

Fallowfield Campus Redevelopment project

Environmental Statement: Non-Technical Summary

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1 INTRODUCTION

1.1 OVERVIEW

- 1.1.1 The University of Manchester (UoM) (the 'applicant') is seeking outline planning permission including access matters for development proposed at the UoM's Fallowfield Campus (hereafter referred to as 'the site'). The location and boundary of the site can be found within Chapter 2 of this document. The area of the site is approximately 9.49 hectares.
- 1.1.2 The Fallowfield Campus Redevelopment Project (hereafter referred to as the "proposed development") comprises redevelopment of the site to provide purpose-built student accommodation as follows:
- "Outline planning application (with access only) for the phased demolition of existing buildings and phased development of up to 3,300 Purpose Built Student Accommodation bedrooms (Sui Generis use class) with associated facilities including waste storage, laundry and cycle storage; up to 4,500 sq m of floorspace to be used for ancillary purposes associated with the student residential use of the site within Use Class F1a, Class E(a), E(b), E(c), E(d), E(g), Sui Generis (drinking establishment and hot food takeaway); ancillary supporting staff accommodation (up to 55 bedrooms) (Sui Generis use class), and up to 1,200 sq m, of ancillary residential dwellings (Use Class C3), plus associated car parking, hard and soft landscaping, open space, utilities, footpaths and roads."*
- 1.1.3 An EIA Scoping Report was submitted to Manchester City Council (MCC) in June 2023 to request the council's opinion on the content of the Environmental Statement (ES) for the proposed development.
- 1.1.4 The ES reports on the findings of the Environmental Impact Assessment (EIA) process and has been prepared on behalf of the applicant to accompany the planning application for the proposed development.

1.2 ABOUT THE APPLICANT

- 1.2.1 UoM is a public research university in Manchester, founded in 2004. The university has 44,000 students across undergraduate, masters and research courses and 13,000 staff across academia and professional services. The university provides approximately 8,000 rooms in about 20 halls of residence which guarantees every first year undergraduate an offer of accommodation.
- 1.2.2 UoM wants to redevelop its existing aging purpose built student residential accommodation at Owens Park, Woolton Hall and Oak House, all of which form part of the site. It is imperative to the ongoing success of UoM that it can continue to provide high-quality accommodation which provides the modern facilities that are needed to ensure the university can remain competitive and attract, and retain, the best students. The proposed development provides an opportunity to not just raise the standard of campus accommodation, but also in attracting returning students (2nd years, 3rd years and postgraduates) and meeting the existing demand of students that are unable to secure on-campus accommodation and instead are having to occupy houses in multiple occupation (HMOs) within the wider Fallowfield area and across the city.

1.3 WHAT IS AN ENVIRONMENTAL IMPACT ASSESSMENT?

- 1.3.1 An Environmental Impact Assessment (EIA) is a process of the collation of data about the conditions

¹ In EIA terms, a receptor (or sensitive receptor) refers to something which could be affected by the presence of a new development – for example people, residential dwellings, or wildlife, protected species and ecological designations, to name a few.

on a site ('baseline data'), the review of the proposals for redevelopment and the consideration (based on professional experience and professional opinion) of the potential for the development to give rise to significant environmental effects. Such effects could arise during demolition, the construction, or later once construction is complete and the development is being used by its new occupants, all of which are considered in the EIA process.

- 1.3.2 The EIA process involves inputs from many different technical specialists who all have expertise in their own specific areas including air quality, ecology and transport. Each individual team considers the potential for the development to give rise to environmental effects in respect of their specialism and then recommends whether any 'mitigation measures' (that is, actions which could be carried out to reduce/offset the scale of an effect) are necessary to ensure the environmental effects of the development are not significant.
- 1.3.3 Technical specialists also consider whether there might be any 'cumulative effects'. These could arise as a result of other developments taking place in the vicinity of the site, or as a result of a number of different environmental effects all impacting on a certain receptors (for example, on people living in a certain area, or a natural feature of the environment or a species which is present)¹.
- 1.3.4 The findings of the EIA process are reported in a document called an ES, submitted with a planning application for a development. The ES for the proposed development has three volumes, as follows:
- Volume I: Main Report – which describes the proposed development, the alternatives considered, the methodology which has been followed in undertaking the EIA, the assessment of significant environmental effects (both beneficial and adverse) and considers the cumulative interactive effects of the proposed development;
 - Volume II: Heritage, Townscape and Visual Impact Assessment (HTVIA) provided in its own volume of the ES in Volume II, due to the size of the assessment. The assessment is consistent with and follows the same structure and format as the environmental assessments contained within Volume I of the ES; and
 - Volume III: ES Appendices - technical appendices such as site surveys and calculations which support the assessments in Volume I.

1.4 WHAT IS A NON-TECHNICAL SUMMARY?

- 1.4.1 The findings of the ES have been summarised and presented in this Non-Technical Summary (NTS). This document is presented as a series of key questions and answers regarding the proposed development and how environmental issues will be addressed by the client during the construction and operational phases.

1.5 WHY HAS AN ENVIRONMENTAL IMPACT ASSESSMENT BEEN CARRIED OUT?

- 1.5.1 The need to undertake EIA is set out in European Union (EU) Directive 2014/52/EU. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ("the EIA Regulations") transpose the EU Directive into UK law.
- 1.5.2 Projects that require or may require EIA are set out in Schedules 1 and 2 of the EIA Regulations. A Schedule 1 development automatically requires an EIA as this has the most potential to cause environmental effects. Schedule 2 development requires an EIA where it exceeds certain thresholds

and significant environmental effects are considered likely to occur.

1.5.3 The proposed development falls under Schedule 2, Category 10b: 'infrastructure projects: urban development projects' and exceeds the thresholds set out for this type of development. Likely significant effects are also anticipated to occur as a result of the proposed development and therefore an EIA has been carried out by the applicant.

1.5.4 The following topics have been assessed as part of the EIA:

- Air quality;
- Noise and vibration;
- Ecology and biodiversity;
- Climate change and GHG emissions; and
- Heritage, townscape and views.

1.6 ENVIRONMENTAL IMPACT ASSESSMENT APPROACH

1.6.1 There is an established standard approach to undertaking EIA, although there is some variation between assessment topics, as to the specific methodology. All assessments involve the following stages:

- Determination of the environmental baseline: what are the conditions now and how might these be expected to change over time if the development did not occur;
- Consultation: contact with relevant organisations to gather information on the baseline conditions, likely environmental effects, and to discuss potential mitigation options;
- Identification of environmental effects and their significance: each topic has a standard approach, which could include modelling to predict effects. Most topics consider the sensitivity of any environmental features, people or property ('receptors') which could be affected and the potential magnitude of the impacts / change to the environment when determining the significance of the effect;
- Cumulative effects: consideration of the effects of the proposed development in combination with other nearby developments and the potential for interactions between effects, for example construction noise occurring at the same time as dust from demolition might produce a more significant effect overall;
- Mitigation: development of measures which would be required to reduce the significance of environmental effects, if the development gets planning permission; and
- Residual effects: highlighting any significant effects which would remain even after mitigation measures have been implemented; these can be beneficial as well as adverse.

