Waterfront South Central

Proposed SHD Scheme

Assorted Appendices

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Thursday 28 January 2021

TOM PHILLIPS + ASSOCIATES
PLANNING FOR THE FUTURE

Waterfront South Central – SHD Proposal – Assorted Appendices

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NOTE: These documents are provided for reference purposes only, and do not form part of this Planning Application

APPENDIX A – ***Report on the Historical Significance of Former Electrical Substation and Pump House, Castleforbes Road*** **prepared by Slattery Conservation Architects, dated January 2021**

REPORT ON THE ARCHITECTURAL/HISTORIC SIGNIFICANCE OF THE FORMER ELECTRICAL SUBSTATION AND PUMP HOUSE, CASTLEFORBES ROAD, DUBLIN 1.

&

OBSERVATIONS ON THE IMPACT OF THE COMMERCIAL DEVELOPMENT ON THE ADJOINING SITE

January 2021

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Report On The Architectural/Historic Significance Of The Former Electrical Substation and Pump House, Castleforbes Road, Dublin 1, And Observations On The Impact Of The Proposed Commerical Development On The Adjoining Site

1. Introduction

This report has been completed on instruction from Tom Philip and Associates Planning Consultants, on behalf of their clients Waterfront Developments Ltd. It provides an assessment of the significance of the two single-storey red-brick structures on Castleforbes Road, their setting and context, and identifies any associated special architectural and historic character and any other features which are of note. An evaluation of the chronology of the site is also included. The report schedules the proposed works to the adjoining site along North Wall Quay, and assesses the works' potential impact on the significance of the subject structures. In the preparation of this report the subject buildings was fully evaluated and photographically recorded. These photographs are appended to the report. The impact of the proposal on the significance and character of the subject buildings has been assessed in accordance with the 2000 Planning Act and the DoAHG Guidelines on Architectural Heritage.

Although assessed as being of Regional Significance by the NIAH, the subject buildings have, to date, not been included on the Dublin City Council Record of Protected Structures. They are located within the Dublin Docklands Strategic Development Zone (SDZ) and the Docklands Strategic Development and Regeneration Area (SDRA), which *"provides for the continued physical and social regeneration of this part of the city, consolidating the area as a vibrant economic, cultural and amenity quarter of the city, whilst also nurturing sustainable neighbourhoods and communities."*

The subject buildings are not within the site boundaries of the proposed redevelopment along North Wall Quay. It should be noted that permission was granted for a Mixed-Use development of the subject development site in 2017, Planning Reg. Ref: DSDZ3780/17 (and subsequent amendments).

2. Context, Setting, Typology, Chronology

The subject buildings were constructed in the early 20th century as infrastructural buildings for the growing industrial quarter in the North Lotts. The northern building was constructed as an electrical substation, supplying the street-lamps in the area, and the second was constructed some years later to house a water pump. The different construction dates of the two buildings is clearly indicated in historic maps, and by the different coloured bricks, and the different architectural details.

The early 20th century substation pre-dates the creation of the Electricity Supply Board, founded in 1927. Manning and McDowell's *Electricity Supply in Ireland: A History of the ESB* notes:

"When the Electricity Supply Board was set up in 1927 the Irish electricity industry has been in existence for over forty years. The rate of progress during those forty years had been less than spectacular: developments had been uncoordinated and isolated, legislation protected the inefficient and the established, prices were high, the number of consumers was small by international standards and, apart from lighting and heating, little use had been found for electricity in either industry or agriculture. Hostility and suspicion rather than co-operation characterised the relationship between the various elements in the industry and nowhere was this more evident than in the competition between local authorities and private enterprise."

Corcoran notes in *Water, Drainage, People and Heritage* the planned construction of the pump house in the early years of the 20th century:

"A drainage programme was prepared in 1912 for North Lotts, which had been partly drained in the late nineteenth century and contained East Road pumping station. Two additional pumping stations were planned, at Castleforbes Road and Mayor Street. Delayed by the events of 1913-1923, work on the North Lotts drainage programme resumed in 1927."

In order to determine the chronology of building on the subject site, a number of historic maps and images were consulted. These are as follows –

[Note: Castleforbes Road was previously named Fish Street, with the new name only appearing on maps by the 1938 Edition Ordnance Survey map.]

2.1 Ordnance Survey Map, 1847

Although the Castleforbes Road (labelled Fish Street) and the neighbouring streets have been laid out by the time of this map, there does not appear to have been any development in this area. Some plots appear to have been laid out.

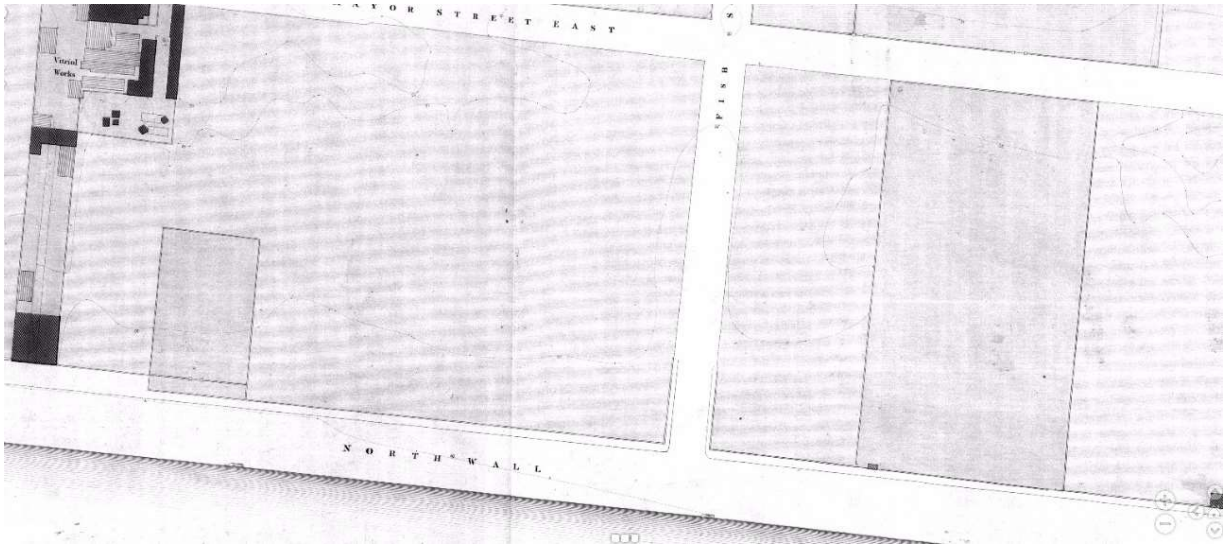


Figure 1: Extract from 1847 Edition Ordnance Survey Map, available online through the UCD Digital Library.

2.2 Ordnance Survey Map, 1864

There has been further development in the area, in particular along the eastern side of Fish Street, with the construction of the large saw-mill and ancillary buildings. The subject buildings have not been built by this time.

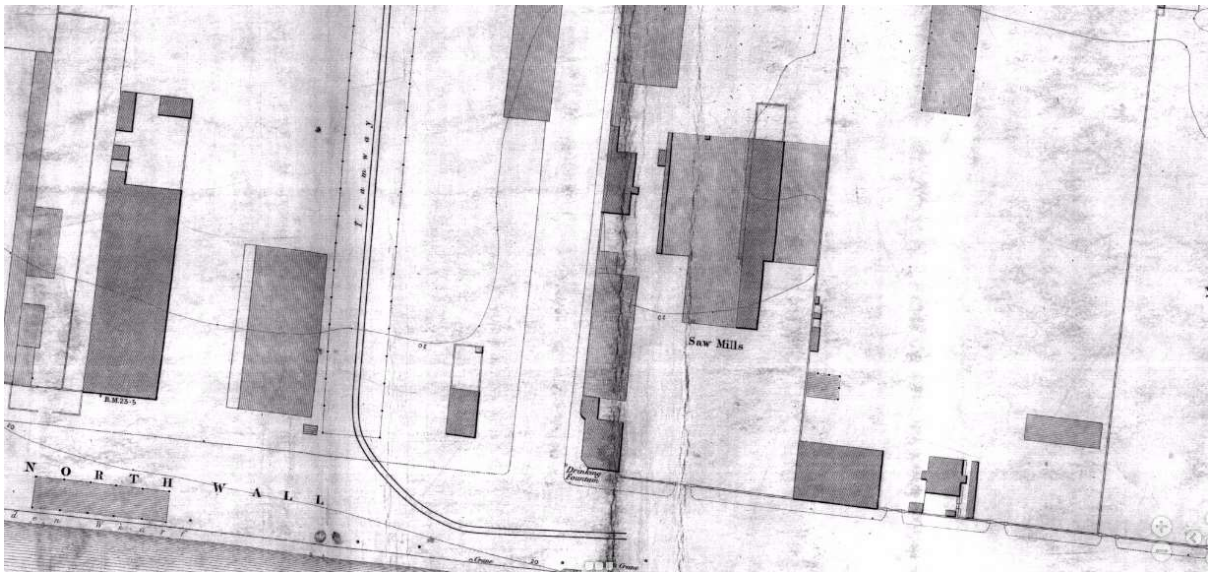


Figure 2: Extract from 1864 Edition Ordnance Survey Map, available online through the UCD Digital Library.

2.3 Goad's Insurance Map of the City, 1892.

Neither of the subject buildings are noted on this map. There appears to be a hydrant along Fish Street, in the general area of the pump house. A detailed lay-out of the timber yard and all of its ancillary buildings is provided in this map.

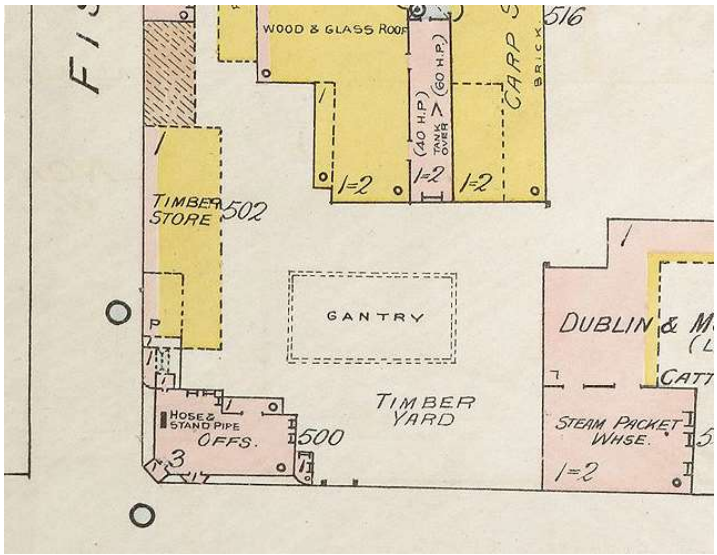


Figure 3: Extract from 1892 Goad Fire Insurance Plan, available online through the British Library.

2.4 Map of the City Accompanying Thom's Directory, 1898

The warehouse to the immediate west of the subject building has bene constructed by this time. Neither of the subject buildings are noted on this map.

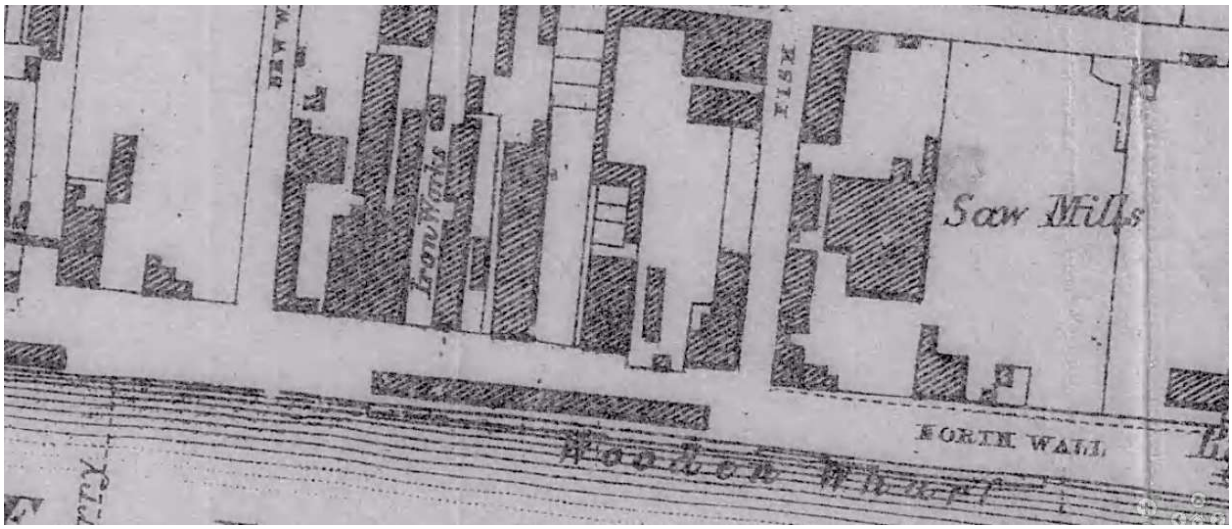


Figure 4: Extract from 1898 Map of Dublin Accompanying Thom's Dublin Directories, available online through the UCD Digital Library.

2.5 Ordnance Survey Map, 1907-11

The electrical substation has been constructed by this time and its rectangular plan form is clearly visible along the eastern side of Fish Street. A pump is noted to the south of this, in the area of the present pump house building.

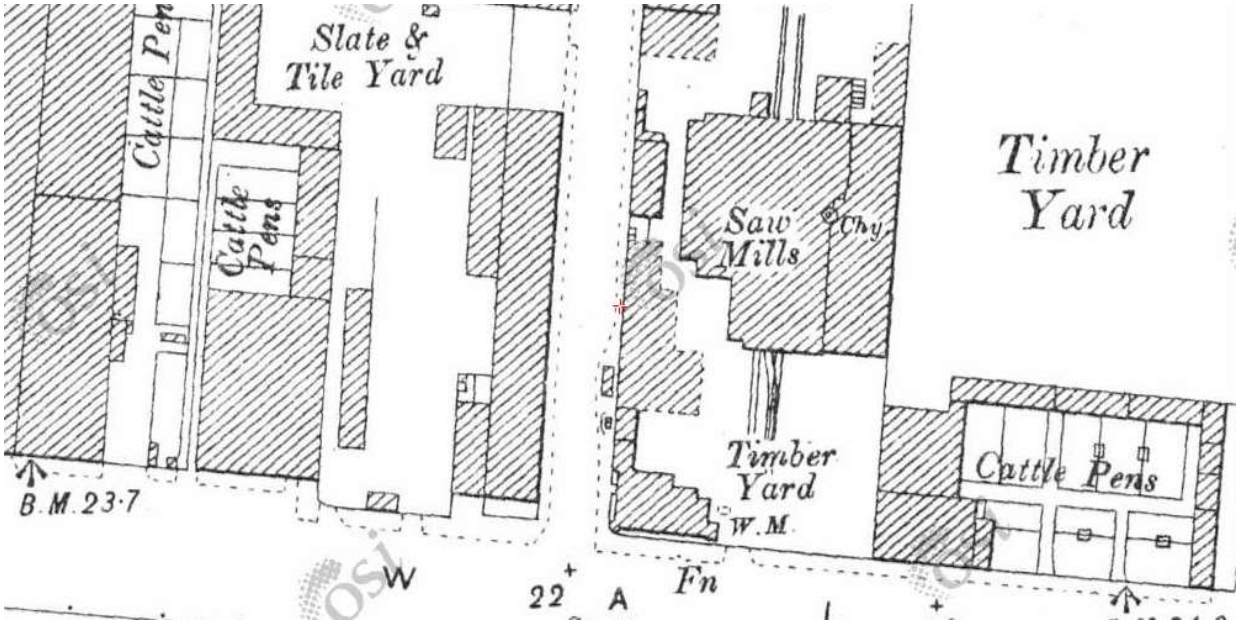


Figure 5: Extract from 1907 Edition Ordnance Survey Map, available online through the Ordnance Survey Ireland Website.

2.6 Ordnance Survey Map, 1938

This map does not provide a detailed view of the subject buildings. The name of the street is now noted as Castleforbes Road.

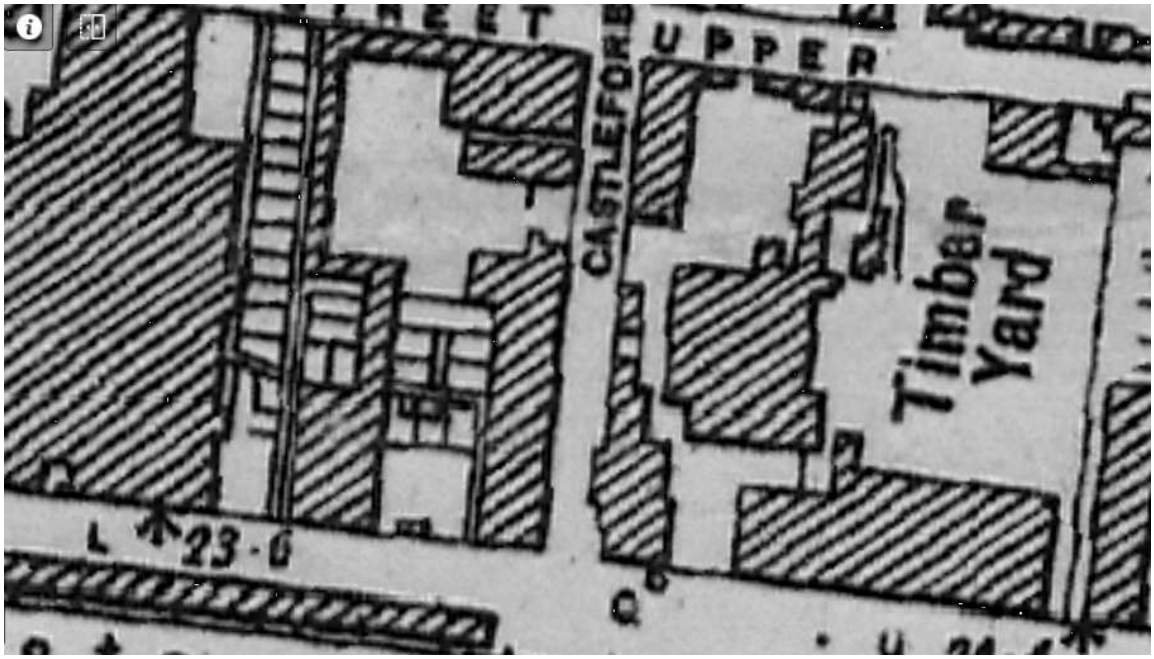


Figure 6: Extract from 1938 Edition Ordnance Survey Map, available online through the South Dublin County Libraries.

3. Description

A full photographic survey of the subject buildings and their setting was carried out in the preparation of this report. This is appended below in the form of a photographic record, and should be read alongside this section.

The National Inventory of Architectural Heritage (NIAH) includes a description of the two subject buildings:

"Two detached single-storey electricity substations, built c.1900, northern being six-bay and southern two-bay. Bitumen covered pitched roofs hidden behind brick parapet walls with terracotta coping to larger structure, concrete coping to smaller, both having small gable to their gable elevations. Red brick walls laid in Flemish bond with brick plinth courses and moulded brick cornice to base of parapets and cast-iron downpipe breaking through to larger structure only. Gauged brick segmental-headed blind bays to larger structure with moulded black brick sills and flush granite keystones. Square-headed window openings to smaller structure with flush concrete lintels, concrete sills and bricked up openings. Square-headed door opening to north gable of larger structure with flush concrete lintel, stop-chamfered jambs and replacement steel doors, and further door opening to west side elevation, detailed as per window openings with steel door. Square-headed door opening to south gable of smaller structure with flush concrete lintel and replacement steel doors."

3.1 Substation

This is a single-storey six-bay red brick structure, constructed between 1898 and 1907. The building sits on a brick plinth. There is terracotta coping at roof level. There is a moulded red-brick cornice at base level of the parapet. The building has a pitched roof, with gables at the northern and southern ends. There are five segmental-arch-headed blind windows on the western elevation and two on the southern elevation. All of these have brick dressings, with granite keystones and moulded black brick cills. The fifth bay of the western elevation appears to have originally had a blind window, but now houses a door. There are double-doors on the northern elevation, with a concrete lintel. The eastern elevation of the building was not accessible. This building does not appear to be in use.

3.2 Pump House

This is a single-storey two-bay red brick structure, constructed shortly after 1927, at least twenty years after the construction of the neighbouring electrical substation. The building sits on a concrete and red-brick plinth, and has concrete cills and lintels to the windows and the double door ope on the southern elevation. There is granite coping at roof level. There is a red-brick cornice at base level of the parapet. The building has a pitched roof, with gables at the northern and southern ends. There are two blind windows on the western elevation. The concrete and brickwork has been painted up to cornice level. The eastern elevation of the building was not accessible. This building is currently in use by the DCC Waste-water services.

4. Assessment of Cultural Significance

The two structures are included on the National Inventory of Architectural Heritage, with a significance rating of 'Regional'. The structures are on the list of recommendations for inclusion on the Record of Protected Structures, as available on the NIAH website. However, to date, the subject buildings have not been added to the Dublin City Council Record of Protected Structures. In addition, the structures have not been included in the comprehensive 2007 ESB publication *A Heritage Inventory of ESB Buildings in Ireland*[1].

This report finds that the buildings are of local interest, both architectural and historical. It is considered that the significance of the structures lies primarily in their contribution to the historic industrial character of the area.

The substation is a typical, early-20th century electricity substation executed in brickwork with a minor level of ornament. A similar architectural language has been applied to the later pump house (now painted over) which was built to protect the pump subsequent to its construction. These two buildings never possessed any formal relationship with their former industrial setting or indeed the existing and proposed docklands blocks. Their diminutive scale has been dictated by their minimal functional requirements and their detached location – as objects on the pavement - has meant that they could never engage formally with the adjacent block. The

[1] It should be noted that the introduction to this publication states: *"The inventory largely excludes ESB substations, of which there are many hundreds, located throughout the country. Due to their large number, the inclusion of these is beyond the scope of this inventory, except where there are particular examples of note that require inclusion."* The exclusion of the subject substation therefore indicates that it is not deemed to be of particular note by the ESB.

rather anomalous character that this has resulted in and the charm of their simple brick expression nevertheless make a contribution to the streetscape and wider area of the Docklands and could, therefore, be considered to be of some minor architectural and historic interest.

The NIAH includes an appraisal of the subject buildings:

"These two diminutive structures were built as utilitarian pieces of electrical infrastructure in the industrial docklands area. The subtle yet decorative brick detailing attests to the attention to aesthetic detail that remained so important until the early twentieth century while forming an attractive element on the streetscape."

The NIAH assign a rating of Regional Interest under the categories of Architectural and Technical to the subject buildings.

4.1 Architectural Significance

The two buildings have a minor level of architectural significance as described above.

4.2 Historic Significance

The structures have minor significance as examples of early-20th century infrastructural constructions by the ESB.

4.3 Technical Significance

The DoAHG guidelines provide examples of how a structure may be attributed special technical interest:

a) *It displays structural or engineering innovation evidenced in its design or construction techniques such as the use of cast- or wrought- iron prefabrication or an early use of concrete;*
b) *It is the work of a known and distinguished engineer;*
c) *It is an exemplar of engineering design practice of its time. For example, a bridge may be a masonry arch, an iron suspension or a concrete span;*
d) *it displays technically unusual or innovative construction of cladding materials, such as early examples of glazed curtain walling, prefabricated concrete plank cladding or Coade stone;*
e) *It contains innovative mechanical fixtures, machinery or plant or industrial heritage artefacts that describe the character of the production processes. The specifically industrial aspect of some sites like mill buildings, mill ponds, tailings, or derelict mines can often have a technical heritage value;*
f) *Purely special technical interest can be ascribed to the innovative engineering qualities of a structure, as distinct from the building's appropriateness for use, or its appearance or form.*

Under these criteria, the subject buildings cannot be considered to be of any technical significance.

