhances security and visual appeal. The design incorporates traditional materials, such as brick and stone, with modern elements like large windows and sleek metal accents. Interior spaces feature high-quality finishes, innovative storage solutions, and bespoke artwork by local artists.

The structural strategy emphasizes stability, efficiency, and adaptability. A reinforced concrete frame provides primary support, with precast elements used to expedite construction and improve quality control. The substructure includes a reinforced concrete foundation system, while the superstructure utilizes a reinforced concrete frame to support open communal spaces. Load considerations address live, dead, wind, and seismic loads to ensure structural stability and occupant safety.

The MEP systems are designed to provide a comfortable and sustainable living environment. The HVAC system focuses on providing adequate clean air and passive ventilation through operable windows. Fresh air intake is managed by an energy recovery ventilator (ERV), and heating is

provided by a radiant system connected to variable refrigerant flow (VRF) units. Electrical systems include high-efficiency lighting and smart sensors to monitor energy usage. Plumbing systems ensure efficient water supply and wastewater management, with stormwater reused for non-potable purposes.

The project targets a near-zero energy rating, incorporating high-performance building materials and systems to reduce energy consumption. Sustainable practices include recycling facilities, eco-friendly materials, and extensive landscaping to support biodiversity. The development aims to achieve certifications such as BREEAM Excellent and Fitwel, emphasizing environmental responsibility and occupant well-being. The design promotes active travel with secure bicycle storage and easy access to public transportation.

The security strategy includes integrated surveillance, controlled access, and 24/7 monitoring. Building access is controlled via keycard or biometric systems, with high-security areas requiring dual authentication. Life safety systems include advanced fire detection and suppression systems, clear evacuation plans, and regular fire drills. The egress strategy ensures safe and efficient evacuation, with multiple exits, emergency lighting, and designated assembly points.

The project complies with EAA standards and local accessibility regulations, providing barrier-free access to all areas. Features include elevators, wide doorways, and accessible restrooms. Universal design principles ensure that fixtures and controls are easy to operate, and signage includes large, high-contrast text and Braille. Common areas and amenities are designed to be inclusive, promoting independence and comfort for all residents.

Stoneybatter Place is a thoughtfully designed student accommodation that integrates modern amenities with historical preservation. The project emphasizes sustainability, community interaction, and occupant well-being, creating a vibrant and engaging living environment. Through careful planning and innovative design, Stoneybatter Place aims to provide a high-quality, sustainable, and inclusive space for students in Dublin.

Architectural & Engineering Information Spatially Coordinated

The current project design reveals several significant inconsistencies when compared to the client's brief and the relevant guidelines, particularly in relation to green space provision, biodiversity conservation, and sustainability measures. While the design includes two green roofs and a single vertical wall planter, these elements only meet the basic requirements outlined by Dublin City Council rather than fulfilling the more ambitious, innovative solutions that the guidelines encourage. The client brief specifically highlights the need for adequate external open space to provide amenities for students, particularly through ground-floor courtyards that offer proper daylight and sunlight exposure. Unfortunately, the design fails to adequately address this requirement. The inclusion of only green roofs and a limited vertical wall planter does not replace or supplement the essential ground-level open spaces, which should be the primary focus. The guidelines suggest that roof gardens and terraces can be considered, but only when they are in addition to, not instead of, ground-level amenity areas. Therefore, the current design underdelivers in terms of providing suitable outdoor spaces for students, which is a critical aspect of the project's success.

In addition, the brief clearly stresses the importance of net biodiversity gain through strategies, planning, and green infrastructure. It outlines a proactive approach to conservation where biodiversity should not be viewed as a constraint but as an opportunity to innovate and contribute positively to the local environment. While the project does include basic green roofs, it lacks a more comprehensive or creative approach to biodiversity integration. There is no evident strategy for biodiversity offsetting, nor does the design make a substantial contribution to the surrounding ecosystem, which could have been achieved through better integration of green infrastructure. The guidelines specifically call for the promotion of green walls or living walls, which offer multiple environmental benefits, such as stormwater management, pollution reduction, carbon emission mitigation, and support for biodiversity. However, the design only includes a single vertical wall planter, which is far less impactful than the more extensive green wall systems encouraged in the brief. The potential for using green walls to improve the environmental quality of the project is not fully realized, and the current design does not fully embrace the scope for innovation that Dublin City Council promotes.

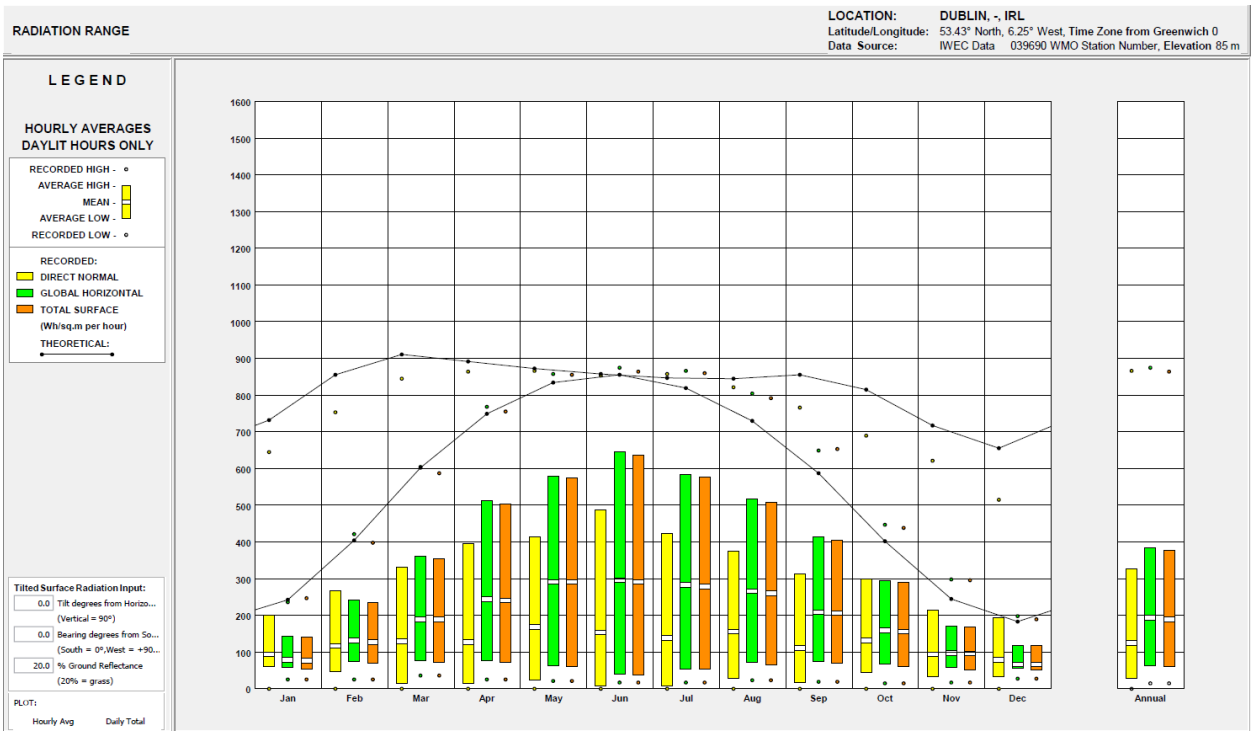
Furthermore, the project's approach to tree preservation and landscaping appears insufficient. The guidelines stipulate that existing trees should be carefully considered from the outset of the design process, with measures taken to protect their root systems, stems, and canopies throughout construction. Additionally, there is no indication that the design has taken into account the Greening Stoneybatter Strategy, which calls for the enhancement of the local green environment through tree preservation and planting. A more comprehensive approach to landscaping and the integration of existing trees would strengthen the project's sustainability credentials and demonstrate a stronger commitment to biodiversity and green infrastructure.

In order to address these deficiencies and align the design with the client's brief and the relevant planning guidelines, a thorough design revision is required. This should involve rethinking the balance between green roofs, green walls, and open ground-level spaces, ensuring that student amenity is prioritized through the creation of generous, well-lit courtyards and terraces. The

scope for incorporating larger-scale green walls should be explored, as they are a key component in reducing environmental impact and promoting biodiversity within urban spaces. The design should also integrate strategies for biodiversity offsetting, ensuring that the project exceeds the minimum requirements and contributes meaningfully to the local environment. Additionally, a more robust approach to tree preservation and landscaping is essential to safeguard the existing natural assets and enhance the overall ecological value of the site. With these adjustments, the design can move beyond simply meeting the basic requirements and begin to embody the innovative, sustainable solutions that the brief envisions, offering a high-quality living environment for students and a lasting positive impact on the surrounding community.