1.6.2 The EIA process means that issues can be identified while the development proposals are still being finalised and can result in design improvements which minimise environmental effects. The assessments are then updated to reflect these changes.

1.7 CUMULATIVE AND INTERACTIVE EFFECTS

1.7.1 Whilst potential effects that occur in isolation may be insignificant, there is the possibility for

significant effects to occur when a number of potential effects are combined. The two types of cumulative effect that the EIA process considers are:

- Interactive effects: multiple effects acting upon the same receptor, from the same development (for example air quality plus noise effects during construction); and
- In-combination effects: the combination of effects from nearby developments, together with those predicted for the proposed development (for example noise from neighbouring schemes).

1.7.2 A review has been undertaken and there are no cumulative developments that need to be considered within the ES. This was also agreed with MCC through the EIA Scoping process. The ES therefore only considers the potential for cumulative interactive effects generated by the proposed development.

2 THE SITE AND DEVELOPMENT PROPOSALS

2.1 SITE DESCRIPTION

2.1.1 The maximum anticipated planning application area comprises approximately 9.49 hectares and is centred on Ordnance Survey Grid Reference SJ 85723 94142, as shown in Figure 2-1. The Fallowfield Campus is situated within a larger cluster of University accommodation within the south Manchester suburb of Fallowfield. The site is approximately 5.6 km south of the city centre immediately adjacent to one of the busiest bus corridors in Europe linking the campus into the Oxford Road corridor and the UoM and Manchester Metropolitan University sites. The site is bound by Moseley Road (B5093) to the south, Wilmslow Road (A6010) to the west and Whitworth Lane to the east. The site is located 750m west to the closest railway line. This line runs from Mauldeth Road Station north toward Manchester City Centre.

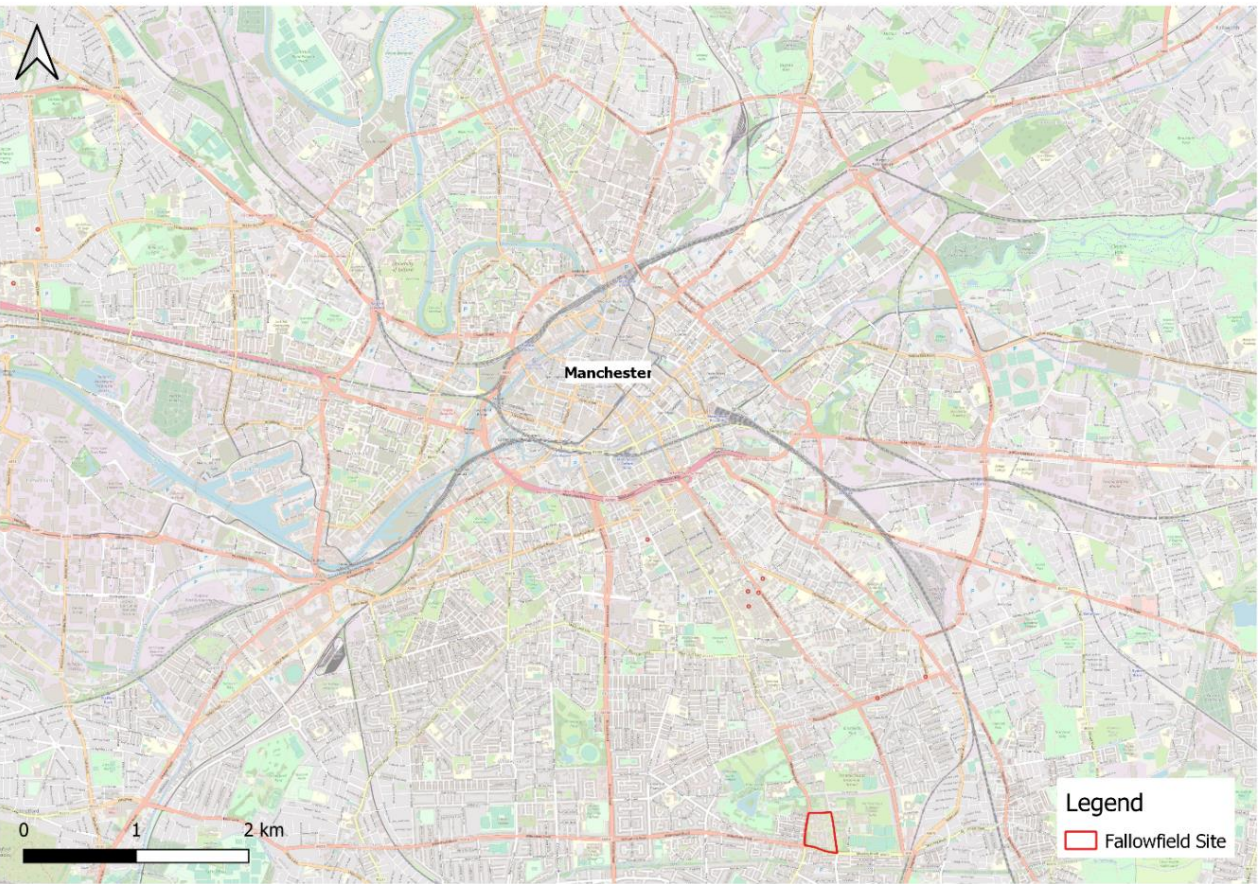


Figure 2-1 The site (shown outlined in red)

2.1.2 The existing site is currently purpose built student accommodation (PBSA) and university-related land uses. The current accommodation dates from the late 1950's to mid-1960's. The structures are of varying build quality, and the campus is now reaching the end of its functional life. Oak House and Woolton Hall which cover the southern half of the site are still in use as student accommodation. Owens Park covering the northern half of the site is now closed as it does not meet current quality standards for its use as student accommodation. The buildings on the site are predominately four storeys in height, with one tower in the north of the site which is 18 storeys tall (Owens Park tower). These buildings will be demolished to accommodate the proposed development. Demolition of the

Limes Building in the east of the site is included as part of the outline planning application, and the building may be relocated under a future planning application.

- 2.1.3 The existing accommodation provides 2,374 beds. This comprises Owens Park (1,071 beds), Oak House (1,105 beds) and Woolton Hall (198 beds). There are 74 existing car parking spaces and 144 existing cycle parking spaces on site.
- 2.1.4 The site sits entirely within Flood Zone 1 which has a low probability of flooding from rivers and the sea. Surface water flooding is predicted to occur in the south-eastern area of the site at the present location of Woolton Hall. The proposed drainage strategy will mitigate the potential impact of any surface water on the site.
- 2.1.5 There are a number of high value and mature trees on the site, and it is proposed to retain as many of these as possible with the proposed development, avoiding key groups of trees, and protecting Class A trees where possible.
- 2.1.6 Figure 2-2 shows the parts within the site boundary that are being developed and those buildings that are being retained in the wider campus area (UoM ownership boundary).