4.4 Vernacular Significance

The buildings are not vernacular.

4.5 Group Significance

The subject buildings can be considered to have a relationship with one another, due to the use of red-brick and similar form and architectural language. However, they do not relate to any of their neighbouring buildings and cannot be considered to have any particular group significance.

4.6 Personal Association

There are no known personal associations of note.

4.7 Unique/Rarity

The subject buildings cannot be considered to be particular intact examples of their building typology, as they appear to have been altered in recent years with the insertion of modern steel doors, the upgrading of machinery internally and crude over-painting and, as noted by the ESB, there are many hundreds of examples of such structures. The buildings nevertheless have a particular value as unusual 20th Century constructions within the docklands context.

4.8 Detail/Design

The buildings are quite standard for their time and typology in detail and execution.

4.9 Archaeological Significance

This report does not address archaeological issues.

4.10 Materials

The use of materials in these buildings is standard for its time, and could not be considered to be significant.

4.11 Setting

The subject buildings are located on a side street off North Wall Quay, and have a diminutive presence on the Castleforbes Road streetscape as they would have done historically. Located within a much-larger scale industrial area, the single-storey structures would historically have had little impact on their setting. The subject buildings are utilitarian structures which were necessary for the development of the area, but do not relate architecturally with their much-altered modern context.

However, it is considered that the two structures are of significance within the context of the industrial history of the area, and contribute to this character.

5. Proposed Works

The detail of this proposal is clearly illustrated on the accompanying documentation.

It is important to note that the subject buildings are located outside of the site boundary for the proposed development, and will therefore be retained with no alterations or physical works to them whatsoever. Steps will be taken to ensure they are adequately protected during construction and not undermined structurally by proposals.

The following is the description from the planning ad:

"The development will consist of the following:

1. *Construction of 3 No. commercial office buildings (identified as four blocks (Blocks B1-B4)) ranging in height from 5-storeys to 9-storeys. The breakdown of accommodation is as follows: Block B1 is 7 storeys in height with a Gross Internal Area (GIA) of 9,409 sq m (excluding 1,681 sq m at lower ground floor level), with external accessible terraces and with roof-level terrace and extended access core; Blocks B2 and B3 are 5-9 storeys in height with a combined GIA of 25,640 sq m (excluding 3,486 sq m at lower ground floor level) (including a retail services unit of 147 sq m and a gallery / exhibition space of 224 sq m, both located at ground floor), with external accessible terraces and with roof-level terrace and extended access core; and Block B4 is 5-8 storeys in height with a GIA of 8,718 sq m (excluding 1,952 sq m at lower ground floor level) (including a retail services unit of 140 sq m located at ground floor), and with external accessible terraces with roof-level terrace and extended access core.*
2. *Construction of basement accommodation (22,951 sq m), accommodating: lower ground floor level (7,119 sq m) of office and ancillary accommodation; plant rooms (1,599 sq m); waste storage facilities (290 sq m); employee changing / drying / locker facilities (825 sq m); a bike repair area (40 sq m); a goods' storage area (298 sq m); double loading bay; 107 No.*

1. *car parking spaces; 14 No. motorcycle parking spaces; and 570 No. bicycle parking spaces, with vehicular access provided by ramp from Castleforbes Road.*
2. *Development of a new western pedestrian lane from Castleforbes Road linking centrally with a new pedestrian lane through the centre of the overall City Block 9 site to North Wall Quay, with a second lane also linking to North Wall Quay to the east of Block B4.*
3. *Public realm improvements, to include the provision of a sculptural feature to the corner of North Wall Quay and Castleforbes Road. (Public realm works inclusive of parking and loading bays external to the planning application site boundary will be subject to agreement with Dublin City Council.)*
4. *All enabling and site development works, landscaping, lighting, services and connections, waste management, interim site hoarding, and all other ancillary works above and below ground including the use of secant piling permitted under Reg. Ref. DSDZ3779/17 and DSDZ3780/17 (as amended by DSDZ3042/19)."*

6. Assessment of the Architectural Heritage Impact of the Proposals

The subject buildings are outside of the site boundary of the proposed commercial development. The proposed works will therefore have no impact on the historic fabric of the

subject building, and will not materially affect their character. The proposed works will be set back from the building line of the two subject buildings to the existing, historic building line, ensuring that there is no impact on the historic fabric. This will enable all four elevations of the historic buildings to remain visible to the public and the new occupants of the building.

The proposed development will have an impact on the setting of the subject buildings. As noted above, the setting of these buildings is of little or no significance as they are utilitarian structures which do not relate to their context, and were constructed in a number of locations around the city. The siting of the structures down a narrow road off North Wall Quay ensured that views of the structures from the quayside were obscured, clearly revealing that these utilitarian structures were not meant to be visually prominent.

Figure 7: CGI view showing the proposed new development adjacent to the subject structures.

The small scale of the buildings, and their incongruous setting in the midst of large industrial complexes means that they would always have been diminutive elements within the streetscape. The CGI view showing the proposed new development adjacent to the structures

illustrates the visual impact the development will have on the existing structures. It is considered that this impact is acceptable given the utilitarian function and diminutive presence of the structures.

The proposed development is in line with the DCC Docklands SDZ and SDRA and will revitalise this area of the city.

7. Conclusion

The subject buildings are of some minor architectural and historical interest, due to their association with the early history of electricity supply in Ireland and the drainage of the North Lotts area. The external brick detailing with some simple ornament gives these utilitarian structures some architectural interest. The buildings were designed as functional structures within the area, and followed the same design as similar ESB structures elsewhere. They do not relate to the historic grain of the area, or to their neighbouring buildings, and would always have had a diminutive presence in the area. The primary significance of the structures today is based in their contribution to the character of the North Docklands as remnants of the historic industrial character of the area.

The proposed redevelopment of the adjoining site along North Wall Quay will have no impact on the historic fabric of the structures, and will not detract from the character of the buildings within the streetscape and wider Docklands area.

James Slattery B.Arch., Dipl. ABRCons M.R.I.A.I.
David Slattery Conservation Architects

8. Bibliography

1. Corcoran, M. *Water, Drainage, People and Heritage.* 2007.
2. Delany, B. *A Heritage Inventory of ESB Buildings in Ireland.* 2005.
3. Manning, M. and McDowell, M. *Electricity Supply in Ireland: The History of the ESB.* 1984.

9. List of Appendices

1. Photographic Record – 2017
2. Photographic Record - 2020
3. CVs

APPENDIX I : PHOTOGRAPHIC RECORD - 2017 PHOTOGRAPHS

Former Electricity Substation and Pump House, Castleforbes Road, Dublin 1.

1. Photographic Record -2017

1. View of the two subject buildings, looking North-East

2. View of the two subject buildngs, looking South-East

3. View looking North-East along Castleforbes Street towards the subject buildings

4. View looking South along Castleforbes Street towards the subject buildings, with the former ESB substation in the foreground

5. View looking North along Castleforbes Street towards the subject buidlings

6. View North up Castleforbes Street from North Wall Quay

7. View looking South-West along Castleforbes Street showing the neighbouring derelict warehouse

8. View looking North-East along Castleforbes Street towards the subject buidlings

9. View looking South along Castleforbes Street towards the subject buildings

10. View looking North along Castleforbes Street towards the subject buildings

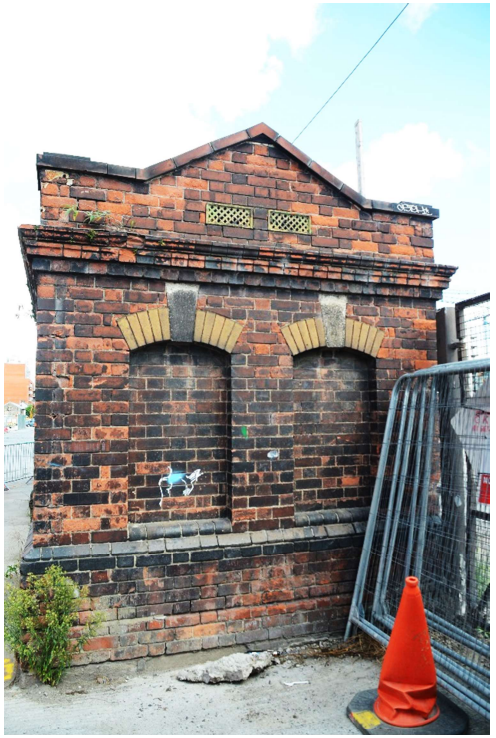
11. View looking south-east towards the former ESB substation

12. View looking north along Castleforbes Street with the former electricity substation in the foreground

13. View of the southern and western elevations of the former substation

14. View of the northern and western elevation s of the former substation

15. View of the northern elevation of the former substation



16. View of the southern elevation of the former substation

17. Detail of the cornice and parapet wall

18. Detail of the window-head

19. View of the western elevation of the former substation

20. Detail of a typical blind window

21. Detail of the moulded brick cill an d brick plinth

22. View looking north-east towards the subject buildings, with the pump house in the foreground

23. View looking north-east towards the pump house, with the former substation in the background

24. View looking south-east towards the pump house

25. View looking north-east towards the pump house

26. View of the western elevation of the pump house

27. Detail of the southern gable of the pump house

28. Detail of the concrete lintel over the double doors on the southern elevation of the pump house

29. View of the northern elevation of the pump house

30. View of the southern elevation of the pump house

APPENDIX II : PHOTOGRAPHIC RECORD - 2020 PHOTOGRAPHS

Former Electricity Substation and Pump House, Castleforbes Road, Dublin 1.

2. Photographic Record -2020

1. Panoramic view along North Wall Quay at the junction with Castleforbes Street

2. Panoramic view along North Wall Quay at the junction with Castleforbes Street

3. Panoramic view along North Wall Quay showing the junction with Castleforbes Street

4. Panoramic view looking North along Castleforbes Street

5. Panoramic view looking North along Castleforbes Street

6. Panoramic view of the streetscape of Castleforbes Street showing the two subject structures

7. Panoramic view of Castleforbes Street showing the two subject structures

8. Panoramic view of Castleforbes Street showing the two subject structures

9. Panoramic view of Castleforbes Street showing the two subject structures

10. Panoramic view of Castleforbes Street showing the two subject structures

11. Panoramic view looking South along Castleforbes Street

12. Panoramic view looking South along Castleforbes Street

13. Panoramic view looking South along Castleforbes Street

14. Panoramic view looking South along Castleforbes Street

APPENDIX III : CVS

PRACTICE DESCRIPTION.

DAVID SLATTERY – Architects – Historic Buildings Consultants

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DESCRIPTION OF PRACTICE

The practice was established in 1990 office location No. 8 Vergemount, Clonskeagh, Dublin 6. The works and projects undertaken are solely of a conservation nature.

In addition to completing major projects for clients, the practice provides specialist consultancy services to other architectural practices. The repair and conservation of historic stonework, brickwork and metalwork; the preparation and use of historic materials such as lime and the conservation and repair of decorative plasterwork, joinery and statuary are areas where the practice has a particular expertise and substantial experience. In addition, the practice has completed a substantial number of assessments of historic buildings and has provided consultancy services for the historic fabric aspects of a number of larger mixed developments.

The practice has seven permanent members of staff and carries Professional Indemnity Insurance.

The practice has worked jointly and in a consultancy role on complex new design and conservation projects on many occasions. It has a proven ability to work as part of a design team.

The practice was part of the Design Team and advising on conservation issues regarding the proposed Terminal 2 at Dublin Airport and conservation architects to the Railway Procurement Agency on Metro North and LUAS Line BXD and to C.I.E./Iarnrod Eireann on the DART Underground Project. The practice was commissioned to act as Conservation Advisors to the E.S.B. on their proposal to redevelop their premises at Lower Fitzwilliam Street. The practice provided advice on the restoration and redevelopment of the former Central Bank Site Dame/College Street now under construction. The practice was also engaged as Conservation Consultants on conservation and repair works carried out on St. Muredach's Cathedral, Ballina, Leinster House, Belvedere College and on the Irish Stock Exchange at Foster Place/College Green.

The Practice is providing ongoing conservation advice on the Bolands Mills Project in the Docklands and on the restoration and redevelopment of No. 2 Grand Parade, Dublin 6 (former Carrolls building) on the Grand Canal as well as the works to the Tropical Fruit Warehouse on Sir John Rogerson's Quay.

CURRICULUM VITAE - JAMES SLATTERY

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CURRICULUM VITAE - JAMES SLATTERY

Name: James Slattery, B Arch MRIAI DiplABRCons.
Position: Principal
Profession: Conservation Architect, Historic Buildings Consultant.

Professional Affiliations:

* BArch Degree in Architecture, UCD-1995-2001.
* Member of the Royal Institute of the Architects of Ireland.
* Diploma in Applied Building Repair and Conservation from Trinity College, Dublin, 2007-2008.

Brief Summary of Experience:

2001-2006 BCDH/BDA Architects

2004-2006 U2 Tower-Competition Winning Scheme & Design up to Tender Stage for DDDA.

2005-2006 Lead designer on the 2nd placed design for the Irish World Performing Arts Village at UL and on shortlisted scheme for Anthony Fokker Park, Schiphol, Holland.

2001-2005 Residential Development to Protected Structure (Regional Significance) at 30-32 S.J.R.Q., Dublin 2 up to Planning Stage

2006- David Slattery Conservation Architects Ltd.

2006-2012 Conservation Architect for Restoration of the National Maritime Museum Protected Structure (National Significance), Haigh Terrace Dun Laoghaire within the former Mariner' Church including roofworks, restoration of stonework, stained glass repairs and protection, interior restorations and new interventions to improve functionality. Lead sketch, planning, tender, construction phases.

2007-2009 Protected Structure (Regional Significance) at No. 13 Stephen's Green, Dublin 2-Conservation Architect for Restoration of external fabric (decorative stucco, sash windows and slate roof) and interior alterations. Lead sketch, planning, tender, construction phases.

2007-2008 Redevelopment of the Humewood Castle Protected Structure (National Significance), Co. Wicklow- Conservation Consulatant to successful

planning for redevelopment of the gothic revival estate which was recently completed.

2008-2012 Kent Station (Protected Structure of National Significance) Redevelopment Masterplan, Horgan's Quay, Cork - Conservation Consultant up to planning stage.

2008- Dartry House (Protected Structure of National/Regional Significance), Rathmines-Restoration - Conservation Consultant though planning, tender and on site stage of a number of phases of work to main house and to Dartry road.

2008-2009 65 Fitzwilliam Sq, Dublin 2 (Protected Structure of National/Regional Significance) – Conservation Consultant to planning stage for conversion of former house in offices back to a single family dwelling.

2008-2010 Ardeevin, Otranto Place, Sandycove (Protected Structure Regional Significance) - Conservation Architect for Extension and Restoration of detached Victorian House by the sea. Sketch, Planning, Tender and Construction stages.

2009-2014 Redevelopment of Ballroom and Stables at K-Club, Straffan House (Protected Structure of Regional Significance)-Conservation Consultant

2008-2012 Works to Railway Stations at Newbridge, Kildare, Sallins, Ballinasloe, Tullamore and Drogheda- (all Regionally Significant Protected Structures) Conservation Consultant.

2008-2012 Dart Underground-Conservation-Consultant for Design, EIS Preparation etc. to successful Railway Order.

2008-2012 Luas Line BXD-Conservation Consultant for Design, EIS Preparation etc. to successful Railway Order for works affecting numerous Nationally and Regionally significant Protected Structures and National Monuments within ACA and CAs in Dublin City.

2009-2012 Redevelopment of interior to Powerscourt Townhouse (Protected Structure of National/Regional Significance) and Restoration Works to Front Setting, Sth William St, Dublin 2 - Conservation Consultant and Architect.

2009-2012 Redevelopment of Doyles/Times Hostel, Fleet Street, Dublin 2 (including Regionally Significanr Protected Structures) - Conservation Consultant.

2010-2014 NUI Galway – Reroofing Quadrangle Building – Protected Structure and Refurbishments to Aula Maxima – Conservation Architect for planning, tender and construction.

2010-	Redevelopment of RTE Campus, Dublin 4 (including assessments of Protected Structures of Montrose and Mt Errol and the STW campus itself) - Conservation Consultant.to Planning and Tender for Restoration Works to Montrose House redevelopment.
2010-2015	Redevelopment of Irish Distiller's Site, Smithfield - Conservation Consultant.
2010-2012	Redevelopment and Restoration of CWU Headquarters, NCR, Dublin 3-Conservation Consultant for planning, tender and construction phases of works to former early Georgian house (Protected Structure of Regional Significance).
2010-2012	Restoration of Seatown Road Parochial House Swords - Conservation Consultant for planning, tender and construction phases of works (Protected Structure of Regional Significance).
2010-2012	Restoration to Interiors of St. Francis Xavier's Church (Protected Structure of National/Regional Significance), Gardiner Street, Dublin 1-Conservation Consultant
2011-2013	Redevelopment of Former Ford Factory Site (Protected Structure of National Significance), Marina Park, Cork-Conservation Consultant. Sketch and planning stage.
2011-2013	Restoration Works to Macroom, Carrig, & Kildare Bridges-Conservation Consultant. Planning and Tender Stages.
2011-	Restoration of Leinster House External Fabric (Protected Structure of National Significance) - Conservation Architect to Tender Stage.
2011-2012	Restoration of Fire Damaged Church, Ballinroad, Waterford (Protected Structure Regional) – Conservation Consultant. Tender and Construction stages.
2011-2015	Restoration of Olympia Roof and Interiors, Dublin 2 (Protected Structure Regional) – Conservation Consultant. Tender and construction stages.
2011-2012	Redevelopment of former Dutch Billy at No. 50 Mary Street, Dublin 3 (Regionally Significant Protected Structure) - Conservation Architect. Planning and Tender stages.
2011-2013	Restoration of Stonework and Copper Lamps and Standards to Sarsfield Bridge, Limerick (Regionally Significant Protected Structure)- Conservation Consultant. Planning, tender and construction stages.

2012- Belvedere House – Belvedere College – Conservation Architect planning tender and construction stage.

2012- Restoration and protection of Apse Roofs to Pugin Chapel, Slate Roofs to Apple Store and Redevelopment of Stoyte House and Kitchen Courtyard all at St. Patrick's College Maynooth including a number of Nationally Significant Protected Structures. Conservation Architect for planning, tender and construction stages.

2012-2013 Restoration & Redevelopment of Marley Grange, Rathfarnham (Regionally Significant Protected Structure) - Conservation Consultant for planning and tender stages.

2012-2016 Redevelopment of former Georgian Houses at Nos. 18-20 Merrion Street, Dublin 2 (Protected Structures of Regional Significance) - Conservation-Architect for planning, tender and construction stages.

2012- Restoration of Glendruid House, Cabinteely (Protected Structure of Regional Significance) - Conservation Architect for planning, tender and construction stages. Conservation consultant for redevelopment of estate.

2012- Restoration and Redevelopment of Ashbourne Church and Parish House (two Regionally Significant Protected Structures), Ashbourne, Co Meath-Conservation Consultant for planning consents, tender and construction stages of restoration and extension works.

2013 Redevelopment of Site of Former Celbridge Workhouse, Co. Kildare (Regionally Significant Protected Structure) - Conservation Consultant for planning stage.

2013- Restoration of the Church of Our Lady and St. David, Co. Kildare (Regionally Significant Protected Structure) -Conservation Architect for planning, tender and construction stages of restoration.

2013-2014 Tyrconnell Bridge Reconstruction, Donegal, Co. Donegal (Regionally Significant Protected Structure) - Conservation Consultant to planning and tender stages.

2013- Redevelopment of Former Late-Georgian Terraced Houses at Camden Street Upper to Camden Street Hotel, Dublin 8 (Protected Structures of Regional Significance) - Conservation Consultant to Planning stage.

2013 Garryduff Bridge in BNM Land - Conservation Consultant in Relation to Proposed Inclusion on RPS.

2013-2016	Restoration of No. 70 Blessington Street, Dublin-Conservation Consultant for planning, tender and construction stages of work to restore a mixed surgery and apartment use to the former Georgian House.
2013-	Redevelopment of Regionally Significant (not on RPS) Ormond Hotel and adjoining Protected Structures, Ormond Quay, Dublin 1 - Conservation Consultant planning stage.
2013-2016	Redevelopment of Fleet Street Hotel, Westmoreland Street, Dublin 2 above former Bewleys premises (Protected Structure Regional) - Conservation Consultant for planning, tender and construction stages.
2013-2014	Redevelopment of Molesworth Street to South Frederick Street Block, Dublin 2-Conservation Consultant planning stage.
2014-2015	Redevelopment of Chatham House, Chatham Street, Dublin 2-Conservation Consultant planning stage.
2014-	Boland's Mills Redevelopment – Conservation Architect for planning, tender and construction stages.
2014-	Spire Restoration at Pro-Cathedral of Saints Peter and Paul, O'Connell Street, Ennis, Co. Clare (Protected Structure Regional) - Conservation Architect tender stage.
2014-2015	Former Dowager House (Now BOI) Restoration, Westport, Co. Mayo (Protected Structure Regional) -Conservation Consultant planning stage.
2014-2016	Works to Trinity Hotel, Dublin 2 Site of Former Tara St Fire Station (including Regionally Significant Protected Structures) - Conservation Consultant planning stage.
2015-	Trinity College Business School including Restoration and Adaptation of former houses on Pearse Street - Conservation Architect for Planning, Tender and Construction stages.
2015-	Restoration of Gate of Justice, Dublin Castle, Dublin 2 (National/Regional Significance Protected Structure) - Conservation Architect for Tender and construction stages.
2015-	Extension and Restoration of Regionally Significant Arts and Crafts Protected Structure at "Seaside", Burrow Road-Conservation Architect for Planning, Tender and Construction stages.

2015- Restoration and Redevelopment of Irish Stock Exchange and Armoury Building, Anglesea Street/College Green (National/Regional Significance) - Conservation Consultant for planning, tender and construction stages.

2016- Restoration of single family dwelling to former Georgian house at No. 5 Mount Street Crescent, Dublin 2 (Regionally Significant Protected Structure) - Conservation Consultant for planning stage.

2016- Restoration and redevelopment of former Clerys Site, Dublin 1 – Nationally Significant Protected Structure - Conservation Consultant for planning and tender stage.

2016- Restoration and redevelopment of No. 2 Grand Parade, Dublin 6 (former Carrolls building) National/Regional Significant Protected Structure - Conservation Consultant for planning and tender stage.

2016- Restoration and redevelopment of site of former Hampton Carmelite Convent and Pugin Chapel, Drumcondra, Dublin 3 (Regionally Significant Protected Structure). Conservation consultant planning and tender stage.

2016- Works to original Fitzgerald airport terminal for DAA (Regional Protected Structure) – Conservation Consultant planning stage.

2016- Restoration and redevelopment of former 19th Century Hotel at Crofton Hall, Crofton Road, Dun Laoghaire (Regional Protected Structure) – Conservation Consultant planning stage.

2016- Restoration and reinstatement of residential use to no. 61 Merrion Square, Dublin 2 (Regionally Significant Protected Structure) – Conservation Consultant planning and tender stage.

2016- Restoration and redevelopment of former Central Bank Site Dame/College Street including one National/Regional Significant Protected Structure (No. 9 College Street) - Conservation Consultant for planning stage.

2017- Redevelopment at Howth Castle Masterplanning – Conservation Consultant.

2017- Restoration and Extension to No.16 St. Stephen's Green – Nationally Significant Protected Structure - Conservation Consultant for planning stage.

2017- Restoration and Extension to former Ardmore House within the UCD Estate – Nationally Significant Protected Structure - Conservation Consultant for planning stage.