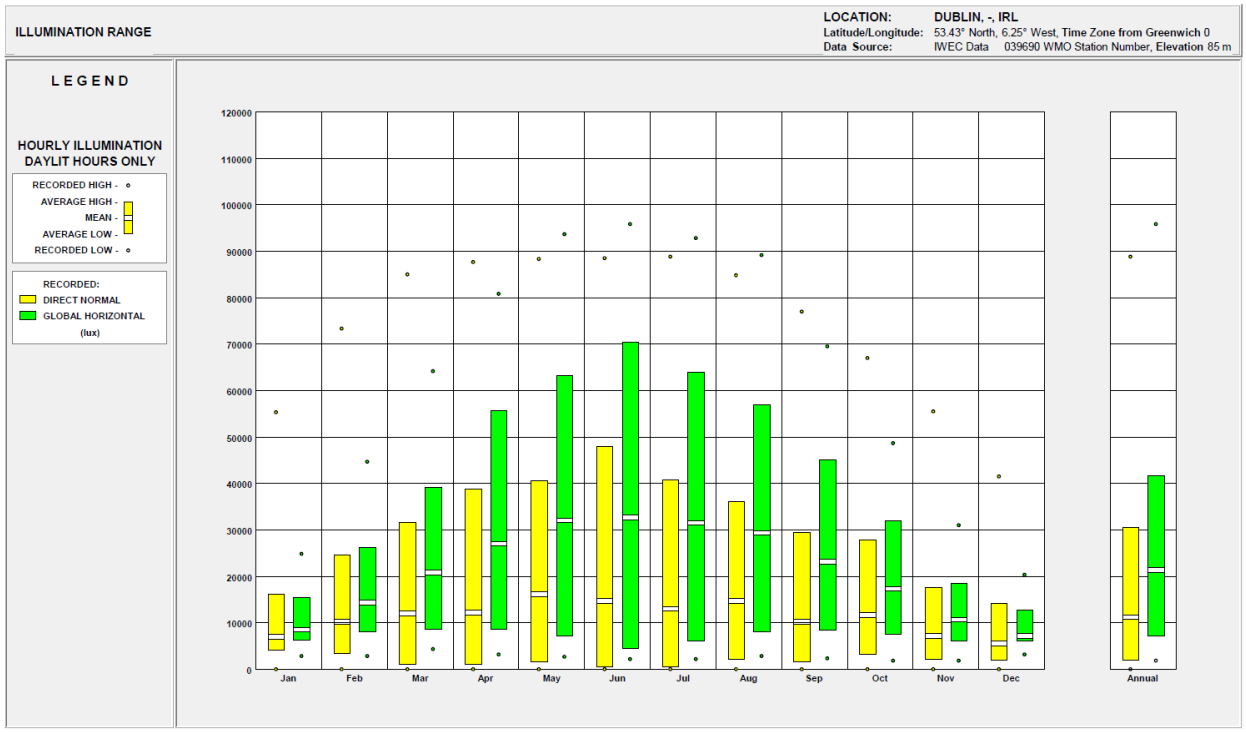
Design Studies/Engineering Analysis Summary

The overall design studies and engineering analysis of the Stoneybatter Student Accommodation Living Building in Dublin, Ireland, demonstrate a highly coordinated approach between architectural and engineering disciplines. Engineering analyses address structural stability with a reinforced concrete frame, optimized HVAC systems for year-round comfort, and advanced MEP systems to ensure efficient resource use. Climate analysis has been conducted to inform the design, ensuring that the building can withstand local weather conditions and maintain indoor comfort. Coordination with geotechnical engineers ensures that the foundation and substructure are designed to handle site-specific soil conditions. Structural engineers have worked to ensure the building's integrity and resilience, while MEP engineers have designed systems that optimize energy efficiency and sustainability. Additionally, collaboration with civic authorities has been essential to navigate the permitting process, ensuring compliance with all local regulations and securing the necessary approvals. This coordinated effort ensures that all aspects of the project, from structural integrity to environmental impact, are meticulously planned and executed, providing a high-quality, sustainable living environment for students.



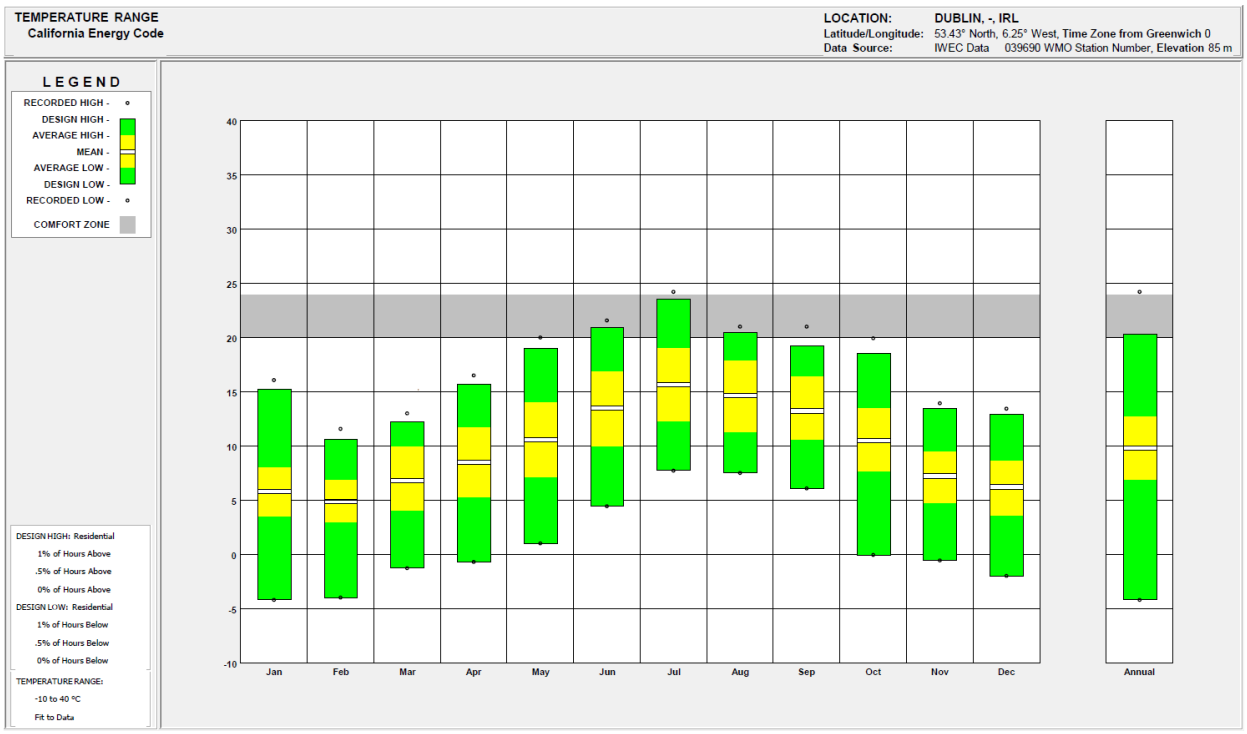
The Radiation Range diagram shown above represents the hourly averages of solar radiation on a tilted surface throughout the year in Dublin, Ireland, measured in watt-hours per square meter per hour (Wh/m²/hr). The x-axis shows the months from January to December, while the y-axis indicates the radiation levels. Additionally, it shows the theoretical daily total and hourly average radiation for a surface with specific tilt and orientation parameters.

The way this diagram pertains to our overall design is specific to the species of plants we are landscaping the site with. In selecting species as noted in the Greening Stoneybatter Strategy within the Dublin Development Plan also noted specifically in the BOD, we choose plants that thrive within such radiation levels.



The Illumination Range chart illustrates the hourly illumination levels throughout the year in Dublin, Ireland, measured in lux. This data is crucial for making informed design decisions for the Stoneybatter Student Accommodation Housing project.

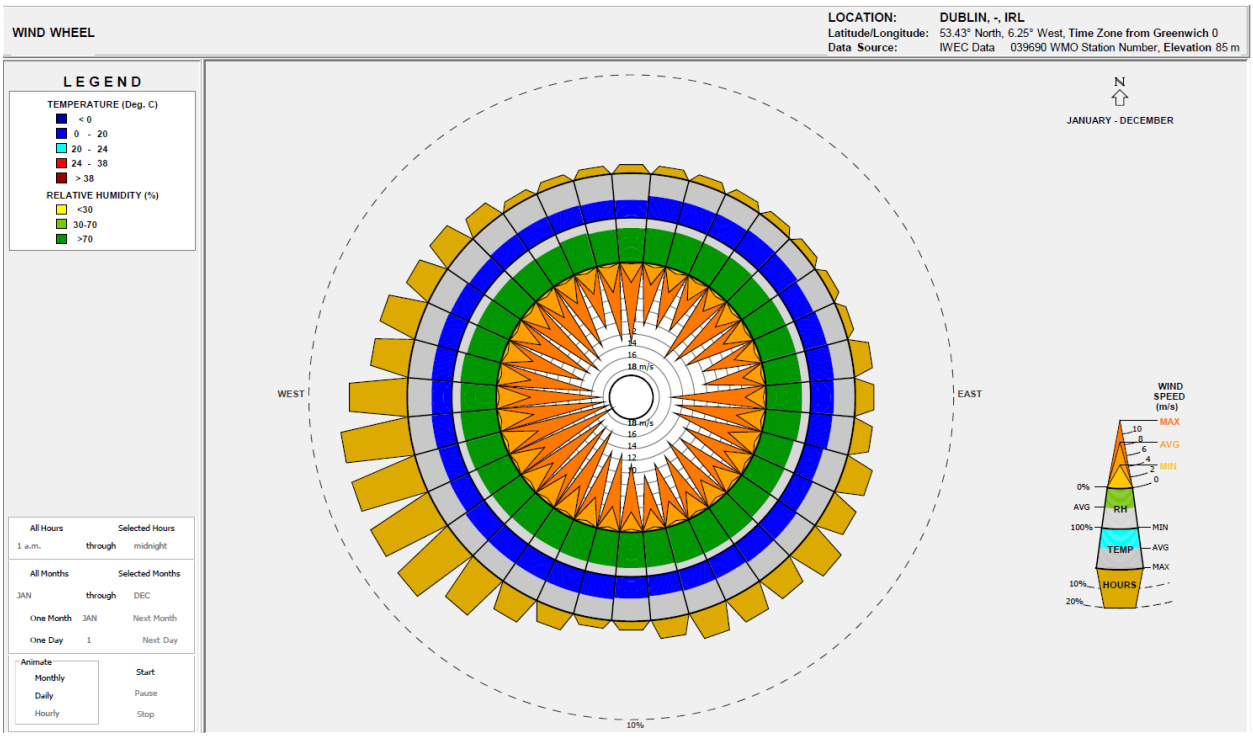
Our specific design decision influenced by this chart would be the optimization of natural lighting within the building. The graph shows variations in daylight illumination across different months, with higher levels during the summer months and lower levels in winter. To maximize natural light and reduce reliance on artificial lighting, the design incorporates larger windows in areas that benefit most from natural light, such as common areas and study spaces, and within each student bedroom.