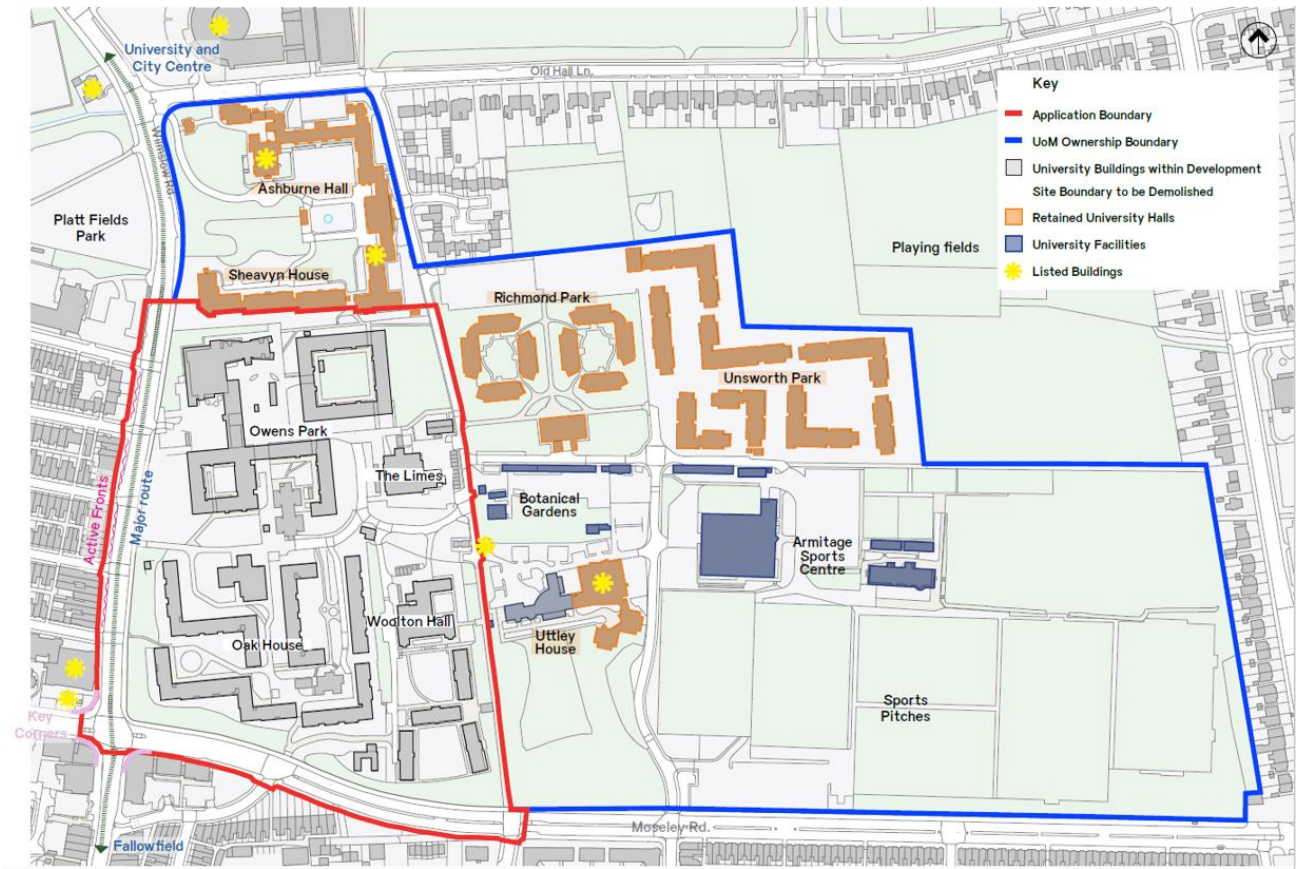


Figure 2-2 Map showing the site area and UoM ownership boundary

2.2 HOW WAS THE DESIGN IMPROVED THROUGHOUT THE PROCESS/ARE THERE ANY ALTERNATIVES?

2.2.1 The evolution of the design of the proposed development is outlined below. This includes a summary of a previous design for the site and a summary of the evolution of the current design.

Previous design for the site – 2015 scheme

- 2.2.2 A hybrid planning application for development of the Fallowfield campus, which included the site within a wider area (110184/FO/2015/S1) was submitted in 2015 and accompanied by an EIA. The application included the development of buildings between two and six storeys to replace the student accommodation with new PBSA. The application proposed to remove 2,176 units and develop 3,209 new residential units for students. The application was granted planning permission in 2015.
- 2.2.3 The majority of the proposals from the application were not developed or constructed – including the area covered by the proposed development. However, 1,185 beds were delivered through part implementation of the 2015 consent, on land not previously in use as PBSA and therefore without any loss in bed spaces.

Evolution of the current design

- 2.2.4 The masterplanning exercise undertaken considered the proposed redevelopment with a number of options which evolved over time, in collaboration with the design team. This ensured a holistic design response, identifying key aspects of the proposed development to be committed to within the parameters for the EIA and providing further design detail to be included in the Design Guide. As part of the masterplanning exercise, engagement has taken place with key stakeholders and members of the public. This has helped to inform the design and allowed the team to develop a broader understanding of the constraints of the site.
- 2.2.5 The site has significant mature tree coverage, particularly to the west and south boundaries, but also within the centre of the site. The trees range in age and stature, with some very mature large specimens growing close to existing buildings. As the design evolved, feedback on the tree locations and the extent of the edge zone of ‘forest’ habitats challenged the design team to rethink the design of the development, as it was infringing on sensitive areas. The design team therefore came up with a solution which maintained the valuable edge habitats.
- 2.2.6 During the design development, the design team increased block heights in the central zone of the site and reduced heights around the edges to protect the setting of listed buildings (such as Ashburne Hall and the Lodge of the Firs) and key views into the site from public areas.
- 2.2.7 The final design enabled strong edges to the site to be formed, a series of smaller-scale green spaces to be created within the centre of the proposals and the height to be reduced around the sensitive edges. This ensured the best quality trees were protected and a variety of character areas were created by the proposed development.

2.3 THE PROPOSED DEVELOPMENT

- 2.3.1 The proposed development comprises the demolition and redevelopment of part of the existing UoM Fallowfield Campus to create a new student residence. A total of up to 2,374 bedrooms, including those at Owen’s Park which is no longer used because of their condition, will be demolished as part of the proposed development.
- 2.3.2 The formal description of the proposed development is as follows:
- “Outline planning application (with access only) for the phased demolition of existing buildings and phased development of up to 3,300 Purpose Built Student Accommodation bedrooms (Sui Generis use class) with associated facilities including waste storage, laundry and cycle storage; up to 4,500 sq m of floorspace to be used for ancillary purposes associated with the student residential use of the site within*

Use Class F1a, Class E(a), E(b), E(c), E(d), E(g), Sui Generis (drinking establishment and hot food takeaway); ancillary supporting staff accommodation (up to 55 bedrooms) (Sui Generis use class), and up to 1,200 sq m, of ancillary residential dwellings (Use Class C3), plus associated car parking, hard and soft landscaping, open space, utilities, footpaths and roads.”