APPENDIX B – *Social Infrastructure Audit: Waterfront South Central (Commercial)* prepared by Tom Phillips + Associates, dated January 2021

SOCIAL INFRASTRUCTURE AUDIT: WATERFRONT S. CENTRAL COMMERCIAL

PREPARED FOR THE ASSESSMENT OF A PROPOSED COMMERCIAL DEVELOPMENT AT SITE KNOWN AS 'WATERFRONT SOUTH CENTRAL', BOUNDED BY NORTH WALL QUAY AND MAYOR STREET UPPER, D1

PREPARED FOR:

WATERSIDE BLOCK 9
DEVELOPMENTS LIMITED
Units 15/16, The Courtyard
Carmanhall Road
Sandyford
Dublin 18
D18 YD27

PREPARED BY:

TOM PHILLIPS + ASSOCIATES
80 Harcourt Street
Dublin 2
D02 F449

IN ASSOCIATION WITH:

HENRY J LYONS
51-54 Pearse Street
Dublin 2
D02 KA66

DATE: JANUARY 2021

1.0 EXECUTIVE SUMMARY

Tom Phillips + Associates, Town Planning Consultants (TPA) have been retained by Waterside Block 9 Developments Limited[1] to prepare a Social Infrastructure Audit in support of a planning application for the redevelopment of a site known as 'Waterfront South Central' comprising 0.921 ha within 'City Block 9' as identified in the *North Lotts and Grand Canal Dock SDZ Planning Scheme.* The site is principally bounded by: Mayor Street Upper to the north; North Wall Quay to the south; Castleforbes Road to the west; and the residual City Block 9 lands of 1.029 ha to the east. The development site of 0.921 ha includes 0.071 ha of lands to facilitate the temporary provision of a pocket park at ground level pending redevelopment of the residual City Block 9 lands.

The application relates to a proposed development within a Strategic Development Zone (SDZ) Planning Scheme area, located within City Block 9 as identified in the *North Lotts & Grand Canal Dock Planning Scheme*, 2014. We note that the site of the proposed commercial scheme adjoins the site of a concurrent application for a Strategic Housing Development (SHD) scheme within 'City Block 9', as shown in Figure 1.1. below.

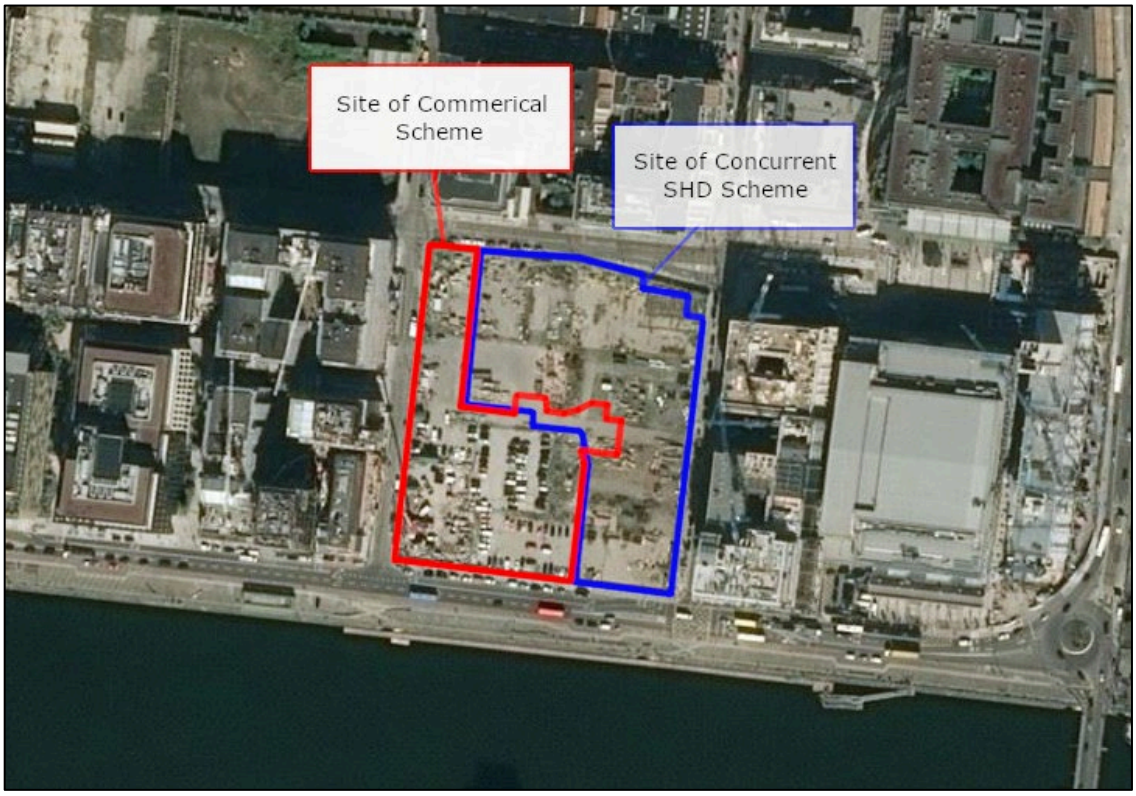


Figure 1.1: Aerial imagery showing indicative extent of the subject development (i.e. the commercial scheme) outlined in red, in relation to the concurrent SHD scheme, outlined in blue, within 'City Block 9'. Source: by TPA, 2021.

The proposed commercial development will consist of the following:

1. Construction of 3 No. commercial office buildings (identified as four blocks (Blocks B1-B4)) ranging in height from 5-storeys to 9-storeys. The breakdown of accommodation is as follows: Block B1 is 7 storeys in height with a Gross Internal Area (GIA) of 9,409 sq m

[1] Embassy House, 32 Burlington Road, Dublin 4, D04 N2X8

(excluding 1,681 sq m at lower ground floor level), with external accessible terraces and with roof-level terrace and extended access core; Blocks B2 and B3 are 5-9 storeys in height with a combined GIA of 25,640 sq m (excluding 3,486 sq m at lower ground floor level) (including a retail services unit of 147 sq m and a gallery / exhibition space of 224 sq m, both located at ground floor), with external accessible terraces and with roof-level terrace and extended access core; and Block B4 is 5-8 storeys in height with a GIA of 8,718 sq m (excluding 1,952 sq m at lower ground floor level) (including a retail services unit of 140 sq m located at ground floor), and with external accessible terraces with roof-level terrace and extended access core.

2. Construction of basement accommodation (22,951 sq m), accommodating: lower ground floor level (7,119 sq m) of office and ancillary accommodation; plant rooms (1,599 sq m); waste storage facilities (290 sq m); employee changing / drying / locker facilities (825 sq m); a bike repair area (40 sq m); a goods' storage area (298 sq m); double loading bay; 107 No. car parking spaces; 14 No. motorcycle parking spaces; and 570 No. bicycle parking spaces, with vehicular access provided by ramp from Castleforbes Road.

3. Development of a new western pedestrian lane from Castleforbes Road linking centrally with a new pedestrian lane through the centre of the overall City Block 9 site to North Wall Quay, with a second lane also linking to North Wall Quay to the east of Block B4.

4. Public realm improvements, to include the provision of a sculptural feature to the corner of North Wall Quay and Castleforbes Road. (Public realm works inclusive of parking and loading bays external to the planning application site boundary will be subject to agreement with Dublin City Council.)

5. All enabling and site development works, landscaping, lighting, services and connections, waste management, interim site hoarding, and all other ancillary works above and below ground including the use of secant piling permitted under Reg. Ref. DSDZ3779/17 and DSDZ3780/17 (as amended by DSDZ3042/19). See Appendix A for the full description of development.

In respect of this proposal, a social infrastructure audit of the area surrounding the subject was initially conducted by TPA in December 2019 and subsequently updated in November 2020 using desktop survey methods which demonstrated that there is an adequate supply of education/childcare, healthcare, and cultural facilities within reasonable walking distance of the subject lands, as well as a variety of public parks and amenity areas, playing pitches and sporting facilities.

Potential gaps in the existing service provision of the area identified during the audit are limited to higher order shopping centres and more significant facilities for the elderly (i.e., nursing homes). We note that the proposed scheme includes a number of retail/café units, a gallery /exhibition space, a variety of shared external and roof level terraces, pedestrian linkages and public realm improvements which will support the working population and positively contribute to the amenity of the area once completed.

2.0 LOCAL CONTEXT

The site comprises c. 0.921 ha within the c. 1.99 hectares of zoned '*Z14 – Strategic Development and Regeneration*'[2] land allocated to City Block 9 of the *North Lotts & Grand Canal Dock Strategic Development Zone* at North Wall Quay, Dublin 1. The area was formerly characterised by aging warehouses and pockets of housing, but is rapidly transitioning to a more urban mixed-use quarter of high-rise commercial and residential developments.

City Block 9, which includes the subject site, is bound by North Wall Quay to the south, Mayor Street Upper/LUAS Red Line to the north, Castleforbes Road to the west and a development site to the east adjacent the 3 Arena. The lands are well serviced by an existing public transport services and are located c. 50m from the Point Terminus Station of the LUAS Red Line. The site is accessible via the 142, 151, 33X, 41X and 747 Dublin Bus Routes and Bus Eireann from North Wall Quay to the south and East Wall Road to the east as shown in Figure 2.1.

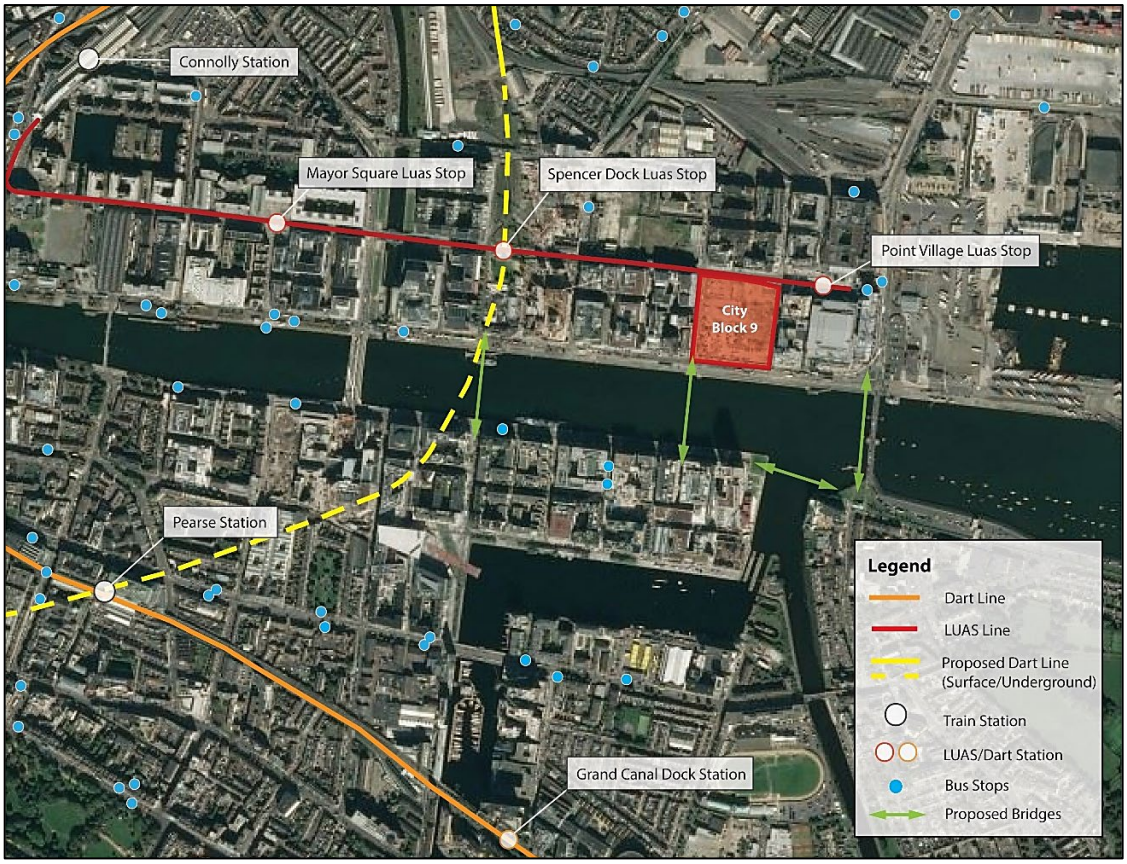


Figure 2.1: Public transport infrastructure in vicinity of City Block 9, shown in red. Source: TPA, 2021.

2.1 Population Demographics

The subject site is located within the 'North Dock B' Electoral District (CSO ED ID: 268108), which comprised some 7,695 No. persons at the time of the 2016 Census (see Figure 2.2). The total population of the study area grew approximately 12% between 2011 and 2016, which is much higher than the 5.6% growth recorded for the rest of Dublin City and national average of 3.8%.

[2] Zoned Z14 – 'To seek the social, economic and physical development and/or rejuvenation of an area with mixed-use, of which residential and Z6 would be the predominant uses', as per *Dublin City Development Plan 2016-2022.*

Table 2.1: Population Change by Enumeration Area (CSO)				
Enumeration Area	**Name**	**2011 Population**	**2016 Population**	**% Change**
Electoral Division	North Dock B	6,895	7,695	+11.6%
County	Dublin City	1,110,627	1,173,179	+5.6%
State	Ireland	4,588,252	4,761,865	+3.8%

More recent population projections for South Dublin were included in the *Regional Spatial and Economic Strategy* (RSES) for the Eastern and Midlands Regional Assembly (EMRA). It is estimated that an additional 84,000-100,500 No. people will need to be accommodated within the local authority by 2031 and an additional 240,000 No. people or more within the larger Dublin Strategic Planning Area (SPA) (see Table 2.2).

Table 2.2: Population Projections 2016 – 2031 (RSES)			
Location	**2016 Base Year**	**2026 (low-high)**	**2031 (low-high)**
Dublin City	554,500	613,000 – 625,000	638,500-655,000
Dublin SPA	1,347,500	1,489,000-1,517,500	1,549,500-1,590,000

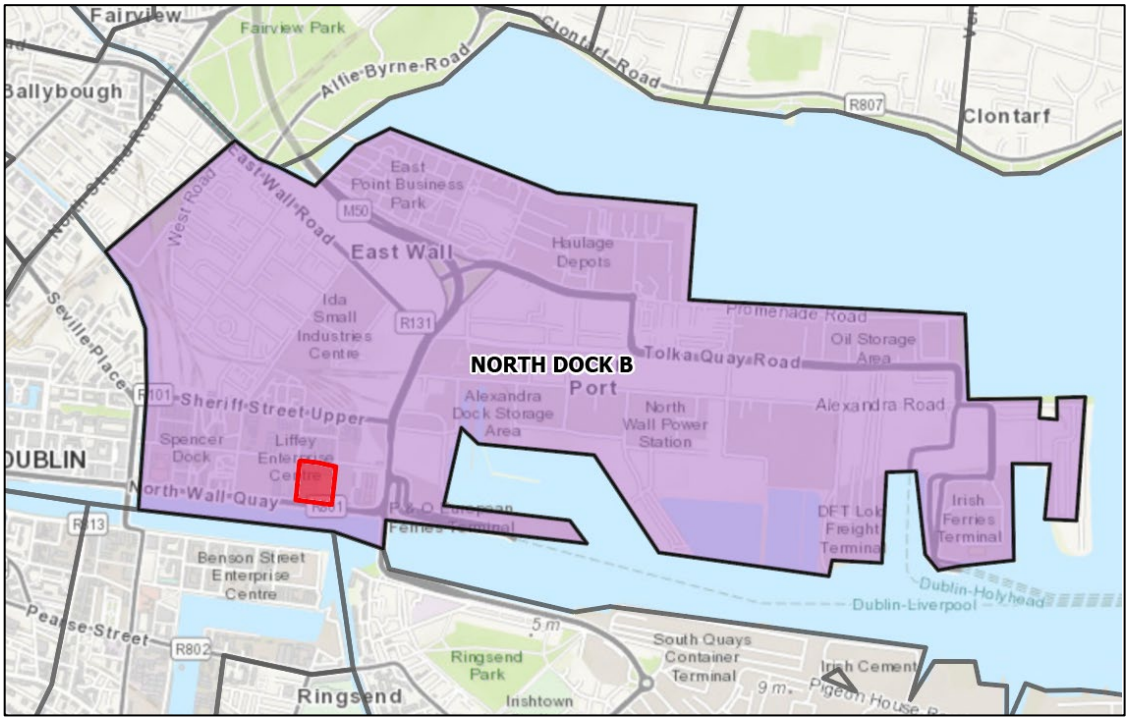


Figure 2.2: Extent of Electoral District included in study area. Indicative location of 'City Block 9', including subject site, identified in red. Source: CSO, 2016, annotated by TPA, 2021.

2.2 Age Profile

The majority of the study area population falls within the Adult (24-64 years) age cohort comprising 70% of the total population, which is nearly 20% more than the national average for this group. Conversely, the School Age (5-18 years) cohort and Older Adults (65+) cohort are roughly half the size of the national equivalents, 9% and 6% respectively, with the Pre-School Age (0-4 years) cohort slightly lower at 5% of the total population.

This indicates that a higher proportion of community facilities may be required for the working population at this time than for the school age or elderly populations, though the current population figures do not account for the development capacity of additional zoned land within the study area and potential population growth arising from future developments.

Table 2.4: Population by Age Cohort (CSO 2016)				
Age Cohort	**Study Area**	**% of Total**	**Ireland**	**% of Total**
Preschool (0-4 years)	403	5%	331,515	7%
School Age (5-18 years)	677	9%	920,281	19%
Young Adults (19-24 years)	768	10%	331,208	8%
Adults (25-64 years)	5,361	70%	2,541,294	53%
Older Adults (65+ years)	486	6%	637,567	13%
Total	**7,695**	**100%**	**4,761,865**	**100%**

3.0 RELEVANT PLANNING GUIDANCE

3.1 National Planning Guidance for Sustainable Residential Development

This audit has regard to the *Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (DoEHLG, 2009)* set out the following categories of community infrastructure as being most relevant in the development of new residential areas:

Table 3.1: Community Infrastructure Categories as per DoEHLG Guidelines	
Infrastructure Types	**Sample Facilities**
Schools	Primary, Post-Primary, Special Education, Third-Level Institutions
Childcare	Registered Facilities (Full Time, Part Time, Sessional)
Community Centres	Community Centres, Resource Centres, Sports Centres, Youth Centres, Training Centres, etc.
Healthcare Facilities	General Practitioners, Healthcare Centres, Hospitals, Nursing Homes
District Centres	Supermarkets, Shops, Convenience Shops

These criteria were considered in the development of the comprehensive infrastructure categories applied during the course of the study area audit, as set out in Section 4.0 to follow.

3.2 Regional Spatial and Economic Strategy 2019-2031 (EMRA)

We note that the *Regional Spatial and Economic Strategy 2019-2031 (RSES)* prepared by the Eastern & Midland Regional Assembly (EMRA) was adopted on 28 June 2019 and supersedes the *Regional Planning Guidelines for the Greater Dublin Area 2010-2022*.

This document takes account of the Dublin Metropolitan Area Strategic Plan (MASP), which identifies strategic residential and employment corridors along key public transport corridors that contain development opportunities, such as the Docklands. The RSES states the following with regard to the lands:

> *"**The ongoing regeneration of Dublin Docklands** and Poolbeg, coupled with the redevelopment of older social housing (former PPPs), industrial and underutilised lands, **support the consolidation of Dublin City**. The proposed DART Underground and LUAS extensions to Finglas and Lucan subject to appraisal and delivery post 2027, will unlock long-term capacity including strategic landbanks such as Dunsink."*
>
> *[**Our emphasis**, Section 5.4].*

The *RSES* further includes the Docklands within the City Centre corridor for the purposes of strategic development, capacity infrastructure and phasing, as shown in Table 3.2, and highlights the long-term population capacity of the City Centre corridor area (incl. Dublin Docklands) to accommodate an additional c. 60,000 No. people.

Table 3.2: Strategic Capacity Infrastructure and Phasing Identified for Docklands

Corridor	Residential	Employment/ Mixed Use	Phasing/Enabling infrastructure
City Centre within the M50 (Multi-modal) **Population capacity** Total 60,000	**Docklands** build out of North Lotts and Grand Canal Docks with further physical and social regeneration of Poolbeg and northeast inner-city lands	Further development of people intensive high tech and services-based business districts in Docklands and Poolbeg	**Short to Medium term** Dodder bridge, LUAS extension to Poolbeg, local and wider area water upgrades, Waste water upgrades and district heating

Source: RSES (Extract from Table 5.1, Ch.5)

3.3 Development Plan Requirements

The proposed development area is located within the Dublin City Council administrative area and therefore this audit also has regard to the policies and objectives contained within the *Dublin City Development Plan 2016-2022* (*DCC Plan*), which states the following with respect to the provision of community infrastructure in new developments in Chapter 12:

> *"The city development plan must ensure that all significant developments **can only take place where sufficient schools, public transport, employment opportunities, parks, community facilities and resources (garda, fire services and ambulance provision etc.) are either in place or proposed**."*
>
> *[**Our emphasis,** Ch. 12, DCC Plan].*

Chapter 12 of the *DCC Plan* also contains a number of relevant policies for the sustainable provision of social infrastructure in urban neighbourhoods, which are reproduced in Table 3.3.

Table 3.3: Policies for Neighbourhoods and Supporting Infrastructure (*DCC Plan*)

Policy	Description
SN5	*To ensure that **applications for significant large new developments (over 50 units) are accompanied by a social audit and an implementation and phasing programme in relation to community infrastructure,** so that facilities identified as needed are provided in a timely and co-ordinated fashion.*

SN6	*To optimise, align and integrate individual social audits/community infrastructure provision in developing and regenerating areas, the City Council will carry out and maintain a community audit for the strategic development and regeneration areas (SDRAs), where appropriate.*
SN7	***To support and encourage the future growth of a wide range of public, social and community services essential to local community life,*** *and to promote and seek to provide multi-use, fit-for-purpose community facilities which are suitable for all ages and all abilities, are operated according to an effective and efficient management strategy, and which are accessible in terms of physical design, location, cost of use, and opening hours.*
SN8	*To continue to liaise and support with other statutory, voluntary and community groups in the provision of key services.*
SN9	*To encourage corporate social responsibility and corporate volunteer programmes to ensure successful integration between the corporate sector and local communities sharing a community and neighbourhood facilities.*
	Our emphasis.

Table 3.4: Policies for the Sustainable Provision of Social Infrastructure (*DCC Plan*)	
Policy	**Description**
SN15	*To **ensure the optimum use of community facilities and that high-quality facilities are accessible to all.***
SN16	*To **ensure that the provision of strategic new community infrastructure complements the range of existing neighbourhood facilities** and… to support the provision of community facilities which act as point of integration between residents of new and established communities within neighbourhoods.*
SN17	*To **facilitate the provision in suitable locations of sustainable, fit-for-purpose childcare facilities in residential, employment, and educational settings,** taking into account the existing provision of childcare facilities and emerging demographic trends in an area.*
SN18	***To encourage and facilitate the provision of a range of community facilities in the city that caters for all.***
SN19	***To enhance and improve the provision of playgrounds, play spaces, playing pitches and recreational spaces** in residential areas and in the city centre in accordance with the City Council's standards and guidelines.*
SN20	*To promote the **development of both indoor and outdoor facilities/spaces for young people** i.e., MUGAs, teenage shelters, skateboarding areas and skateboard parks, youth cafés, youth centres, and kid's clubs.*
SN21	*To facilitate the **development or expansion of community-based healthcare facilities, respite homes and day care centres in residential areas.***
SN22	***To facilitate the provision of hospital, local and other healthcare facilities** in accordance with the requirements of the relevant healthcare authorities and to facilitate the consolidation or enhancement of these facilities within the city as an important resource for the city, region and State.*
SN23	*To provide accessible public toilets and showers if appropriate in locations close to the central business district and in city parks.*
SN24	*To support the implementation of the Dublin City Library Development Plan, including the **development of the branch library service** to serve local communities.*
	Our emphasis.

