ELEMENT SUSTAINABILITY

BLOCK D, FIRST STREET, MANCHESTER

ENVIRONMENTAL STANDARDS STATEMENT VERIFICATION REPORT

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Harry Higgins Sustainability Consultant	Esme Bridge Senior Sustainability Consultant	Stacey Downes Associate Sustainability Consultant

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ELEMENT SUSTAINABILITY

phone: 01829 733 444

email: hello@elementsustainability.co.uk

www: www.elementsustanability.co.uk

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1. INTRODUCTION

Element Sustainability has been commissioned by Downing Living (Manchester) Limited Partnership Incorporated to review the development's performance relative to the Environmental Standards Statement (report reference: 2019.163 - First Street - Environmental Standards Statement FINAL (Jan 20)) submitted to the local planning authority in support of the planning application for this scheme at First Street South, Manchester.

This verification report is intended to assist with the discharge of the following planning condition applied within the Decision Notice for this site (ref. Decision Notice: 125573/FO/2019):

Planning Condition 14 –
The development hereby approved shall be carried out in accordance with the Element Sustainability statement. A post construction review certificate/statement shall be submitted for approval, within a timeframe that has been previously agreed in writing by the City Council as local planning authority.

The purpose of this report is to summarise and verify the design attributes, specifications and characteristics of the scheme that have been implemented as per the commitments made within the Environmental Standards Statement.

2. DEVELOPMENT SITE

2.1 Development Site Description

The site is located on First Street South and First Street, within the First Street Estate in Manchester city centre. It is bound by Hulme Street to the north, Wilmott Street to the east, Chester Street to the south with the Ring Road beyond that and Medlock Street to the west. Newcastle Street also runs through the centre of the site.

The pre-development was a brownfield site comprising hardstanding areas.

Figure 2.1 – Pre-development Site



2.2 Development Proposals

The approved scheme will deliver a total of four, residentially led, mixed-use buildings up to thirty-four storeys in height (Blocks A, B, C and D). This report discusses the single block that has finished construction, Block D, providing seven hundred and fifth-teen new apartments. Blocks A, B and C will be reviewed separately. The scheme has also provided a number of amenities and services, including a gym, co-working spaces, a cinema room, private dining area, as well as green landscaped areas.

The site, which is located to the south of Manchester city centre in the First Street Estate, will offer residents easy access to a range of retail, office, leisure, residential and transport infrastructure associated with the city.

The final construction issue general arrangement drawings and elevations are presented in Figures 2.2 to 2.5.

Figure 2.2 – Block D Ground Floor Podium Layout


Sub Station
LW
Plant
Meeting Room
Entrance Lobby/Lounge
Reception
Post Room
Bin Store
Corridor
WC
Staff Kitchen
Laundry
Management Office
Storage
Comms
Car Park
Bike Store
Plant