- 2.3.3 The proposed development seeks to improve the student accommodation on the site, the quality of the public realm and landscaping between the buildings and the connections into the wider Fallowfield area.
- 2.3.4 As this is an outline planning application, the parameters of the proposed development have been defined through two key parameter plans, see Figure 2-3 and Figure 2-4.
- 2.3.5 The Developable Area parameter plan (Figure 2-3) sets limits in relation to the number of new bedrooms and the range of ancillary uses and amount of ancillary floor space permitted. It also defines the areas of the site which will be kept free from development (referred to as the exclusion zone, with no permanent structures allowed). The plan also defines the maximum cumulative footprint for the proposed buildings.

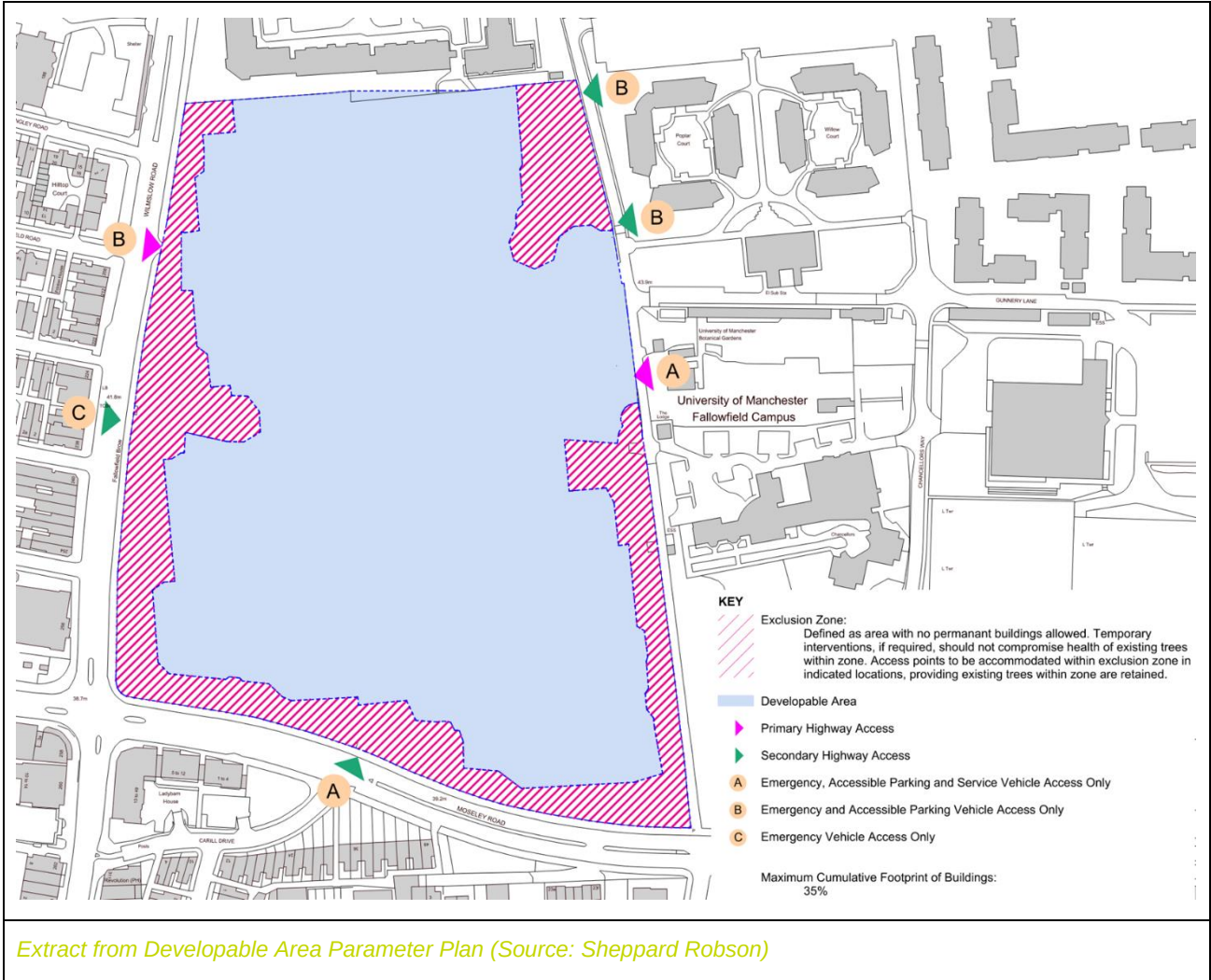


Figure 2-3 Proposed Development – Developable Area

- 2.3.6 The Maximum Heights parameter plan (Figure 2-4) sets limits in relation to the maximum heights permitted in metres Above Ordnance Datum (mAOD) across the site, along with a listed building setting zone, which takes into consideration adjacent listed buildings in the proposed heights.

2.3.7 All maximum heights are based on the finished floor levels of the proposed development, and include an allowance for plant, some of which is anticipated to be located on the roof level of the proposed buildings.