The Temperature Range illustrates the temperature range throughout the year in Dublin, Ireland, with recorded high, design high, average high, mean, average low, design low, and recorded low temperatures. This data is crucial for making informed design decisions for the Stoneybatter Student Accommodation Housing project.

The graph shows the temperature variations across different months, indicating the need for a system that can efficiently handle both heating and cooling requirements throughout the year. During the winter months, when temperatures can drop below the comfort zone, the design will include a robust heating system, such as a radiant heating system connected to variable refrigerant flow (VRF) units. This system would ensure that indoor temperatures remain comfortable even during the coldest periods. Conversely, during the summer months, when temperatures can rise, the HVAC system also includes efficient cooling mechanisms to maintain a comfortable indoor environment.

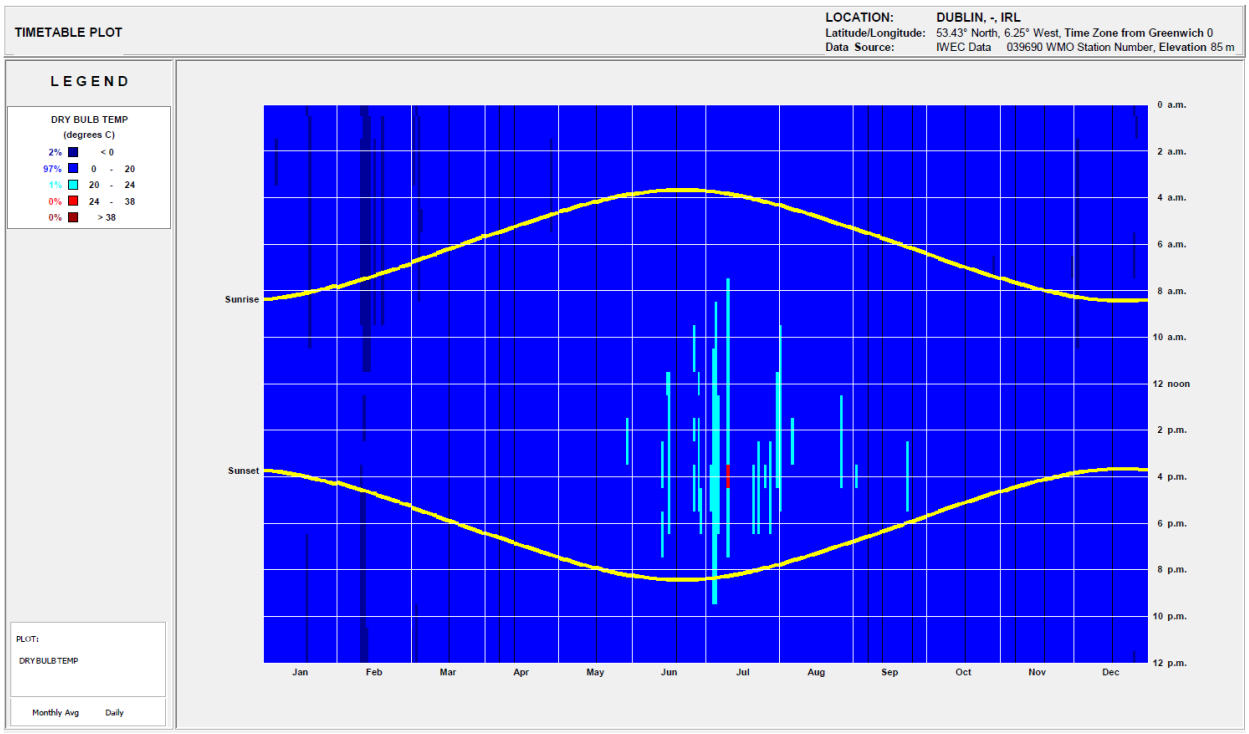
Additionally, the design will incorporate passive heating and cooling strategies, such as high-performance insulation and energy-efficient windows, to reduce the overall load on the HVAC system. By aligning the HVAC system design with the temperature data from the graph, the project can ensure optimal thermal comfort for residents while also enhancing energy efficiency and sustainability.



The Wind Wheel diagram provides detailed information on wind speed and direction throughout the year in Dublin, Ireland. This data is crucial for making informed design decisions for the Stoneybatter Student Accommodation Housing project as the placement and design of outdoor communal areas and rooftop gardens would be directly influenced off this analysis. The graph shows variations in wind speed and direction, which can significantly impact the comfort and usability of these spaces.

If the data indicates that the prevailing winds are strong from the west during certain months, the design will include windbreaks or strategically placed vegetation to shield outdoor areas from these winds. On the roof terraces, we include wind protection panels based off our analysis to ensure comfort of the residents while occupying the space. Additionally, the orientation of seating areas and pathways can be adjusted to minimize exposure to high winds, enhancing the comfort and usability of the outdoor spaces for residents.

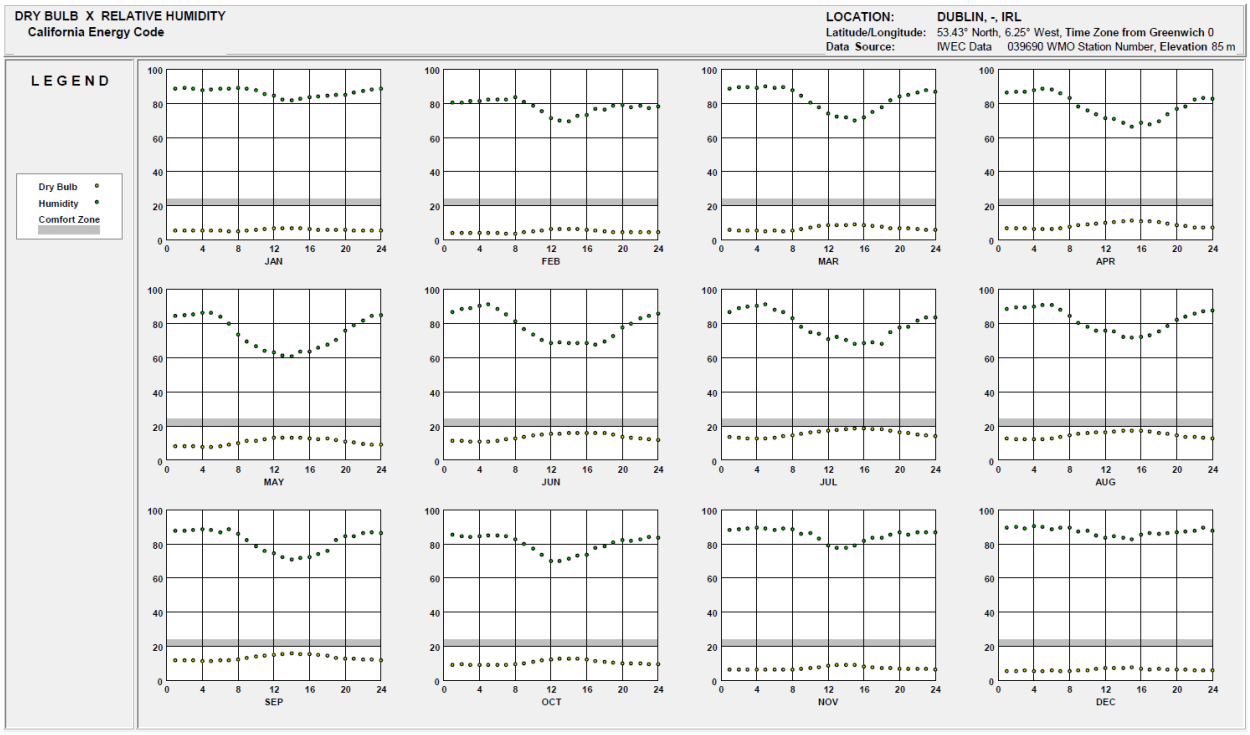
By incorporating wind data into the design, the project can create more pleasant and functional outdoor environments, ensuring that these spaces are comfortable and inviting throughout the year. This approach not only improves the overall living experience for students but also supports the project's sustainability goals by promoting the use of outdoor spaces.