Figure 2.3 – Block D First Floor Podium Layout 1



Figure 2.4 – Typical Floor Level Block D

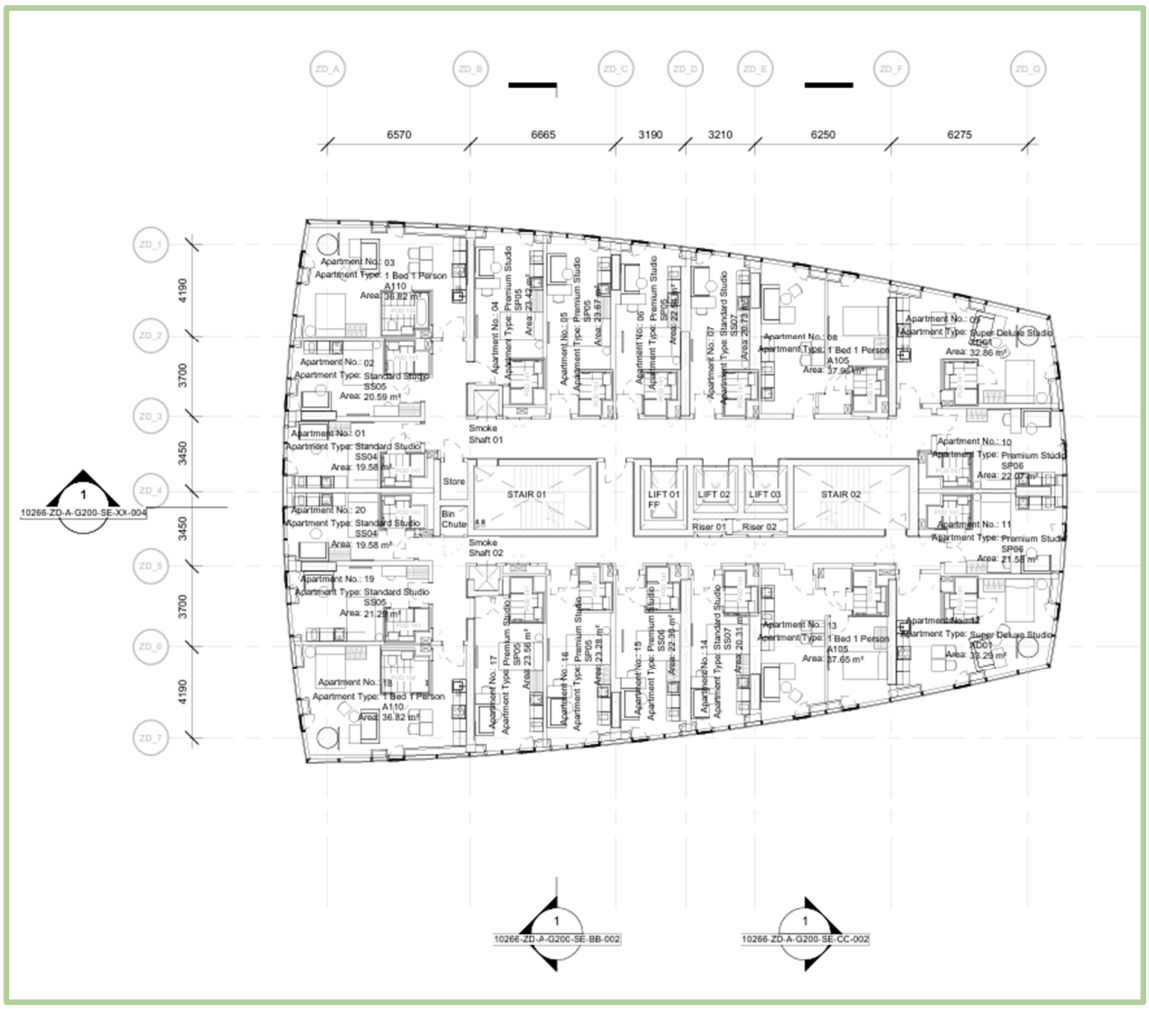
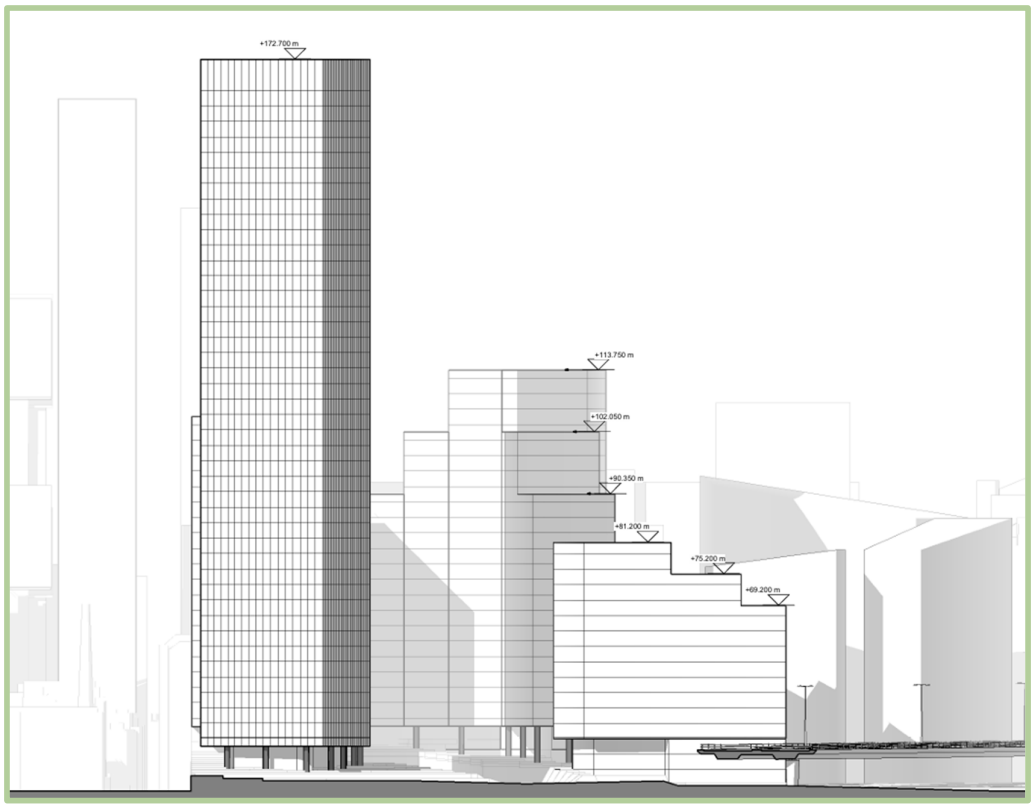


Figure 2.5 –West Elevation of Block D (Far left building)



3. SUSTAINABILITY PERFORMANCE VERIFICATION

This section provides an appraisal of the Environmental Standards and details the specific approach, design features and specifications within this development that have contributed to reducing the environmental impact of this scheme in line with Manchester City Councils adopted planning policies.

The approach used to compile the data in this report involved communications and correspondence with various stakeholders. In order to proceed with the Verification Report, we liaised with the contractor (Downing Construction Limited) to arrange a site visit that took place on the 18th of June 2025. Photographic evidence was acquired during the site visit to confirm that some specifications of the Environmental Standards Statement (ESS) had been met. This also supported the documentary evidence that was supplied to Element Sustainability. Evidence was received directly from project team in the form of:

- Written confirmation;
- Third party reports and documentation;
- Design and specification details;
- As-built drawings, and,
- Test certificates.

The evidence and data gathered in this appraisal responds to the Council's aforementioned planning condition. The following summary Table 3.1 confirms the design attributes and build specifications which ensure this scheme contributes to sustainable development.

Table 3.1 – Environmental Standards Verification

Environmental Standards Statement Requirements	Evidence Provided	Comments
Energy		
Fabric led energy strategy - The proposed approach to emissions reduction for the new build apartments will be through a fabric led energy strategy, in accordance with the principles of the energy hierarchy.	• As-built BRUKL output document.	• The building fabric u-values are all under the limiting values, and the windows have a high specification. • The air permeability test result for the building is 2.67m^3/hm^2 (@50Pa.), which demonstrates a very low air leakage rate from the building. • The performance of the building is in exceedance of Building Regulations Part L2A (2013) (the prevailing Building Regulations at the start of construction).
Dwelling Emission Rate & Fabric Energy Efficiency – The dwellings will perform above the minimum requirements of Building Regulations Approved Document L1A 2013 England.	• As-built BRUKL output document.	• As-built BRUKL demonstrates a performance in excess of the requirements of Building Regulations Part L2A (2013) (the prevailing Building Regulations at the start of construction).
Efficient Mechanical and Electrical Systems – The enhanced material specification will be supplemented with efficient mechanical and electrical systems – including a combined heat and power system to deliver low carbon hot water - and heat recovery systems.	• M&E specification, and, • Low and Zero Carbon Feasibility Study.	• A feasibility study prepared post planning approval, at the detailed design stage, for the scheme confirms that combined heat and power systems are not feasible for the site. • Alternative renewable and low carbon energy sources have however been specified as part of the servicing strategy; the implemented technologies