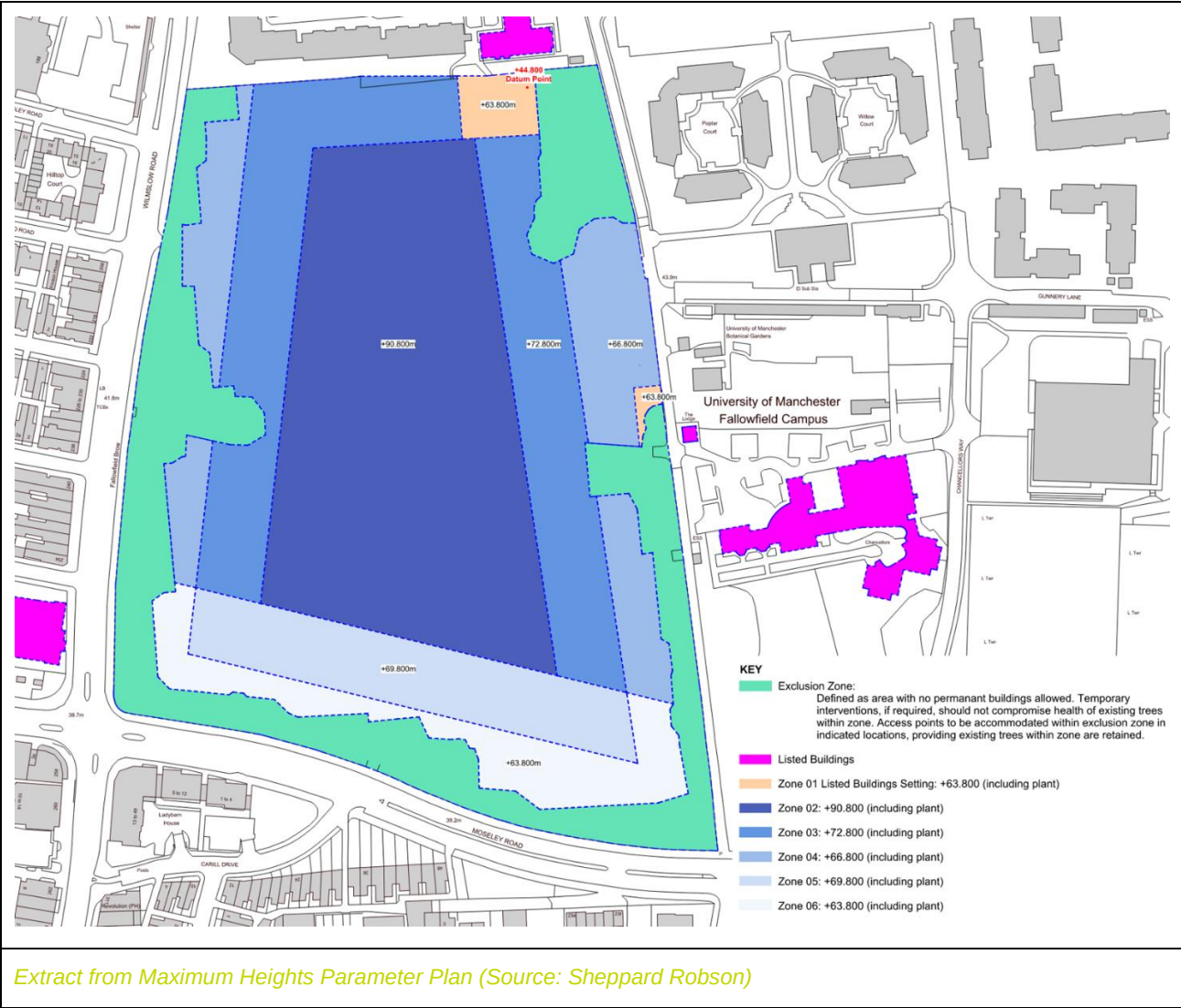


Figure 2-4 Proposed Development – Maximum Heights

- 2.3.8 As described above, up to 3,300 beds of PBSA will be provided as part of the proposed development, with associated uses including waste storage, laundry facilities and cycle storage. Up to 4,500 sqm of floorspace will be provided for ancillary purposes to support the student residential use of the site, within use classes E(a), E(b), E(c), E(d), E(g), F1a and Sui Generis (drinking establishment and hot food takeaway). In addition, ancillary supporting staff accommodation will also be provided. The proposed development will provide a total maximum floorspace of 118,669 sqm Gross External Area.
- 2.3.9 The proposed development will be largely car-free, with limited provision for vehicles other than accessible car parking spaces and access for refuse, maintenance and emergency vehicles. It is proposed that 21 disabled car parking spaces and up to 825 cycle parking spaces will be provided. Reliance will be placed on using existing points of access for entering and exiting the proposed development.
- 2.3.10 The landscape design and use of open space is a key part of the proposed development, and tree retention on the site has been prioritised, including the entirety of the woodland boundary edges. For every one tree felled for the proposed development, three will be planted as replacement trees.

Replacement trees will be planted on site, however where space is limited, one of the three replacement trees will be planted off-site, within land owned by the UoM in the wider Fallowfield Campus. Replacement trees should be planted no closer than 6m apart, or 3m distance to edge of existing tree canopy, to ensure they reach maturity.

2.4 INDICATIVE DEMOLITION AND CONSTRUCTION WORKS & PROGRAMME

- 2.4.1 The overall scope of the works will be progressed as follows:
- Site preparation and set-up;
 - Demolition of the existing buildings on site;
 - Pre-construction enabling works including earthworks, cut and fill, ground remediation and protection measures for existing trees;
 - Construction of new buildings;
 - Associated landscaping and public realm infrastructure; and
 - Preparatory site-works in advance of occupation and operation.
- 2.4.2 All current buildings on the site are proposed to be demolished and delivery of the proposed development will be phased, starting with the Owens Park area in the north (Phase A) and then progressing to the southern areas of the site (Phases B and C). Note that the demolition of the Limes Building will not form part of Phase A, but will be undertaken in a subsequent phase, to be confirmed at a later date.
- 2.4.3 The indicative start date for initial demolition work to begin is Q4 2023 with an estimated project delivery period of seven years through to completion of the final phase in Q3 2030. Indicative phasing timescales are presented in Table 2-1 and an indicative phasing plan showing the areas that each phase comprise is presented in Figure 2-5. This indicative phasing plan will be developed by the UoM's preferred Delivery Partner, with an updated phasing plan to be submitted at the reserved matters stage.

Table 2-1 Indicative phasing timescales

Phase	Stage	Start	End
Phase A (Owens Park)	Demolition	Q4 2023	Q4 2023
	Construction	Q1 2025	Q3 2027
Phases B & C (Oak House & Woolton Hall)	Demolition	Q3 2027	Q1 2028
	Construction	Q1 2027	Q3 2030

- 2.4.4 During the works, parts of the wider Fallowfield campus will remain open to UoM staff and students.

