2.33 It should be noted that the other environmental topics required to be considered under Regulation 4 (2) were determined not likely to have significant environmental effects and either have not been considered in the EIA, or have been reported at a commentary level (i.e. they have been scoped out or scoped down). A summary of these topics is provided in **Table 2.4.**

Table 2.4 Non-significant environmental topics

TOPIC	CONSIDERATION
Microclimate	**Lighting** The Proposed Development is not expected to significantly increase light pollution effects. A separate Lighting Impact Assessment has been prepared in support of the planning application. **Wind** The Proposed Development is not expected to result in significant wind effects. A separate wind analysis report has been prepared and submitted with the planning application.
Climate Change	Potential climate implications from the Proposed Development are two separate but interrelated issues: 1) Climate Change Adaptation (how the project has been designed to be resilient to a changing climate); and 2) Climate Change Mitigation (how the project may contribute to climate change through the emission of greenhouse gases (GHGs) and how it seeks to mitigate such emissions). The above issues have been considered insofar as they relate to the various topics scoped into the EIA and, therefore, the requirement for a standalone assessment of climate change has been scoped out of the EIA. A standalone sustainability and energy statement have been prepared in support of the planning application.
Health and Wellbeing	The construction of the Proposed Development may result in increased noise, dust and vehicle emissions which can have impacts on human health. One of the most common impacts on human health from new developments once operational, is the increase in traffic which can affect pedestrian amenity and safety as well as lead to increased air pollution and noise, with consequential effects on health and quality of life. However, The Proposed Development proposes a decrease in car parking and consequently traffic movement, therefore, impacts on health as a result of increases in traffic are not considered likely. Health Impacts have therefore been scoped out of the EIA. A Health Impact Assessment (HIA) has been prepared and will accompany the planning application. This can be found in **Appendix 12.1**.
Tourism	The Proposed Development is unlikely to have any significant tourism effects. There will be some business tourism expenditure through the use of local hotels used by future employees of the Site during business trips and business visitors. These effects are not anticipated to be significant and have therefore been scoped out of the EIA.
Social Infrastructure	The Proposed Development will not result in an increased demand for social infrastructure such as schools, health services, and playing fields. Social Infrastructure has therefore been scoped out of the EIA.
Retail	The socioeconomics ES chapter has assessed the impact of retail at local authority level. Additionally, a standalone Retail Statement has been prepared in support of the application. Given this, a retail chapter within the EIA is not considered necessary.

TOPIC	CONSIDERATION
Ecology	Previous ecological surveys undertaken at the Site in 2021 confirmed that the Site has very low ecological value. The Proposed Development would therefore not result in significant ecological impacts and ecology has been scoped out of the EIA. A Phase 1 Ecology Survey and a Biodiversity Net Gain Assessment have been prepared in support of the planning application.
Arboriculture	There are several trees near the junction with Coldhams Lane which are protected by Tree Preservation Orders (TPOs). Other arboricultural features on site consist of treelines along the Site boundary as well as some other scattered trees throughout the Site. Existing arboricultural features have been retained where possible and where others have been removed to facilitate the Proposed Development, have been compensated for through additional planting. Significant impacts on arboricultural features are not considered likely, therefore arboriculture has been scoped out of the EIA. A separate Tree Survey and Arboricultural Impact Assessment have been prepared and submitted with the planning application.
Archaeology	Given the Site is already developed, the potential for undiscovered archaeological remains is considered to be low. Archaeology has therefore been scoped out of the EIA. A separate archaeological assessment has been undertaken in support of the planning application.
Utilities	Provision of utilities have been addressed through appropriate technical reports, as needed, but are not considered a likely significant environmental effect. In addition to this, utility providers have a statutory duty to provide capacity in line with permitted demand. For these reasons, utilities have been scoped out of the EIA. Water supply has however been scoped into the EIA as required by the Scoping Opinion (**Appendix 2.2**).
Waste	A waste management strategy has been developed for the operational phase of the Proposed Development and submitted separately with the planning application. With regards to construction waste, details on minimising waste are outlined within the CEMP (**Appendix 4.2**) prepared in support of the planning application. It is therefore considered that impacts arising from waste are not likely to be significant and, therefore, waste is scoped out of the EIA.
Major Accidents and Disasters	Regulation 4 (4) requires the identification, description and assessment of expected significant environmental effects arising from the vulnerability of the Proposed development to relevant major accidents or disasters. Given the Site and the nature of the Proposed Development, it is considered unlikely there will be significant effects from major relevant accidents or disasters.

ES Content Requirements of the EIA Regulations

2.34 The 2017 EIA Regulations establish required processes for EIA screening and EIA scoping. The Regulations also set out a series of requirements for EIA generally (primarily in Regulation 4) and for the ES document (primarily in Regulation 18 and Schedule 4). For clarity this section describes the approach to key elements of these requirements not addressed elsewhere in this ES (see **Table 2.5**).

Table 2.5: ES Content Requirements

SCHEDULE 4 REQUIREMENT	WHERE LOCATED IN THIS ES
1. A description of the development, including in particular a description of the location of the development, the physical characteristics of the whole development, the main characteristics of the operational phase of the development and an estimate, by type and quantity, of expected residues and emissions	Chapter 4: Proposed Development and Alternatives.
2. A description of the reasonable alternatives studied by the developer and an indication of the main reasons for selecting the chosen option	Chapter 4: Proposed Development and Alternatives.
3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge	The baseline scenarios are defined in Chapter 2: Methodology (this chapter), with details provided in each topical chapter (6 to 13).
4. A description of the factors specified in regulation 4(2) likely to be significantly affected by the development	Descriptions provided in each topical chapter (6 to 13). Scoping details are in Chapter 2 (this chapter).
5. A description of the likely significant effects of the development on the environment resulting from, inter alia: (a) the construction and existence of the development, including, where relevant, demolition works	Chapter 4: Proposed Development.
(b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources	Chapter 4: Proposed Development and topical chapters (6 to 13).
(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste	Chapter 4: Proposed Development, and topical chapters (6 to 13).
(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters)	Risks due to accidents or disasters are considered in Chapter 2 (this chapter).
(e) the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources	Cumulative Impacts are considered in Chapter 14.
(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change	The implications of Climate Change have been considered in each of the topic chapters (6-13).
(g) the technologies and the substances used	Chapter 4: Proposed Development and Alternatives.
6. A description of the forecasting methods or evidence used to identify and assess the significant effects on the environment	A framework approach to methods is provided in Chapter 2 (this chapter) with refinements in the topical chapters (6-13) as necessary.

SCHEDULE 4 REQUIREMENT	WHERE LOCATED IN THIS ES
7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements	Each topical chapter specifies mitigation measures and monitoring. This is summarised in Chapter 15: Conclusions.
A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned	Addressed in Chapter 2, this Chapter.
A non-technical summary of the information provided	Provided as a stand–alone document, Volume 3.
A reference list detailing the sources used for the descriptions and assessments included in the environmental statement	References are provided at the end of the ES (Vol 1).

Relevant Environmental Assessments

2.35 Regulation 18(3)(c) requires that any relevant UK environmental assessments reasonably available are taken into account, so as to avoid duplication of assessment. Through the consultation process and cumulative impact consideration, no specific relevant assessments have been identified.

Consultation

EIA Scoping

2.36 The EIA Regulations contain a formal process for determining the content of an EIA called “scoping”. Using the EIA Scoping process, the LPA was asked to provide baseline information and to provide their view as to the likely significant environmental effects resulting from the Proposed Development, resulting in an agreed scope of works for the EIA. The LPA sent the EIA Scoping Request to relevant organisations (referred to as “consultees) who they considered should provide necessary responses. Where responses were received, they were then interpreted by the LPA to determine the required contents of the EIA.

2.37 While there is an overlap between EIA scoping, pre-application consultation and the public consultation, EIA scoping provides a formal check on the proposed scope of the EIA and content of the ES. Under Regulation 18(4), an ES must be based on the most recent scoping opinion issued (so far as the Proposed Development remains materially the same as the Proposed Development which was subject to that opinion or direction).

2.38 **Table 2.6** provides a summary of the key matters highlighted during the consultation with consultees, and the project team response, specifically confirming how the issues have been dealt with within the ES.

Table 2.6: Summary of Key Consultee Issues and Responses

CONSULTEE	SUMMARY OF ISSUES RAISED	WHERE THIS IS REPORTED IN THE ES
Sustainability Officer	Embodied carbon and the overall life cycle impacts of the development, including the demolition and embodied carbon of current structures on site needs to be considered. This can be covered in a detailed energy strategy and sustainability strategy. Overall, the sustainability officer is content with issues on climate change being considered within individual topics scoped into the EIA and agree that a standalone climate change ES chapter is not considered necessary.	N/A see separate sustainability and energy strategy submitted with the planning application
Environment Agency	The Proposed Development has the potential to increase abstraction from groundwater sources. The water resource needs of the Proposed Development alone and in combination with other committed developments should be considered to ensure that the water can be supplied sustainably without an adverse impact to WFD waterbodies and chalk streams. Given the location of the Proposed Development is in an area of serious water stress, it is recommended that all new non-residential development of 1000 sqm gross floor area or more should meet the BREEAM excellent standards for water consumption.	Chapter 8: Flood Risk, Drainage and Water Resources
Natural England	A robust assessment of environmental impacts and opportunities based on relevant and up to date environmental information should be undertaken prior to a decision on whether to grant planning permission.	As stated above, the Site is of low ecological value and ecology has been scoped out of the EIA. A phase 1 habitat survey and a biodiversity net gain report have been submitted separately as part of the planning application
Drainage Officer	The method for Flood Risk Assessment and Surface Water Drainage Strategy is satisfactory.	Chapter 8: Flood Risk, Drainage and Water Resources
Heritage and Conservation Officer	The general Approach to Built Heritage is supported. There are some additional heritage receptors to be included within the heritage assessment: Chapel of St Mary Magdalene, Stourbridge Chapel (The Leper Chapel) – Grade I Listed Cambridge Gas Company War Memorial, Newmarket Road – Grade II Listed Custodian's House, Mill Road Cemetery – Grade II Listed The following should be corrected: The Church of Our Lady and the English Martyrs is Grade I Listed.	Chapter 7: Cultural Heritage
LLFA	Expect a full flood risk assessment and/or surface water drainage strategy to be submitted with the application.	Chapter 8: Flood Risk, Drainage and Water Resources