The subject site is identified as forming part of *Strategic Development Regeneration Area 6 – Docklands incl. SDZ area and Poolbeg West* and larger *North Lotts and Docklands Strategic Development Zone* within the *DCC Plan*. Additional policies with respect to the provision of social infrastructure within the Docklands area are set out in Section 15.1.1.7 of the *Plan*, and have been included in Appendix B for reference.

4.0 COMMUNITY INFRASTRUCTURE AUDIT

A previous social infrastructure audit was conducted by Dublin City Council for the Dublin Docklands Area in 2015, which served as precedent for the independent *Social Infrastructure Audit* of the subject site at North Wall Quay. The development categories utilised in the 2015 DCC audit were applied for the assessment of community infrastructure within the study area, as detailed in Table 4.1 below.

Table 4.1: Community Infrastructure Categories as per DCC Precedent Study[3]	
Infrastructure Types	**Sample Facilities**
Education/Training	Including pre-school (commercial and non-commercial crèches), primary, secondary and third level, evening classes and skills development workshops.
Health	Including health centres, GPs, health nurses, dentists and other health care professionals (e.g., opticians, chiropodists etc).
Sports & Recreation	Including sports centres, sports clubs, public and private children's play areas, playing pitches, swimming pools, gyms, pool halls, etc.
Social & Community	Including local authority offices, statutory welfare services, libraries, and community services
Arts & Culture	Including museums, heritage attractions, theatres, performance areas, art and music centres, etc.
Faith	Including churches, community centres, youth clubs, etc.
Other	Including post offices, credit unions etc.

With respect to these infrastructural categories, a geospatial survey was undertaken using GIS-software which identified more than 150 No. relevant social infrastructure facilities in the vicinity of the proposal for further assessment. We note that a large number of public and private geospatial datasets were used in the course of the survey, including but not limited to:

- 2016 and 2011 Census Boundaries and Statistics
- 2020 ECAD Database (Eircode Address Points)
- 2020 OSM Ireland POI Datasets
- 2020 Google Maps and Places
- 2020 OSi and ESRI Ireland Basemaps
- 2019-2020 Department of Education and Skills Provisional Register of Irish Schools
- 2020 Department of Education and Skills Register of Providers of Higher Education
- 2020 Tusla Early Years Inspectorate Reports – Registered Childcare Facilities
- 2020 HSE Records – 'Find Your Local Health Service'

4.1.1 Study Area

For the purposes of the assessment, the study area comprises a c. 1km radius surrounding the subject site and is generally bounded by the Dublin Port Tunnel in East Wall to the north, Dublin Port to the east, Bath Avenue to the south and Sandwith Street Lower to the west (see Figure 4.1). The study area is divided into north and south portions by the River Liffey, which can be accessed by car or pedestrian from either direction via the Samuel Beckett Bridge to the west and the Tom Clarke Bridge to the east.

[3] http://www.dublindocklands.ie/sites/default/files/Living/Dublin%20Docklands%20Social%20Infrastructure%20Audit.pdf

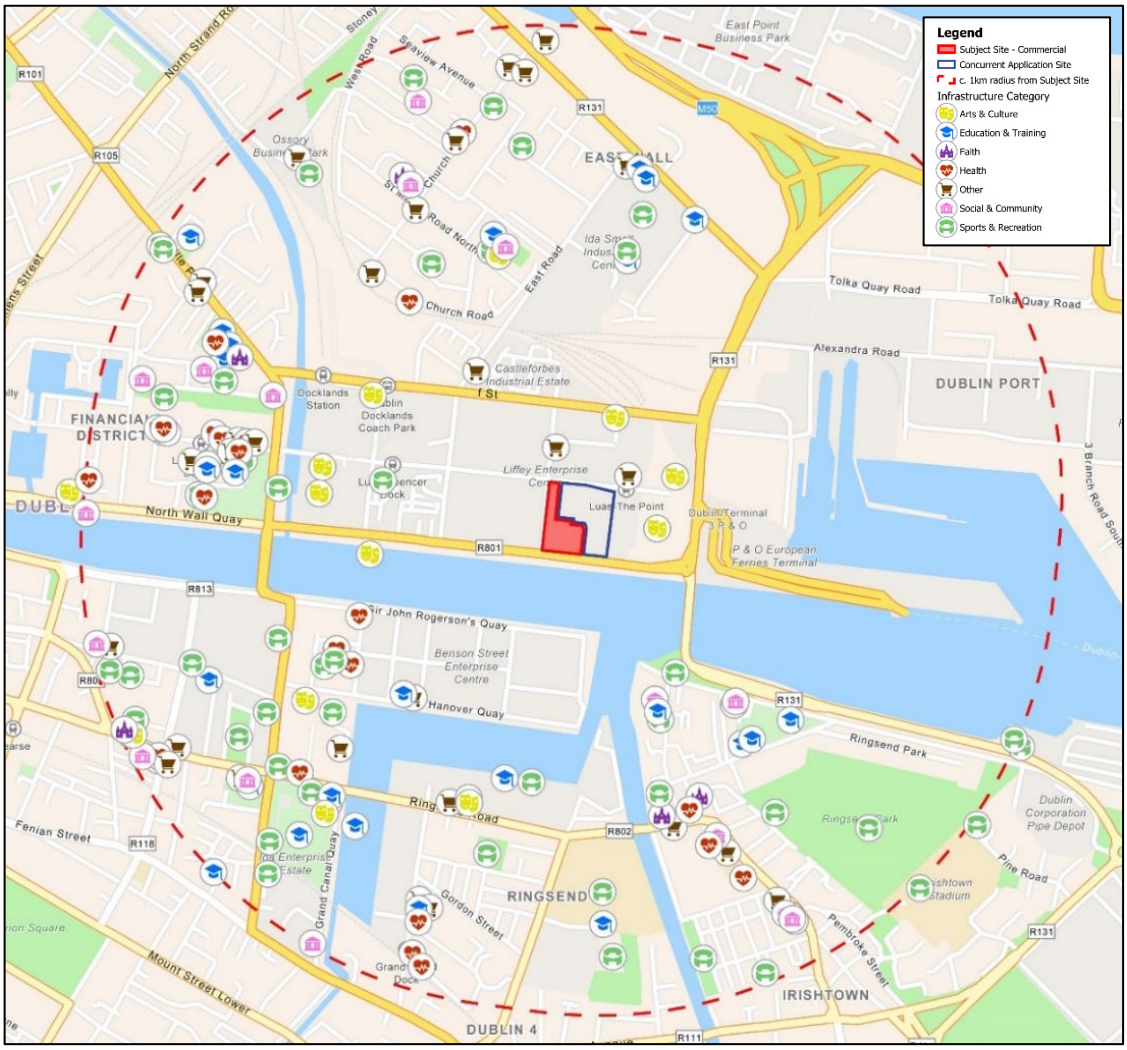


Figure 4.1: Extent of study area comprising a c. 1km radius from subject commercial site, outlined in red. Source: TPA, 2021.

4.2 Education and Training Facilities

The subject site is serviced by a range of existing education services, including St. Joseph's Mixed NS (primary), St. Patrick's Boys and Girls NS (primary) and Ringsend College (post-primary) operating in locations proximate to the proposed development. No special education facilities were noted in the immediate vicinity; however, St. Declan's SES, Catherine McAuley NS and Mater School were identified within a c. 1.5km radius of the subject site.

A number of third level institutions and training facilities including the National College of Ireland, Trinity Technology and Enterprise Campus, Pulse College, and the National Performing Arts School are also located in the vicinity.

Table 4.2: Education Infrastructure within c. 1km	
Type	**Facilities**
Primary	Naomh Lorcan O' Tuathail, Naomh Padraig Boys NS, St. Laurence O' Toole's Girls School, St. Laurence O'Toole Junior Boys, St. Patrick's Girls NS

Post-Primary	Ringsend College Technical Institute, St. Joseph's MXD NS
Special Education	None within c. 1km, others within c. 1.5km include: - St. Declan's SES, Catherine McAuley NS and Mater School
Third Level Institutions and Training Facilities	National College of Ireland, National Performing Arts School, Pulse College, Trinity Technology and Enterprise Campus, Irish College of Traditional Chinese Medicine, Kilroy's College
Education Centres	Irish Nautical Trust, Irish Tax Institute, Waterways Ireland Visitor Centre

National College of Ireland

Trinity Technology and Enterprise Campus

4.2.1 Childcare Facilities

We note that there were 12 No. existing childcare facilities operating within c. 1km of the site at the time of the survey (October 2020), as per the list of registered facilities maintained by the Tusla Early Years Inspectorate Service[4]. These facilities had a reported maximum capacity of 872 No. places for enrolments, as summarised in Table 4.2 and Figure 4.2 overleaf.

Table 4.2: Existing Childcare Operators in Docklands Study Area

No.	Name of Childcare Facility (within c. 1km)	Maximum Capacity
1	Daisy Days Community Childcare	64
2	Island Key Child and Family Services	70
3	Afterschool Education and Support Programme	180[5]
4	Little Treasures Community Creche	62
5	Giraffe Childcare IFSC	92
6	Giraffe Childcare NCI	65
7	Safari Childcare Hanover Street	100
8	St. Andrews Childcare Centre	46
9	Tots and Co Barrow Street	65
10	Tir na Nog Sportsco	40
11	Ringsend Creche	55
12	The Anchorage Preschool	33
	Total	**872 places reported**

[4] The Tusla Early Years Inspectorate carries out inspections of Early Years Services under Section 58(J) of the *Child Care Act 1991* (as inserted by Section 92 of the *Child and Family Agency Act 2013*). Inspection Reports for active facilities are available online for public inspection and are updated at regular intervals by the service.
[5] Includes afterschool places.

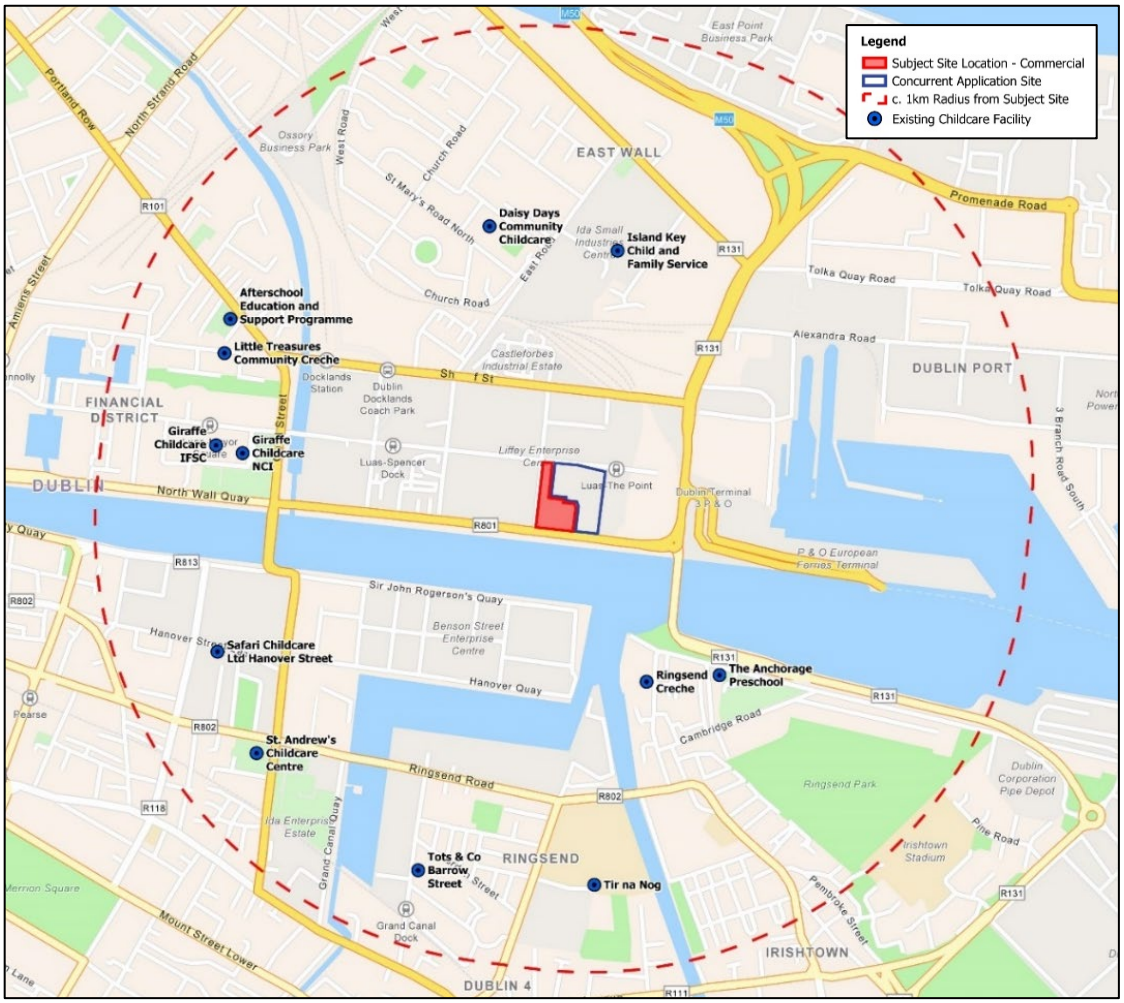
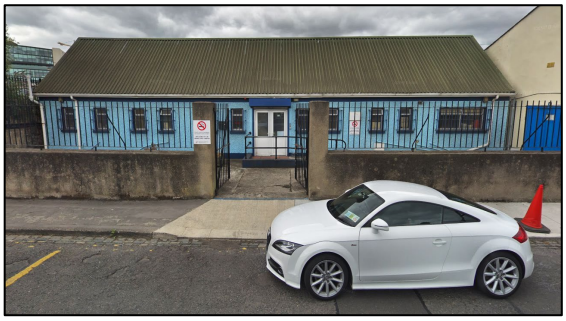


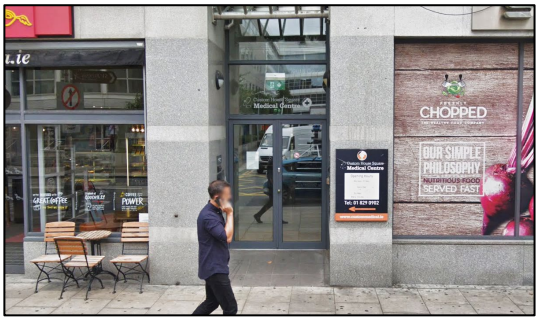
Figure 4.2: Location of childcare facilities identified in vicinity of commercial site, with indicative boundary provided in red. Indicative boundary of concurrent SHD scheme provided in blue. Source: TPA, 2021.

4.3 Healthcare Services

While no hospital facilities were identified within the c. 1km study area, a large number of health centres and GP clinics are located in the vicinity, including Irishtown & Ringsend Primary Care Centre, Custom House Square Medical Centre IFSC, East Wall Medical Centre and Hanover Medical Centre.



East Wall Health Clinic



Custom House Square Medical Centre

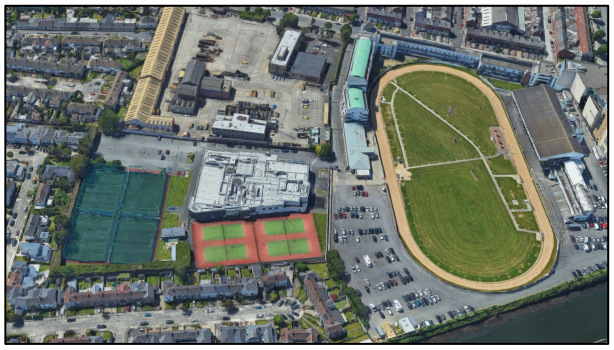
A variety of other specialty medical clinics are also available to local residents such as Smiles Dental, IFSC Physiotherapy, Spectrum Foot Clinic and Mental Health facilities, The Oasis Centre and Gilna Opticians, as well as a number of supporting pharmacies. We note that no nursing home facilities appear to be located within c. 1km, however Mount Tabor Nursing Home is located c. 2km to the south in Sandymount Village.

Table 4.3: Healthcare Infrastructure within c. 1km	
Type	**Facilities**
Health Centres and GPs	Centric Health - Barrow Medical, Corporate Health Ireland, Custom House Square Medical Centre IFSC, East Wall Health Clinic, East Wall Medical Centre, Hanover Medical Centre, Irishtown & Ringsend Primary Care Centre, Ringsend Medical Centre
Specialty Clinics	Dental Magic, Docklands Dental, IFSC Dental Care, Redmond Molloy, Smiles Dental, IFSC Physiotherapy, Spectrum Foot Clinic, Spectrum Mental Health, The Oasis Centre, Gilna Opticians
Pharmacies	Bradley's Pharmacy, Conefrey's Pharmacy Limited, Gallery Quay Pharmacy, Meaghers Pharmacy, Remedi, Shelbourne Pharmacy
Nursing Homes	None within c. 1km, others within c. 2km include: - Mount Tabor Nursing Home

4.4 Sports and Recreation

The subject site is well served by existing sports and recreation infrastructure, including numerous local sports centres and health clubs to the north of the River Liffey (e.g., Sean O'Casey Community Centre, St. Laurence O'Toole Recreation Centre, SV Fitness and The Spencer Health Club) and larger facilities such as Ringsend Park, Irishtown Stadium, and Sportsco to the south. A wide range of playgrounds and pocket parks are also available to service individual housing estates, such as South Dock Street Park, Pearse Square and Chimney Park Playground.

South Dock Street Park



Sportsco and Shelbourne Park

Table 4.4: Sport and Recreation Infrastructure within c. 1km	
Type	**Facilities**
Sport Clubs/Gyms	Andy Kenny Fitness Ltd, CalisthenFit Health & Fitness, Club Vitae Maldron Hotel, Dublin School of Yoga, EducoGym, Feel Fit, Flyefit - Macken Street, Perpetua Crossfit, Sportsco, SV Fitness, The Spencer Health Club, TRIBE Fitness

Sports Centres	Cambridge Boys Football Club, Dublin Dockland Boxing Club, East Wall Recreation Centre, Hubert Fuller Park, Irish Aikido Federation, Poolbeg Yacht & Boat Club, Sean O'Casey Community Centre, St. Joseph's O'Connell Boys GAA, St. Laurence O'Toole Recreation Centre, St. Patrick's Rowing Club, Stella Maris Rowing Club, Surfdock & Wakedock
Stadiums	Irishtown Stadium, Shelbourne Park
Parks and Playgrounds	Aikenhead Park, Central Square, Grand Canal Square, Pearse Square Park, Ringsend Park, Royal Canal Linear Park, Chimney Park Playground, Erne Place Playground, George Reynolds House Playground, Lazer Lane Roof Playground, Macken Villas Playground, Pearse House Playground 01, Pearse House Playground 02, Ringsend Community Centre Playground, Ringsend Playground, Sheriff Street Lower Playground & Pitches, South Dock Street Park, Teeling Way Playground, Whelan House Playground

4.5 Social and Community Services

The proposed development site is supported by a number of local social and community services facilities, including 11 No. community and youth centres within the c. 1km study area (such as the Sean O'Casey Community Centre to the north in East Wall and the Fair Play Community Café to the south) and a range of related welfare services. The Pearse Street Library and Ringsend Library are also located in the vicinity and provide a range of literacy and community activities for local residents.

Pearse Street Library

Sean O'Casey Community Centre

St. Andrew's Resource Centre

Dublin Docklands Development Agency

Table 4.5: Social Services Infrastructure within c. 1km	
Type	**Facilities**
Community, Youth and Training Centres	East Wall Men's Shed, Fair Play Community Cafe & Garden Centre, St. Andrew's Resource Centre, The Spellman Centre, Ringsend & Irishtown Community Centre, Sean O'Casey Community Centre, Dublin South East Community Training Centre, Riccy's Youth Café, Sheriff Youth Club, St. Mary's Youth Club, SWAN Recreational Youth Service
Local Authority and Welfare Services	Dublin Docklands Development Agency, North Wall Community Development Project, Ringsend & District Response to Drugs, Arthritis Ireland
Libraries	Pearse Street Library, Ringsend Library

4.6 Arts & Cultural Facilities

The Docklands area surrounding the subject site is rich in arts and cultural facilities and home to the major tourism venues of 3Arena (adjacent the site to the east), Bord Gáis Energy Theatre to the south and the Convention Centre Dublin to the west.

3Arena

Bord Gáis Energy Theatre

Other significant local attractions include the Odeon Cinema in Point Square, the EPIC Immigration Museum and Jeanie Johnston Famine Experience, while smaller facilities such as Lir Theatre, The Design Tower and a number of local galleries provide additional opportunities for local artists, performers and craftsmen.

The Design Tower

Odeon Cinema – Point Square

Table 4.6: Arts & Culture Facilities within c. 1km	
Type	**Facilities**
Arts and Cultural Facilities	Odeon Cinema, Sean O'Casey Community Centre Theatre, The Lir, The Design Tower, Green on Red Gallery, Stone Gallery, Liffey Trust Studios, Windmill Lane Recording Studios, The Art Park
Venues	3Arena, Bord Gáis Energy Theatre, Convention Centre Dublin
Museums	EPIC Immigration Museum, The Jeanie Johnston

4.7 Faith-based Institutions

A small number of religious facilities were also identified in the area, including Abundant Grace Christian Assembly and St. Patrick's Ringsend to the south and St. Laurence O' Toole Catholic Church within c. 10 min walk of the subject site to the west.

St. Laurence O' Toole Catholic Church

Abundant Grace Christian Assembly

Table 4.7: Faith-based Institutions within c. 1km	
Type	**Facilities**
Churches and Related Facilities	Abundant Grace Christian Assembly, Apostolic Church Dublin City, St. Joseph's Church, St. Laurence O' Toole Catholic Church, St. Patrick's Ringsend

4.8 Other Social Infrastructure

The subject site is supported by the shops and supermarkets accessible from the LUAS Red Line, including Marks & Spencer – Excise Walk and Fresh – Mayor Street, as well as Centra - Mayor Street and Spar - Castleforbes Road within c. 5 min walk. A wide range of other local services are available within the c. 1km study area, including post offices, credit unions and laundry facilities as shown in Table 4.8.

Table 4.8: Other Social Infrastructure within c. 1km	
Type	**Facilities**
Supermarkets and Shops	Aldi, Centra - Church Road, Centra - Mayor Street, Centra - Pearse Street, Eurospar - Barrow Street, Eurospar - Hanover Street, Fresh - Grand Canal Quay, Fresh - Mayor Street, Gala, Lidl, Marks & Spencer, Supernatural Food Market, Tesco Express, K&A Stores, Londis, Spar - Castleforbes Road, Spar - Hanover Quay, Spar - Mayor Street

Other Services	BizPOST etc, Church Road Post Office, Erne Street Upper Post Office, Ringsend Post Office, An Post Employees Credit Union, Pearse Credit Union, Progressive Credit Union, Savvi Credit Union, St. Laurence O'Tooles Credit Union, Excel Laundry, Georgian Dry Cleaners, Sunlight Dry Cleaners, Bottle Bank - East Wall, Ossory Car Recycling Co.

5.0 CONCLUSION

In our opinion, there is sufficient existing provision of social infrastructure in the vicinity of the subject site (i.e., within a c. 1km radius) to support the proposed development despite the commercial character of the Docklands area. As the above survey demonstrates, there is an adequate supply of education/childcare, healthcare, and cultural facilities within reasonable walking distance of the subject lands, as well as a variety of public parks and amenity areas, playing pitches and sporting facilities available to local residents.