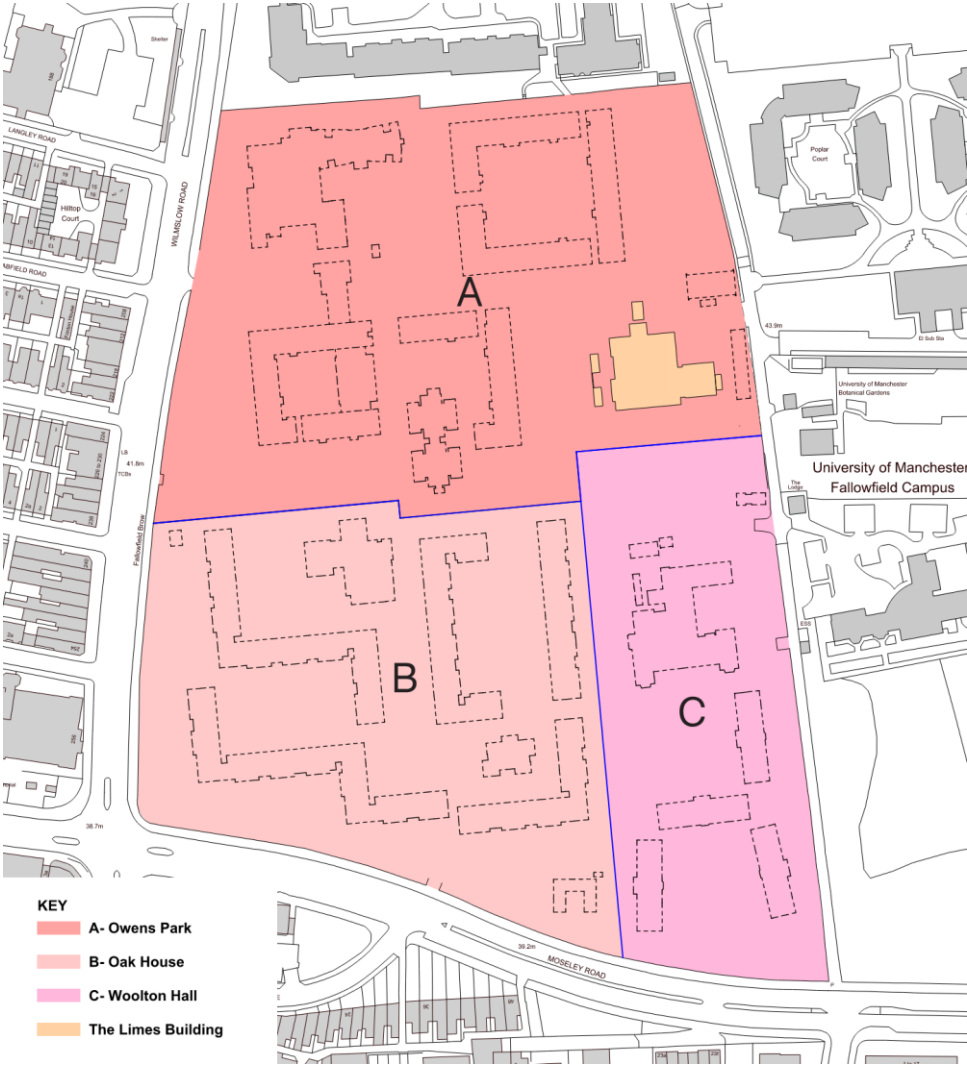


Figure 2-5 Proposed phasing plan

- 2.4.5 An Outline Demolition Environmental Management Plan (ODEMP) has been developed for the proposed development to support the planning application, and to allow demolition works to proceed following receipt of a planning consent from MCC. This commits to a suite of mitigation measures, including those to protect bats (a protected species), which have been identified as roosting in some of the existing buildings on the site, along with the trees and other habitats to be retained as part of the proposed development.
- 2.4.6 A Construction Environmental Management Plan (CEMP) will be prepared for the construction stage of the proposed development, relating to environmental issues. The CEMP will include roles and responsibilities, control measures and activities to be undertaken to manage environmental effects. As such, the site will be managed in accordance with industry-wide best practice standards.

3 ENVIRONMENTAL CONDITIONS AND POTENTIAL EFFECTS

3.1 INTRODUCTION

- 3.1.1 The following section provides a summary of the assessments undertaken in the ES. Specific terminology is used to classify the environmental effects of the proposed development. Most disciplines have adopted consistent terminology in defining the significance of an environmental effect (i.e. the consequence of the proposed development on a certain feature or sensitive receptor). In general, effects have been defined as being major, moderate, minor or negligible, whereby major and moderate are considered to be “significant” and minor or negligible considered “not significant”.

3.2 AIR QUALITY

- 3.2.1 The impact of the proposed development on the air quality of surrounding existing receptors during both the demolition/construction, and operational phases has been assessed. In addition, the impact of the exposure of future site occupants to air pollution has been considered.

Demolition and construction effects and mitigation

- 3.2.2 There is a high risk of loss of amenity due to dust soiling associated with the demolition, earthworks, construction and tracking out of dust onto the wider road network. There is a low risk of human health effects due to the on-site demolition and construction activities. A suite of mitigation measures is recommended to prevent any significant residual effects. Mitigation measures include development of an Air Quality Dust Management Plan, undertaking daily dust inspections and spraying water to suppress dust.

Operational effects and mitigation

- 3.2.3 The proposed development will not lead to an increase in traffic on the surrounding road network. Although the heating and hot water strategy is yet to be finalised, it is anticipated that it will not lead to any air pollutant emissions. With this assumption, it is determined that operational effects on air quality will be negligible. This assumption will be revisited at the reserved matters stage if necessary.
- 3.2.4 The roads adjacent to the site are within the City of Manchester Air Quality Management Area (AQMA), which indicates that MCC has identified possible exceedance of the UK air quality objectives in the vicinity of the site. Therefore, the exposure of future site users has been assessed.
- 3.2.5 The location of the AQMA has been determined using air quality modelling, using worst-case assumptions. Proposed buildings will be significantly set back from the roadside and outside the AQMA boundary. Existing perimeter planting between the roadside and proposed buildings, which will be retained as part of the proposed development, will act to prevent transport of pollutants onto the site. In addition, air quality is projected to improve in the future due to a range of factors, including reductions in tailpipe emissions from vehicles and wider policy measures. Taking this into account, it is predicted that future site users will be exposed to air quality that is in compliance with air quality objectives. Therefore, the impact of introducing new exposure will be not significant.

Residual effects and conclusion

- 3.2.6 With the implementation of the proposed construction dust mitigation measures there will be no significant residual effects with regards to air quality.

3.3 NOISE AND VIBRATION

- 3.3.1 The noise and vibration chapter has predicted and assessed the potential effects of the demolition works associated with the proposed development, which are anticipated to represent the worst-case in terms of the potential effects of noise and vibration from the overall construction process. It also sets out target noise levels for fixed plant installations and entertainment premises to be referenced in the design to avoid significant adverse effects.
- 3.3.2 As well as comments received via the EIA Scoping opinion, direct liaison with the MCC Environmental Protection department was undertaken to confirm the approach to the baseline noise survey and assessment methodology.
- 3.3.3 A baseline noise survey was undertaken at the site in May 2023 in order to obtain noise data to inform the assessment and derive the target levels for fixed plant and entertainment noise.

Demolition and construction effects and mitigation

- 3.3.4 While based on preliminary data, major adverse significant effects from the noise associated with the demolition works have been predicted at the nearest noise sensitive receptors around the site. Mitigation measures are contained in an Outline Demolition Environmental Management Plan (ODEMP), which has been submitted as part of the outline planning application and an overarching Construction Environmental Management Plan (CEMP), to be submitted to MCC at a later stage. Mitigation measures include the selection of quieter plant and methods as far as is practicable, and the use of screening and enclosures to reduce noise levels at the receptors.
- 3.3.5 Vibration arising from vibratory ground compaction has also been predicted, but no significant effects have been identified.

Operational effects and mitigation

- 3.3.6 Target noise levels have been defined for fixed plant installations and entertainment premises that will be part of the proposed development. Achievement of these target levels would avoid significant adverse effects.

Residual effects and conclusion

- 3.3.7 With the mitigation measures in the DEMP and CEMP in place, no significant residual effects from construction noise and vibration associated with the demolition works are expected.

3.4 ECOLOGY AND BIODIVERSITY

- 3.4.1 The impact of the proposed development on the habitats and protected species on site during both the demolition and construction, and operation phases has been assessed. In addition, existing habitats have been assessed to understand the current baseline conditions and considerations have been given to deliver 10% biodiversity net gain within the site and increase the biodiversity value of the site.