CONSULTEE	SUMMARY OF ISSUES RAISED	WHERE THIS IS REPORTED IN THE ES
National Highways	As part of the planning application, it may be necessary to take account of the interaction of the Site with the Strategic Road Network (SRN), principally the A14 as well as identifying any measures that may need mitigation. The assessment should be undertaken in accordance with DfT Circular 02/2013 "The Strategic Road Network and the Delivery of Sustainable development" or subsequent iterations of the document. Any junction experiencing an increase of 30 two-way vehicles within either the AM or PM peak would likely require a Junction Capacity Assessment to ensure the junction can accommodate the increase in traffic from the development. A Construction Traffic Management Plan (CTMP) is suggested.	Chapter 13: Transport
Cambridge Past Present and Future	Townscape and Visual Assessment The assessment must take the full height of the buildings into account which should include roof top plan and flues / chimneys. Transport Assessment The Transport Assessment should assess the practicality of walking from the rail station. The pedestrian route is about 1 mile and will take approximately 20 minutes to walk and there is therefore the potential for a large number of people to walk from the station to the Centre. The planning application should consider how to make this route attractive to encourage people to use active modes to reach the Proposed Development. Given the pedestrian route would pass through residential areas, the impact on the amenity of the residents should be considered. Sustainability The planning application should demonstrate high levels of sustainability and ideally achieve BREEAM Outstanding. Ecology Although ecology has been scoped out which is understood, the planning application needs to show significant ecological and landscape enhancement.	Chapter 10: Townscape and Visual Assessment Chapter 13: Transport
Nature Conservation Officer	The Officer is content with ecology being scoped out of the EIA. However, species and habitat surveys compliant with the biodiversity SPD will be required to inform a planning application, along with a biodiversity net gain plan.	N/A see separate ecology reports submitted as part of the planning application
Historic England	The Proposed Development has the potential to affect the setting of a number of heritage assets which include five grade I Listed Buildings, a Scheduled Monument, six Grade II Listed Buildings and six Conservation Areas. The Proposed Development could affect the significance of heritage assets at some distance from the Site itself. The assessment should therefore have a study area of an appropriate size to ensure that all heritage assets likely to be affected have been included and properly assessed. The analysis of setting (and the impact upon it) is considered to be a qualitative matter and cannot be achieved solely by the use of standardised EIA matrices. It is therefore recommended that these should be in a separate appendix.	Chapter 7: Cultural Heritage

CONSULTEE	SUMMARY OF ISSUES RAISED	WHERE THIS IS REPORTED IN THE ES
Historic England	It is recommended that the Landscape and Visual Impact Assessment provides heritage specific viewpoints with both photographs and photomontages that illustrate the EIA and supports the results of the heritage assessment. Where relevant, cultural heritage should also be cross-referenced to other relevant chapters and should take account of the potential impacts, such as construction, servicing and maintenance and associated traffic, might have upon perceptions, understanding and appreciation of heritage assets in the area. Assessment of archaeology is recommended through a Desk Based Assessment, geophysical survey and trial trenched evaluation.	Chapter 7: Cultural Heritage
Environmental Health Officer	Construction/demolition pollution The approach outlined in the Scoping Report in relation to noise and vibration is considered acceptable. Details on what is expected to be within a construction / demolition impact assessment are provided within the consultee response. The approach to assessing dust impacts is considered acceptable. Details on requirements of a dust management plan are provided. Artificial Lighting A full lighting impact assessment will be required at the planning application stage and/or secured by condition. Contaminated Land The commitment to the submission of the full Preliminary Risk Assessment with the ES is noted and welcomed. Similarly, the Scoping Report's commitment to consultation with the City Council's Environmental Health department for further contaminated land information ahead of the issuing of the final Preliminary Risk Assessment is also noted and welcomed. It would be beneficial (although not essential) if the final Preliminary Risk Assessment could include a proposed site investigation strategy. The approval of a robust Preliminary Risk Assessment and proposed site investigation methodology at the outline application stage would result in the imposition of one less contaminated land-related planning condition. Air Quality Air quality impacts are intrinsically linked to changes in vehicle movements. The scoping out of 'the assessment of vehicle emissions' will only be supported once trip generation transport figures has been agreed and support this conclusion. The methodology for assessing air quality is broadly accepted but a number of points should be taken into consideration within the assessment as detailed on pages 6 and 7 of the response from Environmental Health.	Chapter 6: Air Quality Chapter 9: Ground Conditions and Contamination

CONSULTEE	SUMMARY OF ISSUES RAISED	WHERE THIS IS REPORTED IN THE ES
Anglian Water	Anglian Water assets should be identified on and near the Site and any required easements taken into account in the Site layout. The Site falls within the catchment of Cambridge Water Recycling Centre (WRC), which currently does not have capacity to treat additional foul flows. Anglian Water has applied to the Environment Agency for an interim new permit to address exceedance. Our long-term plans for Cambridge WRC are linked to the Cambridge relocation project and the Development Consent Order. The new Cambridge WRC will take all existing flows from current Cambridge WRC and all flows from future growth within the WRC catchment. We are working with Greater Cambridgeshire to understand the long-term growth figures, using the emerging local plan allocations and planning permissions. This allows us to design and deliver a new Cambridge WRC which can meet future demand. Anglian Water supports the reference to the use of SuDs on Site.	Chapter 8: Flood Risk, Drainage and Water Resources

Baseline Assessments

2.39 The baseline environmental conditions need to be established to enable an accurate assessment of potential changes to such conditions that may occur, and to assess the resultant environmental impacts of the Proposed Development.

2.40 The EIA determines the likely significant environmental effects resulting from the Proposed Development for the following scenarios:

Baseline (current site conditions);

- The baseline assessment year for the EIA is the environmental conditions of the Site and surrounding area prevailing at the time baseline research and surveys were undertaken, which for most topics was 2022. The baseline position consists of the existing Beehive Centre which is a retail park.
- A broad range of information has been gathered to define and describe the existing environmental characteristics and receptors for each environmental topic baseline. Specific relevant baseline details are provided in each topic chapters.

Baseline with the addition of the Proposed Development:

- Baseline with the Proposed Development under construction, and
- Baseline with the Proposed Development in operation.

Baseline evolution without the Proposed Development:

- The EIA Regulations require an assessment of "*an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed. With reasonable effort on the basis of the availability of environmental information and scientific knowledge*" (Schedule 4, 3). The project baseline without the Proposed Development is considered to be the continuation of the current Site's uses. Topic-specific baseline evolution assessments are provided in the individual topic chapters.

Spatial Scope

2.41 The geographical extent of the EIA is referred to as the 'spatial scope' and varies depending on the given environmental receptor. Some environmental effects extend beyond the Site boundary, such as air quality and noise. The appropriate spatial scope of specific assessments is set out in the relevant ES chapters and differs based on the requirements of each assessment. This takes into account:

- The physical area of the Proposed Development and any ancillary works;
- The nature of the baseline environment; and
- The manner in which effects are likely to spread.

2.42 Key environmental receptors within and around the Site are presented in Chapter 3 of this ES. Where specific or more distant receptors have been considered these are described in relevant technical chapters.

Temporal Scope

2.43 The EIA considers the effects from the Site preparation and construction through to operation. The temporal scope used for the assessment assumes the construction works for the Proposed Development will commence in Q2 2026.

2.44 The temporal scope also takes the time of day during which construction works are likely to be undertaken into account.

2.45 It is anticipated that the Proposed Development will be fully operational by 2034.

Cumulative Impacts

2.46 Cumulative effects can be broadly defined as the effects which results from incremental effects of an action when added to other past, present and reasonably foreseeable future actions. These actions should be considered regardless of what agency or person undertakes such actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

2.47 Chapter 14 of the ES details the consideration of cumulative impacts which have been undertaken and draws together the findings from each topic chapter to analyse the interactions between effects and to provide a summary of the cumulative effects of the Proposed Development.

Assumptions and Limitations

2.48 The following are the overarching assumptions, limitations and uncertainties in the ES. Assumptions on a topic specific level are covered in each chapter.

- The assumptions undertaken within each of the topic chapters are based on the Parameter Plans enclosed in **Appendix 4.1**;
- All of the principal existing land uses adjoining the Site remain substantially unaltered;
- Information provided by third parties is complete and up to date;
- The design, construction and operational development will satisfy environmental standards consistent with contemporary legislation, practice and knowledge at the time of the submission of the application as a minimum, but will strive to achieve best practice;

- The cumulative assessment is only based upon publicly available information for the other development commitments;
- Baseline conditions have been established from a variety of sources, including historical data. However, due to the dynamic nature of certain aspects of the environment, conditions may change during the construction and operation of the Proposed Development; and
- The planning permission, if granted, will contain conditions and legal obligations that will be sufficient to secure the necessary mitigation measures identified during the assessment process.

2.49 The individual technical chapters provide additional detail where there are specific assumptions and limitations of relevance to a particular topic.

2.50 It is not considered that these limitations have had a material impact on the outcome or conclusions of the assessments undertaken, which remain an accurate, comprehensive and robust record of the likely significant effects arising from the Proposed Development.

Avoidance of Bias

2.51 This ES reports the findings of an independent assessment of environmental effects, which presents the environment effects objectively and separate from any planning argument for the Proposed Development.

2.52 Where qualitative assessment has been undertaken, it has used standardised methodology and employed professional judgement. The assessment has taken a conservative 'worst case view' in assessing impacts where appropriate. Where uncertainties or assumptions have been made in the assessment process, these have been clearly stated.

Approach to Technical Chapters

2.53 Each topic chapter (Chapter 6-13 inclusively) has approached the assessment by following a consistent structure, which is generally as follows:

- **Introduction-** A brief summary of the topic to be assessed.
- **Potential Impacts-** Building on the scoping stage; this section outlines potential impacts on a particular topic.
- **Methodology-** Outlines the methods used to undertake the assessment for a particular environmental topic.
- **Baseline Conditions** - Outlines the baselines for the topic area under assessment. The environmental effects are measured by the degree of deviation from the baseline.
- **Predicted Impacts** - Identifies the nature, extent and magnitude resulting from the development during construction and once operational.
- **Significance Evaluation of Predicted Impacts** - The significance of the predicted impacts is assessed accordingly to the methodology.
- **Mitigation and Enhancement** - Details the scope for mitigation of any adverse effects, enhancement of beneficial effects, and the effectiveness of these measures.
- **Residual Impacts** - Evaluate the significance of any unavoidable or residual impacts that remain after the mitigation and enhancement measures have been fully implemented.