Environmental Standards Statement Requirements	Evidence Provided	Comments
		are Air Source Heat Pumps and Photovoltaic Panels (PV). • All the dwellings have efficient Mechanical Extract Ventilation systems, all the amenity areas on the ground and first floors have Mechanical Ventilation with Heat Recovery systems.
Photovoltaic Panels – A number of large photovoltaic (PV) arrays will be integrated upon the roofs of the towers, generating approximately 104,400kWh per year of zero carbon electricity.	• MCS certificates, • As-built BRUKL output document, • Post-construction site visit, • Email confirmation, and, • Drawing.	• The original Environmental Standards Statement requirement was to install a PV output of 104,400kWh across the whole scheme, including all four blocks (A, B, C and D). • This verification report is solely focused on Block D. The PV panels provided on Block D have an estimated output of 13.28kWh/m^2 = 11504kWh/year. • This requirement can only be validated fully once all four blocks are constructed.
Space Heating Strategy - The proposed space heating strategy for the building will be provided by a high efficiency, full electric system to meet the limited energy loads generated by the apartments.	• As-built BRUKL output document, and, • M&E specification.	• Electric panel heaters are installed and provide space heating throughout the development. These are efficient at point of use.

Environmental Standards Statement Requirements	Evidence Provided	Comments
Energy Labelled White Goods – Provision of EU energy efficiency labelling scheme details to assist in the purchasing of energy efficient A and A+ rated white goods.	• Post-construction site visit • Manufacturers datasheets	• Post-construction site visit completed prior to handover. This visit confirmed the installations of the following: o LKD cd14121 45cm Integrated Dishwasher is E rated, o JLA 98 Washing Machines provided in laundry room. Email received from supplier confirming that as it is a commercial appliance it does not have a category rating, and, o FW852 fridge-freezers are E rated.
Electric Car Charging Points - Electric car charging points will be specified in accordance with Manchester City Council's planning policy target provision.	• Post-Construction site visit, and, • As-built drawing.	• Nineteen electric car parking spaces in a secure parking garage have been provided for Block D in line with Manchester City Council's policy to support the transition to electric vehicles and meet its zero-carbon targets by 2038.
Heat Recovery Systems and Mechanical Extract - Heat recovery systems and mechanical extract for dwellings to maintain a healthy living environment.	• M&E specification, and, • Email confirmation.	• The dwellings in Blocks A and B utilise Mechanical Extract Ventilation systems throughout. This comprises extract only with make-up fresh air via trickle vents in the façade. • All the dwellings have Mechanical Extract Ventilation systems, and all the amenity areas on the ground and first floors have Mechanical Ventilation with Heat Recovery systems.

Environmental Standards Statement Requirements	Evidence Provided	Comments
Internal lighting - 100% low energy and/or LED internal lighting.	• Electrical drawings and specifications, and, • Post-construction site visit.	• Post-construction site visit completed prior to handover confirming the presence of 100% LED lighting along with the documentary evidence from the M&E contractor.
External Lighting – All external space lighting to be provided by dedicated energy efficient fittings and controls.	• Electrical drawings and specification of external space and security lighting, • Post-construction site visit, and, • Written confirmation.	• Formal confirmation from the mechanical and electrical consultants that the external Lighting is in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas and BS EN 12464-2:2014 Light and lighting - Lighting of workplaces - Part 2: Outdoor workplace. • External lighting controls include presence detection and time clock control to prevent operation during daylight hours.
Cycle Space Provision – At least four hundred secure cycle storage spaces plus one hundred shared cycle spaces will be provided across the proposed development to encourage the use of sustainable modes of transport.	• As-built drawing, and, • Email confirmation.	• The original Environmental Standards Statement requirement was to have at least five hundred secure cycle storage spaces across the whole scheme blocks (A, B and D). This report is solely focused on Block D. Two hundred and forty-nine cycle storage spaces have been provided internally for Block D.

Environmental Standards Statement Requirements	Evidence Provided	Comments
		• This requirement can only be validated fully once all four blocks are constructed.
Water		
Water Efficiency Strategy - A water efficiency strategy will be determined for the development. This will include 'A' rated appliances (where provided).	• Post-construction site visit, and, • Manufacturers datasheets.	• Post-construction site visit completed prior to handover. This visit confirmed the installations of the following: o CDI CD14121 45cm Integrated Dishwasher is E rated. o JLA 98 Washing Machines provided in laundry room (email received from supplier confirming that, as it is commercial appliance, it does not have the category rating).
Efficient Water Fixtures - Specification of efficient water fixtures throughout the scheme (low flow taps and showers, dual flush WCs and low volume baths).	• Sanitaryware schedule, and, • Manufacturers datasheets confirming flow rates.	• A water consumption calculation has been undertaken for the BREEAM assessment. The component level achieved is 2.41, which is 25% improvement over the BREEAM baseline performance for buildings of this type. • Abacus Consulting, the M&E consultant, completed Building Regulation Part G calculations for the scheme. The calculations confirm that the total water consumption achieves 96.4 litres/person/day. This exceeds Part G requirements.

Environmental Standards Statement Requirements	Evidence Provided	Comments
Indoor Water Use – In order to reduce the demand, the sanitary fixtures will be specified to achieve a calculated daily consumption of <105litres/person/day.	• Part G water calculations	• Abacus Consulting, the M&E consultant, completed Building Regulation Part G calculations for the scheme. The calculations confirm that the total water consumption achieves 96.4 litres/person/day. This exceeds Part G requirements.
External Water Use - The landscaped areas of the development will be irrigated solely by precipitation throughout all seasons of the year to reduce unregulated water consumption.	• Datasheet, and, • Post-construction site visit.	• An irrigation system has been specified and implemented; it will not be watered solely by precipitation. • The specification for the irrigation system confirms that the system being implemented will ensure that watering will only happen when required, following best practice measures.
Resource Management and Pollution		
Previously Developed Land – The proposals include for the redevelopment of a previously developed, brownfield site as promoted by national and local planning policy. • The redevelopment of the brownfield site represents an efficient use of land with a large accommodation density within the thirty-four-storey, mixed-use development.	• As-built drawings, and, • Letter of confirmation from architect.	• 100% of the development was built on land that was previously occupied. This is an efficient use of land and resources. • The scheme provides residents with access to social amenities and services, including a gym and wellness centre, co-working spaces and extensive social areas including a cinema room and private dining area.