The Timetable Plot provides detailed information on the daily and monthly average dry bulb temperatures throughout the year in Dublin, Ireland. With the consideration of this information, a design decision influenced by this chart would be the selection and specification of the building's insulation and glazing systems. The graph shows that most of the year experiences temperatures between 0°C and 20°C, with very few instances of temperatures exceeding 24°C. This indicates a relatively mild climate with occasional cold periods.

To optimize thermal comfort and energy efficiency, the design will incorporate high-performance insulation materials in the building envelope to minimize heat loss during the colder months. Additionally, the use of double or triple-glazed windows would help maintain indoor temperatures by reducing heat transfer. These windows would also provide better sound insulation, enhancing the overall living environment for students.

With aligning the insulation and glazing specifications with the temperature data from the graph, the project can ensure that the building remains comfortable year-round while also reducing energy consumption for heating and cooling. This approach supports the project's sustainability goals and contributes to achieving high energy efficiency standards, such as a BREEAM Excellent rating.



The Dry Bulb and Relative Humidity provides detailed information on the dry bulb temperature and relative humidity throughout the year in Dublin, Ireland. The graph shows variations in temperature and humidity levels across different months, which can significantly impact the indoor environment.

For example, during the summer months, when both temperature and humidity levels are higher, the design of our VRF and ERV systems incorporate a dehumidification system within the HVAC setup to maintain comfortable indoor humidity levels. This would prevent issues such as mold growth and discomfort due to high humidity.

In aligning the HVAC system design with the temperature and humidity data from the graph, the project can ensure that the indoor environment remains comfortable and healthy for residents throughout the year. This approach supports the project's sustainability goals by optimizing energy use and enhancing the overall living experience for students.

Site and Neighborhood Analysis

Stoneybatter is a vibrant and evolving neighborhood located just northwest of Dublin's city center, offering a unique blend of historic charm, cultural diversity, and modern urban development. Traditionally a working-class area, it has gradually transformed into one of the city's most desirable residential locations, attracting a mix of young professionals, families, and students. Its proximity to Dublin's core and the expanding campus of Technological University Dublin (TU Dublin) at Grangegorman has played a significant role in shaping its current character and future prospects.

The neighborhood is defined by its narrow, cobbled streets, traditional red-brick terraced houses, and a strong sense of local community. Historically, Stoneybatter was known for its industrial activity and working-class roots, but over time, it has become a hub for artists, independent shops, cafes, and pubs, all contributing to a dynamic and evolving local culture. The community thrives on a mix of long-term residents and newcomers, with a blend of old-world charm and new creative energy.

At its heart is a strong sense of community, with local markets, neighborhood festivals, and public events fostering a tight-knit atmosphere. The neighborhood's social fabric is also reinforced by several local landmarks, including the beautiful Stoneybatter Church, and the nearby Phoenix Park—one of Europe's largest urban parks, which offers recreational green space and a connection to nature in the midst of an increasingly urban environment.

The design of this community is influenced by its historical layout, with an emphasis on preserving its character while integrating modern development. Many of the homes and buildings are protected structures, reflecting the area's historical significance and contributing to its architectural diversity. However, with Dublin's rapid growth, the area is also seeing an influx of new development, including the proposed student housing project near the adjacent TU Dublin campus.

The expansion of the university campus at Grangegorman is a key driver of change for the area. The masterplan for the campus includes a mix of academic, residential, and community spaces, creating a vibrant, inclusive environment that connects with the surrounding neighborhoods, including Stoneybatter. The university's development aims to rejuvenate the area, introducing new facilities and improving local infrastructure, all while respecting the character of the historic surroundings. The integration of modern sustainable designs, green spaces, and pedestrian-friendly pathways will help bridge the gap between the old and new parts of the community.

One of the significant components of the current urban renewal initiatives is this student housing development. The new housing complex will not only provide much-needed accommodation for the growing student population but will also contribute to the revitalization of the neighborhood. The development plans emphasize enhancing local greenspaces, increasing pedestrian walkability, and adding bike racks and storage facilities, all designed to reduce reliance on cars and promote sustainable transportation options.

Moreover, future initiatives for Stoneybatter include improving public amenities and fostering a more pedestrian-oriented environment. Local parks and open spaces will see upgrades to encourage outdoor activities and community gatherings. The addition of new cycling infrastructure and more accessible public transport links will promote a greener, more connected community. There are also plans for more community-driven projects, including new shops, cafes, and cultural venues, which will further enrich the local economy and social landscape.

Stoneybatter is a neighborhood in transition—balancing its rich history with the demands of a modern city. The new student housing development and the Grangegorman campus masterplan will play a pivotal role in shaping the area's future. By enhancing green spaces, improving

mobility, and fostering a sustainable, walkable community, Stoneybatter is set to become a more vibrant and inclusive place for residents and visitors alike.

Review Design against Building Regulations and Planning

The Stoneybatter Student Housing Development does not fully comply with Dublin City Council's guidelines regarding parking. The design includes no parking spaces for persons with disabilities, which is a key requirement under the guidelines. Additionally, the project fails to provide the necessary cycle parking spaces, as it does not meet the standard of one cycle space per resident or include sufficient visitor parking at a rate of 1 space per 10 residents. These shortcomings undermine the development's alignment with the city's sustainability and transport policies, which prioritize accessibility and encourage cycling as a primary mode of transport. The design needs to be revised to ensure it meets both disability access and bicycle parking requirements.

To ensure full adherence to Dublin City Council's guidelines and address the potential archaeological sensitivities of the site, we will engage a multidisciplinary team of archaeological, geotechnical, structural, and civil engineering experts for a comprehensive preliminary site analysis. The project is located within the Zone of Archaeological Potential for Dublin (DU018-020), an area with known historical significance, including evidence of settlement from the Viking, Medieval, and post-Medieval periods. Given the proximity to historically important sites, such as Oxmantown and Grangegorman Manor House, thorough archaeological investigations will be necessary to assess and manage any potential discoveries. The team's work will involve detailed surveys to ensure that any archaeological features or artifacts are properly identified and preserved, ensuring the development is fully compliant with heritage regulations. However, this rigorous approach introduces risks to the schedule and cost of the project. The need for extensive archaeological studies, alongside geotechnical assessments to understand the soil composition and structural stability, could result in unexpected delays if significant findings or site conditions are discovered. Furthermore, additional costs may be incurred if any mitigation measures or modifications to the design are required to address these findings. While this approach may increase the overall complexity of the project, we believe that it is essential to mitigate long-term risks and ensure the development is both sustainable and respectful of the area's rich historical context.

Preconstruction

Cost Certainty

Cost Summary	
Total Project Cost	€ 14,897,353
€ per Square Meter	€ 4,235
€ per Bed	€ 104,911

Cost Breakdown	
A-Substructure	€ 380,040
B-Shell	€ 3,456,281
C-Interiors	€ 1,381,527
D-Services	€ 3,952,075
E-Equipment & Furnishes	€ 986,941
F-Special Construction & Demolition	€ 116,777
G-Sitework & Utilities	€ 1,549,656
Sub Total	€ 11,823,296

Overhead and Fees		
GC Fees	3.5%	€ 413,815
Design Fees	5.0%	€ 591,165
Contingency	15.0%	€ 1,773,494
Insurance	1.5%	€ 177,349
Bond	1.0%	€ 118,233

The initial budget for the project was established based on current market data, anticipated material and labor costs. This budget includes allocations for subcontractor fees, general contractor fees, design fees, and a contingency fund to cover unforeseen expenses. Given the urban location and proximity to sensitive sites like schools and residential areas, we have allocated additional funds for safety measures, environmental controls, and community engagement initiatives. The budget has been divided across major project phases, including demolition, excavation, construction, and interior fit-out, with specific line items dedicated to permits, utilities, equipment rentals, and specialized labor.

The total proposed contract value is €14.9M. Costs were estimated using internal historic and local market data.

A 3.5% GC fee aligns with industry standards for projects of this scope and complexity. Given inherent risks associated with the tight urban location and logistical challenges, an experienced construction team is essential for maintaining progress and minimizing disruptions.

Design fees at 5% support the architectural and engineering services necessary to meet Dublin's stringent planning and building regulations. This allocation reflects the project's complexity and the owner's commitment to achieving the BREEAM Excellent certification.

A 15% contingency provides a financial buffer against potential risks identified in the client's requirements, including unforeseen site conditions. This aligns with industry with best practices for design-build projects as design and build puts more risk on the general contractor.

Comprehensive insurance coverage, including Contractors' All Risks and Public Liability, is allocated 1.5% of the project cost. This ensures adequate risk protection, essential for a high-profile project in a densely populated urban area. It provides security for both the client and contractor against any accidental damages or claims that may arise.