- **Monitoring** - Considers the need for monitoring any effects and mitigation to confirm that effects and mitigation are operating as expected in the EIA.
- **Cumulative Impacts** - A summary of cumulative impacts provided for clarity.
- **Conclusion and Summary of Impacts** - A conclusion and a summary of impacts in table format is provided in each chapter.

2.54 The next chapter outlines the Site context, whilst also identifying the existing Site conditions, land use and nature of the Site and its surroundings.

Site Context

3

3.0 Site Context

Introduction

3.1 This chapter of the ES seeks to set the context for the assessment of the likely significant environmental effects arising from the Proposed Development. It describes the nature of the Site and the surrounding area and the specific planning context, insofar as it relates to the Site and its immediate surroundings.

Site Location and Description

3.2 The Site is approximately 7.85 hectares (ha) in size and comprises a mid-sized retail park with mixed uses and associated ground level car park.

3.3 The Site is located east of Cambridge city centre, along the west side of the railway line. The Site is accessed via Coldhams Lane which forms the northern site boundary and connects to Newmarket Road, which is a main vehicular route into the city, whilst to the east the road leads to Coldham's Common. The Site is approximately 10 minutes' cycle and 25 minutes' walk from the city centre.

Heritage Features

3.4 There are no heritage assets within the Site. However, a number of heritage assets are in close proximity to the Site and have the potential to be affected by the Proposed Development including the Mill Road Conservation Area which is adjacent to the Site, St Matthews Church Grade II Listed Building approximately 200m west of the Proposed Development and 247 Newmarket Road (Grade II Listed Building) approximately 200m north of the Site.

3.5 Additionally, The Old Cheddar's Lane pumping station (Scheduled Monument) is located approximately 670m northeast of the Site. The closest Registered Park and Garden to the Site is Mill Road Cemetery approximately 275m south of the Site.

3.6 A full list of the heritage assets can be found in chapter 7 of this ES.

Flood Risk, Drainage and Water Resources

3.7 Environment Agency mapping indicates that the Site lies at low risk of flooding from Main Rivers (including the River Cam and its tributaries) and the Sea. Furthermore, the Site is not traversed by Ordinary Watercourses. The nearest surface water to the Site is Cherry Hinton Brook approximately 350m north-east of the Site.

3.8 The majority of the Site is deemed to remain dry or be subject to very shallow (less than 150mm) of surface water flooding from intense or prolonged rainfall even for a significant (between 1 in 100 years up to 1 in 1,000 year) event. Localised areas around the south-eastern and north-eastern periphery of the Site are shown to be subject to ponding during moderate events.

3.9 Flood risk to the Site from other sources of flooding, such as groundwater, sewers, failure of pumping installations, or breach of raised reservoir embankments are considered to be low.

Geology, Hydrogeology and Soils

3.10 According to the British Geological Society (BGS), the Site lies on Gault Formation with West Melbery chalk formation and lower greensand formation are also present.

Environmental Designations and Ecological Features

3.11 The majority of the Site is dominated by areas of built form and hardstanding, therefore providing habitats of negligible ecological value.

3.12 There are no statutory designated sites of nature conservation interest within or adjacent to the Site. The nearest statutory designated sites (designated for their nature conservation interest) are Coldham's Common Local Nature Reserve (LNR) and Logan's Meadow LNR which are situated approximately 0.4km to the east and 0.47km to the north of the Site respectively. The nearest Site of Special Scientific Interest (SSSI) is the Cherry Hinton Pit SSSI, which is located approximately 3.2km south-east of the Site at its closest point. The nearest European Protected Site is Eversden and Wimpole Woods Special Area of Conservation (SAC), which is situated approximately 13km south-west of the Site at its closest point.

Air Quality

3.13 The Site is located within the Cambridge City Air Quality Management Area (AQMA) which has been declared due to exceedances of the annual mean Nitrogen Dioxide (NO_2) Air Quality Strategy (AQS) Objective.

3.14 The next chapter describes the Proposed Development and outlines the main alternatives considered by the Applicant and an indication of the principal reasons for the chosen scheme.

Description of Proposed Development (including Assessment of Alternatives)

4

4.0 Description of Proposed Development (including Assessment of Alternatives)

Background

4.1 This chapter describes the Proposed Development which forms the basis of the EIA. It describes the various elements of the proposals as well as the means by which the proposals would be implemented.

Planning Drawings

4.2 Planning drawings relied upon and form the basis of the EIA are appended to the ES in **Appendix 4.1.**

Development Overview

4.3 The Proposed Development consists of demolition of the existing buildings onsite and redevelopment of the Site comprising a new local centre as well as office and laboratory space and associated infrastructure. The full description of development is:

Outline Application for the demolition and redevelopment for a new local centre (E (a-f), F1(b-f), F2(b,d)), open space and employment (office and laboratory) floorspace (E(g)(i)(ii) to the ground floor and employment floorspace (office and laboratory) (E(g)(i)(ii) to the upper floors; along with supporting infrastructure, including pedestrian and cycle routes, vehicular access, car and cycle parking, servicing areas, landscaping and utilities.

Development Vision

4.4 The vision for the Proposed Development is based on the following six principles:

1. A better place for all

4.5 The Proposed Development will provide a new local centre that includes a mixed-use ground floor providing shops, cafes, restaurants services and leisure facilities. The Proposed Development will also provide:

- 7,000 sqm of active mixed-use ground floor spaces; and
- 22 new shops, cafés, services and mixed-use spaces.

2. A sustainable place

4.6 The Proposed Development seeks to achieve ambitious targets to contribute to the City's response to the climate emergency. The Proposed Development will be all-electric, with low embodied and operational carbon emissions.

3. A welcoming place for nature

4.7 One of the key principles of the masterplan is to achieve 100% Biodiversity Net Gain. The Proposed Development will retain 45 trees and plant an additional 212. Furthermore, new climate resilient habitat types would be introduced to the Site, with existing resilient habitat types enhanced.

4. A welcoming place for all

4.8 The Proposed Development has been designed to be open to everyone, all day and every day of the week. There will be spaces and places suitable for all, in the landscape and inside the buildings including:

- 2.1 hectares of open space created within 2.7 hectares of wider landscape;
- A community garden; and
- Up to 5.9 sqm of open space per employee on site.

5. A well connected place

4.9 The Proposed Development has been designed to prioritise pedestrian, cycle and public transport access including:

- 30% increase in cycle mode share;
- 80% reduction in car mode share; and
- Reduced weekday peak flow for car trips on local highways network.

6. A place of opportunity

4.10 The Proposed Development will create a range of new jobs close to the city centre across a variety of sectors including life sciences, research and development, administration, leisure and retail including:

- 986 low-skilled jobs;
- 1,275 mid-skilled jobs; and
- 4,448 high-skilled jobs.

The Illustrative Masterplan

4.11 An illustrative masterplan as shown in **Figure 4.1** has been developed to show how the vision, as set out above, could be achieved.

Masterplan Components

Beehive Greenway and Character Areas

4.12 The Site is organised around a single central space known as Beehive Greenway, and connects to four character areas which are:

- **Abbey Walk -** would be the sole vehicle entry road, and will include a cycle path, new tree planting and three new workplace buildings.
- **Creative Exchange** – is the centre of the proposal where five routes across the Site converge upon a public square surrounded by mixed use units and entrances to the new workplace buildings. It is expected that this space will be bounded to the south by the Community Pavilion.
- **Garden Square North –** will sit to the south of the Community Pavilion and has a higher proportion of hard landscaping as this would be used for hosting community events.
- **Garden Square South** – the southern portion of Garden Square South would include the creation of a wetland space. The wetland would perform a dual function of attenuating water runoff and providing a new habitat type on site, thereby contributing to biodiversity net gain.