Environmental Standards Statement Requirements	Evidence Provided	Comments
• The re-use of the piece of land in a highly accessible, city-centre location will provide a development that inherently supports a sustainable community while creating opportunities for employment and enjoyment.		• The landscaped areas are accessible to the public, ensuring a community benefit of access to green space is provided.
Global Warming Potential (GWP) of Insulants - Insulating materials that have a GWP of less than 5 throughout the development to reduce the construction phase impact of this scheme upon climate change.	• Specification of Insulation and manufacturers literature.	• The Rockwool and Isover insulation types used have a GWP of less than five. • No information has been provided for the following insulation types: o Guardian Insulation Solutions, o Aalco, and, o Pro-tech global.
Pollution Prevention Guidance - Pollution Prevention Guidance will be adhered to in respects of air (dust) and water (ground and surface) pollution during the demolition and construction phase.	• Environmental Site Waste Management Plan, and, • Pollution Prevention Guideline (PPG6) checklist.	• Pollution Prevention Guidance 6 (PPG6) checklist has been completed by the main contractor confirming the procedures implemented, including best practice and how air (dust) and water (ground and surface) pollution has been managed throughout construction phase.

Environmental Standards Statement Requirements	Evidence Provided	Comments
External Lighting Controls - External light fittings will be controlled through a time switch, or daylight sensor, to prevent operation during daylight hours to limit the impact of artificial lighting for the development's residents and surrounding environment.	• Electrical drawings and specification of external space and security lighting, • Post-construction site visit, and, • Confirmation letters.	• Formal confirmation from the mechanical and electrical consultants that the external Lighting is in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas and BS EN 12464-2:2014 Light and lighting - Lighting of workplaces - Part 2: Outdoor workplace. • External lighting controls includes presence detection and time clock control to prevent operation during daylight hours.
Temporary Drainage and Pollution Prevention Measures - The development site is within the locality of the River Medlock. Where necessary, temporary drainage and pollution prevention measures will be in place on site, this may include, for example, bunded areas and spill kits to prevent harmful chemicals / materials from draining to natural watercourses; and silt traps to ensure that suspended solids are removed from the drainage water.	• Environmental Site Waste Management Plan • Pollution Prevention Guideline (PPG6) checklist • Email Confirmation	• Pollution Prevention Guideline 6 checklist has been implemented by the main contractor, which includes best practice measures on how pollution has been managed throughout construction. • Spill Kits were provided to mitigate spread of spillage. • Bunded Fuel Storage units were provided to receive fuel for site vehicle use only during construction.
Dust Suppression Measures - Dust suppression measures will also be put in place as part of the Main Contractor's Environmental Management Plan, such that any potential risks to	• Construction Management Plan (CMP)	• Downing Construction's Construction Management Plan confirms all measures undertaken to eliminate, or at least minimise, dust generation with consideration given to material usage, type of work equipment used and work methods applied.

Environmental Standards Statement Requirements	Evidence Provided	Comments
watercourses or the neighbouring properties are minimised.	• Pollution Prevention Guideline (PPG6) checklist	• Pollution Prevention Guideline PPG6 checklist implemented by Downing Construction includes best practice and how air (dust) and water (ground and surface) pollution has been managed throughout construction.
Sound Insulation - Sound insulation will be specified to achieve Building Regulation Part E compliance standard (this will be verified by pre-completion testing) in addition to meeting the requirements of the council. This will reduce the impact of sound pollution for the occupants within adjoining dwellings.	• Acoustic testing reports for Block D • Acoustic design report.	• The report and test results demonstrated compliance with Building Regulation, Part E.
Noise and Vibration Assessment - A Noise and Vibration Assessment has been prepared by Acoustic & Engineering Consultants Limited which proposes, but is not limited to, the following: • Maximum noise levels (excluding amplified music) breaking out of the café and gym units is controlled to no greater than the existing background noise level external to the nearest noise sensitive receptors. Noise levels from café and gym activities would also need to be	• Email Confirmation	• Contractor confirmed obligation to build shell / core in compliance with Acoustic & Engineering Consultants Limited specification, which has been completed. • For the commercial units, the future tenants will be responsible to comply with Planning Conditions NMA06-15b and 17, this compliance is outside of the main contractor's control and being managed by Downing Property Development & Investment Services. This has not been closed out yet.

Environmental Standards Statement Requirements	Evidence Provided	Comments
controlled to the flats above via the separating floor. • Based on measured noise levels, windows to habitable rooms would need to remain closed to achieve appropriate internal noise levels. • The impact of sound associated with the occupied development will be mitigated by the design and specification of the dwellings including the sound insulation requirements of the building envelope and ventilation, to achieve the appropriate noise levels. Other suggested control measures include; enhanced glazing; lobbied external doors, and noise level limits.		
Materials		
Environmental Impact of Materials - Materials with a low environmental impact throughout their lifecycle.	• Materials schedule, • Environmental Product Declaration (EPD) certificates, and, • RIBA Stage 2 Life Cycle Analysis (LCA) report.	• A number of construction products have been specified that have EPD certification. • Under the BREEAM assessment methodology, Mat 02 (Environmental impacts from construction products) has been achieved with a total EPD points score of at least 20. • An LCA was completed at RIBA Stage 2 to inform early decision making.