The 1% allocation for bonds ensures that the project has performance and payment guarantees in place, which are standard requirements for projects with significant financial investment and community impact. This provides the client with additional assurance of project completion to quality standards.

Cost Management

To ensure accuracy in spending and accountability, we will implement a robust cost-tracking system. Each expense will be logged and categorized in a project management software, allowing the project team to compare actual costs against the budgeted amounts on a real-time basis. This system will generate regular financial reports and cost variance analyses, which will be reviewed weekly by the project manager. These reports will enable the project team to promptly identify any areas where costs exceed the budget and implement corrective actions, such as adjusting procurement schedules, sourcing alternative materials, or renegotiating subcontractor terms. Monthly budget review meetings will be held with senior management to discuss the financial status, highlight any significant cost variances, and assess the project's financial health.

The cost management plan incorporates a 15% contingency fund to cover unexpected costs arising from project risks, such as encountering buried utilities, extended demolition times due to structural constraints, or delays in permit processing. This contingency allocation was determined based on a risk assessment of the project's specific challenges, such as working near historical sites and managing environmental requirements. The contingency fund will be drawn upon only when all other cost-saving measures have been exhausted. To maintain transparency, any use of contingency funds will require authorization from the project manager and be documented with detailed explanations for future review.

Accurate and timely documentation of all project-related expenses is crucial for maintaining budget control and accountability. Every cost incurred, including labor, materials, equipment rentals, and subcontractor fees, will be documented in detail and assigned to specific budget categories. All financial records will be reviewed monthly and stored in an organized digital

system, accessible to authorized personnel for audit purposes. This documentation will support future financial audits, ensure compliance with regulatory requirements, and serve as a reference for future projects.

Financial Risks

One of the primary financial risks in this project is the potential for cost escalation due to fluctuations in material prices and labor rates. With rising costs in the construction industry and supply chain disruptions, we risk exceeding budget allocations for materials like steel, concrete, and fuel. To mitigate this risk, we have secured fixed-price contracts with key suppliers and subcontractors wherever possible. This approach locks in prices early in the project and shields us from unexpected market changes.

Compliance with local regulations, especially regarding noise, environmental protection, and safety standards, is crucial in this project. Failure to adhere to these regulations could lead to costly penalties, delays, and even work stoppages, significantly impacting the budget. To address this, we have conducted an in-depth regulatory review and engaged local experts to ensure compliance with Dublin's planning and environmental regulations. Regular monitoring of regulatory changes will allow us to adjust practices as necessary. These steps minimize the risk of unexpected costs related to non-compliance.

Urban construction projects often encounter hidden conditions such as buried utilities, unknown soil conditions, or archaeological findings, which can delay the project and increase excavation and utility relocation costs. In Stoneybatter, the potential to encounter buried gas lines or historical artifacts adds significant risk. To mitigate this, we conducted a ground-penetrating radar survey to identify underground utilities before excavation begins, reducing the chance of unexpected utility strikes. Additionally, we have allocated a 15% contingency fund to cover potential cost overruns related to unforeseen conditions. This reserve allows us to address unexpected discoveries without derailing the overall budget.

Project delays are another significant financial risk, potentially leading to increased labor costs, extended equipment rentals, and lost opportunity costs. Delays can stem from weather conditions, unforeseen site issues, or supply chain disruptions. To address this, we have implemented a just-in-time delivery system for materials, which minimizes the need for on-site storage and ensures that materials arrive precisely when needed, reducing the risk of downtime due to storage limitations. Additionally, a detailed project schedule with defined milestones allows us to monitor progress closely. Regular reviews will allow us to identify potential bottlenecks and implement corrective actions early, preventing prolonged delays and associated costs.

Accidents on-site can lead to unexpected expenses related to medical treatment, regulatory fines, and work stoppages, which can disrupt the project and increase costs. Given the proximity to a school and residential areas, the risk of accidents involving pedestrians or residents also increases financial exposure. To mitigate this, we have developed a comprehensive health and safety plan, which includes strict adherence to PPE requirements, regular safety training, and the

use of safety barriers and signage around high-risk areas. A designated health and safety officer will conduct regular inspections to ensure compliance with safety standards, reducing the likelihood of accidents and related financial impacts.

In a project of this scale, maintaining a steady cash flow is essential to meet payment schedules for materials, labor, and subcontractors without delays. Interruptions in cash flow can lead to project slowdowns or penalties for late payments. To prevent this, we will closely monitor expenses and align disbursements with project milestones. Regular financial reporting and forecasting will allow us to track cash flow in real-time, ensuring funds are available when needed. Additionally, we have a line of credit in place to handle any temporary cash flow shortages, ensuring uninterrupted progress on-site.

Changes in project scope or stakeholder-driven modifications can lead to significant budget overruns if not carefully managed. Requests for design changes, added features, or increased sustainability measures can drive up both material and labor costs. To mitigate this, we have established a formal change order process that requires all scope changes to be reviewed and approved by senior management before implementation. We will also work closely with the client to finalize design elements early in the project, limiting the need for late-stage adjustments that can disrupt the schedule and budget.

Weather-related delays and environmental risks, such as unexpected heavy rainfall leading to water runoff issues, can impact project costs by causing delays and requiring additional site stabilization efforts. To manage this, we will monitor weather forecasts closely and plan construction activities around anticipated weather patterns where possible. Water runoff will be managed through proper site grading and drainage systems, preventing additional costs associated with water damage to neighboring properties.

D&B contract

For a design and build lump-sum contract in Dublin, Ireland, the Royal Institute of the Architects of Ireland (RIAI) Design and Build Lump Sum Contract is the most suitable choice. This contract is specifically tailored for projects in Ireland, providing a clear structure for lump-sum agreements while addressing the needs of design and build arrangements. The RIAI Design and Build Lump Sum Contract is ideal for this project for numerous reasons.

In design and build arrangement, single-point responsibility is crucial. The RIAI contract ensures that the contractor is responsible for both the design and construction, streamlining communication and accountability. This structure reduces the potential for disputes between designers and contractors, as the contractor handles both roles, leading to smoother project management and alignment with project goals. The RIAI contract includes structured provisions for managing variations, allowing any changes to the project's scope, costs, or timeline to be formally documented and approved. This ensures that changes are controlled and do not lead to unexpected cost increases or scope creep.

The RIAI Design and Build Lump Sum Contract is widely recognized and accepted in Ireland. This makes it easier to obtain approvals, work with local contractors familiar with the contract, and ensure compliance with Irish building codes, safety regulations, and planning requirements. Local familiarity with the RIAI contract can streamline regulatory approval processes and help with smoother project execution in Dublin's urban environment. For lump-sum contracts, effective risk allocation is essential to prevent cost overruns and delays. The RIAI Design and Build Lump Sum Contract clearly defines the allocation of risks, with most financial risks related to cost overruns borne by the contractor. This incentivizes the contractor to manage costs tightly and minimizes the client's exposure to unexpected financial risks. The RIAI Design and Build Lump Sum Contract allows the client to set specific quality and performance standards that the contractor must meet within the agreed lump sum.

Procurement

Throughout the entire planning and design process, the development of a procurement plan is essential to efficiently acquire the best subcontractors and materials for keeping the project on time and on budget. For this same reason, it is important to bring on subcontractors as early as possible to expedite the design phase of the project. This allows those who are most knowledgeable about specific systems to provide input on design choices, phasing, and scheduling. Regarding material, subcontractors will be required to provide product data submittals to the design team to ensure that all permanent materials located on the project match the intention of the design team. These submittals will be required early in the project to ensure that the shipment and delivery of materials will meet the short project schedule. This is especially important for long lead items such as air handlers or internationally manufactured materials.

Selection of Subcontractors and Suppliers

When selecting subcontractors, we rigorously evaluate companies to find those that we believe can complete the project to the highest standard at an accurate cost. Subcontractors will be asked to provide a history of similar projects that showcase their ability to perform work to the standards set for this project. We will also require subcontractors to answer specific RFP's where they will be required to estimate, schedule and sequence the work within their scope to evaluate if their plan will function within ours. Other factors will also be used to help determine which subcontractors are selected including but not limited to history, community reputation, diversity, sustainability practices, and innovations. Suppliers will be vetted through our procurement team where they will be asked to provide pervious experiences with similar projects, lead times for large critical items, and a cost estimate of their scope of the project. We will also evaluate their ecological footprint through carbon emissions in the manufacturing and delivery of their goods, their waste management practices, and their reputation in the community.

Value Engineering

The utilization of our design practices and construction methods is fundamentally built to provide the most added value to the client. For this project our methods of prefabrication will provide the client with higher quality results, leading to lower operational and maintenance costs in the future. Our equipment selection for the MEP systems will also provide added value to the client as operational costs will be substantially less than more inefficient systems, this includes our HVAC systems and smart sensors in the building reducing total energy usage. The reuse of the existing cobblestone to pave the courtyard also saves the cost of purchasing new materials as well as adding historical value to the building tying its presence into the history of the community.