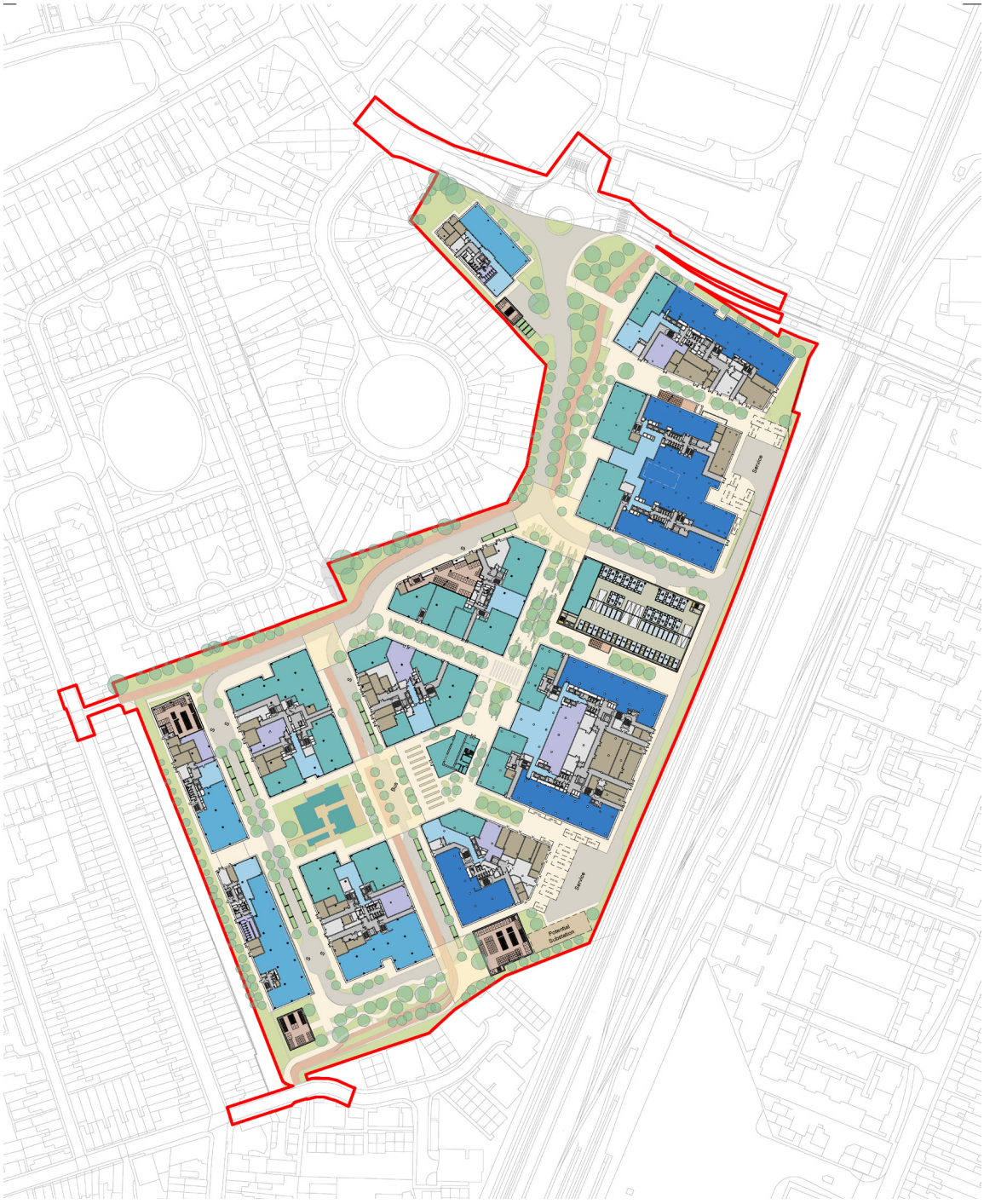

Figure 4.1: Proposed Masterplan

4.13 Beehive Greenway is also supported by two additional character areas which connect the southern site entrances to the centre of the Site. These are known as Hive Lane and Vera's Garden. Hive Lane is the new local high street that connects York Street to the centre of the masterplan. At the southern end, this space includes a one-way vehicle route, pedestrian routes and a new cycle path which provides connections to Cambridge Retail Park and to the north of the city.

4.14 Vera's Garden will be the entry point into the Site from Sleaford Street. The new green space is c.90m in length and will include a community garden including vegetable beds.

Building Plots and Heights

4.15 There are eleven primary building plots, each with varying footprints across the masterplan. In terms of height, typically buildings adjacent to neighbouring residential plots are lower and feature steps in height so that the impact on the neighbouring properties is minimised. The Building Heights Parameter plan in **Appendix 4.1** shows the indicative location of fume extract flues on four of the buildings (plots C, D F and G). The maximum height of the flues are to be up to an additional 25% of the host building and the number of flues at each location will be determined at reserved matters stage.

4.16 Across the eleven plots, the Proposed Development will provide a total of 148,327 sqm GEA compared to the existing site which currently provides 24,382 sqm GEA. A breakdown of the floor space per block is shown in **Table 4.1.**

Table 4.1: Proposed Development Area Schedule

BLOCK	USE	TOTAL GEA (SQM)	TOTAL GIA (SQM)
A	Office	2,336	2,124
C	Office	15,074	14,223
D	Office	17,290	16,406
F	Office	36,07	31,870
G	Office	12,570	11,789
H	Office	13,114	12,295
IJ	Office	10,611	9,721
K	Office	12,708	11,995
L	Office	14,391	13,500
M	Office	13,241	12,403
N	Events / Community	612	535
3	Commercial Active Use	301	284
Total	**-**	**148,327**	**137,145**

Local Centre

4.17 A new local centre at the ground floor is proposed. An illustrative mix of uses is provided within the masterplan, but the final mix will be determined at reserved matters stage.

Vehicular Access

4.18 The main access into the Site for vehicles will remain from the existing roundabout on Coldham's Lane. The access will continue to be facilitated by a roundabout; however,

improvements will be made to prioritise pedestrian and cycle safety. Each arm of the roundabout will feature dedicated crossing points for pedestrians and cyclists, ensuring their priority and convenience.

4.19 The access road into the Site will lead vehicles either south-east to the multi-storey car park and service yard or further south into the Site, to a one-way loop around Block H and K.

Car Parking

4.20 A total of 460 car parking spaces will be provided in the Proposed Development, of which 428 will be provided within a multi-storey car park (which includes accessible and general parking) and 32 accessible spaces will be provided at grade. This is an overall reduction of 425 spaces compared to the existing retail park.

Buses

4.21 There is an existing bus stop on site, and this will be re-provided within the Proposed Development along the one-way loop.

Pedestrians

4.22 Pedestrian access would be from the following entrance points: Coldham's Lane, St Matthews Gardens, York Street and Sleaford Street. The Proposed Development will improve these pedestrian access points by including wider sidewalks, well defined pedestrian crossings as well as pedestrian friendly streetscapes.

Cycling

4.23 A total of 4,269 cycle parking spaces are included as part of the Proposed Development and each block will include facilities for cyclists and other non-car commuters including showers and changing rooms. The provision will adhere to a ratio of one shower/changing room per 25 cycle parking spaces and one locker per cycle parking space.

Landscape and Public Realm

4.24 The Proposed Development will provide 2.1 ha of open space created within 2.7 ha of wider landscape.

4.25 The illustrative masterplan has been split into five key landscape character areas as described below.

Abbey Walk

4.26 Abbey Walk is located to the north of the Site and would provide 7,795sqm of which 3,654sqm is soft landscaping.

Creative Exchange

4.27 Creative Exchange is the link between Abbey Walk and Garden Square. This would be a car free space. The total area within the Creative Exchange is 2,460sqm of which 530sqm is proposed to be soft planting. .

Garden Square

4.28 Garden square is the largest area of open space in the proposed masterplan. A large variety of spaces are proposed such as communal lawns, meadows and decking areas. The total area of the Garden square is 4,815sqm of which 1,364sqm is soft planting (excluding roof tops).

4.29 Garden Square is split into two areas. Garden Square North is a 41m long X 14m wide flexible plaza, and Garden Square South is a 25m long X 22m wide wetland and would provide 420sqm of flood capacity at upstream level.

Vera's Garden

4.30 Vera's Garden (69m long X 30m wide) would provide 42.5% of soft landscaping space: 4,064sqm total area from which 1,728sqm is soft planting (excluding green roofs). Existing trees are to be retained to maintain a green boundary with neighbouring residents.

Linear Walks

4.31 The Linear Walks are the east – west active streets linking to the landscape character areas. This will provide 7,680sqm of landscaping, of which 2,318sqm is soft planting (excluding green roofs).

Biodiversity Net Gain

4.32 The existing baseline of the Site holds very limited ecological value. The proposals include a variety of measures to ensure that a net gain in biodiversity is achieved on site. These include:

- Improvements on the Site boundary to preserve and protect the existing green areas.
- Where losses to habitats are required, these will be more than off-set for through the emerging landscape designs. This will be achieved through the provision of new areas of species-rich grassland, tree and scrub planting and the proposed wetland area.
- Significant areas of green and blue roof space.
- Non-native amenity species will be kept to a minimum.
- Native berry or nut bearing species.

4.33 Overall, the Proposed Development is targeting a 100% biodiversity net gain improvement on site.

Drainage Strategy

4.34 A site-specific Flood Risk Assessment (FRA) has been undertaken for the Proposed Development. The FRA has been prepared in accordance with the National Planning Policy Framework (NPPF) and the associated technical guidance and, as such, it has identified and assessed the risks of all sources of flooding to and from the development and demonstrates how these flood risks will be managed so that the development remains safe for its lifetime, taking climate change into account.

Green Roof / Blue Roof Areas & Attenuation Storage

4.35 Provision has been made for the integration of extensive areas of blue roof attenuation storage on selected buildings, in tandem with green roof coverage where practical considerations allow. Green roof areas will also be provided on selected roof canopies and cycle storage sheds where permissible. Below ground attenuation storage is proposed beneath external hardstanding areas and service yards towards the northern portion of the Proposed Development to control and utilise runoff from the lower (northern) drainage catchment, working in tandem with green and blue roof attenuation and upper catchment SUDs features.

Rainwater Harvesting & External Re-Use

4.36 Rainwater will be captured from selected appropriate building roof areas for filtration and re-use for irrigation of soft landscaping within the public realm areas.

Sustainability

4.37 A Sustainability Strategy has been prepared as part of the planning application which outlines the sustainability benefits and values that the Proposed Development can bring to the Site, local community, surrounding businesses and future building users.

4.38 The Proposed Development is targeting 5 BREEAM Wat01 credits for water consumption and will also be targeting the additional Exemplary Performance credit. This will be achieved through a combination of low flow outlets and rainwater recycling. Furthermore, a BREEAM score of 85% for all office and lab buildings will be achieved.

Construction Methods, Environmental Mitigation and Monitoring

4.39 An outline CEMP has been prepared in support of the planning application and is appended to the ES in **Appendix 4.2.** The CEMP is an iterative document which will be updated as the construction proposals mature and will incorporate any necessary planning condition requirements.

Overview

4.40 The hours of work on the Proposed Development will be in line with CCC's guidelines and requirements. Standard working hours are expected and include:

- 07:00 hours to 18:00 hours Mondays to Fridays; and
- 07:00 hours to 13:00 hours on Saturdays.

Transport

4.41 The CEMP outlines mitigation measures to avoid nuisance to the public that may arise from increases in traffic flows and temporary rearrangements of the road network associated with the construction works. A Traffic Management Plan will be implemented on site and will be included within the CEMP. The TMP plan will outline the routes and timings of deliveries to be taken by hauliers to minimise disruption to local residents and businesses. In addition to containing information in respect of predicted traffic numbers throughout the duration of the project, as well as clearly demonstrating how traffic and deliveries will be managed to mitigate the impact on the Environment.

4.42 In order to reduce the number of vehicles attending the Site the Principal Contractor will target the following best practice suggestions:

- Procurement of local sub-contractors and labour.
- Procurement of local suppliers.
- Combined deliveries.
- Install a delivery regime of "just in time". Use of off-site storage hubs if available.
- Cycle parking on-site for development operatives. Encourage/reward car sharing.
- Encourage the use of public transport, timetable and routes should be available to all operatives at the Site.
- Site meetings should be timetabled for after peak hours or utilisation of video conferencing such as Zoom or Microsoft Teams.