Demolition and construction effects and mitigation

- 3.4.2 The most significant effects relating to the demolition and construction phase of the proposed development is the potential for permanent loss of common pipistrelle maternity roosts. Additionally, there is a potential moderate permanent adverse effect on commuting and foraging bats due to the loss of habitat. Minor adverse significant effects will arise from noise/vibration, light and dust due to the demolition and construction works, which could impact the retained habitats (i.e. high ecological

value woodland), and protected species such as bats and birds.

3.4.3 A suite of mitigation measures has been recommended which will aim to prevent any significant residual effects relating to roosting bats and disturbance and damage to retained habitats and species during the demolition and construction phases, including the potential for spread of invasive non-native species. There is a requirement to provide adequate mitigation to support the application of a Natural England mitigation licence for the destruction of bat roosts on site and secure the protection of ecological receptors through the CEMP.

3.4.4 A significant adverse residual effect remains relating to habitat loss and potential further effects this may have on commuting and foraging bats and nesting birds. The parameter plans assessed for the outline planning application do not indicate habitat retention outside of the woodland perimeter of the site, nor do they identify the landscape proposals for the proposed development. Therefore, habitat loss is assumed to be extensive across the site at this stage, with no mitigation currently proposed, and a residual moderate adverse (significant) effect.

Operational effects and mitigation

3.4.5 A minor adverse effect from noise, human disturbance and lighting due to operational effects upon habitats created on the site and retained woodland will occur. However, the woodland is located along the boundaries of the site and the site is located within an urban area with a certain level of existing disturbance within the vicinity. It is considered that species likely to utilise the site in the future are likely to be those that are typically urban adapted. Supplementary mitigation measures are recommended which will aim to prevent any significant residual effects (i.e.: development of an external lighting strategy to ensure light spill onto ecological receptors is reduced).

3.4.6 It is recommended that MCC request a planning condition for detailed Ecological Mitigation and Management Plans to be provided for each reserved matters phase to identify actual habitat retention or loss as a result of the proposed development. At each phase, this may require a reassessment of impacts as high levels of habitat retention in the detailed design would remove the significant adverse effect relating to habitat loss, or extensive new habitat creation may provide sufficient mitigation.

3.5 CLIMATE CHANGE AND GREENHOUSE GAS EMISSIONS

3.5.1 The greenhouse gas (GHG) emissions ES chapter assesses the likely environmental effects of GHG emissions associated with the proposed development.

Demolition and construction effects and mitigation

3.5.2 The total estimated cumulative embodied carbon associated with the demolition and construction of the proposed development has been calculated to be between 168,000 – 196,000 tonnes of carbon dioxide equivalent (tCO₂e). As the sensitivity of the receptor (the global atmosphere) is high, the effects of demolition and construction in relation to GHGs are of moderate adverse significance prior to mitigation.

3.5.3 The following mitigation measures are suggested for the demolition and construction stage:

- Put in place a commitment to reduce lifecycle embodied carbon by 10% compared to the business-as-usual baseline. The business-as-usual baseline is defined as the design of the proposed development using current standard best practice construction materials and techniques. An appropriate baseline should be defined for the proposed development, taking into consideration industry benchmarks;

- Review opportunities to minimise internal finishes where not technically required (e.g. for acoustics or fire protection);
- A whole life carbon assessment should be undertaken for each building to identify opportunities to reduce embodied carbon through design, material specification and construction processes;
- Explore the use of off-site modular construction to consolidate delivery requirements, and for energy efficient assembly and minimising site installation; and
- Implement a travel plan for site staff.

Operational effects and mitigation

3.5.4 Embodied carbon associated with the operational stage of the proposed development has been estimated to be approximately 84,100 tCO₂e over the 60-year lifecycle of the proposed development. There are commitments in place to reduce operational embodied carbon, including applying circular economy principles and designing for whole life and end of life. As sensitivity of the receptor (the global atmosphere) is high, the effect is of moderate adverse significance prior to mitigation.

3.5.5 It is predicted that cumulative GHG emissions associated with operational energy will be between 2,800 and 3,900 tCO₂e over the 60-year lifecycle of the proposed development, with a minor adverse effect reported prior to mitigation. There are commitments in place to reduce operational GHG emissions. These include using all electric systems, using energy from solar panels and designing ventilation to minimise the need for cooling.

3.5.6 GHG emissions associated with operational water consumption are estimated to be 4,202 tCO₂e over the lifecycle of the proposed development, with a minor adverse effect reported prior to mitigation. There is a commitment to use low flow fittings and sanitaryware to reduce operational water consumption.

3.5.7 GHG emissions associated with delivery and servicing vehicles are estimated to be approximately 70,130 tCO₂e over the lifecycle of the proposed development, with a major adverse effect reported prior to mitigation. There are no commitments in place to reduce GHG emissions associated with delivery and servicing trips.

3.5.8 GHG emissions associated with the end-of-life stage of the proposed development have been estimated by applying appropriate benchmarks based on the proposed floor area and the building typologies. GHG emissions associated with the end-of-life stage are estimated to be approximately 430 tCO₂e, with a moderate adverse effect reported prior to mitigation. Commitments in place to reduce the GHG emissions associated with the end-of-life stage include designing for end of life.

3.5.9 The following mitigation measures are suggested for the operational stage of the proposed development:

- Put in place a commitment to reduce lifecycle embodied carbon by 10% compared to the business-as-usual baseline;
- Explore the use of passive design measures to reduce the need for heating;
- Where any electrical equipment (e.g. oven, white goods etc.) is being installed, identify unregulated energy loads and demonstrate reduction by specifying energy efficient equipment;
- Specify the use of water meters to measure water consumption;
- Explore the feasibility of specifying rainwater harvesting to reduce potable water consumption;

- Specify landscaping that does not require irrigation to reduce unregulated water consumption;
- Where possible, use green routing to optimise route choices of servicing and delivery trips; and
- A whole life carbon assessment should be undertaken for each building to identify opportunities to reduce embodied carbon through design, material specification and construction processes.

Residual effects and conclusion

- 3.5.10 With the suggested mitigation measures in place, the effects associated with the demolition and construction stage are likely to reduce to minor adverse; the effects associated with delivery and servicing trips are likely to reduce to moderate adverse; the effects associated with operational phase embodied carbon, and end-of-life stage are likely to reduce to minor adverse; and the effects associated with operational phase energy and water consumption are likely to reduce to negligible.

3.6 HERITAGE, TOWNSCAPE AND VISUAL

- 3.6.1 The heritage, townscape and visual impact assessment has considered the potential effects of the proposed development on the designated and non-designated heritage assets located in the vicinity of the site, the surrounding townscape character and the character and quality of strategic and local views, both during the demolition and construction period and once the proposed development is completed and operational.