Planning and Programming

Construction Methodology and Consideration

We believe that procedures and methodologies are derived from needs therefore we have compiled methods we believe solve the needs of our project allowing us to deliver a better project, faster while maintaining our budget. One methodology we will utilize throughout the project is prefabrication. Prefabrication allows us to assemble components off site and deliver them to be installed when they are needed. Prefabrication has quite a few benefits but specifically with this project we will benefit from reducing space requirements on site for assembly/storage and reducing the number of workers on site. We will also see benefits in the quality of prefabricated units as they are assembled in clean spaces where defects are rarer, and quality can be monitored more closely allowing us to assemble more complex units. Assemblies we will be prefabricating for this project include bathroom assemblies, floors, precast walls, and raft foundation reinforcement.

Milestones and Key Activities

The first schedule iteration of the project has the schedule broken down into three main components: design, construction, and close-out. The design phase is broken into design development, 60% construction document, and 90% construction document. The length of the design phase is 143 days. Because of the design-build set up of the project, construction is able to start well before design is finalized. The actual construction of the building will be broken into phases. Each floor will be constructed separately from the other, and each floor will be separated into 3 zones allowing for an efficient flow of work, expediting the duration of construction. The utilization of prefabrication in portions of the MEP systems allows for faster construction is these phases as well. The overall duration of the construction phase is 340 days. Finally, in order to turnover the project to the owner, several closeout activities must be completed. These activities include: building cleanout, commissioning, and inspections. Closeout will be able to begin shortly before the conclusion of construction, with a duration of 28 days. This then concludes the project is the duration of the whole project being 451 days and turnover to the owner being on July 30th, 2026; meeting the deadline set by the owner for the start of the school year. One issue with the schedule is that the construction of the gatehouse is set for two months, but is unable to start before the substantial completion of the primary student living structure. This sets the completion of the gatehouse to be in mid-September. Since it is in all stakeholders' interest to have the housing in operation for the school year, construction of the gatehouse will occur during the operation of the primary structure. Extra consideration to occupant safety during the construction of the gatehouse will be taken into account.

Task	Duration (days)	End Date
Sitework and utilities	35	29 / 5 / 25
Demolition	25	15 / 6 / 25
Substructure	55	11 / 9 / 25

Shell	192	15 / 5 / 26
Interiors	47	1 / 6 / 26
Services	94	22 / 6 / 26
Equipment and furnishes	50	20 / 7 / 26

Design Release Schedule

This project involves the development of a Purpose-Built Student Accommodation (PBSA) building in the vibrant Stoneybatter area of Dublin, Ireland. The Design-Build contract aims to integrate the design and construction phases, ensuring a seamless and efficient process.

For the architectural design of the schedule, we include 5 phases. The first phase allocates for the conceptual design of the project. In the first weeks of this phase, we will have a kick-off meeting with stakeholders, including university representatives, local authorities, and the design-build team, to outline project goals, requirements, and constraints. We will provide an initial site analysis and feasibility studies will be conducted. The overall development of preliminary design concepts, including sketches and rough layouts will be in production, leading to the presentation to stakeholders for feedback. From there, the refinement of selected design concepts based on feedback will continue until we are able to get an initial cost estimate and project timeline to be drafted. The finalization of the conceptual design and approval from stakeholders will allow us to proceed to the next phase.

Moving on to the second phase, we focus on the schematic design of the project. Within this phase, we will conduct detailed site analysis and surveys as well as develop the schematic design drawings, including floor plans, elevations, and sections. We plan to focus on coordination with structural, geotechnical, mechanical, and electrical engineers to integrate their input into the design in addition to providing us feedback directly correlated to the site and climate analysis. Following, we will present the schematic designs to stakeholders for review and feedback to then allow for adjustments to be made based on comments. The ending of this phase concludes with the finalization of schematic design and the approval from stakeholders to proceed to the design development phase.

The third phase, which highlights design development, commences with the development of detailed design drawings, including architectural, structural, mechanical, and electrical plans. We will then select materials, finishes, and fixtures and have direct coordination with suppliers and vendors for preliminary cost estimates. The integration of design elements into a cohesive set of drawings will be the next step before reviewing with stakeholders and adjusting as needed. The finalization of design development drawings will follow in addition to the approval from stakeholders to proceed to the construction documents phase.

The fourth phase commences with the construction documents, where the team will prepare detailed construction drawings and specifications, coordinating with all engineering disciplines to ensure accuracy and completeness. These documents will be reviewed with stakeholders, and adjustments will be made based on their feedback. The construction documents will be finalized and submitted for building permits and regulatory approvals. Finally, the team will secure approval from regulatory authorities and prepare for the construction phase.

In the fifth and final phase of the design release schedule we will kick off with a meeting with the construction team to review the construction schedule and milestones. Throughout the construction phase, regular site visits and meetings will be conducted to monitor progress, address any issues, and ensure compliance with the design intent. Upon completion, a final inspection will be carried out, and the completed work will be approved. The project will then be handed over to the client, marking the closeout of the project.

Site Management and Logistics

Site Management

The project presents unique challenges due to its urban location, adjacent infrastructure, and site restrictions. Successfully navigating these constraints requires a comprehensive plan addressing spatial limitations, traffic and pedestrian management, environmental controls, and stakeholder communication. Here is an analysis of the key challenges associated with the site, alongside proposed solutions to ensure safe, efficient, and compliant construction processes.

1. Limited Site Space

The restricted footprint of the construction area poses difficulties for material storage, equipment maneuverability, and worker safety. Proximity to other structures and limited on-site parking further complicate logistics. Materials and equipment will be delivered in a phased approach, synchronized with daily construction needs to prevent overcrowding. Establishing a designated laydown area for materials and arranging early-morning or late-night deliveries will reduce congestion. Off-site storage facilities can serve as temporary holding areas, from which materials are dispatched to the site as needed.

2. Traffic and Pedestrian Management

The site is bordered by busy roads and a bus lane, and maintaining safe pedestrian pathways is essential. Traffic congestion during rush hours further limits access, creating scheduling conflicts for deliveries. To alleviate disruptions, deliveries will be scheduled outside peak traffic hours (7:30-9:30 AM and 4:00-6:30 PM). Early coordination with local traffic authorities will enable temporary rerouting and road closures for crane assembly and material hoisting. A clear traffic management plan will be developed to allocate temporary parking and loading zones for construction vehicles. Additionally, pedestrian pathways will be demarcated with fencing and signage, including temporary crosswalks where necessary. During critical operations like crane lifts, flaggers will guide pedestrians, ensuring their safety. Bus lane diversions will be implemented with minimal disruption to public transit schedules.

3. Noise, Dust, and Environmental Control

Construction activities, particularly demolition, generate noise and dust, which can affect nearby schools and residential areas. Compliance with environmental regulations is mandatory, requiring proactive management of site emissions. Noise levels will be monitored to ensure compliance with allowable limits. Equipment with lower noise output will be prioritized, and noise barriers will be installed along site boundaries, especially adjacent to the school. Dust suppression techniques, including water spray systems and industrial vacuums, will mitigate airborne particles during demolition and concrete cutting.

A structured waste management plan will reduce on-site clutter and environmental impact. Waste will be sorted, compacted, and removed regularly, with designated concrete washout stations to

prevent site contamination. Additionally, energy-efficient equipment and periodic emissions testing will ensure compliance with carbon management policies.

4. Health and Safety in a Constricted Urban Setting

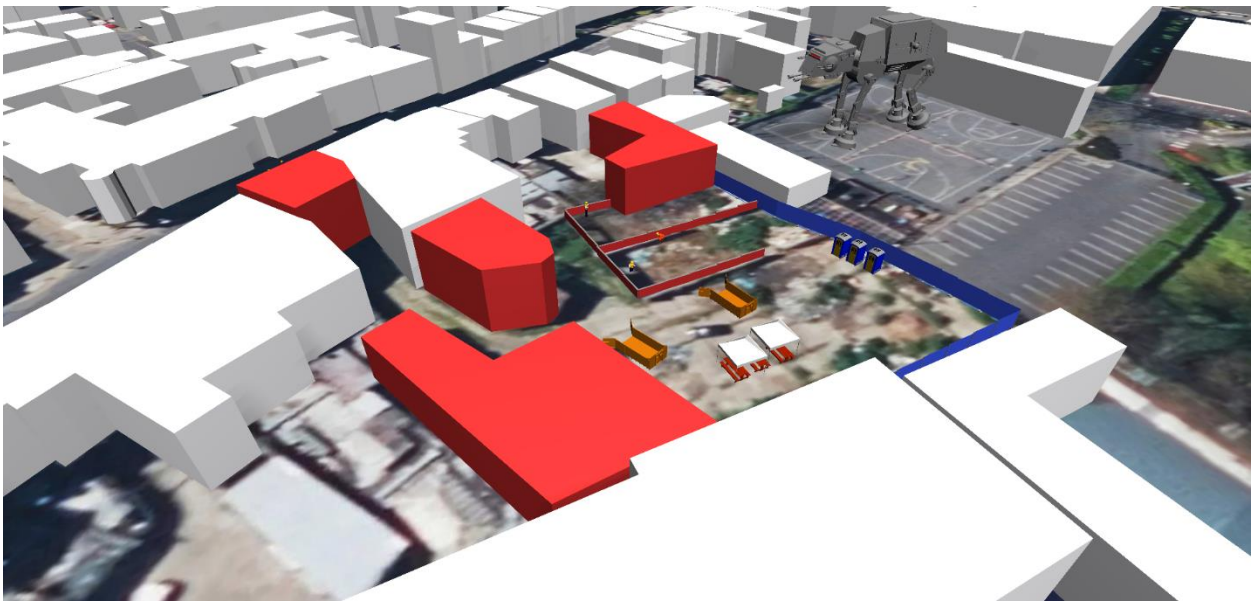
The limited space and active urban surroundings increase the risk of accidents involving both workers and the public. Safety precautions must be elevated to prevent hazards during crane operations, vehicle movements, and construction activities near the site perimeter. Health and Safety regulations, as outlined in Ireland's Safety, Health, and Welfare at Work Act, will be strictly enforced. Personal protective equipment (PPE) use, regular safety audits, and daily toolbox talks will be part of standard protocol. Designated muster points, eyewash stations, and on-site first aid stations will ensure immediate response capabilities. The tower crane will be fitted with restrictors to limit its swing radius, preventing it from moving over neighboring properties. Flaggers will coordinate pedestrian flow during crane lifts, allowing pedestrians to cross safely during non-lifting intervals. Scaffoldings with protective netting will be used during demolition to contain debris and protect pedestrians.