Waste

4.43 The CEMP outlines ways to minimise construction waste including waste prevention and reduction, re-use and recycling. The final CEMP will include a resources management plan which will outline measures to monitor the Proposed Development's generation of non-hazardous waste and diversion of waste from landfill. Furthermore, once the Principal contractor is appointed, a Waste Management Plan will be generated which will adopt the principles set out in the CEMP.

Noise and Vibration

4.44 Construction noise will be minimised in accordance with Best Practice Mean such as:

- Noise emission limits for equipment brought to site.
- Use of acoustic screens.
- Control of working hours.
- Noise monitoring on site.

4.45 In addition to the above, the Principal Contractor will ensure compliance with the recommendations set out in BS5228:2009 and in particular with the following requirements:

- Vehicles and mechanical plant will be maintained in a good and effective working order and operated in a manner to minimise noise emissions.
- HGV and site vehicles will be equipped with broadband, non-tonal reversing alarms.
- Compressor, generator, and engine compartment doors will be kept closed and plant turned off when not in use.
- All pneumatic tools will be fitted with silencers/mufflers.
- Restrict the number of plant items in use at any one time.
- Plant maintenance operations will be undertaken at a distance from noise sensitive receptors.
- Reduce the speed of vehicle movements.
- Ensure that operations are designed to be undertaken with any directional noise emissions pointing away from noise sensitive receptors.

4.46 Vibration is a particular risk during the piling and excavation stages. The measures taken to reduce the acoustics of these two operations will also assist in mitigating the effects of vibration on neighbours and their property. Specific measures required include but are not limited to:

- A digital seismograph measuring device will be used to measure the amount of vibration produced during the works. Where elevated levels are recorded the source will be investigated and, where possible, alternative techniques employed to reduce the levels.
- The Contractor will comply with the vibration levels established by agreement with CCC, which will consider BS 5228-2.
- The potential requirement for vibration monitoring will be assessed in line with BS 5228-1:2009+A1:2014 'Code of Practice for Noise and Vibration Control on Construction and Open Sites'.

- Where vibration monitoring is required measured vibration levels shall be compared with the criteria in BS 5228:2009 Part 2 (i.e.,1mms-1 PPV for potential disturbance in residential areas and using a suggested trigger criteria of 2mms-1 for commercial areas). Lower limits will be confirmed with Cambridge City Council if there is a risk of vibration levels interfering with vibration sensitive equipment or other vibration sensitive objects.

Air Quality

4.47 The CEMP outlines ways to control dust and particulate matter from the construction phase. Such measures include:

- Erect solid screens or barriers around dusty activities or the Site boundary that are at least as high as any stockpiles on site.
- Fully enclose site or specific operations where there is a high potential for dust production and the Site is active for an extensive period.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site.
- Cover, seed or fence stockpiles to prevent wind whipping.
- Ensure all vehicles switch off engines when stationary - no idling vehicles.
- Avoid the use of diesel or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
- Impose and signpost a maximum-speed-limit of 15 mph on surfaced and 10 mph on unsurfaced haul roads and work areas.
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems.
- Ensure an adequate water supply on the Site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment.
- Ensure equipment is readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.
- Avoid bonfires and burning of waste materials.
- Ensure effective water suppression is used during deconstruction operations. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground.

Surface Water Management

4.48 The contractor will prepare a detailed Surface Water Management Plan and site-specific Erosion and Sediment Control Plan, which will minimise discharge of potentially polluted site water to nearby drains and overland flow routes. This will include points such as:

- No polluted water is to be discharged from the Site.
- Sediment and erosion controls are to be regularly inspected to ensure sufficient capacity.
- Wheel washes are to be implemented on site.
- Drainage of surface runoff and de-watering effluents to settling tanks to remove suspended solids prior to discharge to sewer or removal by a suitably licenced waste operator.
- Storage of chemicals and hazardous materials within bunded areas, with adequate capacity (of 110%). Bunded areas are to be regularly inspected to ensure that sufficient capacity is available.
- Prevention of spills and leaks.

Alternatives

4.49 Schedule 4 of the EIA Regulations requires that an ES should provide a description of reasonable alternatives considered by the Applicant which are relevant to the project and its specific characteristics, and an indication of the main reasons for the chosen option including a comparison of environmental effects. This is provided below.

Site Alternatives

4.50 The Beehive Centre is not performing well, with expenditure per sqm less than half the equivalent amount in the adjacent Cambridge Retail Park. By comparison, demand for employment space within Greater Cambridge is at record high levels, and there is currently a significant shortfall in available floorspace, as reported in the Cambridge Office & Laboratory Occupational Market Update prepared by Bidwells and submitted in support of the planning application. Current demand is dominated by Life Science and Tech sectors, and the lack of supply of high-quality wet labs, dry labs and office floorspace is considered to be a hindrance to business growth in Cambridge. The Proposed Development will therefore help to alleviate some of the acute supply shortages in Cambridge.

4.51 When considering the points above, no alternative sites have been considered by the Applicant because as described above, the existing site is underperforming, therefore it would be sensible to redevelop the Site into a new life science and innovation park which would provide much needed office and laboratory space within Cambridge.

Masterplan Evolution

4.52 The masterplan has undergone significant design development since the initial pre-application consultation in 2021. This has been influenced by the TVIA and heritage assessments and through a series of workshops with planning officers, Historic England, and the public. Feedback on the scheme has been taken on board and resulted in the final scheme that forms this outline application.

4.53 The following section highlights the key changes that were made to the design of the Proposed Development.

2021 - Initial Pre-Application

4.54 The first iteration of the Proposed Development was submitted through a series of three pre-application sessions over the course of 2021 that covered the principles of the development, ground floor activation and townscape, with an initial response provided by officers that would inform the initial stages of the design development throughout 2022. This can be seen in **Figure 4.2**.

Figure 4.2: Proposed Design at Pre-application 2021 February 2022

4.55 The following changes were made following Pre-application 1:

Plan Changes

- Plot D was rotated to create skyline gap between C and D in east-west views.
- Plot G was extended towards Plot F to allow greater change at upper levels.

Massing Changes

- Plot F & G: Upper level setbacks were increased for the benefit of York Street and Mill Road Bridge viewpoints.
- Plot H: Increase depth of setback was increased for the benefit of York Street viewpoint.
- Plot M: Upper Levels were re-profiled in order to improve quality of space adjacent to Silverwood close Boundary.

4.56 The above changes are shown in **Figure 4.3** which subsequently reduced visual impacts at the adjacent Conservation Area as well as at York Street and Mill Road Bridge.

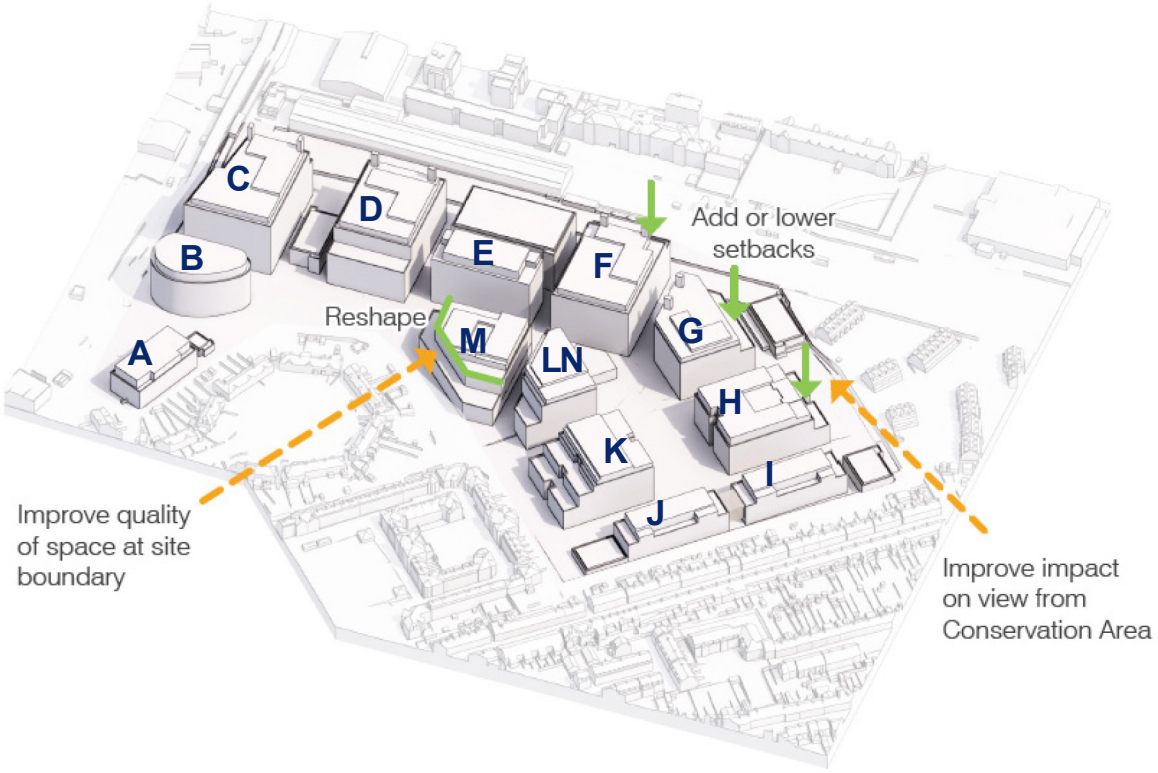

Figure 4.3: Proposed Design at February 2022

May 2022

Plan Changes

- Plot B was removed in order to preserve and improve the important green space adjacent to Coldham's Lane roundabout.
- Plot E was rotated 90 degrees and paired with Plot 3 to add another massing break to the skyline in east-west views.

Massing Changes

- Plot C: Upper levels were sculpted to mitigate footprint increase.
- Plots F, G & H: building heights were reduced by 1 storey for the benefit of York Street and Mill Road Bridge viewpoints.

4.57 The above changes are shown in **Figure 4.4.** The reduction in height at plots F, G & H reduced the potential for visual impacts again at York Street and Mill Road Bridge.