On the basis of this audit, potential gaps in the existing service provision of the area are limited to higher order shopping centres and more significant facilities for the elderly (e.g., nursing homes); however, the demographic assessment indicates that the elderly cohort of the population is lower in this area (6%) than the rest of the State (13%), and thus a higher proportion of community facilities may be required for the working population (70%).

We note that the proposed scheme includes a number of retail/café units, a gallery /exhibition space, a variety of shared external and roof level terraces, pedestrian linkages and public realm improvements which will support the working population and positively contribute to the amenity of the area once completed.

APPENDIX A: Description of Development
Waterfront South Central Commercial Scheme

Waterside Block 9 Developments Limited intends to apply for a ten-year permission for development totalling 66,718 sq m above and below ground on a site of 0.921 ha at City Block 9, North Wall Quay and Mayor Street Upper, Dublin 1. (The cumulative gross floor area above ground is 43,767 sq m; with three basement levels totalling 22,951 sq m (including 7,119 sq m at lower ground level).) The subject site is principally bounded by: Mayor Street Upper to the north; North Wall Quay to the south; Castleforbes Road to the west; and the residual City Block 9 lands of 1.029 ha to the east. The development site of 0.921 ha includes 0.071 ha of lands to facilitate the temporary provision of a pocket park at ground level pending redevelopment of the residual City Block 9 lands.

The application relates to a proposed development within a Strategic Development Zone Planning Scheme area, located within City Block 9 as identified in the North Lotts & Grand Canal Dock Planning Scheme, 2014. The development will consist of the following:

1. Construction of 3 No. commercial office buildings (identified as four blocks (Blocks B1-B4)) ranging in height from 5-storeys to 9-storeys. The breakdown of accommodation is as follows: Block B1 is 7 storeys in height with a Gross Internal Area (GIA) of 9,409 sq m (excluding 1,681 sq m at lower ground floor level), with external accessible terraces and with roof-level terrace and extended access core; Blocks B2 and B3 are 5-9 storeys in height with a combined GIA of 25,640 sq m (excluding 3,486 sq m at lower ground floor level) (including a retail services unit of 147 sq m and a gallery / exhibition space of 224 sq m, both located at ground floor), with external accessible terraces and with roof-level terrace and extended access core; and Block B4 is 5-8 storeys in height with a GIA of 8,718 sq m (excluding 1,952 sq m at lower ground floor level) (including a retail services unit of 140 sq m located at ground floor), and with external accessible terraces with roof-level terrace and extended access core.

2. Construction of basement accommodation (22,951 sq m), accommodating: lower ground floor level (7,119 sq m) of office and ancillary accommodation; plant rooms (1,599 sq m); waste storage facilities (290 sq m); employee changing / drying / locker facilities (825 sq m); a bike repair area (40 sq m); a goods' storage area (298 sq m); double loading bay; 107 No. car parking spaces; 14 No. motorcycle parking spaces; and 570 No. bicycle parking spaces, with vehicular access provided by ramp from Castleforbes Road.

3. Development of a new western pedestrian lane from Castleforbes Road linking centrally with a new pedestrian lane through the centre of the overall City Block 9 site to North Wall Quay, with a second lane also linking to North Wall Quay to the east of Block B4.

4. Public realm improvements, to include the provision of a sculptural feature to the corner of North Wall Quay and Castleforbes Road. (Public realm works inclusive of parking and loading bays external to the planning application site boundary will be subject to agreement with Dublin City Council.)

5. All enabling and site development works, landscaping, lighting, services and connections, waste management, interim site hoarding, and all other ancillary works above and below ground including the use of secant piling permitted under Reg. Ref. DSDZ3779/17 and DSDZ3780/17 (as amended by DSDZ3042/19).

A Natura Impact Statement has been prepared in relation to the proposed development.

APPENDIX B: Policies for the Development of Social Infrastructure within Docklands Section 15.1.1.7 – Docklands Area, Dublin City Development Plan 2016-2022

Social and Community Development
• Social sustainability is central to the regeneration strategy for Docklands. The regeneration of Docklands is about people, it is not just physical and economic aspects. Dublin City Council will actively pursue a community and social development agenda, re-integrating and connecting the Docklands communities to its range of services and expertise across all sectors. Docklands presents an opportunity to create an exemplary model of good neighbourhoods and successful placemaking.
Housing
• *To ensure a holistic approach to housing that will achieve successful integration of residents, neighbours and the wider community (see also Chapter 5 – Quality Housing) To promote the expansion of the Docklands' residential population, cater for life-cycle requirements of the existing population and provide recreational facilities for children across a range of ages (see also Chapter 5 – Quality housing, Chapter 10 – Green Infrastructure, Open Space and Recreation, and Chapter 12 – Sustainable Communities and Neighbourhoods)* • *To provide for residential choice with schemes conducive to family living, long term rental and home-ownership* • *To achieve successful interaction between the SDZ scheme and surrounding streets and public realm to retain and foster a strong sense of neighbourhood within communities* • *To ensure that residential developments optimise the unique Docklands character in terms of visual context, maritime location, heritage assets and community identity* • *To provide physical, social and amenity infrastructure in tandem with new housing* • *To safeguard residential amenity and to ensure appropriate transition in scale, the design of new development shall have regard to the context, setting and amenity of existing housing within the SDZ and wider Docklands area (see Chapter 16 – Development Standards)* • *To ensure that all proposals for residential development meet the obligations under Part V and Dublin City Council's housing strategy. The City Council will pro-actively seek the delivery of social housing units on site within the Docklands area, where appropriate having regard to the range of options for delivery of social housing available to applicants under Part V; the need to counteract undue segregation in housing between persons of different social backgrounds; whether the proposal would constitute the best use of resources to ensure an adequate supply of housing and the financial implications for the Council in its functions as a housing authority; as well as government policy on the provision of social housing* • *To recognise the important role of approved housing bodies in social housing provision and that the voluntary and co-operative model can achieve mixed tenure communities through the provision of housing for market sale, private and social rental* • *To promote a programme of support housing in conjunction with housing agencies (see also Appendix 3 – Housing Strategy)* • *To encourage 'own front doors' and defensible open space as far as practicable* • *To explore opportunities to address the social housing legacy issues associated with partially implemented Section 25 Certificates under the Dublin Docklands Development Authority (DDDA), 1997 Act. Any potential options will be explored having regard to the objectives of the North Lotts and Grand Canal Planning Scheme, Dublin City Council's Housing Strategy, legislative provisions to facilitate transition from the Section 25 planning process and government policy on social housing provision.*
Employment
• *To encourage local employment, where the appropriate skills are available, on all construction projects in the Docklands area* • *To maximise the employment generating opportunities of the support services sector including the local enterprise office under Dublin City Council, as well as enterprise activity with a range of key skilled, semi-skilled and unskilled workers as part of the overall economic regeneration of the Docklands area*

- *To maximise educational opportunities and access to employment for local residents in the Docklands area*
- *To promote a local schools job placement programme*
- *To promote a Docklands local employment steering group with relevant stakeholders to facilitate an employment strategy to enable enhanced employment access*
- *To explore new opportunities for local employment in conjunction with the construction sector, corporate sector and other key stakeholders through the Community and Social Development Plan for the Docklands area*
- *To monitor progress on educational attainment and local employment levels in the Docklands area.*

Education

- *To conduct a special review with the Department of Education and Skills (DES) to assess the need to enhance or develop new educational facilities in the neighbourhood to service the growing population of the SDZ and the wider Docklands area*
- *To give consideration to the re-building or up-grading of the St Laurence O'Toole School as the locally preferred option, subject to feasibility studies, in the event that additional school capacity is deemed necessary*
- *To liaise with the Department of Education and Skills (DES) in supporting the important services provided by existing schools in the Docklands area, especially in relation to the pivotal role of schools in community development*
- *To investigate the potential to develop synergies with the Department of Education and Skills (DES) in recognition of the key role of education in social regeneration and to seek to continue the educational programmes or similar appropriate programmes, as pioneered by the Dublin Docklands Development Authority (DDDA), having regard to the fact that as a local authority or development agency, Dublin City Council has no statutory educational remit*
- *To promote the delivery of educational programmes for the local community in conjunction with third-level institutions, for example the National College of Ireland (NCI), Trinity College Dublin (TCD) and Dublin Institute of Technology (DIT)*
- *To promote local community access to third-level plus education, enterprise training and skills development in collaboration with key stakeholders and to investigate the potential for a coordinated approach with consideration also to an umbrella Corporate Social Responsibility (CSR) Programme for the Docklands area.*

Social

- *To pro-actively engage and re-integrate the Docklands community with the full spectrum of Dublin City Council services, with particular regard to the Council's community services which include children and young people, community development, social inclusion and interculturalism, community and voluntary, as well as public private partnerships of socio-economic interests*
- *To develop a community and social development plan for the Docklands area in close collaboration with the community and to explore the potential for initiatives with corporate stakeholders through a structured corporate social responsibility programme (CSR)*
- *To ensure co-ordination between the various statutory and non-statutory providers of social services and social programmes in the Docklands area. Dublin City Council as Development agency for the SDZ Area will fulfil this coordinating role to continue the important work of social regeneration in the wider Docklands area*
- *To ensure that social and community facilities, in particular educational facilities, are provided in tandem with residential development, having regard to the over-arching social audit of community infrastructure to be undertaken by Dublin City Council for the entire Docklands Area and the supporting social audits and community infrastructure statements to accompany proposals for large scale developments (200 Units/20,000 sq. m mixed-use)*
- *To ensure that social infrastructure is inclusive, caters for the needs of all the community, is accessible and available to all sectors including the existing community of the historic*

neighbourhoods and the emerging residential and working communities that have a mixed international profile, and represents the optimum use value of public investment

- *To promote community, cultural and recreational development on the peninsula site in accordance with the planning scheme objectives for city block 19*
- *To recognise culture as a vehicle for social inclusion and community integration in Docklands*
- *To develop an inclusive strategy for culture in the Docklands area based on the findings of the cultural audit 'The Docking Station' (2013) which was undertaken through engagement with the cultural, community and corporate stakeholders in Docklands and to ensure that the cultural strategy reflects social regeneration objectives to facilitate the building of a best practice dance theatre with state of the art facilities to complete part of the cultural and heritage provision of providing such amenities.*
- *Social infrastructure and community facilities to be provided in accordance with the infrastructure schedule as set out on Appendix 4 of the North Lotts and Grand Canal Planning Scheme and to seek national funding sources through NAMA/Government where appropriate, in recognition of the need to continue the important work of social regeneration in the Docklands area.*
- *That all new developments in the Docklands area, North Lotts and Grand Canal Dock and Poolbeg West will provide for a minimum of 5% allocation of space in the development to be used for social, cultural, creative and artistic purposes*

Economic

- *Dublin's economic performance is essential to the success and competitiveness of the national economy. As the engine of the national economy, Dublin needs to develop a sufficient critical mass to compete at an international level. The Docklands area has the potential to fulfil this strategic role as a global economic hub. Continuing the approach of the Docklands 2008 Master Plan – that the successful development of Docklands is driven by the objective of Docklands as a great place to do business, work and visit – the guiding principles below focus on the direct and indirect sectors that drive economic activity and support a vibrant urban environment in Docklands*

Business

- *To promote the Docklands as a location for sustainable businesses, and to encourage contact with the Local Enterprise Office, under Dublin City Council*
- *To support the marine economy, in particular the shipping services sector and cruise tourism*
- *To promote the Docklands as a location for sustainable tourism including cultural, recreational and business tourism*
- *To promote the development of retail use to serve the existing residential community, new residents and visitors*
- *To promote the development of sufficient retail facilities to serve the needs of the population living, working and visiting the Docklands Area*
- *To work with the Convention Centre Dublin (CCD) to exploit event and business opportunities.*

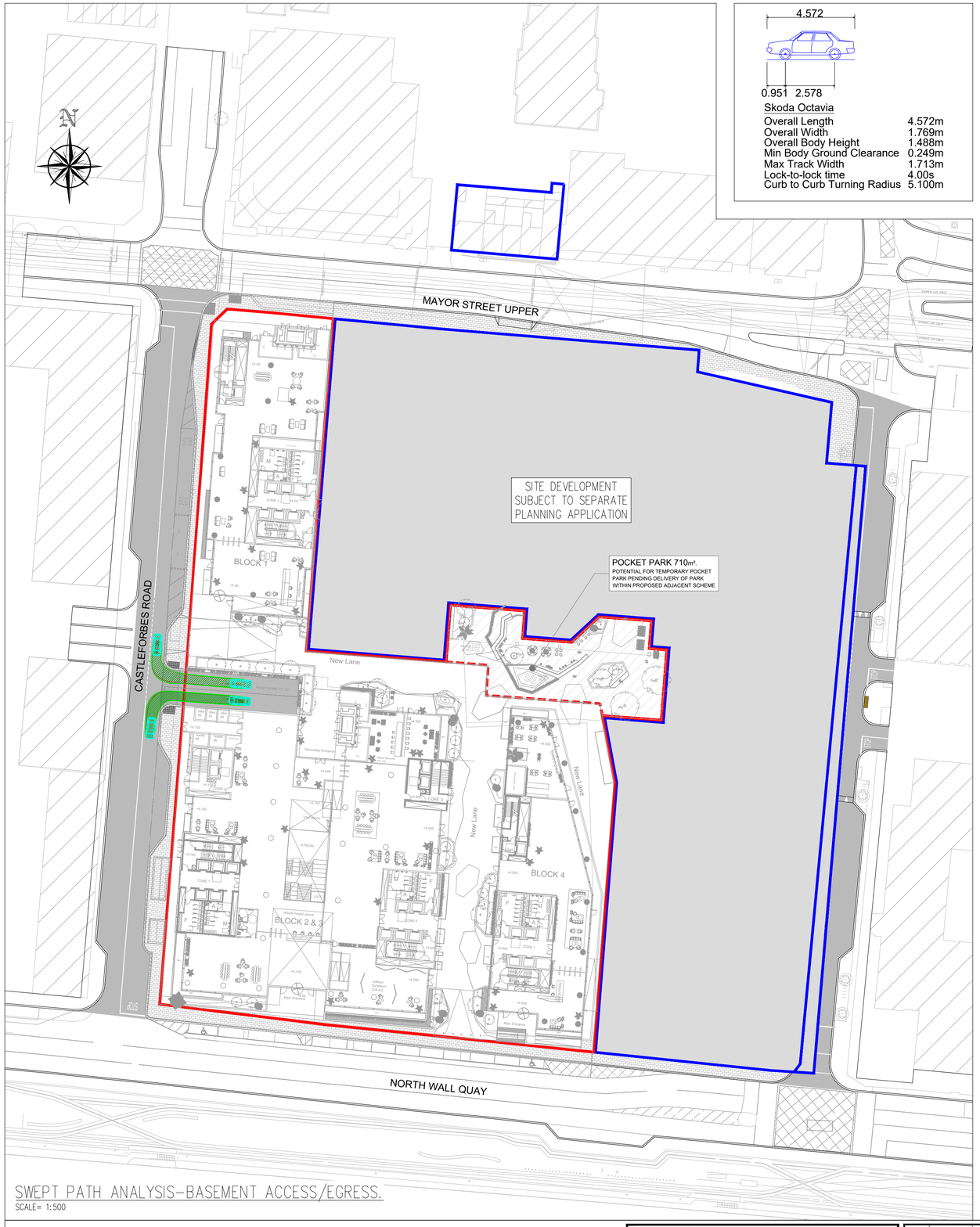
Maritime

- *To develop and champion a maritime heritage strategy to attract visitors to the Docklands Area (see also Chapter 11 – Culture and Heritage)*
- *To seek to ensure the River Liffey is navigable between the East Link Bridge and Samuel Beckett Bridge, working in conjunction with Dublin Port Company and Waterways Ireland*
- *To develop strategies to animate the waterbodies and the campshires, in partnership with Dublin Port Company and Waterways Ireland*
- *To ensure that any development on the campshires does not limit the potential for water-based activities*
- *To support and liaise with Waterways Ireland to restore Camden Lock for water-based activity*
- *To support and liaise with NAMA and Waterways Ireland to secure the sustainable development of city block 19.*

Marketing
• *To maintain and enhance the Docklands brand and marketability as an attractive prime location for investment and as a vibrant living place, by developing and promoting a marketing strategy for Docklands, in conjunction with key stakeholders* • *To continue to develop Docklands as a distinct recognisable urban quarter with its unique Docklands identity* • *To promote Docklands for international events, in particular water-based leisure, recreational and cultural activities, as well as corporate economic activity* • *To promote collaboration among and between the corporate, community and cultural sectors through networking events and to exploit the potential for soft supports and e-communication such as a Docklands app.*
Environment
• *Issues such as movement, land-use, urban design and flood risk management are important environmental matters for the Docklands area. In terms of movement, the significant potential of walking and cycling is recognised and future initiatives will focus on sustainable modes of travel and greater integration with the wider city transport network. On land-use, a balanced mixed-use approach is critical to achieving good place-making and a high-quality public realm, with a residential component key to creating a sense of place and community. Meanwhile, flood prevention and management will play an increasingly important role in terms of new infrastructure provision, flood-resilient design and maintenance regimes to prevent the occurrence of flooding in the Docklands area.*
Movement/Transport
• *To support sustainable transport initiatives which facilitate pleasant, accessible and easy movement to, from and within the Docklands area* • *To develop an integrated transport strategy for the entire Docklands area and to pro-actively promotion sustainable smarter travel* • *To recognise and promote the potential for walking and cycling in the Docklands Area (see also Chapter 8 – Movement and Transport).* • *To allow for the extension of the Luas, the eastern bypass and southern port access route (in accordance with NTA Transport Strategy for the Greater Dublin Area 2016 – 2035) and provision of regular bus service from the city to the Docklands area including out to the Poolbeg Peninsula.* • *To develop a cycle and walkway along the waterfront around the Docklands, around the Poolbeg Peninsula and linking the City with the South Bull Wall.*
Land-Use/Urban Design
• *To continue to secure the distribution of residential use throughout the Docklands area by requiring an appropriate residential/commercial land-use mix on key development sites* • *To ensure that the public realm in the Docklands area operates as a connected network of social spaces and creates a unique sense of place* • *To use street furniture, informal spaces, pocket parks, civic spaces and the spaces between buildings and to promote opportunities for increased interaction and mobility within the Docklands* • *To integrate the public realm, streets and routes of Docklands with the surrounding city* • *To support the extension of the Royal Canal Linear Park to Newcomen Bridge.*
Flood Risk
• *To promote and support initiatives that address flood risk in the entire Docklands area* • *To maintain and improve infrastructure to reduce and manage the risk of flooding in the entire Docklands area.*

Implementation
• *The Government's designation of the SDZ reflects a keen awareness of the strategic importance of this area. However, it is acknowledged that to facilitate the continued socio-economic regeneration of the wider Docklands area, there is a need to address areas beyond the SDZ Boundary* • *To prepare local environmental improvement plans (LEIPs) for the established villages in the Docklands area: East Wall, North Strand, Sherriff Street/North Wall, City Quay/Westland Row and Ringsend/Irishtown (See Chapter 4 – Shape and Structure of the City)* • *To prepare an LAP/SDZ for the wider Docklands area or part thereof which relates to strategic brownfield sites with significant development capacity – such as the remainder of the North Wall area, the CIE lands to the north of Sheriff Street and the Poolbeg Peninsula. The prioritisation of any such LAP(s)/SDZ shall be determined in accordance with the Schedule of LAPs to deliver the core strategy and/or in accordance with any future SDZ designation by government (see Chapter 2 – Vision and Core Strategy).*
Our emphasis.

APPENDIX C – *Dwg. No. 064-260 (Rev. C), 'Autotrack Ground Level Fire Tender',* prepared by CS Consulting Engineers

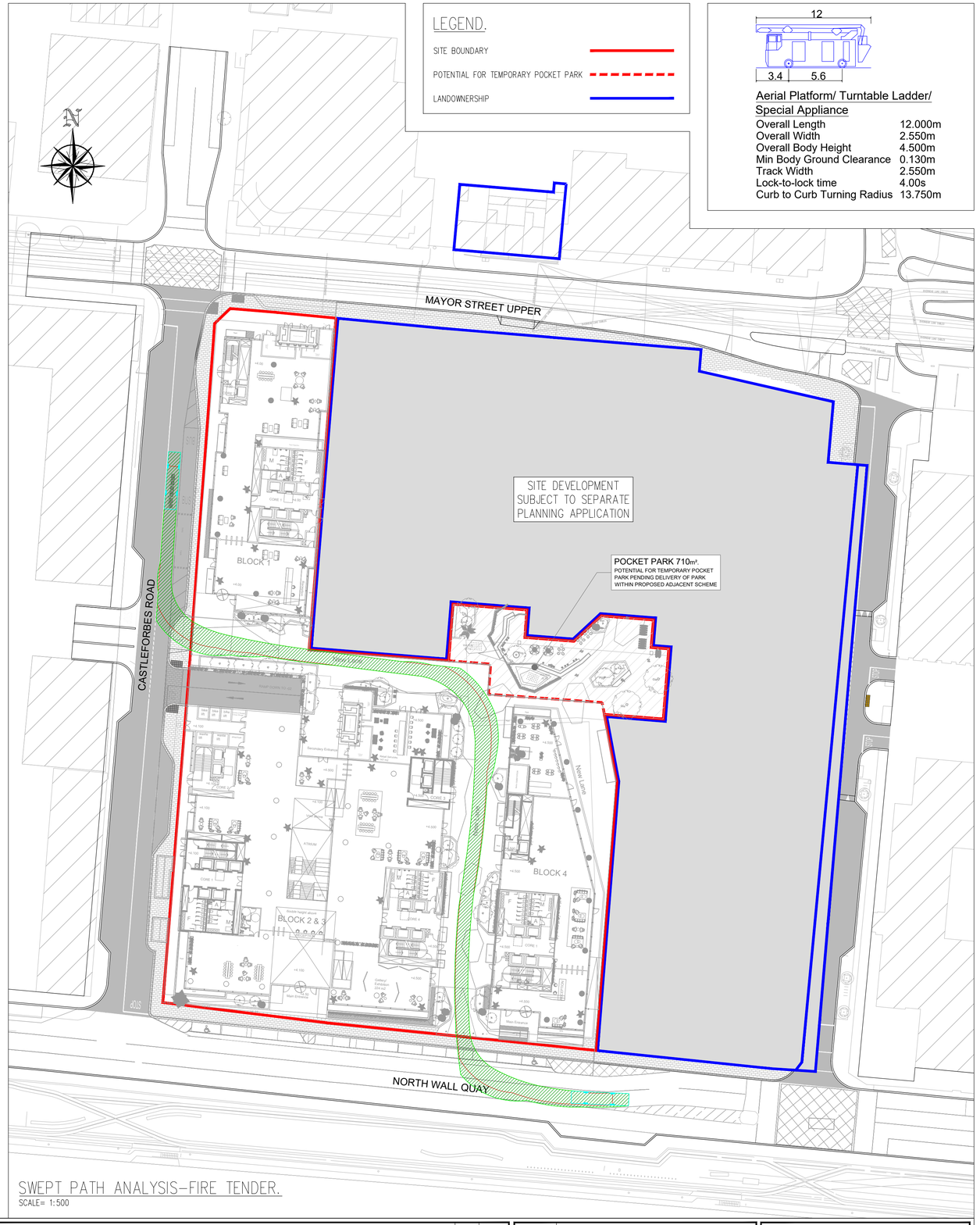


Skoda Octavia

Overall Length	4.572m
Overall Width	1.769m
Overall Body Height	1.488m
Min Body Ground Clearance	0.249m
Max Track Width	1.713m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.100m

SWEPT PATH ANALYSIS–BASEMENT ACCESS/EGRESS.