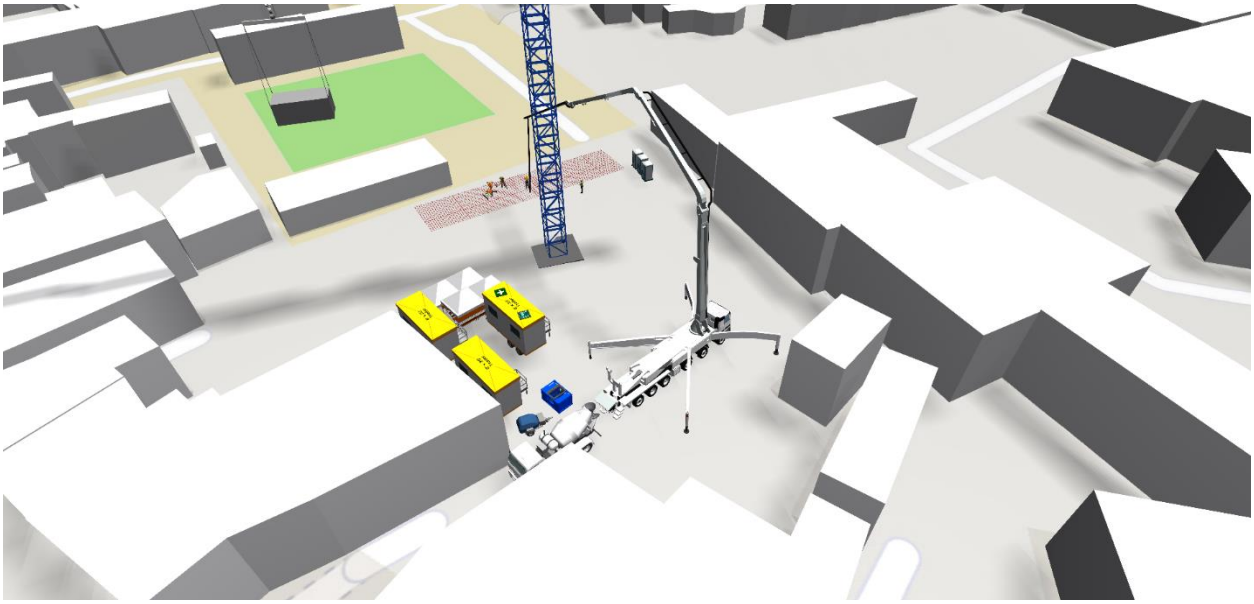
Logistics and Traffic Management

There is no parking available on-site, so all personnel must find public parking and walk to the site. Deliveries will reverse into the site under the direction of the SLG traffic marshal. Traffic movement within the site will be meticulously controlled by management and the SLG traffic marshal to ensure safety and efficiency. Additionally, it is important to note that there are no overhead power lines present, which eliminates one potential hazard and simplifies the management of site access and traffic flow.

The traffic system on-site will be meticulously managed to ensure safety and efficiency. All movement will be controlled by both management and the SLG traffic marshal, who will oversee the coordination of vehicles and personnel. This structured approach helps to prevent accidents and maintain order. Additionally, the absence of overhead power lines eliminates a significant hazard, simplifying the management of site access and traffic flow. This comprehensive traffic management plan is designed to create a safe and organized environment for all site activities.


DETOUR





Health and Safety

The Health, Safety, and Welfare Management Plan places special emphasis on the Safety, Health, and Welfare at Work Act 2005. This plan also incorporates the Health and Welfare at Work (Construction) Regulations 2013, as well as the Safety, Health, and Welfare at Work (General Application) Regulations 2007 and its amended version from 2016. These regulations collectively ensure a comprehensive approach to maintaining health, safety, and welfare standards in the workplace, particularly in construction and general work environments.

To efficiently manage Health, Safety, and Environmental (HSE) risks, it is essential to stay up to date with the latest regulations and best practices. Continuous monitoring and risk assessment, along with the application of appropriate controls, are crucial. Maintaining high health standards for workers, providing a safe workplace, safe systems of work, and ensuring the safety of equipment and vehicles are also key components. Consulting with employees, having well-defined emergency plans and procedures, and actively cooperating with local authorities are vital

for effective HSE management. Objectives will be SMART (Specific, Measurable, Achievable, Relevant, and Time-bound) and reviewed annually by senior management to ensure ongoing improvement and compliance.

The Environmental Policy Statement outlines our commitment to fulfilling legal duties, meeting client requirements, and addressing social obligations. We aim to reduce waste, manage the use of water and raw materials, and protect biodiversity. Our Environmental Management approach includes considering sustainability during design, monitoring water consumption at both office and site, preventing pollution, and being prepared for emergency pollution situations. We also focus on monitoring and reducing waste for both environmental and financial benefits, considering the effects on local communities, and collaborating with our supply chain.

In terms of Carbon Management, we are dedicated to monitoring and reducing emissions, identifying opportunities to reduce emissions and setting targets, reducing energy use, and considering energy-efficient opportunities at temporary offices. We encourage the use of alternative energy sources such as solar and wind, and ensure that staff are aware of these initiatives.

For Waste Management, we implement a waste site management plan, design out waste, use recycled materials, and reuse materials and equipment from other sites. We also fulfill our duty of care obligations in accordance with waste legislation.

Our Quality Policy is centered around meeting client requirements and adhering to relevant regulations. We prioritize staff training to ensure that our team is well-equipped to maintain high standards of quality. Additionally, we have established quality objectives that are reviewed annually by senior management to ensure continuous improvement and alignment with our goals.

All access roads leading to the site entrance must be maintained in a clean and unobstructed condition.

Stakeholder C ommunication

As the General Contractor for the Stoneybatter Student Accommodation project, our priority is to ensure transparent, proactive, and collaborative communication with all project stakeholders. Our primary stakeholders include the client, Merrymount Student Developments, local authorities, adjacent businesses, residents, nearby schools, and subcontractors. To maintain alignment with the client's vision and community standards, we will establish regular updates and open communication channels that address project milestones, potential disruptions, and safety considerations.

Throughout the project, we will conduct monthly stakeholder meetings to share progress updates and upcoming construction activities. Key events, such as crane assembly or road closures, will be communicated well in advance to minimize the impact on surrounding businesses, residents, and schools. For high-impact operations, we will issue advance notifications and collaborate with local authorities to obtain necessary permits, as well as coordinate traffic and pedestrian safety

measures. Additionally, we will distribute weekly bulletins outlining project milestones, anticipated disruptions, and health and safety measures to provide ongoing transparency.

To maintain consistent and accessible communication, a designated liaison officer will be appointed to address any stakeholder concerns promptly. This officer will serve as the primary point of contact for the community, ensuring that feedback and questions are handled efficiently. We will also set up a project website and hotline, where stakeholders can access real-time updates and voice their concerns. This approach fosters trust and responsiveness, ensuring that the project progresses smoothly while respecting the needs and expectations of all parties involved.

Risks and Restrictions

There are several particular risks and restrictions associated with this project. These include the potential for encountering buried gas supply lines, the risk of demolition activities damaging nearby buildings, and the proximity of a school. Other risks involve excavation entrapment, falls, working adjacent to residential areas, traffic and road safety, and the challenges of piling new underground utilities. Additionally, noise and vibration, water runoff to neighboring buildings, dust and particulate matter, and hazardous substances must be managed carefully. It is important to note that all deliveries will be scheduled on a just-in-time basis to minimize on-site congestion and storage issues.

A comprehensive risk management plan will be implemented to address these concerns. This plan will cover traffic management, working at heights, waste management, public safety, and the removal of public utilities during construction. These measures are designed to mitigate risks and ensure the safety and efficiency of the project. We will also be documenting the surrounding structures (with permission of the owners) to maintain records of the condition of these structures before the start of construction. We will be using lidar and 3D Scanning on both the interior and exterior of the structure to map all surfaces that could be affected.