June 2022

4.58 Following a pre-application meeting with the Design Review Panel and Historic England, the following changes were made:

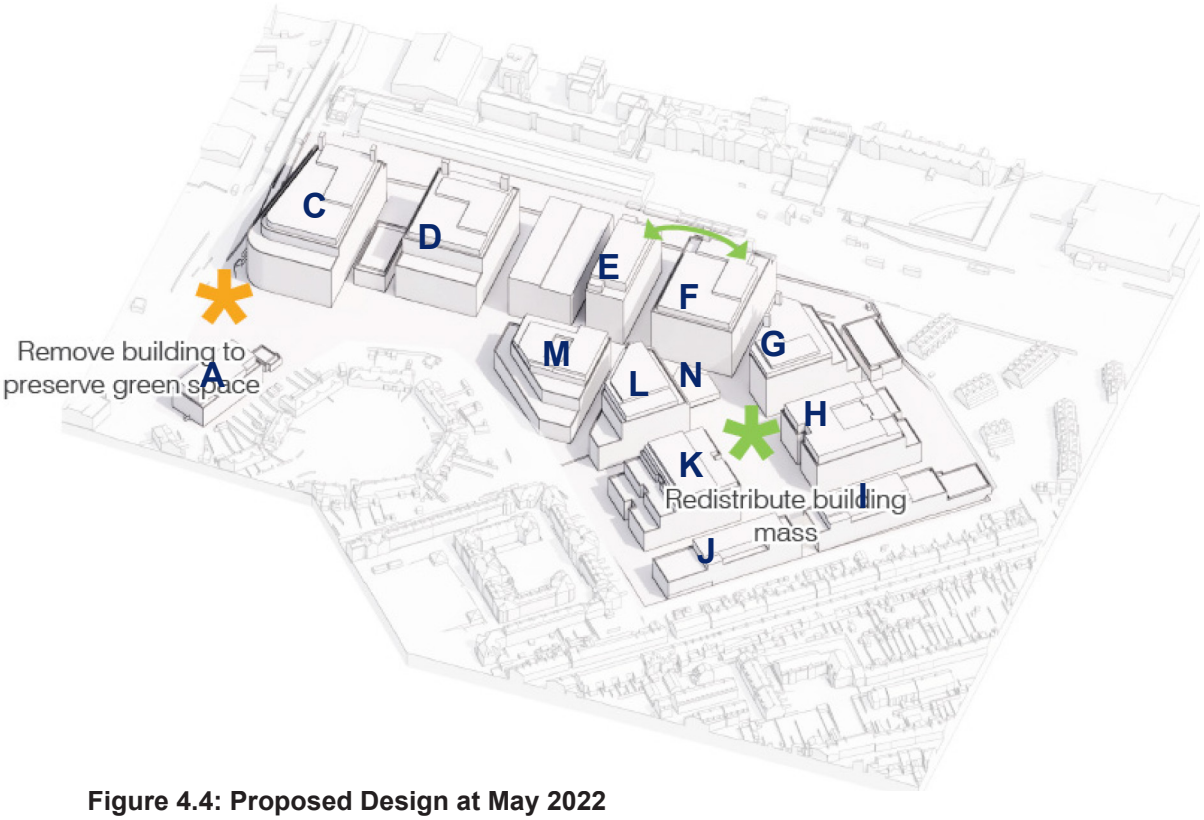

Figure 4.4: Proposed Design at May 2022

Plan Changes

- Plot A: Plan area decreased to avoid conflict with all but one TPO tree.
- Plot C: Building footprint area was reduced and form was refined.
- Plot D: Building footprint was increased and divided into 'paired buildings' form.
- Plot E: was removed in favour of revised Plot F.
- Plot F: Building footprint was increased and divided into 'paired buildings' form.
- Plots H & K: a massing break was introduced to the north and south facades to create building elements with reduced scale.
- Plot I & J: were realigned to increase the gap from Rope Walk boundary.

Massing Changes

- Plot C: the width was reduced to create more slender form in east west views.
- Plot D: Spilt form and vary heights of each element.
- Plot F: Spilt form and vary heights of each element by reducing height of southern element.
- Plot K: height was reduced by one storey.
- Plot L: height was reduced by one storey.

4.59 The above changes are shown in **Figure 4.5.** The reduction in height in the southern part of the site reduced the potential for visual impacts.

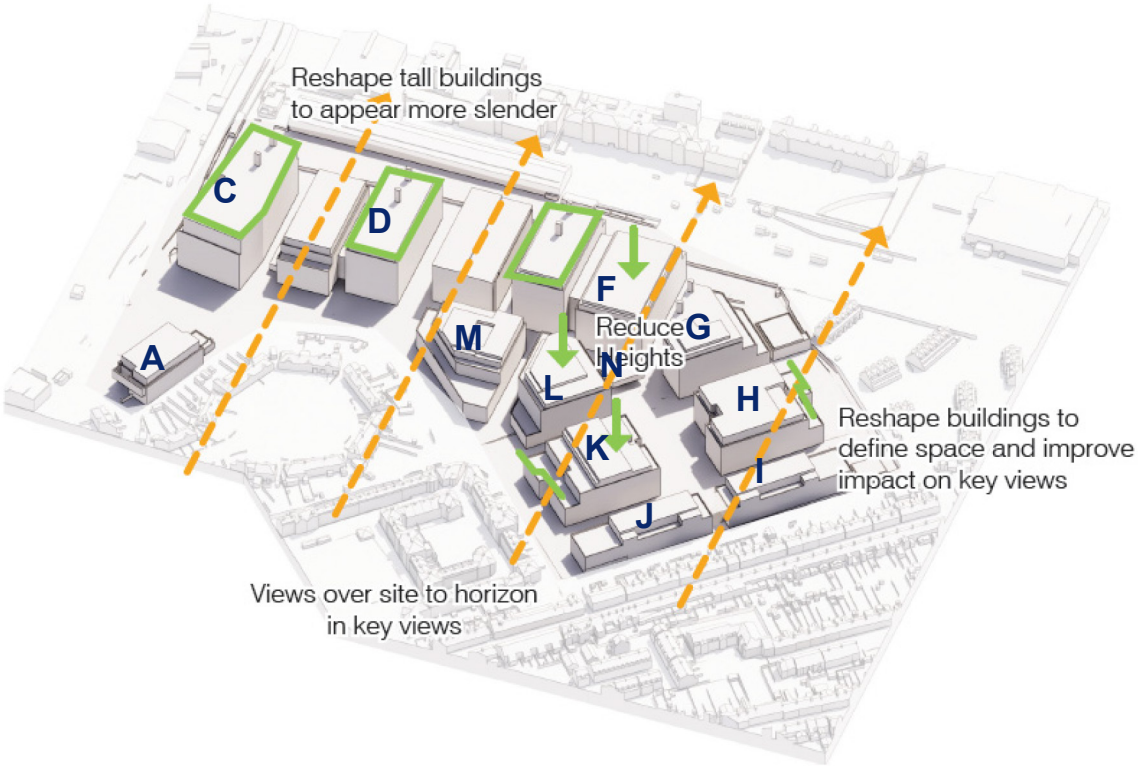

Figure 4.5: Proposed Design at June 2022

September 2022

4.60 Following a combined heritage workshop and pre-app design review, the following changes were made:

Plan Changes

4.61 Plot F: Building footprint was amended to increase central 'gap' between paired building volumes.

Massing Changes

4.62 The following height reductions were undertaken to reduce maximum height of the Proposed Development and improve impact and relationship with skyline and key heritage assets, thereby reducing the potential for heritage and townscape/visual impacts.

- Plot C: Reduction in height by 2 storeys.
- Plot D: Reduction in height by 1 storey.
- Plot F: Reduction in height by 2 storeys.
- Plot 3: Reduction in height by 1 storey.

4.63 The above changes are shown in **Figure 4.6.**

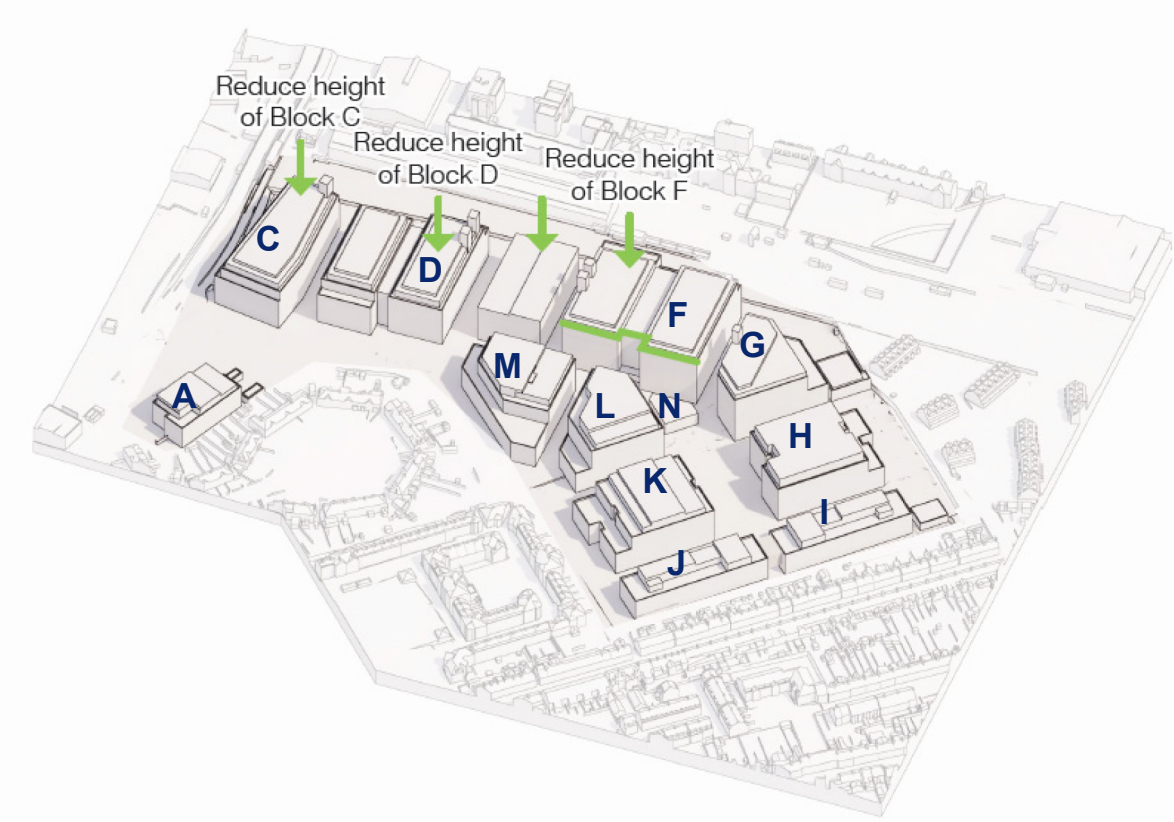

Figure 4.6: Proposed Design at September 2022

February 2023

4.64 Following a live massing workshop with planning officers, a new approach to skyline form was explored which prioritised a more varied form, reduced impact on Coldham's Common and limited points of height visible in long distance views. This reduced the potential for visual impacts at sensitive receptors.