SCALE= 1:500



LEGEND.

- SITE BOUNDARY
- POTENTIAL FOR TEMPORARY POCKET PARK
- LANDOWNERSHIP

Aerial Platform/ Turntable Ladder/
Special Appliance

Overall Length	12.000m
Overall Width	2.550m
Overall Body Height	4.500m
Min Body Ground Clearance	0.130m
Track Width	2.550m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	13.750m

SWEPT PATH ANALYSIS–FIRE TENDER.

SCALE= 1:500

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NOTES
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Rev. No.	Date	REVISION NOTE	Drn. By	Chkd. By
A	16/11/2020	Site Layout and Site Boundary Revised	JS	MD
B	08/01/2021	Revised for SDZ Application.	JS	MD
C	15/01/2021	Site Boundary Revised	JS	MD

Architect	Henry J Lyons Architects			
Project	Waterfront South Central. Proposed Commercial Scheme.			
Title	Autotrack Ground Level Fire Tender			
Drn by: JS	Chkd by: MD	Aprvd by: NB	Dwg. No. R064-260	Revision C
Date: SEPT 2019	Scale: 1:500 @ A1			

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Environment I.S. EN ISO 14001:2004
Energy I.S. EN ISO 50001:2011
Health & Safety OHSAS 18001:2007

APPENDIX D – ***Dwg. No. Z1010 (Rev. 6), 'Ground Floor Plan',*** **prepared by Henry J Lyons**

APPENDIX E – ***Part L Compliance Report for Commercial Scheme at Waterfront South Central*** **prepared by Axiseng Consulting Engineers, dated 16 December 2020**

PART L COMPLIANCE REPORT

FOR

Commercial Scheme

AT

Waterfront South Central, City Block 9, North Wall Quay, Dublin 1

For

Waterside Block 9 Developments Limited

16/12/2020 Rev: 01

Document History

Revision No.	Description	Prepared By	Reviewed By	Date
Rev 00	Preliminary Issue	DN	EN/CD	30/10/2020
Rev 01	Updated Planning Submission	DN	JC	16/12/2020

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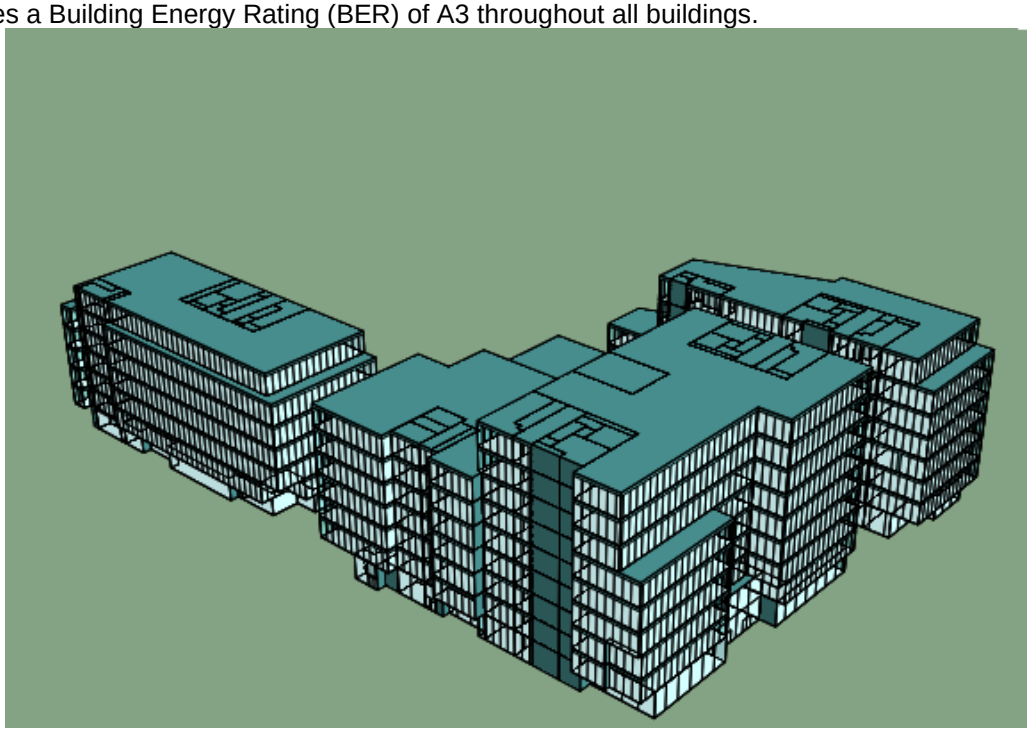
1. Executive Summary

With consideration to the EU energy performance of Buildings Directive (EPBD), the Building Regulations Technical Guidance Document, Part L (NZEB), for sustainable design and reductions in energy and carbon emissions, the building services design strategy for a new office development is to utilise sustainable design options and energy efficient systems that are technically, environmentally and economically feasible for a project of this kind. The purpose of this document is to detail in broad terms how the development incorporates sustainability and energy efficiency with the focus being on TGD L.

The strategy targets a low energy and environmentally friendly building. This report will demonstrate that the design philosophy for the proposed development, a commercial scheme at Waterfront South Central will employ a holistic approach to the construction and integration of the building, its systems and its users. This philosophy is supported by the use of sustainable engineering solutions and energy efficient systems.

The design team recognises the need for the building to be designed and operated in a manner that reduces the energy consumption and carbon emission of the building. This objective will be achieved in an economical manner whilst maintaining an internal environment that is comfortable for occupants and visitors.

To meet the target set out for the proposed development, the energy modelling software, IES <VE2020> using the SBEMie 5.5.h calculation engine has been utilised. This report demonstrates that the proposed design allows the development to be in compliance with NZEB under TGD Part L and achieves a Building Energy Rating (BER) of A3 throughout all buildings.



The CO_2 emission rate from the proposed buildings is less than that of the reference building used in the Part L assessment. The calculated primary energy consumption rate of the proposed building is also less than that of the reference building. The following table demonstrates compliance and indicates the calculation results of the proposed building performance versus the reference building under the part L.

Block 1

Primary Energy Consumption, CO2 Emissions, and Renewable Energy Ratio

The compliance criteria in the TGD-L have been met.

Calculated CO2 emission rate from Reference building	16.6 kgCO2/m2.annum
Calculated CO2 emission rate from Actual building	14 kgCO2/m2.annum
Carbon Performance Coefficient (CPC)	**0.84**
Maximum Permitted Carbon Performance Coefficient (MPCPC)	**1.15**
Calculated primary energy consumption rate from Reference building	85.7 kWh/m2.annum
Calculated primary energy consumption rate from Actual building	71 kWh/m2.annum
Energy Performance Coefficient (EPC)	**0.83**
Maximum Permitted Energy Performance Coefficient (MPEPC)	**1**
Renewable Energy Ratio (RER)	**0.15**
Minimum Renewable Energy Ratio	**0.1**

Block 2&3

Primary Energy Consumption, CO2 Emissions, and Renewable Energy Ratio

The compliance criteria in the TGD-L have been met.

Calculated CO2 emission rate from Reference building	17 kgCO2/m2.annum
Calculated CO2 emission rate from Actual building	14.1 kgCO2/m2.annum
Carbon Performance Coefficient (CPC)	**0.83**
Maximum Permitted Carbon Performance Coefficient (MPCPC)	**1.15**
Calculated primary energy consumption rate from Reference building	87.4 kWh/m2.annum
Calculated primary energy consumption rate from Actual building	71.8 kWh/m2.annum
Energy Performance Coefficient (EPC)	**0.82**
Maximum Permitted Energy Performance Coefficient (MPEPC)	**1**
Renewable Energy Ratio (RER)	**0.15**
Minimum Renewable Energy Ratio	**0.1**

Block 4

Primary Energy Consumption, CO2 Emissions, and Renewable Energy Ratio

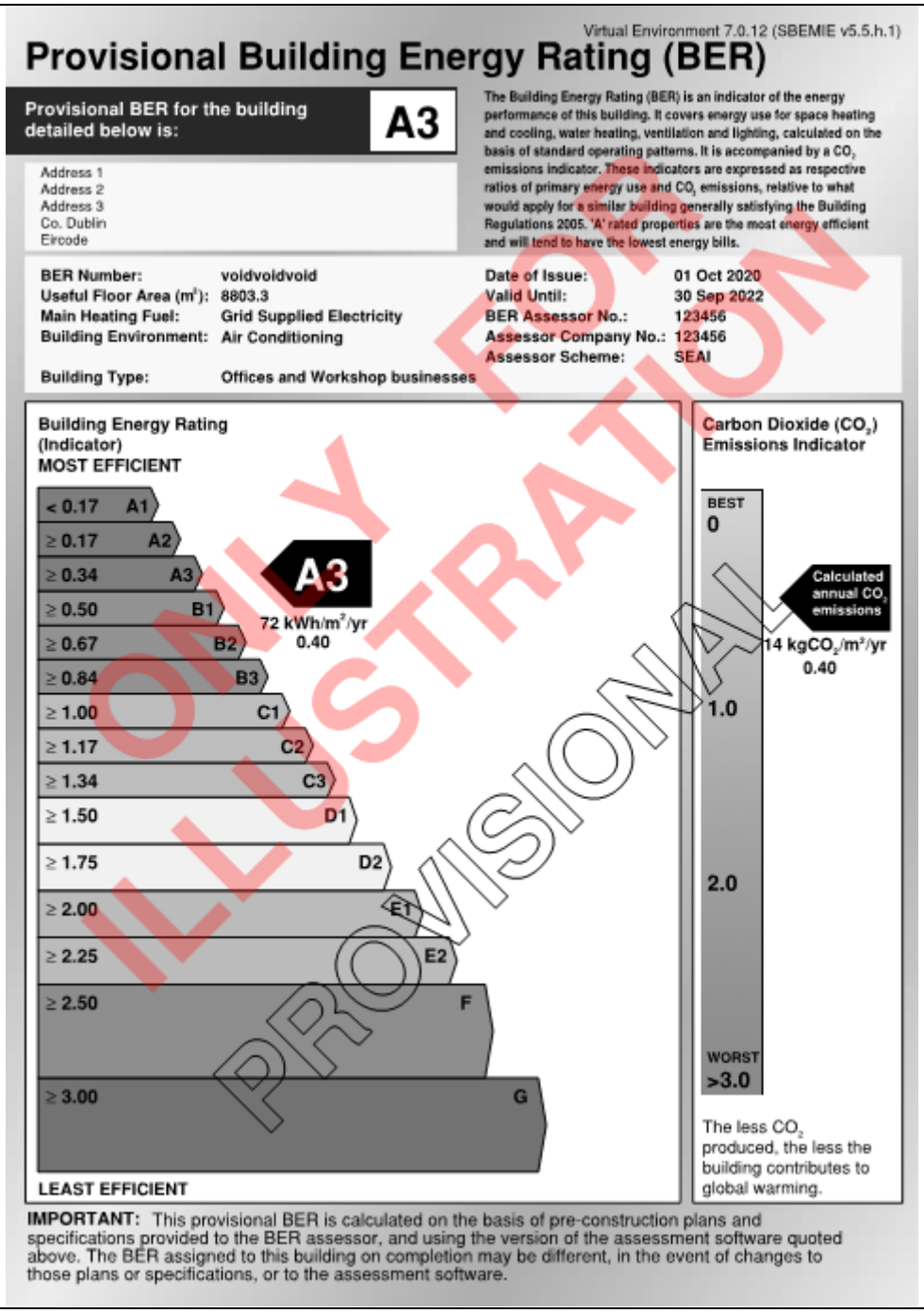
The compliance criteria in the TGD-L have been met.

Calculated CO2 emission rate from Reference building	16.2 kgCO2/m2.annum
Calculated CO2 emission rate from Actual building	15 kgCO2/m2.annum
Carbon Performance Coefficient (CPC)	**0.93**
Maximum Permitted Carbon Performance Coefficient (MPCPC)	**1.15**
Calculated primary energy consumption rate from Reference building	83.7 kWh/m2.annum
Calculated primary energy consumption rate from Actual building	76.4 kWh/m2.annum
Energy Performance Coefficient (EPC)	**0.91**
Maximum Permitted Energy Performance Coefficient (MPEPC)	**1**
Renewable Energy Ratio (RER)	**0.22**
Minimum Renewable Energy Ratio	**0.2**

In order to achieve the overall Nearly Zero Energy Performance criteria, a renewable energy target, of 10%-20% of its energy provided must come from onsite or nearby renewables. The renewable primary energy has been assessed shows an RER of 0.15 & 0.22 being achieved (15% & 22%) with the current design. The energy contribution from the heat pumps is considered to be renewable energy which equates to 10.65 kWh/m²/year for Block 1, 10.77 kWh/m²/year for Block 2&3 and 16.80kWh/m²/year for Block 4.

The preliminary building energy rating calculation indicates an A3 rating is being achieved for the proposed buildings.

Block 1



Virtual Environment 7.0.12 (SBEMIE v5.5.h.1)

Provisional Building Energy Rating (BER)

Provisional BER for the building detailed below is: **A3**

Address 1
Address 2
Address 3
Co. Dublin
Eircode

The Building Energy Rating (BER) is an indicator of the energy performance of this building. It covers energy use for space heating and cooling, water heating, ventilation and lighting, calculated on the basis of standard operating patterns. It is accompanied by a CO_2 emissions indicator. These indicators are expressed as respective ratios of primary energy use and CO_2 emissions, relative to what would apply for a similar building generally satisfying the Building Regulations 2005. 'A' rated properties are the most energy efficient and will tend to have the lowest energy bills.

BER Number:	voidvoidvoid	**Date of Issue:**	01 Oct 2020
Useful Floor Area (m^2):	8803.3	**Valid Until:**	30 Sep 2022
Main Heating Fuel:	Grid Supplied Electricity	**BER Assessor No.:**	123456
Building Environment:	Air Conditioning	**Assessor Company No.:**	123456
		Assessor Scheme:	SEAI
Building Type:	Offices and Workshop businesses		

Building Energy Rating (Indicator)
MOST EFFICIENT

< 0.17	A1
≥ 0.17	A2
≥ 0.34	A3
≥ 0.50	B1
≥ 0.67	B2
≥ 0.84	B3
≥ 1.00	C1
≥ 1.17	C2
≥ 1.34	C3
≥ 1.50	D1
≥ 1.75	D2
≥ 2.00	E1
≥ 2.25	E2
≥ 2.50	F
≥ 3.00	G

LEAST EFFICIENT

A3
72 kWh/m^2/yr
0.40

Carbon Dioxide (CO_2) Emissions Indicator

BEST
0
1.0
2.0
WORST
>3.0

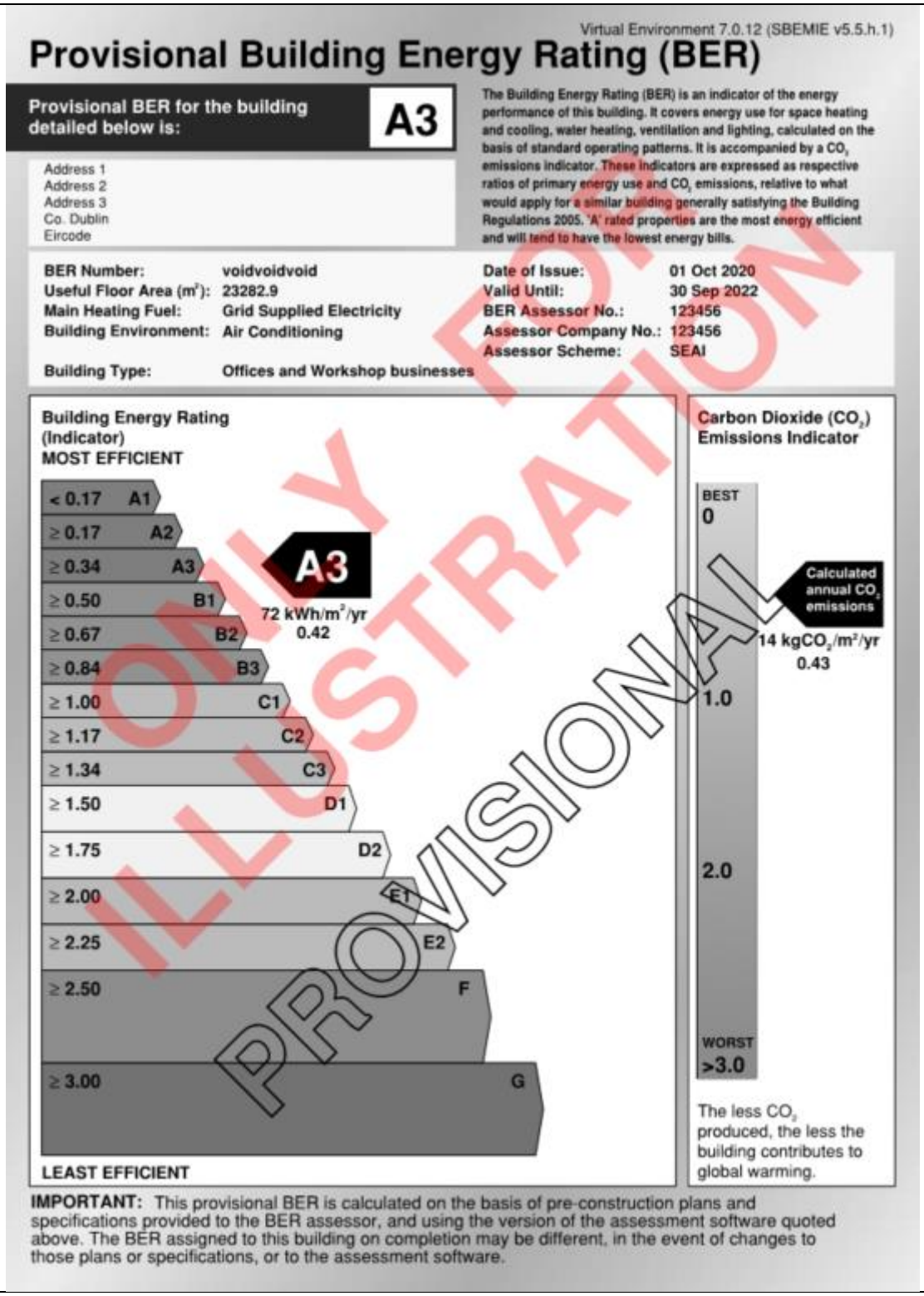
Calculated annual CO_2 emissions
14 kgCO_2/m^2/yr
0.40

The less CO_2 produced, the less the building contributes to global warming.

IMPORTANT: This provisional BER is calculated on the basis of pre-construction plans and specifications provided to the BER assessor, and using the version of the assessment software quoted above. The BER assigned to this building on completion may be different, in the event of changes to those plans or specifications, or to the assessment software.

ONLY FOR ILLUSTRATION PROVISIONAL

Block 2&3



Virtual Environment 7.0.12 (SBEMIE v5.5.h.1)

Provisional Building Energy Rating (BER)

Provisional BER for the building detailed below is: **A3**

Address 1
Address 2
Address 3
Co. Dublin
Eircode

The Building Energy Rating (BER) is an indicator of the energy performance of this building. It covers energy use for space heating and cooling, water heating, ventilation and lighting, calculated on the basis of standard operating patterns. It is accompanied by a CO_2 emissions indicator. These indicators are expressed as respective ratios of primary energy use and CO_2 emissions, relative to what would apply for a similar building generally satisfying the Building Regulations 2005. 'A' rated properties are the most energy efficient and will tend to have the lowest energy bills.

BER Number:	voidvoidvoid	**Date of Issue:**	01 Oct 2020
Useful Floor Area (m^2):	23282.9	**Valid Until:**	30 Sep 2022
Main Heating Fuel:	Grid Supplied Electricity	**BER Assessor No.:**	123456
Building Environment:	Air Conditioning	**Assessor Company No.:**	123456
		Assessor Scheme:	SEAI
Building Type:	Offices and Workshop businesses		

Building Energy Rating (Indicator)
MOST EFFICIENT

< 0.17	A1
≥ 0.17	A2
≥ 0.34	A3
≥ 0.50	B1
≥ 0.67	B2
≥ 0.84	B3
≥ 1.00	C1
≥ 1.17	C2
≥ 1.34	C3
≥ 1.50	D1
≥ 1.75	D2
≥ 2.00	E1
≥ 2.25	E2
≥ 2.50	F
≥ 3.00	G

LEAST EFFICIENT

A3
72 kWh/m^2/yr
0.42

Carbon Dioxide (CO_2) Emissions Indicator

BEST
0
1.0
2.0
WORST
>3.0

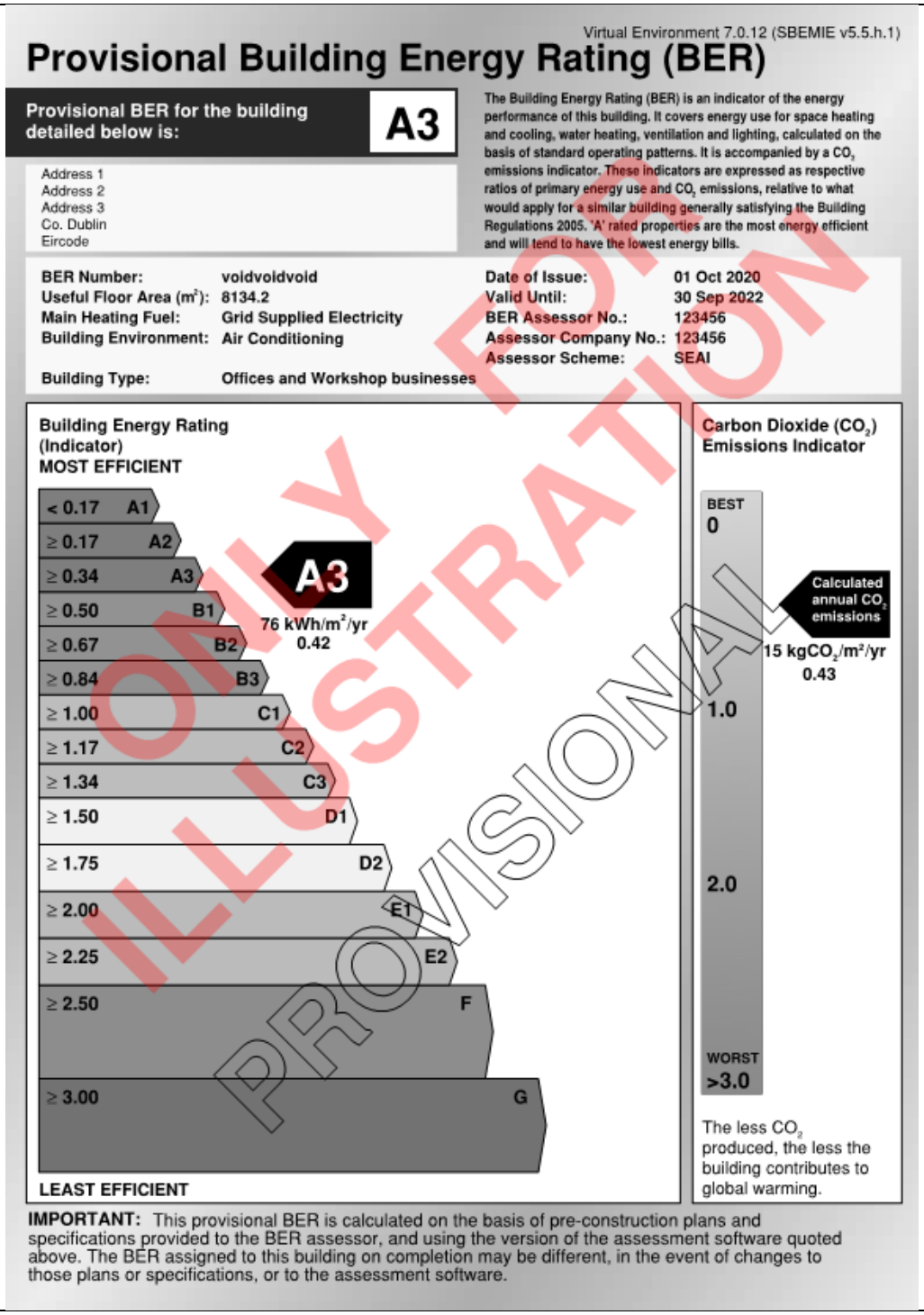
Calculated annual CO_2 emissions
14 kgCO_2/m^2/yr
0.43

The less CO_2 produced, the less the building contributes to global warming.