Environmental Standards Statement Requirements	Evidence Provided	Comments
Responsible Sourcing of Materials- • Materials responsibly sourced from suppliers operating an Environmental Management System or procuring timber from FSC and PEFC sources, for example will be prioritised. • Consideration will be given to local sourcing of construction materials where feasible and viable, which will minimise the impact of carbon dioxide emissions associated with the transportation of materials.	• Materials schedule, and, • Responsible Sourcing Certificates.	• All timber was legal and sustainably sourced. FSC and PEFC certification has been provided from all timber suppliers. • A number of material suppliers with environmental management systems certified to ISO 14001 have been. • In addition to ISO14001 accredited materials, products/materials specified with BES 6001 and Sustainable Constructional Steel System (CARES) responsible sourcing accreditations have also been used. Valid certificates have been provided demonstrating this. • Under the BREEAM methodology, Mat 03 (Measuring Responsible Sourcing) the scheme achieved two out of three credits. This demonstrates that responsible sourcing of materials has been a priority, where possible. • It was not confirmed that consideration was given to local sourcing in their sustainable procurement plan.

Environmental Standards Statement Requirements	Evidence Provided	Comments
Surface Water Run-Off		
Flood Risk of the Development - The development site is located in Flood Zone 1, a low flood risk zone. Flood Risk assessment to determine the risk of flooding from all sources.	• Flood Risk Assessment	• The Flood Risk Assessment covers all sources of flooding and demonstrates that the development is located in Flood Risk Zone 1, low risk of flooding.
Management of Surface Water - To minimise the risk and impact of localised flooding on and off-site, watercourse pollution and other environmental damage, a site-specific Flood Risk Assessment and Drainage Strategy Report has been prepared by Alan Johnson Partnership LLP which confirms the following: • The proposed First Street South co-living development will be designed in order to reduce the post development surface water run-off to at least 50% of the existing surface-water brownfield runoff rates. It has been concluded that the only practical solution for the discharge of surface water is into the surrounding public combined water sewer. • To achieve the restriction in peak rates of surface water runoff from the developed site, it is anticipated that the total proposed discharge rate of 24.2 L/s will be split between three networks across the four building developments. This is designed to withstand a 1	• Flood Risk Assessment and Drainage Strategy Report, and, • Drawings.	• A drainage report was provided looking at the site-wide development. The pre-development peak rate of run-off for one year return 20.7 l/s. • The post-development peak rate of run-off for one year return 10.8 l/s. These include an allowance for climate change. It does not fully comply with the 50% reduction requirement. • The proposed Sustainable Urban Drainage Systems (SuDS) have been implemented. Drawings have been provided showing the installation of the green roof, rainwater harvesting (with the storage tanks buried underground), permeable surfaces, tank / oversized pipe system implemented.

Environmental Standards Statement Requirements	Evidence Provided	Comments
in a 100-year storm event plus a 40% allowance for climate change. • The drainage strategy will incorporate the use of Sustainable Drainage Systems (SuDS) where appropriate throughout the site. The proposed surface water drainage strategy for the site currently includes; green roofs, small rain gardens, swales, non-infiltration permeable paving and also below ground cellular attenuation tanks. This will reduce the volume of runoff discharging into the public sewer system.		
Waste		
Construction Waste - Best practice techniques to prevent and minimise waste arising during the design and construction phases of the development will be adopted, as follows: • A target of 85% of waste to be diverted away from landfill will be established for the construction phase of the development; and, • This scheme will promote the minimisation of waste on site and seek to maximise the use of recycled materials in construction.	• Site waste management plan (SWMP), and, • Waste data.	• The SWMP contains waste minimisation practices, best practice, and targets. • Final waste data from Kenny Waste confirms that out of 1,215.876 tonnes generated, 412.431 were recovered, 799.485 tonnes recycled, and only 3.960 tonnes went to landfill. • A total of 99.67% was diverted from landfill.
	• Post-construction site visit,	• Communal bin store is sized appropriately to accommodate the relevant waste streams

Environmental Standards Statement Requirements	Evidence Provided	Comments
Domestic waste - The dwellings will be provided with infrastructure and facilities that meet the need of the occupants for segregated storage: • Communal bin storage provisions would enable residents and building users to make full use of Local Authority recycling services; and, • A waste management strategy will be developed, ensuring that adequately sized bin storage areas for each residential dwelling, access for collection personnel and vehicles will be established and other aspects of waste management will be designed into the development at an early stage of the design. The strategy will allow for storage of general waste, recyclable materials and food waste in order to optimise the recycling rates achieved by Manchester City Council (MCC).	• As-built drawings, and, • Waste Strategy.	associated with this type of building. Bin chutes have been provided for all residents to access the waste management facilities. • A waste strategy has been developed ensuring waste is managed appropriately. This includes: management, suitably sized bins, and timing and frequency of waste collections. Waste collections are for; general waste, recyclable materials and food waste in accordance with MCC requirements. • Internal and external waste transfer routes have also been established.
Health and Wellbeing		
Daylighting - Good levels of natural daylighting will be achieved. This will provide a good quality of life for the occupants and reduce the need for energy to light the dwellings.	• As-built drawings and elevations, and, • View out report.	• No daylighting assessment or calculations have been undertaken. However, the façade is made up of glass unitised curtain walling providing all apartments access to windows and natural daylight.

Environmental Standards Statement Requirements	Evidence Provided	Comments
		• A view out report that was undertaken concluded that on the typical floor levels of Block D the living room areas within studios and apartments are within 5m of a wall with a window, which is >20% of the surrounding wall area which has a window or permanent opening that provides an adequate view out.
Communal Space - The combined residential, commercial and public elements of the development will enhance the character of the area as a familiar neighbourhood where people will live and spend their free time, supporting a vibrant, diverse and inclusive community.	• Post-Construction site visit, and, • As-built drawings.	• Photographic evidence and drawings provided showing outdoor landscaped areas including seating and green space. • Some of the landscaped areas are accessible to the public ensuring a community benefit of access to green space is provided.
Secure by Design (SbD) - The security needs of the development will be considered to achieve Secure by Design accreditation and adopt crime prevention measures to assists in reducing the opportunity for, and fear of crime.	• Crime Impact Statement, and, • Secure By Design Certification.	• Secure By Design Certification confirming that the development has achieved the necessary criteria and accreditation. • Crime Impact Statement recommendations have been adopted.