There are several hazardous materials and associated risks to consider. Asbestos may be present in demolished structures, and there is a risk of burial during excavation activities. To mitigate these risks, a ground-penetrating radar survey will be conducted. During excavations, hand digging with insulated tools will be used when underground utilities are expected, and scanning will take place first to identify any potential hazards.

Hot work permits are required before performing any hot work, and fire extinguishers must be placed near the work area. Personal protective equipment (PPE) is mandatory and includes helmets, safety boots, hi-visibility vests, and gloves.

Planning permission has been granted by Dublin City Council under Section 8 of the Planning and Development Act 2001, as amended.

To ensure the safe and efficient operation of crane lifts, liaison will be conducted to ensure clear access and the possible suspension of activities. Danger and exclusion zones will be established, and mobile crane foundations will be prepared. Designated loading and unloading zones will be set up, and traffic management plans will be implemented. An emergency plan will also be in place.

All new workers are required to complete site-specific safety training. First aid facilities are available at the site office, and the nearest hospital is Saint James Hospital. Any accidents will be reported to the Health and Safety Authority (H.S.A.).

Project ESG

The Stoneybatter Student Housing Development project represents a significant step forward in our company's commitment to Environmental, Social, and Governance (ESG) principles. By integrating sustainability into every stage of the project—from design and construction to operation—we aim to deliver a development that not only meets the growing need for high-quality student accommodation in Dublin but also aligns with our broader ESG objectives. This development is a direct reflection of our belief that achieving long-term success requires a commitment to responsible business practices that create lasting value, benefit local communities, and minimize environmental impacts. The Stoneybatter project will serve as a model for how future developments can balance urban needs with the urgency of climate action, contributing to both the city's growth and our global sustainability targets.

One of the core components of the project is community engagement, a principle we take seriously throughout every phase of development. We understand that successful projects go beyond just the physical space and must reflect the needs and desires of the surrounding community. As such, we are committed to consulting with local stakeholders, including residents, businesses, and city officials, to ensure the design and execution of the development align with the cultural and environmental expectations of the Stoneybatter neighborhood. This engagement will focus on integrating the project into the local context, preserving the architectural character of the area, and ensuring the development enhances the public realm. We are particularly focused on creating accessible green spaces, improving public transport links, and providing areas that serve the wider community, ensuring the project becomes a long-term asset for the area. Additionally, we will support the local economy by creating job opportunities for local contractors, tradespeople, and suppliers, further embedding the development within the community fabric.

In terms of environmental sustainability, the Stoneybatter development is designed to exceed the minimum standards required by regulatory bodies, with a strong emphasis on energy efficiency, green building practices, and climate resilience. The project is targeted for a BREEAM Excellent rating, which reflects its commitment to outstanding sustainability performance. BREEAM is an internationally recognized environmental certification that measures the sustainability of buildings across various categories, including energy use, water consumption, indoor environmental quality, and the management of waste and materials. Achieving the Excellent rating underscores our dedication to minimizing the development's environmental footprint and ensuring that it delivers long-term energy and resource efficiencies for its occupants.

In addition to the BREEAM certification, the project is also targeting a Fitwel Level 3 rating, which focuses on promoting occupant health and well-being through smart design. Fitwel is a global standard for healthy buildings, and its Level 3 rating indicates that the Stoneybatter development will provide a safe, healthy, and comfortable environment for students. This includes features such as improved air quality, access to natural light, well-designed social spaces, and enhanced thermal comfort, all of which contribute to the overall well-being of those who live and work in the building. In a post-pandemic world, it's more important than ever to

prioritize the health and safety of building occupants, and this project is designed with that principle at its core.

The development also aims for a Building Energy Rating (BER) of A2, which signifies an exceptionally high level of energy efficiency. This will be achieved through a combination of advanced building technologies and sustainable materials. Key strategies include high-performance insulation, energy-efficient glazing, and the use of low-carbon energy systems, such as heat pumps and solar panels. These measures will help reduce both the operational energy demand and the carbon emissions associated with the building's ongoing use, moving us closer to our goal of net-zero emissions. The BER A2 rating also ensures that the building will have low running costs for students, making it an economically sustainable choice in addition to being an environmentally responsible one.

Our commitment to achieving net-zero emissions is at the heart of this project. To reach this ambitious goal, we are taking a comprehensive approach that involves minimizing emissions throughout the project lifecycle—from construction to operation. During construction, we are committed to limiting waste, reducing carbon emissions, and ensuring all waste is properly disposed of and recycled. We are working with contractors and suppliers who share our commitment to sustainability and are incorporating circular economy principles to reduce resource consumption. This includes sourcing materials with low environmental impact and prioritizing sustainable, renewable, and locally sourced options whenever possible. Moreover, we are ensuring that energy use during the building's operation is optimized through smart building technologies, such as automated systems that manage lighting, heating, and cooling to ensure energy efficiency without compromising comfort.

On the social side, the project aims to make a positive impact on the lives of its future residents and the surrounding community. The development will provide safe, affordable, and high-quality housing for students, creating a sense of community within the building and offering spaces that encourage social interaction, academic collaboration, and personal well-being. Additionally, the project's focus on sustainability and environmental stewardship will help instill a sense of responsibility and environmental awareness in the students who live there, encouraging them to adopt more sustainable lifestyles. The integration of green spaces, outdoor areas, and pedestrian-friendly paths will promote a healthy, active lifestyle while also reducing the urban heat island effect and improving the local microclimate.

Ultimately, the Stoneybatter Student Housing project is a tangible step towards achieving our broader ESG ambitions. It demonstrates how development projects can address the pressing need for student accommodation while simultaneously creating positive outcomes for the environment and society. By adhering to high sustainability standards, engaging with the community, and prioritizing the health and well-being of the building's occupants, we are not only creating a building that meets the immediate needs of students but also setting a precedent for future developments that place sustainability and social responsibility at their core.

Community Engagement

Community engagement is a cornerstone of the Stoneybatter Student Housing Development project, and we are committed to ensuring that the local community is involved and supported throughout all phases of the development. From the outset, we plan to create positive relationships with residents, local businesses, and educational institutions by integrating thoughtful, collaborative initiatives. One of the ways we will support the community is by providing meals from surrounding restaurants for construction workers, not only helping to boost the local economy but also fostering goodwill with area businesses. We believe in the importance of fostering connections with the surrounding educational institutions, and as such, we will offer site tours for students from local grade schools through to universities, allowing them to see real-time construction processes and gain insight into the development industry. These educational experiences will help inspire future generations of construction professionals while also creating a sense of shared community ownership over the project.

In addition, we are eager to support research and learning through collaborations with the university's School of Construction, which will benefit both students and the wider industry. By providing access to our site as a living laboratory, we can help advance the university's academic and practical programs in construction, sustainability, and urban planning. The project also offers an excellent opportunity for surrounding trade schools to enhance workforce development, giving students hands-on experience and apprenticeship opportunities. We are committed to creating a pipeline of local talent that can contribute to the success of future developments and contribute to the long-term sustainability of the construction industry.

Transparency and open communication with the local community are also integral to our approach. We will provide regular updates and maintain open lines of communication to ensure that local residents are kept informed of progress and have the opportunity to voice concerns or suggestions. To further strengthen our engagement with the community, we propose visioning workshops where residents and other community members can share their ideas, aspirations, and feedback. These workshops will ensure that the development aligns with the broader community's vision and addresses any local concerns, fostering a sense of inclusivity and collaborative decision-making. In this way, the Stoneybatter Student Housing Development will not only provide much-needed housing but also contribute to the ongoing vibrancy and resilience of the Stoneybatter area, creating lasting benefits for all stakeholders involved.

Closing Statements

We are proud to present a project proposal that aligns closely with the vision and values of all key stakeholders involved in the Stoneybatter Student Accommodation project. This proposal is designed to meet the urgent demand for high-quality student housing in Dublin, while respecting the historical and cultural integrity of the Stoneybatter neighborhood. Our team at Virginia Tech Design-Build Group has crafted a plan that not only delivers a state-of-the-art facility but also reflects a deep commitment to environmental sustainability, social engagement, and community collaboration.

Our design integrates seamlessly into the surrounding area, preserving the aesthetic character of Stoneybatter while introducing modern features that foster an inclusive and vibrant student community. We have focused on creating spaces that promote well-being, with communal areas, green spaces, and innovative sustainability measures that align with the city's green initiatives. Our proposal emphasizes sustainable practices throughout every phase of the project, from energy-efficient design elements to waste management and renewable energy sources. Our goal is to achieve BREEAM Excellent certification, setting a new benchmark for sustainable student housing in Ireland.

In addition to the physical infrastructure, our project emphasizes community engagement and academic partnerships. We are committed to supporting local businesses, providing site tours, and offering apprenticeship opportunities to nearby trade schools. Our collaboration with educational institutions will allow students to gain hands-on experience, fostering the next generation of construction and design professionals. We believe this project will not only address Dublin's student housing shortage but also serve as a model for responsible, forward-thinking development that respects the community's heritage and champions a sustainable future. We thank you for the opportunity to contribute to this vision and look forward to the positive impact this project will bring to Stoneybatter and the broader Dublin area.