IMPORTANT: This provisional BER is calculated on the basis of pre-construction plans and specifications provided to the BER assessor, and using the version of the assessment software quoted above. The BER assigned to this building on completion may be different, in the event of changes to those plans or specifications, or to the assessment software.

ONLY FOR ILLUSTRATION PROVISIONAL

Block 4



Virtual Environment 7.0.12 (SBEMIE v5.5.h.1)

Provisional Building Energy Rating (BER)

Provisional BER for the building detailed below is: **A3**

Address 1
Address 2
Address 3
Co. Dublin
Eircode

The Building Energy Rating (BER) is an indicator of the energy performance of this building. It covers energy use for space heating and cooling, water heating, ventilation and lighting, calculated on the basis of standard operating patterns. It is accompanied by a CO_2 emissions indicator. These indicators are expressed as respective ratios of primary energy use and CO_2 emissions, relative to what would apply for a similar building generally satisfying the Building Regulations 2005. 'A' rated properties are the most energy efficient and will tend to have the lowest energy bills.

BER Number:	voidvoidvoid	**Date of Issue:**	01 Oct 2020
Useful Floor Area (m^2):	8134.2	**Valid Until:**	30 Sep 2022
Main Heating Fuel:	Grid Supplied Electricity	**BER Assessor No.:**	123456
Building Environment:	Air Conditioning	**Assessor Company No.:**	123456
		Assessor Scheme:	SEAI
Building Type:	Offices and Workshop businesses		

Building Energy Rating (Indicator)
MOST EFFICIENT

< 0.17	A1
≥ 0.17	A2
≥ 0.34	A3
≥ 0.50	B1
≥ 0.67	B2
≥ 0.84	B3
≥ 1.00	C1
≥ 1.17	C2
≥ 1.34	C3
≥ 1.50	D1
≥ 1.75	D2
≥ 2.00	E1
≥ 2.25	E2
≥ 2.50	F
≥ 3.00	G

LEAST EFFICIENT

A3
76 kWh/m^2/yr
0.42

Carbon Dioxide (CO_2) Emissions Indicator

BEST
0
1.0
2.0
WORST
>3.0

Calculated annual CO_2 emissions
15 kgCO_2/m^2/yr
0.43

The less CO_2 produced, the less the building contributes to global warming.

IMPORTANT: This provisional BER is calculated on the basis of pre-construction plans and specifications provided to the BER assessor, and using the version of the assessment software quoted above. The BER assigned to this building on completion may be different, in the event of changes to those plans or specifications, or to the assessment software.

ONLY FOR ILLUSTRATION PROVISIONAL

2. Introduction

Axiseng were commissioned by Waterside Block 9 Developments Limited to undertake a Part L – NZEB / BER analysis on the basis of the currently proposed design, for use within the development site at North Wall Quay, Dublin 1.

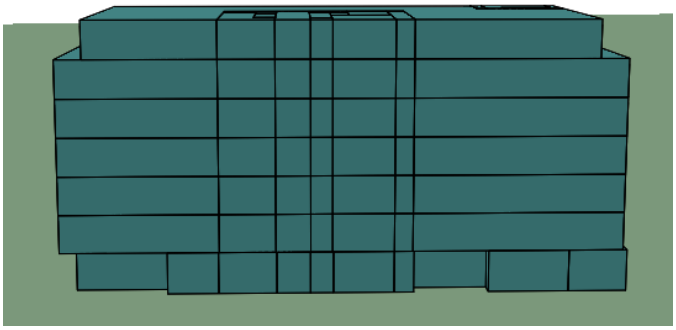
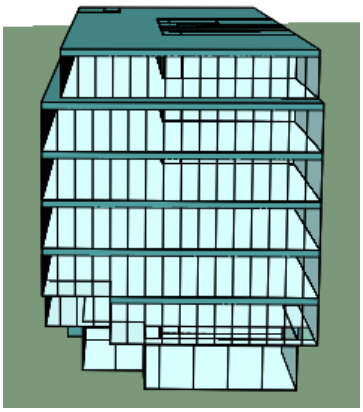
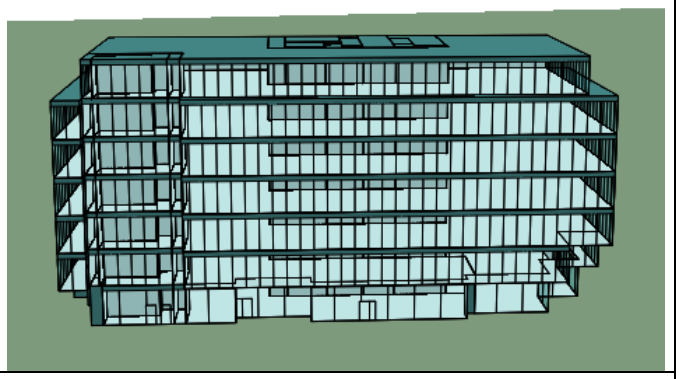
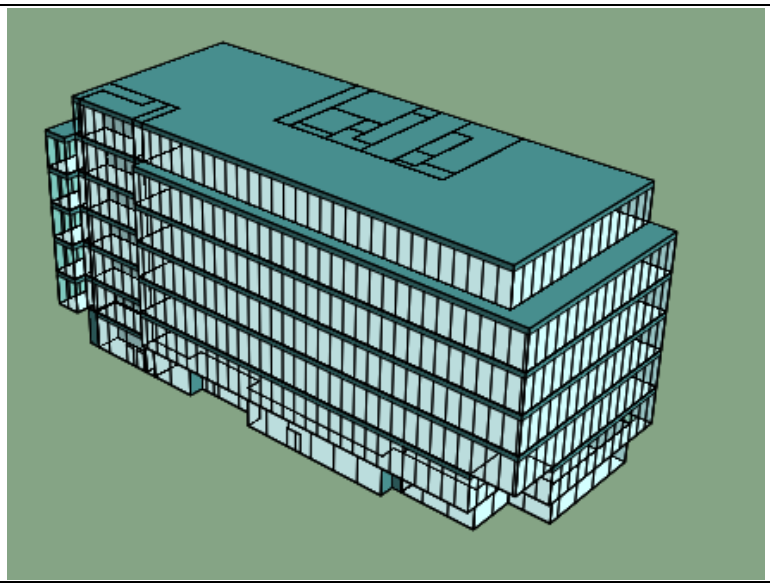
The buildings include the following energy conservation measures to achieve the best energy performance as possible;

- High-performance construction envelope including low u-value and g-value
- Air tightness construction
- Multi-purpose unit (4-pipe heat pump technology) for heating and cooling
- Air source heat pump for hot water system
- Heat Recovery Mechanical Ventilation
- Low specific fan power installed unit
- Low installed lighting power & intelligent lighting control

The design of the proposed development presents an opportunity to ensure the overall buildings perform efficiently and meets the NZEB challenges. The model inputs were both passive and active and are summarised in the following section. This report details how the proposed design solutions comply with TGD Part L and BER requirements. The report intends to inform the readers of the service strategy employed in the new buildings, which are used for the NZEB assessment.

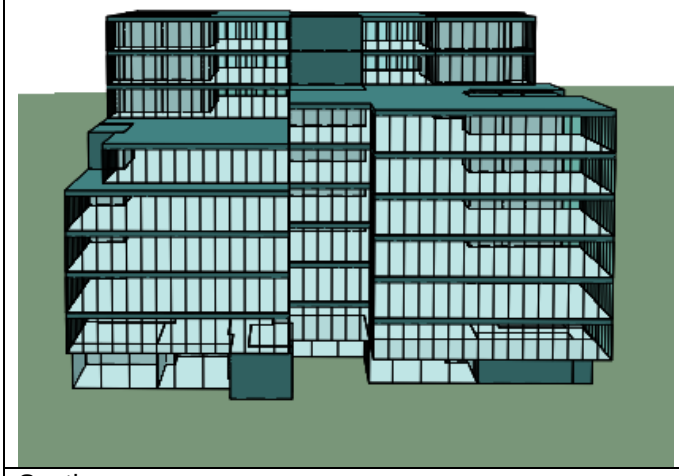
3. Geometry

Block 1

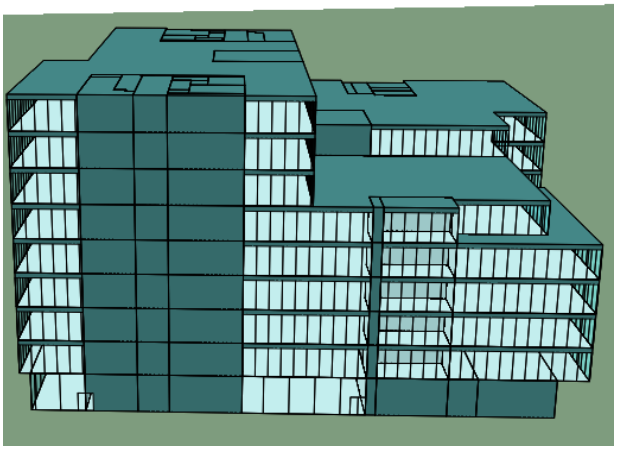
North	East
	
South	**West**
	
Perspective View	
	

Block 2&3

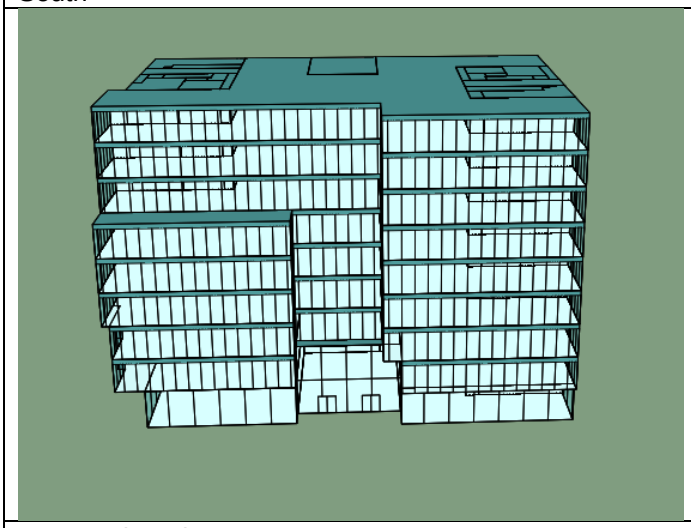
North



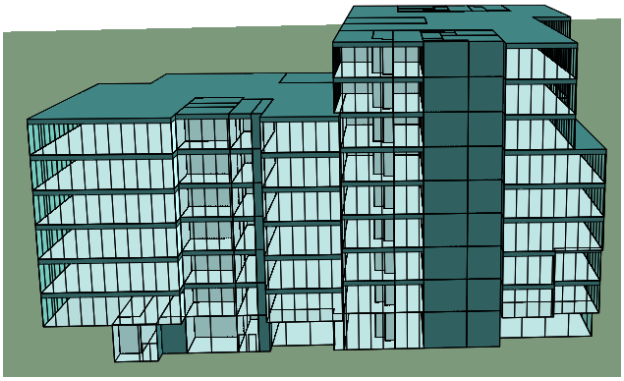
East



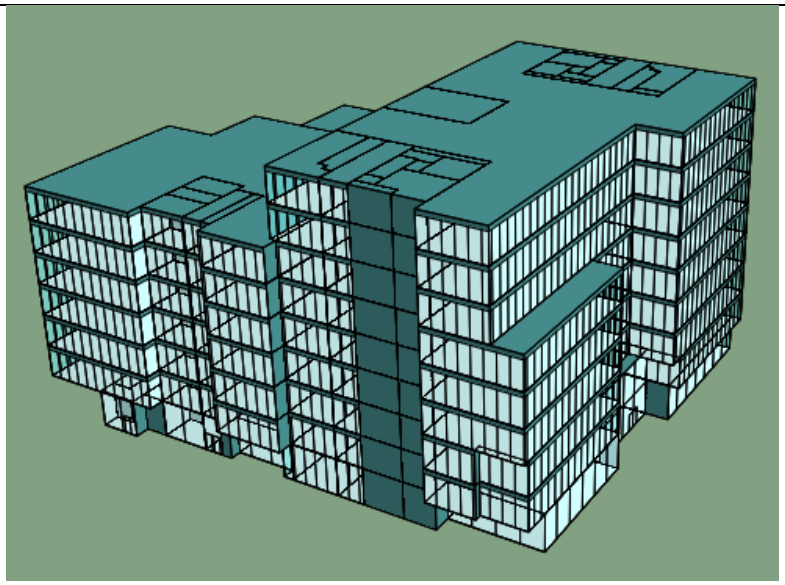
South



West

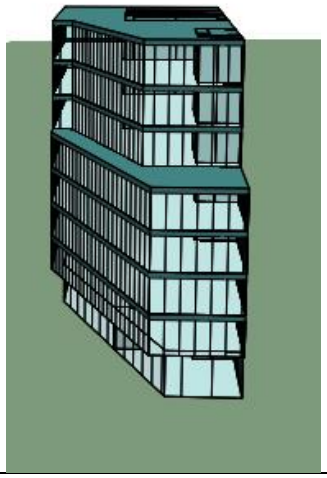


Perspective View

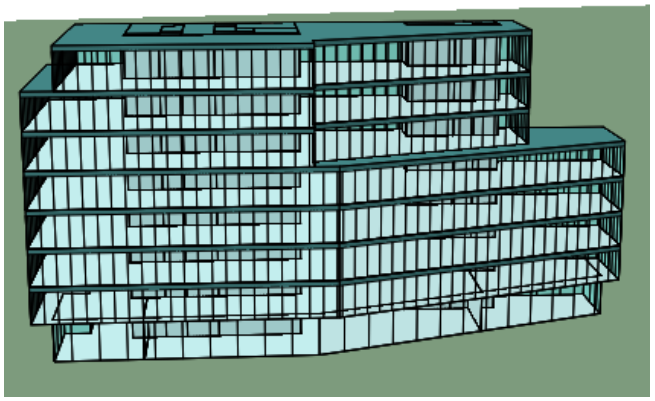


Block 4

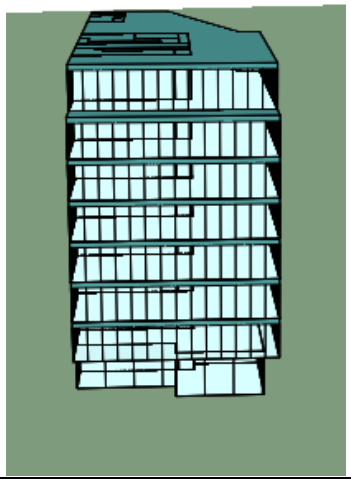
North



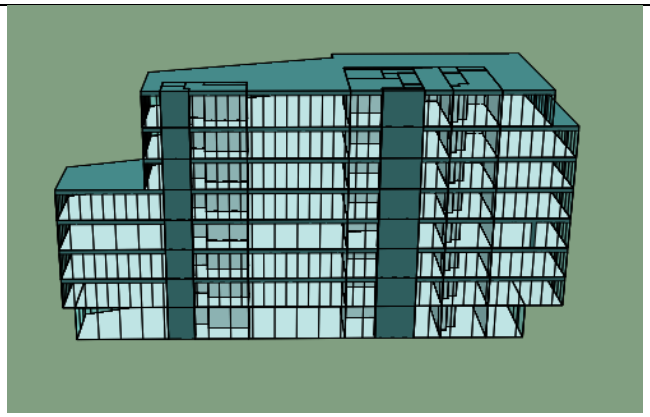
East



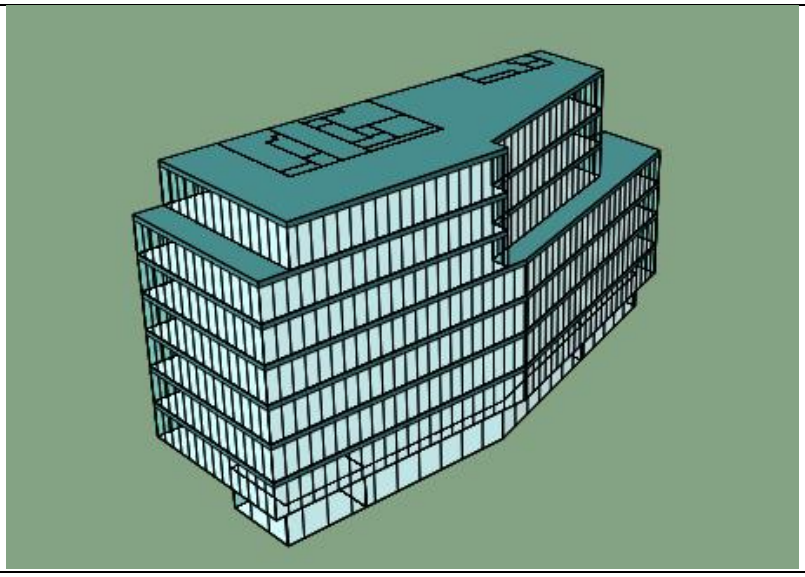
South



West



Perspective View



4. Construction

The following construction has been modelled based on the proposed u-value and will achieve the target u-value on Table 1, of the Building Regulation Part L;

Building Element	Targeted u-value (w/m²K)
WALL_00	0.186 w/m2k
INTERNAL PARTITION_INSULATED	0.1879 w/m2k
INTERNAL PARTITION	1.788 w/m2k
GROUND FLOOR_00	0.1647 w/m2k
FLAT ROOF_00	0.1502 w/m2k
INTERNAL CEILING/FLOORINSULATED	0.283 w/m2k
INTERNAL CEILING/FLOOR	1.086 w/m2k
DOOR_00	1.58 w/m2k
WINDOW_01	1.306 w/m2k/0.25 G-value

The reduction of fabric losses from the proposed development will be achieved by using materials with U-values which are lower than those required by the 2017 Building Regulations, demonstrating the energy efficient approach being adopted for this development.

4.1 Thermal Bridging

The following thermal bridging coefficients were used;

	Junctions involving metal cladding	QA accredited	Junctions NOT involving metal cladding	QA accredited
Type of junction	Psi (W/(m·K))		Psi (W/(m·K))	
Roof-wall	0.280	☑	0.120000	☐
Wall-ground floor	1.000	☐	0.160000	☐
Wall-wall (corner)	0.200	☐	0.090000	☐
Wall-floor (not ground)	0.000	☐	0.070000	☐
Lintel above window/door	0.000	☐	0.300000	☐
Sill below window	0.000	☐	0.040000	☐
Jamb at window/door	0.000	☐	0.090000	☐

The u-value for the facade system are assumed to be assembly u-values and therefore account for all bridging at framing. In this case, the thermal bridging for relevant junctions have been set to zero to account for this.

The building air permeability was set to the 3 m³/(h.m²) @ 50 pa to comply with the Building Regulation Part L in the provision of air tightness. An air tightness target of 3m3/hr per m² is in line with the recognised BSRIA (UK) standard for air tightness (BG 4 / 2006) below 5m3/hr per m² normal practice for air-conditioned office building type. Air permeability target of 2 m3/hr per m² has been considered for best practice.

5. Lighting & Control

The following is proposed for the lighting installation.

Room	Design Illuminance (Lux)	Installed Power Wattage (w/m2)	Control Type				
			Occupancy controls	Parasitic Power (w/m2)	Photoelectric	Sensor type	Parasitic Power (w/m2)
Open Plan Office	400	5 - 6	Dimming / Man-on-Dimmed	0.07	DIMMING	Standalone	0.07
Lobby	200	7	auto on/off	0.07			0.07
WC	200	6	auto on/off	0.07	-	-	-
Stairs	100	7	auto on/off	0.07	-	-	-
Lift Lobby	300	7	Dimming / Auto on-off	0.07	DIMMING	Standalone	0.07
Reception	300	12	Dimming / Man-on-Dimmed	0.07	DIMMING	Standalone	0.07
Plant Room	200	6	auto on/off	0.07	-	-	-
Cupboard	200	5	auto on/off				

Automatic daylight control (automatic dimming) in the open plan office, Lift Lobby and reception allow for electrical energy savings as well as increasing the occupant exposure to natural daylight. Rooms other than the open plan office and reception are to be fitted with presence detection automatic sensors to switching off the lighting when the rooms are unoccupied.

6. HVAC

The HVAC system design has been designed to ensure minimal energy requirement in the building. The following table is a list of the proposed HVAC systems within the development;

Room	HVAC System	Ventilation Type	Heat Recovery Unit	Specific Fan Power (W/l/s)
Open Plan Office	FCU	Centralised Mech Vent	82.5% Thermal Wheel	1.8 (0.2 for FCU)
Lobby	-	Room air circulation		
W/C	Radiator	Exhaust System	-	1.8
Stairs	Radiator	Room air circulation		
Lift Lobby	FCU	Centralised Mech Vent	82.5% Thermal Wheel	1.8
Reception	FCU	Centralised Mech Vent	82.5% Thermal Wheel	1.8
Plant Room	-	Room air circulation		
Cupboard	-	Room air circulation	-	-

The proposed HVAC systems are selected based upon their efficiencies and performance. These have been assessed to ascertain their coefficient of performance in terms of heating, cooling and hot water generation. All open plan offices are to be fitted with ceiling mounted FCU unit with supplied heating and cooling from the Multi-purpose units (four pipe system). The core zones including W/C's and circulation areas are to be fitted with low temperature radiator supplied with low-temperature hot water from heat recovery from the Multi-purpose units. W/C's will have a mechanical ventilation system. All air handling units will have a thermal wheel heat recovery at efficiency over 82.5%.

Heating Plant System	Cooling Plant System	Domestic Hot Water
Generator Type 1 – Multi-purpose Unit (LPHW heat pump - 4 pipe unit) Seasonal Efficiency – 3.27 Fuel Type – Electricity	Generator Type 1 – Multi-purpose Unit (Heat pump – 4 pipe unit) EER / SEER – 3.27 / 3.83 Fuel Type – Electricity	Generator Type 1 – Heat pump (air source) Seasonal Efficiency – 2.78 Fuel Type – Electricity Overall Seasonal Efficiency (SCoP) – 2.78 Storage Volume (litres) – 1000

Pump Type Variable speed Multiple pressure sensors	Pump Type Variable speed Multiple pressure sensors	Storage losses (kWh/(l.day)) – 0.0047 Circulation losses (W/m) – 9.81 Loop Length (metres): • B1= 374 • B2/3 = 610m • B4 = 214m Pump Power (kW) – 0.134 Time Switch – Yes *Rules of thumb applied in case of absence of data, where: $\left(\sqrt{(total} floor\ area\ serve\ by\ DHW\right)\ x\ 4$

The heating system will be fed with a heat rejection from the multi-purpose unit (4-pipe system). Domestic Hot Water will be generated by both Air Source Heat Pumps (ASHP). The heat pumps for the generation of domestic hot water are to be selected based upon the seasonal coefficient performance (sCOP) over 278%.