4.65 No plan changes were made but the following massing changes were included:

- Plot A: Reduction in height by 1 storey.
- Plot C: Reduction in height by 1 storey.
- Plot D: Reduction in height by 2 storeys.
- Plot F: Height of building was increased by 1 storey.
- Plot G: Height of building was increased by 2 storeys.
- Plot H: Reduction in height by 1 storey.

4.66 The above changes are shown in **Figure 4.7.**

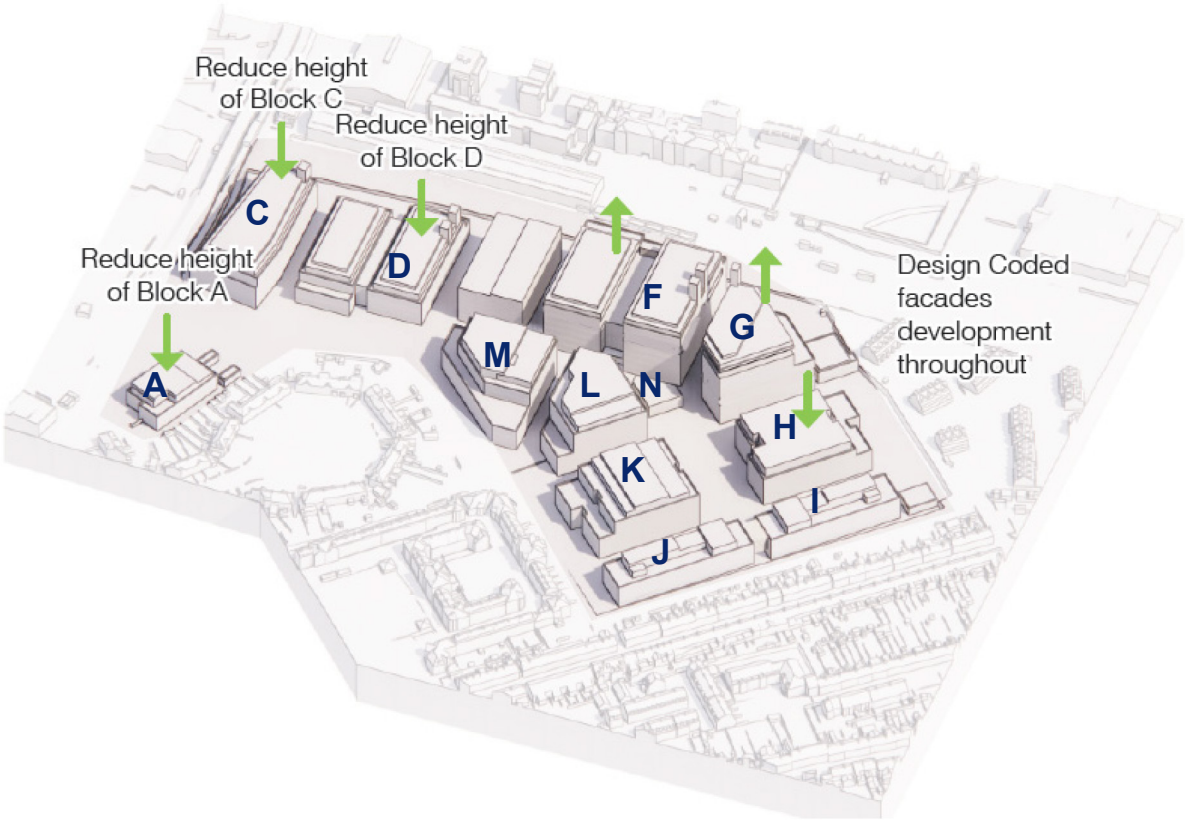

Figure 4.7: Proposed Design at February 2023

4.67 Following the output of the massing workshop it was agreed that while there was some merit in the proposed skyline reshaping, the maximum height of the Proposed Development and wider impact that carried was too great. The final iteration of the Proposed Development aimed to keep the best elements of the workshop while reducing the overall visual impact.

4.68 No plan changes were made but the following massing changes were included:

- Plot C: building height was increased by 1 storey.
- Plot F: building height was increased by 1 storey and the footprint of the final floor was significantly reduced.
- Plot G: Reduction in height by 2 storeys.
- Plot H: building height was increased 1 storey.
- Plot L: building height was increased by 1 storey.

4.69 The above changes are shown in **Figure 4.8.**

Figure 4.8: Final Stage of the Masterplan Evolution

Townscape Evolution

4.70 Impacts on building heights were evident as part of the consultation process. Feedback from the consultation events have informed the design codes submitted as part of the planning application and building heights were amended following the first exhibition to reduce townscape appearance and reduce the height of plots A&D at the north of the Site.

Conclusion

4.71 It has been demonstrated in this chapter, that the proposals have developed and evolved in response to the TVIA and heritage assessments undertaken by the consultant team and included within the ES, but also through detailed engagement with statutory consultees and Planning Officers as part of the masterplan process. The Applicant and their design team consider this is the most appropriate solution to meet the development requirements identified, after having regard to those environmental assessments and engagement with stakeholders to provide the best quality solution for the Proposed Development.

4.72 The next chapter of this ES sets out the planning policy context, insofar as it relates to the Proposed Development.

Planning Policy Context

5.0 Planning Policy Context

Introduction

5.1 The planning policy context for the Proposed Development is set out in detail in the Planning Statement, submitted separately as part of the documents accompanying this planning application. The Planning Statement describes how the Proposed Development complies with policy, and sets out the Applicant's case for development. This ES is objective to arguments about policy compliance, and instead provides information about the planning policy context within which this EIA has been proposed. To this end, this ES Chapter provides an overview of planning policies which have been considered in the EIA; individual chapters assessing particular environmental topics provide more detail on relevant policies as they relate to specific topics.

Development Plan Policy

5.2 The development plan for Cambridge City is formed of the Cambridge Local Plan (2018).

5.3 In relation to the Proposed Development, the most pertinent policies of the Cambridge Local Plan include:

- **Policy 1: The presumption in favour of sustainable development:**

  "Planning applications that accord with the policies in this local plan will be approved without delay, unless material considerations indicate otherwise".

- **Policy 2: Spatial strategy for the location of employment development:**

  "The strategy will be to support Cambridge's economy, offering a wide range of employment opportunities, with particular emphasis on growth of the Cambridge Cluster of knowledge-based industries and institutions and other existing clusters in the city, building on existing strengths in 'knowledge-based' activities.

  "Proposals that help reinforce the existing high technology and research cluster of Cambridge will be supported. The Council will work closely with relevant partners, including the universities and The Business Board, to attract employment in such activities.

  "Employment development will be focused on the urban area, Areas of Major Change, Opportunity Areas and the city centre.

  "The Council's aim is to ensure sufficient land is available to allow the forecast of 22,100 new jobs in Cambridge by 2031, including some 8,800 in B-use class (offices and industry). Therefore, provision has been made for the development of at least 12 hectares of employment land (net) from April 2011 to March 2031…"

- **Policy 5: Sustainable transport and infrastructure**

  "Development proposals must be consistent with and contribute to the implementation of the transport strategies and priorities set out in the Cambridgeshire Local Transport Plan (LTP) and the Transport Strategy for Cambridge and South Cambridgeshire (TSCSC).

  "Cambridge City Council, Cambridgeshire County Council and developers will work together to achieve the objectives and implement the Cambridge-specific proposals in the LTP and the TSCSC, with particular emphasis on securing modal shift and the greater use of more sustainable forms of transport.

"In addition, Cambridge City Council will work with partners to support the implementation of transport schemes that will improve linkages across the region and by doing so increase the use of sustainable transport modes to get to and from Cambridge."

- **Policy 6: Hierarchy of centres and retail capacity**

  The Site is not identified as a retail centre within the hierarchy. However, the Site is primarily under retail use and the Development includes some retail use.

  "Any retail developments proposed outside these centres must be subject to a retail impact assessment, where the proposed gross floorspace is greater than 2,500 sq. m…"

- **Policy 8: Setting of the city**

  The Site is not on the urban edge of Cambridge; it is not within or abutting green infrastructure corridors or the Cambridge Green Belt, open spaces or the River Cam corridor, which are locations specifically referenced in Policy 8. However, it lies close to Coldham's Common (Green Belt), and this context has been fully considered in the Proposed Development through the landscape/townscape and visual impact assessment work, which has informed the design evolution.

  "Development on the urban edge, including sites within and abutting green infrastructure corridors and the Cambridge Green Belt, open spaces and the River Cam corridor, will only be supported where it: following issues:

  a. responds to, conserves and enhances the setting, and special character of the city…

  b. promotes access to the surrounding countryside/open space, where appropriate…

  d. includes landscape improvement proposals that strengthen or recreate the well-defined and vegetated urban edge, improve visual amenity and enhance biodiversity."

- **Policy 28: Carbon reduction, community energy networks, sustainable design and construction, and water use**

  "All development should take the available opportunities to integrate the principles of sustainable design and construction into the design of proposals. Promoters of major development, including redevelopment of existing floor space, should prepare a Sustainability Statement as part of the Design and Access Statement submitted with their planning application, outlining their approach to the following issues:

  a. adaptation to climate change

  b. carbon reduction

  c. water management

  d. site waste management

  e. use of materials…"

- **Policy 40: Development and expansion of business space**

  "New offices, research and development and research facilities are encouraged to come forward within the following locations:

  …b. In the areas around the two stations…

  Proposals for the development of these uses elsewhere in the city will be considered on their merits and alongside the policies in Section Three of the plan.

Development of larger employment sites, with multiple occupiers, should consider whether they want to provide shared social spaces within the site, to enhance the vitality and attractiveness of the site."