Environmental Standards Statement Requirements	Evidence Provided	Comments
Safe Environment - The landscaped area will also facilitate natural surveillance and create busy, overlooked routes at the site to reduce the opportunity for crime, creating a safer and more secure environment.	• As-built drawings, • Crime Impact Statement, and, • Secure By Design Certification.	• Secure By Design Certification confirming that the development has achieved the necessary criteria for surveillance for the wider site. • Crime Impact Statement recommendations have been adopted, including the landscaped areas, creating a safe environment. As-built drawings and specifications have been provided showing the implementation of these measures.
National Space Standards - All dwellings, with the exception of the studio apartments, will comply with National Space Standards to ensure that all dwellings are of a sufficient size and provide more flexibility and comfort for the future occupants.	• Drawings, and, • Email confirmation.	• The cluster bedroom complies with National Described Space Standards (NDSS), achieving more than minimum gross internal floor areas stated in the NDSS for Block D
Management		
Construction Site Impacts - Construction site impacts will be minimised, measures to protect water courses, as well as to prevent impacts upon the local area in terms of dust and noise pollution during construction works.	• Construction Management Plan (CMP) • Pollution Prevention Guideline (PPG6) checklist	• Downing Construction's Construction Management confirms all measures undertaken to eliminate, or at least minimize, dust generation with consideration given to material usage, type of work equipment used and work methods applied. • Pollution Prevention Guideline (PPG6) checklist implemented by Downing Construction, includes best practice and how air (dust), water (ground and

Environmental Standards Statement Requirements	Evidence Provided	Comments
		surface) and noise pollution has been managed throughout construction.
Biodiversity		
Ecological Recommendations – • A sensitively developed lighting design, allowing for some areas of darker/reduced lighting for at least some of the night to encourage use by species such as bats and moths. • New species introduced to the development. These will be either native species, or those that provide a benefit to the local ecosystem in addition to artificial habitat features such as insect, bat and bird boxes, to support a diversity of wildlife. • The scheme proposals also include for a green roof. • All vegetation clearance should be undertaken between September to February outside of the breeding season for birds	• Post-Construction site visit, • As-built drawings, and, • Letter of confirmation.	• The scheme ecologist, Penny Anderson Associates Ltd, issued a technical note regarding the external lighting design and confirmed that the lighting plan is largely in line with recommendations by current guidelines in respect of bats and artificial lighting at night. • A range of native and wildlife-friendly plants are included in the landscaping design. • Insect, bird and bat boxes have been implemented. • A green roof has been provided, to improve the biodiversity of the site and forms part of the drainage strategy for the scheme. • Confirmation that all site clearance of trees, dense scrub and vegetation was removed prior to March 2021, outside of the breeding season for birds

Environmental Standards Statement Requirements	Evidence Provided	Comments
Transport		
Transport Links and Local Amenities – The site benefits from excellent sustainable access opportunities and is well connected by existing walking and cycling routes to key trip attractors. Bus and train can also be used to easily access the site. Residents are able to walk to local amenities and shops along Chester Road; and, the site benefits from very good links to local amenity space and recreational facilities.	• Greater Manchester Accessibility Levels (GMAL), and, • Local amenities report.	• Due to the central location of the scheme to Manchester's city centre a GMAL score of 51.79, level 8 is achieved. This is highest level available and represents a highly sustainable site in terms of accessibility to public transport nodes and amenities. • It is a well-connected site with great access to a number of local amenities within the surrounding area. Shops, food outlets and a cash point are all found within five hundred meters. • The creation of new amenities has been formed as part of the scheme; these include outdoor spaces and a gym facility providing residents with convenient and accessible benefits.
Car Parking Spaces - The proposal acknowledges the sustainable location of the site within Manchester with the provision of only twenty-one car parking spaces all being disabled and electric charging spaces.	• Post-Construction site visit, and, • As-built drawing. • Confirmation email	• The Environmental Standards Statement requirement was to have, across the three blocks (A, B, and D), the provision of thirty-three car parking spaces, including two disabled parking bays and two electric car charging bays. This report is only focused on Block D. For this phase of the scheme, nineteen car parking spaces in a secure parking garage have been provided on Block D. • This requirement can only be validated fully once all four blocks are constructed.

Environmental Standards Statement Requirements	Evidence Provided	Comments
Cycle Spaces - A minimum of five-hundred cycle spaces will be provided in secure accessible locations within the ground floor of each development block. An additional one-hundred cycle storage spaces will also be provided for rental along with some Sheffield stands for use in the public realm.	• As-built drawing, and, • Email confirmation.	• The Environmental Standards Statement requirement was, across the whole scheme including all four blocks (A, B, C and D), at least five hundred secure cycle storage spaces plus one hundred shared cycle spaces. • The email confirms that Block D. Will have two hundred and forty-nine cycle storage spaces have been provided internally for Block D. • This requirement can only be validated fully once all four blocks are constructed.
Manchester City Councils Green and Blue Infrastructure Strategy		
Green and Blue Infrastructure - The river Medlock runs close to the development site providing an attractive setting for apartments and associated amenities. This will provide an opportunity to encourage access to part of the city centre's Blue Infrastructure. Investment into the public realm in the form of public green space surrounding each of the four proposed buildings will provide a further steppingstone, to	• As-built drawings, • Ecology Report and Recommendations, • Letter of Confirmation, • Environmental Site Waste Management Plan, and,	• An ecology survey was completed during the early RIBA stages, this included a list of recommendations which have been implemented to enhance the green infrastructure. There has been a 186% increase in area-based habitats against the BRE's baseline and therefore significant biodiversity net gain. • Native and wildlife-friendly plants have been provided including bird, bat and insect boxes.