The following control types have been applied to all systems;

Metering Provision	System Controls
Provision for Metering – Yes Metering "Out of range" – Yes Electric Power Factor - > 0.95	Central Time Control – Yes Optimum Start / Stop Control – Yes Local Time Control – No Local Temperature Control – Yes Weather Compensation Control - Yes

Central BMS will be designed to check metering to monitor & optimise energy usage. The energy management system is expected to review and adjust the operating efficiencies and strategy for the various building services to minimise overall energy use of carbon emission thus saving the cost.

7. Renewables

Renewable technologies have been employed to offset and exceed the requirements of building regulations Part L. The heating and cooling load in the propose development building are to be met by the Multi-purpose Unit heat pump technology and is identified as renewable energy technology design in this case. DHW are to be met by dedicated air source heat pump technology and is identified as renewable energy technology.

8. Result

The following NZEB/Part L & BER has been calculated with results highlighted below;

8.1 BRIRL Document

Output from Building Regulation Ireland (BRIRL) Document

Block 1

BRIRL Output Document

Compliance Assessment with the Building Regulations (Ireland) TGD-Part L 2017

This report demonstrates compliance with specific aspects of Part L of the Building Regulations. Compliance with all aspects of Part L is a legal requirement. Demonstration of how compliance with every aspect is achieved may be sought from the Building Control Authority.

PROJECT WATERFRONT

Date: Tue Sep 29 16:43:42 2020

Administrative information

Building Details

Address: Address 1, Address 2, Address 3, Address 4, Co. Dublin, Eircode

NEAP

Calculation engine: SBEMIE

Calculation engine version: v5.5.h.1

Interface to calculation engine: Virtual Environment

Interface to calculation engine version: 7.0.12

BRIRL compliance check version: v5.5.h.0

Client Details

Name: Name

Telephone number: Phone

Address: Street Address, Co. Dublin, Eircode

Energy Assessor Details

Name: Name

Telephone number: Phone

Email: you@yourISP

Address: Street Address, Co. Carlow, Eircode

Primary Energy Consumption, CO2 Emissions, and Renewable Energy Ratio

The compliance criteria in the TGD-L have been met.

Calculated CO2 emission rate from Reference building	16.6 kgCO2/m2.annum
Calculated CO2 emission rate from Actual building	14 kgCO2/m2.annum
Carbon Performance Coefficient (CPC)	**0.84**
Maximum Permitted Carbon Performance Coefficient (MPCPC)	**1.15**
Calculated primary energy consumption rate from Reference building	85.7 kWh/m2.annum
Calculated primary energy consumption rate from Actual building	71 kWh/m2.annum
Energy Performance Coefficient (EPC)	**0.83**
Maximum Permitted Energy Performance Coefficient (MPEPC)	**1**
Renewable Energy Ratio (RER)	**0.15**
Minimum Renewable Energy Ratio	**0.1**

Heat Transmission through Building Fabric

Element	$U_{b\text{-Limit}}$	$U_{b\text{-Calc}}$	$U_{i\text{-Limit}}$	$U_{i\text{-Calc}}$	Surface with maximum U-value*
Walls**	0.21	0.37	0.6	1.79	L0000017_W3_A0
Floors (ground and exposed)	0.21	0.17	0.6	0.28	L0000010_F_A1
Pitched roofs	0.16	-	0.3	-	"No heat loss pitched roofs"
Flat roofs	0.2	0.15	0.3	0.28	L0000037_C_A2
Windows, roof windows, and rooflights	1.6	1.31	3	1.31	L0000047_W1_O0
Personnel doors	1.6	3.08	3	3.08	L0000005_F_O1
Vehicle access & similar large doors	1.5	-	3	-	"No ext. vehicle access doors"
High usage entrance doors	3	-	3	-	"No ext. high usage entrance doors"

$U_{b\text{-Limit}}$ = Limiting area-weighted average U-values [W/(m2K)] $U_{i\text{-Limit}}$ = Limiting individual element U-values [W/(m2K)]
$U_{b\text{-Calc}}$ = Calculated area-weighted average U-values [W/(m2K)] $U_{i\text{-Calc}}$ = Calculated individual element U-values [W/(m2K)]

* There might be more than one surface with the maximum U-value. ** Automatic U-value check by the tool does not apply to curtain walls whose area-weighted average and individual limiting standards are 1.8 and 3 W/m2K, respectively.

Air Permeability	Upper Limit	This Building's Value
m3/(h.m2) at 50 Pa	5	3

Block 2&3

BRIRL Output Document

Compliance Assessment with the Building Regulations (Ireland) TGD-Part L 2017

This report demonstrates compliance with specific aspects of Part L of the Building Regulations. Compliance with all aspects of Part L is a legal requirement. Demonstration of how compliance with every aspect is achieved may be sought from the Building Control Authority.

PROJECT WATERFRONT

Date: Wed Sep 30 11:20:40 2020

Administrative information

Building Details

Address: Address 1, Address 2, Address 3, Address 4, Co. Dublin, Eircode

NEAP

Calculation engine: SBEMIE

Calculation engine version: v5.5.h.1

Interface to calculation engine: Virtual Environment

Interface to calculation engine version: 7.0.12

BRIRL compliance check version: v5.5.h.0

Client Details

Name: Name

Telephone number: Phone

Address: Street Address, Co. Dublin, Eircode

Energy Assessor Details

Name: Name

Telephone number: Phone

Email: you@yourISP

Address: Street Address, Co. Carlow, Eircode

Primary Energy Consumption, CO2 Emissions, and Renewable Energy Ratio

The compliance criteria in the TGD-L have been met.

Calculated CO2 emission rate from Reference building	17 kgCO2/m2.annum
Calculated CO2 emission rate from Actual building	14.1 kgCO2/m2.annum
Carbon Performance Coefficient (CPC)	0.83
Maximum Permitted Carbon Performance Coefficient (MPCPC)	1.15
Calculated primary energy consumption rate from Reference building	87.4 kWh/m2.annum
Calculated primary energy consumption rate from Actual building	71.8 kWh/m2.annum
Energy Performance Coefficient (EPC)	0.82
Maximum Permitted Energy Performance Coefficient (MPEPC)	1
Renewable Energy Ratio (RER)	0.15
Minimum Renewable Energy Ratio	0.1

Heat Transmission through Building Fabric

Element	$U_{a\text{-Limit}}$	$U_{a\text{-Calc}}$	$U_{i\text{-Limit}}$	$U_{i\text{-Calc}}$	Surface with maximum U-value*
Walls**	0.21	0.48	0.6	1.79	L000001B_W5_A0
Floors (ground and exposed)	0.21	0.18	0.6	0.28	L0000004_F_A0
Pitched roofs	0.16	-	0.3	-	"No heat loss pitched roofs"
Flat roofs	0.2	0.15	0.3	0.28	L00000C1_C_A0
Windows, roof windows, and rooflights	1.6	1.31	3	1.31	L000008A_W1_O0
Personnel doors	1.6	-	3	-	"No ext. personnel doors"
Vehicle access & similar large doors	1.5	-	3	-	"No ext. vehicle access doors"
High usage entrance doors	3	-	3	-	"No ext. high usage entrance doors"

$U_{a\text{-Limit}}$ = Limiting area-weighted average U-values [W/(m2K)] $U_{i\text{-Limit}}$ = Limiting individual element U-values [W/(m2K))]
$U_{a\text{-Calc}}$ = Calculated area-weighted average U-values [W/(m2K)] $U_{i\text{-Calc}}$ = Calculated individual element U-values [W/(m2K)]

* There might be more than one surface with the maximum U-value. ** Automatic U-value check by the tool does not apply to curtain walls whose area-weighted average and individual limiting standards are 1.8 and 3 W/m2K, respectively.

Air Permeability	Upper Limit	This Building's Value
m3/(h.m2) at 50 Pa	5	3

Block 4

BRIRL Output Document

Compliance Assessment with the Building Regulations (Ireland) TGD-Part L 2017

This report demonstrates compliance with specific aspects of Part L of the Building Regulations. Compliance with all aspects of Part L is a legal requirement. Demonstration of how compliance with every aspect is achieved may be sought from the Building Control Authority.

PROJECT WATERFRONT

Date: Wed Sep 30 15:22:30 2020

Administrative information

Building Details

Address: Address 1, Address 2, Address 3, Address 4, Co. Dublin, Eircode

NEAP

Calculation engine: SBEMIE

Calculation engine version: v5.5.h.1

Interface to calculation engine: Virtual Environment

Interface to calculation engine version: 7.0.12

BRIRL compliance check version: v5.5.h.0

Client Details

Name: Name

Telephone number: Phone

Address: Street Address, Co. Dublin, Eircode

Energy Assessor Details

Name: Name

Telephone number: Phone

Email: you@yourISP

Address: Street Address, Co. Carlow, Eircode

Primary Energy Consumption, CO2 Emissions, and Renewable Energy Ratio

The compliance criteria in the TGD-L have been met.

Calculated CO2 emission rate from Reference building	16.2 kgCO2/m2.annum
Calculated CO2 emission rate from Actual building	15 kgCO2/m2.annum
Carbon Performance Coefficient (CPC)	**0.93**
Maximum Permitted Carbon Performance Coefficient (MPCPC)	**1.15**
Calculated primary energy consumption rate from Reference building	83.7 kWh/m2.annum
Calculated primary energy consumption rate from Actual building	76.4 kWh/m2.annum
Energy Performance Coefficient (EPC)	**0.91**
Maximum Permitted Energy Performance Coefficient (MPEPC)	**1**
Renewable Energy Ratio (RER)	**0.22**
Minimum Renewable Energy Ratio	**0.2**

Heat Transmission through Building Fabric

Element	$U_{a\text{-}Limit}$	$U_{a\text{-}Calc}$	$U_{i\text{-}Limit}$	$U_{i\text{-}Calc}$	Surface with maximum U-value*
Walls**	0.21	0.43	0.6	1.79	L0000014_W5_A1
Floors (ground and exposed)	0.21	0.17	0.6	0.17	L0000008_F
Pitched roofs	0.16	-	0.3	-	"No heat loss pitched roofs"
Flat roofs	0.2	0.15	0.3	0.15	L0000070_C
Windows, roof windows, and rooflights	1.6	1.31	3	1.31	L0000008_W1_O0
Personnel doors	1.6	-	3	-	"No ext. personnel doors"
Vehicle access & similar large doors	1.5	-	3	-	"No ext. vehicle access doors"
High usage entrance doors	3	-	3	-	"No ext. high usage entrance doors"

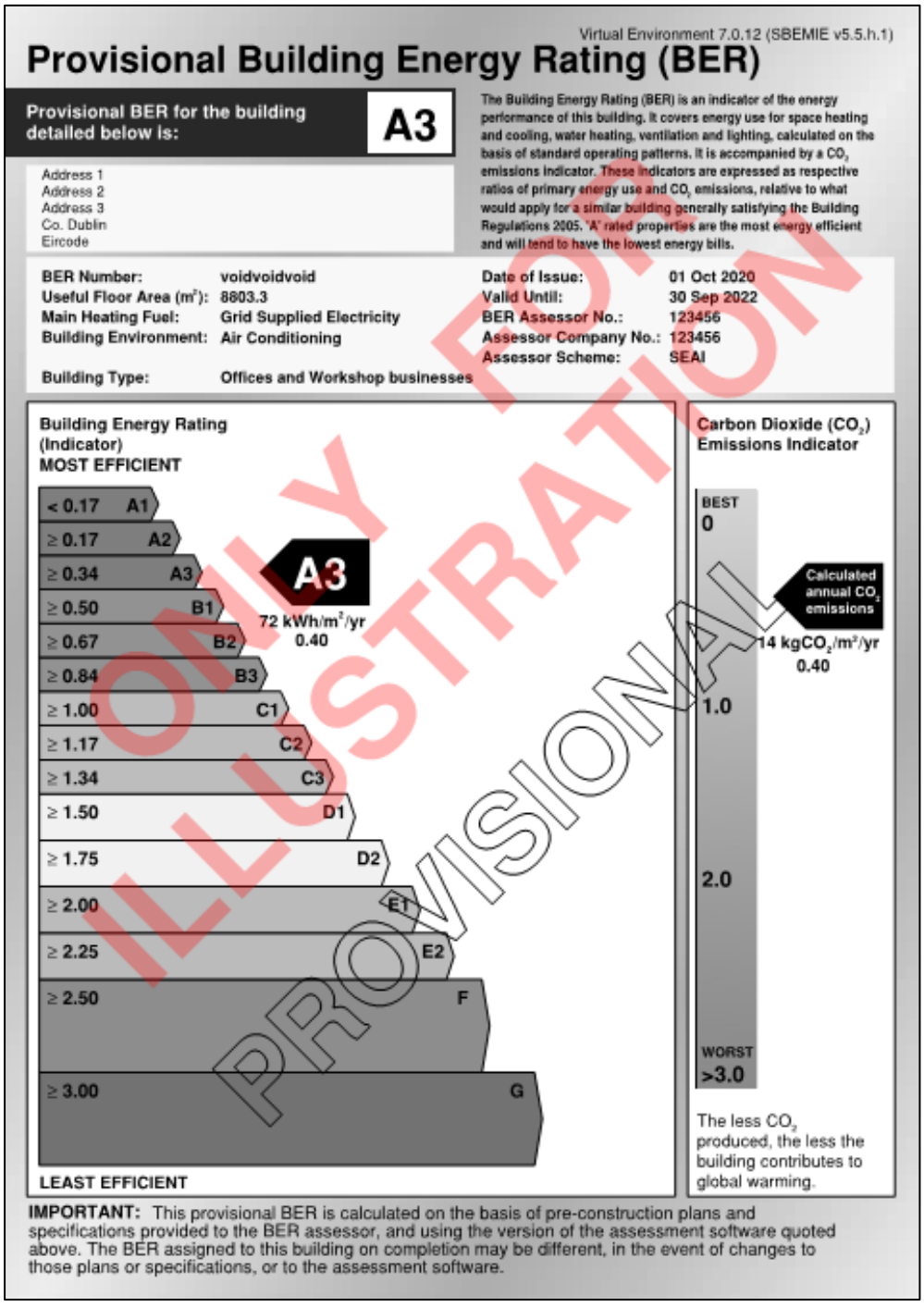
$U_{a\text{-}Limit}$ = Limiting area-weighted average U-values [W/(m2K)] $U_{i\text{-}Limit}$ = Limiting individual element U-values [W/(m2K)]
$U_{a\text{-}Calc}$ = Calculated area-weighted average U-values [W/(m2K)] $U_{i\text{-}Calc}$ = Calculated individual element U-values [W/(m2K)]

* There might be more than one surface with the maximum U-value. ** Automatic U-value check by the tool does not apply to curtain walls whose area-weighted average and individual limiting standards are 1.8 and 3 W/m2K, respectively.

Air Permeability	Upper Limit	This Building's Value
m3/(h.m2) at 50 Pa	5	3

8.2 BER document

Block 1



Virtual Environment 7.0.12 (SBEMIE v5.5.h.1)

Provisional Building Energy Rating (BER)

Provisional BER for the building detailed below is: **A3**

Address 1
Address 2
Address 3
Co. Dublin
Eircode

The Building Energy Rating (BER) is an indicator of the energy performance of this building. It covers energy use for space heating and cooling, water heating, ventilation and lighting, calculated on the basis of standard operating patterns. It is accompanied by a CO_2 emissions indicator. These indicators are expressed as respective ratios of primary energy use and CO_2 emissions, relative to what would apply for a similar building generally satisfying the Building Regulations 2005. 'A' rated properties are the most energy efficient and will tend to have the lowest energy bills.

BER Number:	voidvoidvoid	**Date of Issue:**	01 Oct 2020
Useful Floor Area (m^2):	8803.3	**Valid Until:**	30 Sep 2022
Main Heating Fuel:	Grid Supplied Electricity	**BER Assessor No.:**	123456
Building Environment:	Air Conditioning	**Assessor Company No.:**	123456
		Assessor Scheme:	SEAI
Building Type:	Offices and Workshop businesses		

Building Energy Rating (Indicator)
MOST EFFICIENT

< 0.17	A1
≥ 0.17	A2
≥ 0.34	A3
≥ 0.50	B1
≥ 0.67	B2
≥ 0.84	B3
≥ 1.00	C1
≥ 1.17	C2
≥ 1.34	C3
≥ 1.50	D1
≥ 1.75	D2
≥ 2.00	E1
≥ 2.25	E2
≥ 2.50	F
≥ 3.00	G

LEAST EFFICIENT

A3
72 kWh/m^2/yr
0.40

Carbon Dioxide (CO_2) Emissions Indicator

BEST
0
1.0
2.0
WORST
>3.0

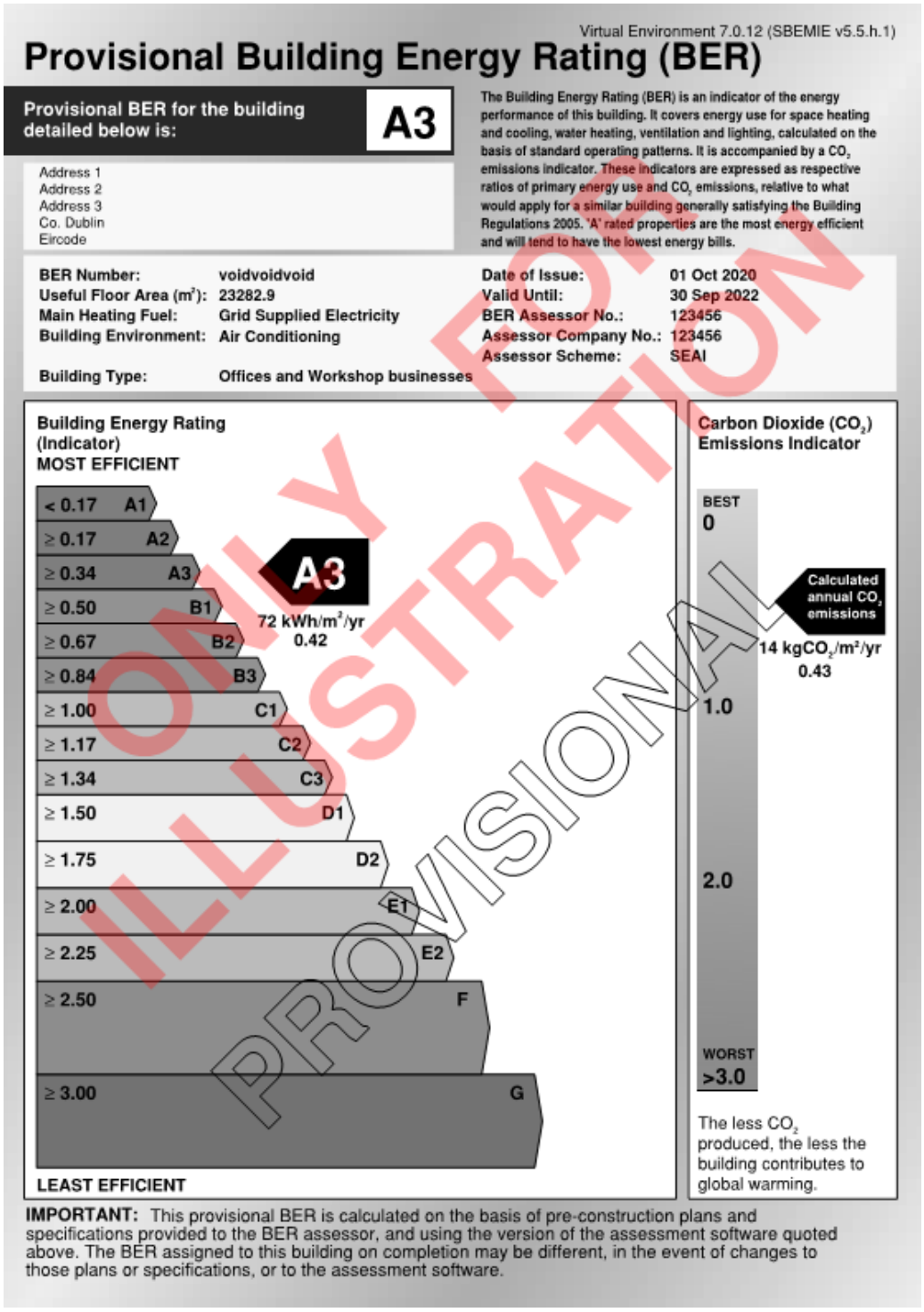
Calculated annual CO_2 emissions
14 kgCO_2/m^2/yr
0.40

The less CO_2 produced, the less the building contributes to global warming.

IMPORTANT: This provisional BER is calculated on the basis of pre-construction plans and specifications provided to the BER assessor, and using the version of the assessment software quoted above. The BER assigned to this building on completion may be different, in the event of changes to those plans or specifications, or to the assessment software.

ONLY FOR ILLUSTRATION PROVISIONAL

Block 2&3



ONLY FOR ILLUSTRATION PROVISIONAL

Block 4

Virtual Environment 7.0.12 (SBEMIE v5.5.h.1)

Provisional Building Energy Rating (BER)

Provisional BER for the building detailed below is: **A3**

Address 1
Address 2
Address 3
Co. Dublin
Eircode

The Building Energy Rating (BER) is an indicator of the energy performance of this building. It covers energy use for space heating and cooling, water heating, ventilation and lighting, calculated on the basis of standard operating patterns. It is accompanied by a CO_2 emissions indicator. These indicators are expressed as respective ratios of primary energy use and CO_2 emissions, relative to what would apply for a similar building generally satisfying the Building Regulations 2005. 'A' rated properties are the most energy efficient and will tend to have the lowest energy bills.

BER Number:	voidvoidvoid	**Date of Issue:**	01 Oct 2020
Useful Floor Area (m^2):	8134.2	**Valid Until:**	30 Sep 2022
Main Heating Fuel:	Grid Supplied Electricity	**BER Assessor No.:**	123456
Building Environment:	Air Conditioning	**Assessor Company No.:**	123456
		Assessor Scheme:	SEAI
Building Type:	Offices and Workshop businesses		

Building Energy Rating (Indicator)
MOST EFFICIENT

< 0.17	A1
≥ 0.17	A2
≥ 0.34	A3
≥ 0.50	B1
≥ 0.67	B2
≥ 0.84	B3
≥ 1.00	C1
≥ 1.17	C2
≥ 1.34	C3
≥ 1.50	D1
≥ 1.75	D2
≥ 2.00	E1
≥ 2.25	E2
≥ 2.50	F
≥ 3.00	G

LEAST EFFICIENT

A3
76 kWh/m^2/yr
0.42

Carbon Dioxide (CO_2) Emissions Indicator

BEST
0
1.0
2.0
WORST
>3.0

Calculated annual CO_2 emissions
15 kgCO_2/m^2/yr
0.43

The less CO_2 produced, the less the building contributes to global warming.

IMPORTANT: This provisional BER is calculated on the basis of pre-construction plans and specifications provided to the BER assessor, and using the version of the assessment software quoted above. The BER assigned to this building on completion may be different, in the event of changes to those plans or specifications, or to the assessment software.

ONLY FOR ILLUSTRATION PROVISIONAL

9. Conclusion

The assessment shows that the proposed development buildings are in compliance with the performance criteria under Part L. These measures have been designed to reduce the primary energy consumption through intelligent control and highly efficient plant and equipment.

The results in the Part L compliance assessment show that the proposed office buildings have an Energy Performance Coefficient (EPC) less than Maximum Permitted EPC (MPEPC) of 1.0. The buildings have a Carbon Performance Coefficient (CPC) less than the Maximum Permitted CPC (MPCP) of 1.15. The result shows that the proposed development has a Renewable Energy Ratio between 0.15 to 0.22 (15% -22%) exceeding the target under the part L. It is concluded that the proposed buildings achieve the NZEB performance specification for energy and carbon dioxide emissions, therefore is in compliant with the performance criteria under section 1.1.2, Building Regulation 2017 Part L for building other than Dwellings.