Demolition and construction effects and mitigation

- 3.6.2 The assessment of demolition and construction effects considers how these stages of the proposed development will potentially impact surrounding heritage receptors, the townscape character areas and views towards the site.
- 3.6.3 In terms of heritage, a few of the receptors have the potential to be affected in a minor-moderate adverse way, but this could be mitigated with appropriate measures in the CEMP, which will be produced prior to construction commencing. When considering townscape, the assessment concludes that the proposed development will provide largely adverse, though minor, effects, with the exception of the University Campus character area itself which will see moderate adverse effects. Finally, no views are expected to be subject to impacts greater than a minor adverse effect. As mentioned above, adverse impacts across all these assessment areas are likely to be mitigated by the reduced scale of the final design.

Operational effects and mitigation

- 3.6.4 The assessment of operational effects considers how the completed development will potentially impact surrounding heritage receptors, the townscape character areas and views towards the site. It should be noted that at this outline planning stage, the assessment is somewhat rudimentary as it can only consider the outline maximum parameter massing which will not be representative of, and overexaggerates the massing of whatever scheme comes forward at the detailed stage. Therefore, to a large extent, any impacts identified will likely be mitigated by the design, reduced height in many cases, and separation of buildings (i.e. how the outline building envelope will be split up).
- 3.6.5 In terms of heritage, a few of the receptors have the potential to be affected in a minor adverse way, however it is considered that the completed development may equally benefit Behrens Hall. When considering townscape, the assessment concludes that the proposed development will provide largely beneficial, though minor, effects, with the exception of the University Campus character area itself which will see moderate beneficial effects. Finally, no views are expected to be subject to impacts greater than minor, with a mix of beneficial and adverse effects. As mentioned above,

adverse impacts across all these assessment areas are likely to be mitigated by the reduced scale of the final design.

4 CONCLUSIONS

4.1 RESIDUAL EFFECTS

- 4.1.1 During the demolition and construction stage, adverse effects have been concluded to be insignificant and temporary if the recommended mitigation measures are implemented, with the exception of three effects – two ecological and one related to townscape:
- Ecology: The removal of trees and hedgerows is expected to lead to significant habitat loss and reduced connectivity throughout the site which is utilised by notable species such as commuting and foraging bats and nesting birds. This impact on native hedgerows, line of trees and broadleaved scattered trees is expected to have a permanent, moderate adverse impact on these receptors. In addition, the loss of habitat connectivity and permeability through the site and loss of foraging resources is also anticipated to result in a permanent, moderate adverse impact on bats.
 - Heritage, Townscape and Visual Impact: The introduction of construction traffic and associated environmental effects of the demolition of old buildings and the construction of new ones, such as dust, vibration, and noise, are likely to have a moderate adverse effect on the experience and enjoyment of the University Campus townscape character area.
- 4.1.2 During operation of the proposed development, the majority of adverse effects will be reduced to insignificant levels if mitigation measures are implemented, with the exception of the following:
- 4.1.3 Greenhouse gas emissions – whilst appropriate measures have been specified to reduce emissions, the greenhouse gas emissions assessment has noted that a potentially significant effect could occur. However, this is not specific to the proposed development, rather all development, and is an acknowledgement of the guidance used to write the assessment² which specifies that *“any GHG emissions or reductions from a project might be considered to be significant”*.
- 4.1.4 There is also a moderate beneficial residual effect arising from the operational stage:
- Heritage, Townscape and Visual Impact: The overall effect of the proposed development on the character, appearance, and function of the University Campus townscape character area is moderate beneficial.

4.2 HUMAN HEALTH IMPACTS

- 4.2.1 This section of the NTS has been included following feedback from MCC on the content of the ES for the proposed development. It draws together consideration of the day to day impacts of the proposed development on residents and the wider community as far as possible, based on relevant information from the ES, taken from the air quality and noise and vibration assessments.
- Air Quality**
- 4.2.2 The impacts on human health from the proposed development take into account factors such as the generation of dust and emissions from vehicle traffic caused by the demolition and construction works. This is an important consideration, due to the presence of existing residential properties, both private dwellings and student residences, located around the boundary of the site on all sides.
- 4.2.3 Overall, the works are unlikely to cause impacts which will affect local residents close to the site, with

the exception of the demolition of the existing buildings on the site, which will result in a greater amount of dust and debris being generated during that time. Appropriate measures will be taken in line with good industry practices to ensure any adverse effects are minimised. Before any construction work begins, an Air Quality and Dust Management Plan will be prepared. This is a practical plan which will set out clear steps to manage air quality and dust generation during the demolition and construction works.

- 4.2.4 Air quality is highly unlikely to be an issue for local residents following completion of the proposed development.

Noise and Vibration

- 4.2.5 Road traffic noise from the A6010 (Wimslow Road), the B5093 Mosely Road and other roads in the surroundings of the site can be heard in this area of Manchester and local residents will therefore be accustomed to some noise living in a city suburb. Having said that, the demolition and construction activities associated with the proposed development will undoubtedly result in noise which will be heard by local residents, particularly those living in student accommodation on Fallowfield campus itself. As in the case of air quality, appropriate measures will be taken in line with good industry practices to ensure any adverse effects are minimised, and noise levels are reduced as far as possible.
- 4.2.6 During operation of the proposed development, noise from fixed plant (such as air conditioning units and extractor fans) will be strictly controlled to ensure no noise annoyance to local residents. Any entertainment premises would be likely to operate on weekdays between 13:00 and 00:00, and on weekends between 12:00 and 00:00, based on the same opening hours for the existing premises on the site.

4.3 SUMMARY

- 4.3.1 The redevelopment of the existing student residential accommodation at Fallowfield Campus by UoM will result in some potential adverse impacts including at the demolition and construction phase, impacts from habitat removal and the associated effects on flora and fauna species as well as temporary construction disruption in relation to the townscape character of the area, and at the operational stage, the release of greenhouse gas emissions.
- 4.3.2 However, redevelopment of the site will bring with it largely significant benefits. The adverse impacts identified will be mitigated by appropriate measures, aligning with the UoM's Environmental Sustainability Strategy³. In particular, the proposed development will result in a moderate beneficial effect on the heritage, townscape and visual impact of the University Campus area, enhancing its aesthetic appeal and cultural significance. Additionally, the proposed development will provide higher-quality housing to meet the existing demand of the student population and add a broader range of social spaces, raising the standard of campus accommodation and fostering a vibrant community.
- 4.3.3 The proposed development will be designed to minimise its carbon footprint, embodying UoM's dedication to environmental stewardship. Ultimately, this development signifies a future-focused approach to meet the evolving needs of the student community while promoting sustainability and benefiting the wider community.

² The Institute of Environmental Management and Assessment (IEMA) Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition (2022).

³ University of Manchester (2023) Our Sustainable Future: Environmental Sustainability Strategy 2023-2028. [display.aspx](https://www.manchester.ac.uk/display.aspx) ([manchester.ac.uk](https://www.manchester.ac.uk))

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