Environmental Standards Statement Requirements	Evidence Provided	Comments
overall improve connectivity and accessibility to Green and Blue Infrastructure within the city. The formation of gardens, parks and vertical greenery throughout the First Street South development will be a key component as it will draw people through the development and to help create successful neighbourhoods and support the city's growth. Pollution Prevention Guidance will be adhered to by the main contractor in respects to air (dust) and water (ground and surface) pollution during the demolition and construction phase to prevent any degradation of existing Blue Infrastructure.	• Pollution Prevention Guideline (PPG6) checklist.	• A green roof has also been provided adding to the increase in green space throughout the First Street South development. • PPG6 checklist implemented by Downing Construction, includes best practice and how air (dust) and water (ground and surface) pollution has been managed throughout construction.

4. LIMITATIONS

There were some limitations in collating all of the appropriate information to verify the requirements of the Environmental Standards Statement (ESS). As a result, there are several items of evidence that are yet to be resolved, as follows:

- Under the **Efficient Mechanical and Electrical Systems** section within the ESS, the enhanced material specification was to be supplemented with efficient mechanical and electrical systems – including a combined heat and power system. However, a detailed feasibility study (post planning approval) confirmed that combined heat and power systems were not feasible for the site, and an Air Source Heat Pump and Photovoltaic Panels were implemented instead.

- As specified in the ESS, **Energy Labelled White Goods** that are A+ rated and **Water Efficiency Strategy,** including 'A' rated appliances, will be provided however, these were E-rated or had no rating available.

- The ESS stated that for the **External Water Use** landscaped areas of the development will be irrigated solely by precipitation throughout all seasons of the year to reduce unregulated water consumption. An irrigation system has been specified and implemented. However, the specification for the irrigation system confirms the systems being implemented to reduce the water demand through best practice measures.

- The ESS specifies that the **Global Warming Potential (GWP) of Insulants** is less than five. Both Rockwool and Isover insulation types have a GWP of less than five. For the following insulation types responses from the manufacturers were not provided:
    - Guardian Insulation Solutions,
    - Aalco, and,
    - Pro-tech global.

- The future tenants are responsible for assuring compliance with Part E and the noise levels outlined within the Noise and Vibration Assessment prepared by Acoustic & Engineering Consultants Limited. The incoming tenants are currently unknown; as a consequence, there is no evidence to validate at this time.

- Under the section **Responsible Sourcing of Materials** within the ESS, to demonstrate full compliance, evidence needs to be given to show that consideration has been given to local sourcing of construction materials.

- To comply with the ESS requirement **Management of Surface Water** was required to reduce the post-development surface water run-off to at least 50% of the existing surface-water brownfield runoff rates. A drainage report was provided reviewing the site-wide development. The pre-development peak rate of run-off for one year return 20.7 l/s. The post-development peak rate of run-off for one year return 10.8 l/s. This is slightly above the 50% reduction.

- The ESS specifies that under **Daylighting,** a daylighting assessment was to be undertaken. Although there is a significant amount of glazing on the façade and apartments have access to natural daylight, a formal daylighting report has not been provided.

A number of the Environmental Standards Statement requirements considered the whole scheme, including all four blocks (A, B, C and D). These criteria have been assessed against what has been implemented on Block D at this stage. The full ESS requirements can only be validated once all four blocks are constructed. These issues are as follows:

- For **Photovoltaic (PV) Panels** the requirements were to have an output of 104,400kWh across the whole scheme. PV panels provided on Block D have an estimated output of 13.28kWh/m^2 = 11504kWh/year.

- The **Cycle Space Provision** requirements were to have at least five hundred secure cycle storage spaces plus one hundred shared cycle spaces across the whole scheme. Two hundred and forty-nine cycle storage spaces have been provided internally for Block D.

- The **Car Parking Spaces** requirements were to have provision of thirty-three car parking spaces including two disabled parking bays and two electric car charging bays. Nineteen electric vehicle parking spaces in a secure parking garage have been provided in Block D.

5. CONCLUSION

This verification report is intended to assist with the discharge of the following planning condition applied within the Decision Notice for this site (ref. Decision Notice: 125573/FO/2019):

Planning Condition 14 –
The development hereby approved shall be carried out in accordance with the Element Sustainability statement. A post construction review certificate/statement shall be submitted for approval, within a timeframe that has been previously agreed in writing by the City Council as local planning authority.

This independent Verification Report responds to the developer's commitments within the Environmental Standards Statement (ESS) for the First Street South development for Block D in Manchester. This report has reviewed the assurances made by the developer/ contractor at the pre-construction stage and confirms the key issues have been implemented.

The site visit and subsequent information received from the developer/ contractor demonstrates this scheme has been designed and built in accordance with all commitments (with the exception of those outlined in Section 4) specified in the Environmental Standards Statement. The specifications designed to ensure that sustainability standards have been achieved are as follows:

- Fabric led energy strategy - The proposed approach to emissions reduction for the new build apartments is through a fabric led energy strategy, in accordance with the principles of the energy hierarchy.

- Dwelling Emission Rate & Fabric Energy Efficiency - The dwellings perform above the minimum requirements of Building Regulations Approved Document L1A 2013 England.

- Space Heating Strategy - The proposed space heating strategy for the building is provided by a high efficiency, full electric system to meet the limited energy loads generated by the apartments.

- Electric Car Charging Points - Electric car charging points are specified in accordance with Manchester City Council's planning policy target provision.

- Heat Recovery Systems and Mechanical Extract - Heat recovery systems and mechanical extract dwelling to maintain a healthy living environment.

- Internal lighting - Internal lighting is 100% low energy and/or LED internal lighting.

- External Lighting – All external space lighting is provided by dedicated energy efficient fittings and controls.

- Efficient Water Fixtures - Specification of efficient water fixtures throughout the scheme (low flow taps and showers, dual flush WCs and low volume baths).

- Indoor Water Use – In order to reduce the demand, the sanitary fixtures are specified to achieve a calculated daily consumption of <105litres/person/day.

- Previously Developed Land –

- The proposals include for the redevelopment of a previously developed, brownfield site as promoted by national and local planning policy.
- The redevelopment of the brownfield site represents an efficient use of land with a large accommodation density within the thirty-four-storey, mixed-use development.
- The re-use of the piece of land in a highly accessible, city-centre location provides a development that inherently supports a sustainable community while creating opportunities for employment and enjoyment.

- Pollution Prevention Guidance - Pollution Prevention Guidance were adhered to in respects of air (dust) and water (ground and surface) pollution during the demolition and construction phase.

- External Lighting Controls - External light fittings are be controlled through a time switch, or daylight sensor, to prevent operation during daylight hours to limit the impact of artificial lighting for the development's residents and surrounding environment.

- Temporary Drainage and Pollution Prevention Measures - The development site is within the locality of the River Medlock. Where necessary, temporary drainage and pollution prevention measures were in place on site, this may include, for example, bunded areas and spill kits to prevent harmful chemicals / materials from draining to natural watercourses; and silt traps to ensure that suspended solids are removed from the drainage water.

- Dust Suppression Measures - Dust suppression measures were put in place as part of the Main Contractor's Environmental Management Plan, such that any potential risks to watercourses or the neighbouring properties were minimised.

- Sound Insulation - Sound insulation achieves Building Regulation Part E compliance standard in addition to meeting the requirements of the council. This reduces the impact of sound pollution for the occupants within adjoining dwellings.

- Environmental Impact of Materials - Materials with a low environmental impact throughout their lifecycle have been selected.

- Responsible Sourcing of Materials - Materials responsibly sourced from suppliers operating an Environmental Management System or procuring timber from FSC and PEFC sources, for example, were prioritised.

- Flood Risk of the Development –The development site is located in Flood Zone 1, a low flood risk zone. A Flood Risk assessment has been carried out to determine the risk of flooding from all sources.

- Management of Surface Water – The drainage strategy has incorporated the use of Sustainable Drainage Systems (SuDS) where appropriate throughout the site. The surface water drainage strategy for the site currently includes: green roof, rainwater harvesting (with the storage tanks buried underground), permeable surfaces, tank / oversized pipe system implemented. This will reduce the volume of runoff discharging into the public sewer system.

- Construction Waste - Best practice techniques to prevent and minimise waste arising during the design and construction phases of the development were adopted, as follows:
  - A target of 85% of waste to be diverted away from landfill was met for the construction phase of the development; and,

- This scheme promoted the minimisation of waste on site and sought to maximise the use of recycled materials in construction.

- Domestic waste - The dwellings were provided with infrastructure and facilities that meet the need of the occupants for segregated storage:
  - Communal bin storage provisions would enable residents and building users to make full use of Local Authority recycling services; and,
  - A waste management strategy was developed, ensuring that adequately sized bin storage areas for each residential dwelling, access for collection personnel and vehicles was established and other aspects of waste management was designed into the development at an early stage of the design. The strategy allows for storage of general waste, recyclable materials and food waste in order to optimise the recycling rates achieved by Manchester City Council.

- Communal Space - The combined residential, commercial and public elements of the development enhance the character of the area as a familiar neighbourhood where people will live and spend their free time, supporting a vibrant, diverse and inclusive community.

- Secure by Design - The security needs of the development were considered to achieve Secure by Design accreditation and adopt crime prevention measures to assists in reducing the opportunity for, and fear of crime.

- Safe Environment - The landscaped area facilitates natural surveillance and create busy, overlooked routes at the site to reduce the opportunity for crime, creating a safer and more secure environment.

- National Space Standards - All dwellings, with the exception of the studio apartments, comply with National Space Standards to ensure that all dwellings are of a sufficient size and provide more flexibility and comfort for the future occupants.

- Construction Site Impacts - Construction site impacts were minimised, measures to protect water courses, as well as to prevent impacts upon the local area in terms of dust and noise pollution during construction works were implemented.

- Ecological Recommendations –
  - A sensitively developed lighting design, allowing for some areas of darker/reduced lighting for at least some of the night to encourage use by species such as bats and moths.
  - New species introduced to the development. These were either native species, or those that provide a benefit to the local ecosystem in addition to artificial habitat features such as insect, bat and bird boxes, to support a diversity of wildlife.
  - The scheme has also implemented a green roof.

- Transport Links and Local Amenities –
  - The site benefits from excellent sustainable access opportunities and is well connected by existing walking and cycling routes to key trip attractors. Bus and train can also be used to easily access the site.
  - Residents are able to walk to local amenities and shops along Chester Road; and, the site benefits from very good links to local amenity space and recreational facilities.

- Green and Blue Infrastructure –

- The river Medlock runs close to the development site providing an attractive setting for apartments and associated amenities. This provides an opportunity to encourage access to part of the city centre's Blue Infrastructure. Investment into the public realm in the form of public green space surrounding each of the four proposed buildings will provide a further steppingstone, to overall improve connectivity and accessibility to Green and Blue Infrastructure within the city.
- The formation of gardens, parks and vertical greenery throughout the First Street South development is a key component as it will draw people through the development and to help create successful neighbourhoods and support the city's growth.
- Pollution Prevention Guidance were adhered to by the main contractor in respects to air (dust) and water (ground and surface) pollution during the demolition and construction phase to prevent any degradation of existing Blue Infrastructure.

In conclusion, the commitments reviewed within this ESS Verification Report for the scheme at First Street Block D, Manchester have been met with satisfaction except for a few points (outlined in Section 4). Downing Living (Manchester) Limited Partnership Incorporated have sought to deliver a development that responds positively to the guidance provided within the Environmental Standards Statement.