- **Policy 55: Responding to context**

  "Development will be supported where it is demonstrated that it responds positively to its context and has drawn inspiration from the key characteristics of its surroundings to help create distinctive and high quality places. Development will:

  a. identify and respond positively to existing features of natural, historic or local importance on and close to the proposed development site.

  b. be well connected to, and integrated with, the immediate locality and wider city.

  c. use appropriate local characteristics to help inform the use, siting, massing, scale, form, materials and landscape design of new development."

- **Policy 56: Creating successful places**

  "Development that is designed to be attractive, high quality, accessible, inclusive and safe will be supported. Proposals should:

  a. provide a comprehensive design approach that achieves the successful integration of buildings, the routes and spaces between buildings, topography and landscape.

  b. create streets that respond to their levels of use while not allowing vehicular traffic to dominate.

  c. create attractive and appropriately-scaled built frontages to positively enhance the townscape where development adjoins streets and/or public spaces.

  d. ensure that buildings are orientated to provide natural surveillance.

  e. create active edges on to public space by locating appropriate uses, as well as entrances and windows of habitable rooms next to the street.

  f. create clearly defined public and private amenity spaces that are designed to be inclusive, usable, safe and enjoyable.

  g. be designed to remove the threat or perceived threat of crime and improve community safety.

  h. use materials, finishes and street furniture suitable to the location and context.

  i. create and improve public realm, open space and landscaped areas that respond to their context and development as a whole and are designed as an integral part of the scheme.

  j. embed public art as an integral part of the proposals as identified through the Council's Public Art Supplementary Planning Document.

  k. ensure that proposals meet the principles of inclusive design, and in particular meet the needs of disabled people, the elderly and those with young children.

- **Policy 57: Designing new buildings**

  "High quality new buildings will be supported where it can be demonstrated that they:

  a. have a positive impact on their setting in terms of location on the site, height, scale and form, materials and detailing, ground floor activity, wider townscape and landscape impacts and available views.

b. are convenient, safe and accessible for all users.

c. are constructed in a sustainable manner and are easily adaptable.

d. successfully integrate functional needs such as refuse and recycling, bicycles and car parking.

e. design measures to reduce the environmental impact of the buildings, such as renewable energy systems and other rooftop plant and services, in an architecturally integrated way….

h. include an appropriate scale of features and facilities to maintain and increase levels of biodiversity in the built environment."

- **Policy 59: Designing landscape and the public realm**

"External spaces, landscape, public realm, and boundary treatments must be designed as an integral part of new development proposals and coordinated with adjacent sites and phases. High quality development will be supported where it is demonstrated that:

a. the design relates to the character and intended function of the spaces and surrounding buildings.

b. existing features including trees, natural habitats, boundary treatments and historic street furniture and/or surfaces that positively contribute to the quality and character of an area are retained and protected.

c. microclimate is factored into design proposals and that public spaces receive adequate sunlight.

d. materials are of a high quality and respond to the context to help create local distinctiveness.

e. an integrated approach is taken to surface water management as part of the overall design.

f. a coordinated approach is taken to the design and siting of street furniture, boundary treatments, lighting, signage and public art.

g. trees and other planting are incorporated, appropriate to both the scale of buildings and the space available.

h. species are selected to enhance biodiversity through the use of native planting and/or species capable of adapting to our changing climate.

i. the design considers the needs of all users and adopts the principles of inclusive design."

- **Policy 60: Tall buildings and the skyline in Cambridge**

"Any proposal for a structure that breaks the existing skyline and/or is significantly taller than the surrounding built form will be considered against the following criteria:

a. location, setting and context – applicants should demonstrate through visual assessment or appraisal with supporting accurate visual representations, how the proposals fit within the existing landscape and townscape;

b. impact on the historic environment – applicants should demonstrate and quantify the potential harm of proposals to the significance of heritage assets or other sensitive receptors (view of, backdrop and setting), assessed on a site-by-site basis but including impact on key landmarks and viewpoints, as well as from the main streets, bridges and open spaces in the city centre and from the main historic approaches, including road and river, to the historic

core. Tall building proposals must ensure that the character or appearance of Cambridge, as a city of spires and towers emerging above the established tree line, remains dominant from relevant viewpoints as set out in Appendix F;

c. scale, massing and architectural quality – applicants should demonstrate through the use of scaled drawings, sections, accurate visual representations and models how the proposals will deliver a high quality addition to the Cambridge skyline and clearly demonstrate that there is no adverse impact;

d. amenity and microclimate – applicants should demonstrate that there is no adverse impact on neighbouring buildings and open spaces in terms of the diversion of wind, overlooking or overshadowing, and that there is adequate sunlight and daylight within and around the proposals; and

e. public realm – applicants should show how the space around tall buildings will be detailed, including how a human scale is created at street level…"

- **Policy 61: Conservation and enhancement of Cambridge's historic environment**

  "To ensure the conservation and enhancement of Cambridge's historic environment, proposals should:

  a. preserve or enhance the significance of the heritage assets of the city, their setting and the wider townscape, including views into, within and out of conservation areas;

  b. retain buildings and spaces, the loss of which would cause harm to the character or appearance of the conservation area;

  c. be of an appropriate scale, form, height, massing, alignment and detailed design which will contribute to local distinctiveness, complement the built form and scale of heritage assets and respect the character, appearance and setting of the locality;

  d. demonstrate a clear understanding of the significance of the asset and of the wider context in which the heritage asset sits, alongside assessment of the potential impact of the development on the heritage asset and its context; and

  e. provide clear justification for any works that would lead to harm or substantial harm to a heritage asset yet be of substantial public benefit, through detailed analysis of the asset and the proposal."

- **Policy 62: Local heritage assets**

  "…Where permission is required, proposals will be permitted where they retain the significance, appearance, character or setting of a local heritage asset.

  Where an application for any works would lead to harm or substantial harm to a non-designated heritage asset, a balanced judgement will be made having regard to the scale of any harm or loss and the significance of the heritage asset."

National Planning Policy

5.4 The National Planning Policy Framework ('the Framework' or 'NPPF') represents up-to-date Government planning policy and is a material consideration that must be taken into account where it is relevant to a planning application or appeal. This includes the presumption in favour of development found at paragraph 11 of the Framework.

5.5 Key sections of the Framework include:

- Chapter 2: Achieving sustainable development.
- Chapter 4: Decision-making.
- Chapter 6: Building a strong, competitive economy.
- Chapter 8: Promoting healthy and safe communities.
- Chapter 9: Promoting sustainable transport.
- Chapter 11: Making effective use of land.
- Chapter 12: Achieving well-designed places.
- Chapter 14: Meeting the challenge of climate change, flooding and coastal change.
- Chapter 16: Conserving and enhancing the historic environment.

5.6 The remainder of the ES now provides the detailed assessment into the environmental effects of the Proposed Development on the following:

- Air Quality;
- Cultural Heritage;
- Flood Risk, Drainage and Water Resources;
- Ground Conditions and Contamination;
- Noise and Vibration;
- Socio Economics;
- Townscape and Visual;
- Transport;
- Cumulative Assessment; and
- Conclusions.

Air Quality

6

6.0 Air Quality

Introduction

6.1 This chapter addresses the air quality impacts of the Proposed Development. It has been prepared by Waterman Infrastructure and Environment to assess the impacts of the Proposed Development in relation to the effects it would have on the local air quality.

6.2 This chapter is supported by the following appendices:

- **Appendix 6.1**: Summary of Relevant Legislation, Planning Policy and Guidance

Potential Impacts

6.3 This chapter assesses the following likely significant effects of the Proposed Development on the environment with respect to air quality:

Construction

6.4 Temporary generation of dust arising from the construction works leading to potential dust nuisance to surrounding sensitive receptors; and

6.5 Temporary changes in traffic-related emissions during the construction works as a result of changes in traffic generated by such works / activities.

Operational Development

6.6 Qualitatively considers the potential air quality concentrations future uses of the Development would be exposed to.

Methodology

6.7 The Air Quality Assessment was undertaken in accordance with the Scoping Opinion received from Cambridge City Council (CCC) prepared on 3 February 2023. As requested, reference was made to the following planning and supplementary advice:

- Planning Policy 36 of the Cambridge City Local Plan;
- The Cambridge City Air Quality Action Plan;
- Greater Cambridge Sustainable Design and Construction SPD (2020); and
- Emerging national policy relating to $PM_{2.5}$ and the new limit value of 10µg/m^3.

Air Quality Standards and Objectives

UK Air Quality Objectives

6.8 The Government has established a set of air quality standards and objectives to protect human health. The current AQS was published in July 2007 and sets out the objectives for Local Planning Authorities (LPA) in undertaking their LAQM duties. The AQS objectives apply at locations where members of the public are likely to be regularly present and are likely to be exposed over the averaging period of the objective. Box 1.1 of Defra's Local Air Quality Management Technical Guidance (LAQM.TG22) explains the locations where these objectives apply.

6.9 The AQS objectives in relation to air pollutants relevant to this assessment are summarised in

Table 6.1.

Table 6.1: National Air Quality Strategy Objectives

POLLUTANT	OBJECTIVE		DATE BY WHICH OBJECTIVE IS TO BE MET
	CONCENTRATION	MEASURED AS	
Nitrogen Dioxide (NO_2)	200µg/m^3	1 hour mean not to be exceeded more than 18 times per year	31/12/2005
	40µg/m^3	Annual Mean	31/12/2005
Particulate Matter (PM_{10}) [(a)]	50µg/m^3	24 hours mean not to be exceeded more than 35 times per year	31/12/2004
	40µg/m^3	Annual Mean	31/12/2004
Particulate Matter ($PM_{2.5}$) [(b)]	Target of 15% reduction in concentrations at urban background locations	Annual Mean	Between 2010 and 2020
	25µg/m^3	Annual Mean	01/01/2020

Notes: (a) Particulate matter with a mean aerodynamic diameter less than 10 microns (or micrometres – µm)

(b) Particulate matter with a mean aerodynamic diameter less than 2.5 microns

World Health Organization Global Air Quality Guidelines

6.10 The latest World Health Organization (WHO) Global Air Quality Guidelines were published in September 2021. The guidelines set out recommendations on air quality concentration levels (AQC) levels, together with interim targets, shown in **Table 6.2**.

Table 6.2: Summary of WHO AQC Levels

POLLUTANT	AVERAGING TIME	INTERIM TARGET				AQC LEVEL
		1	2	3	4	
Nitrogen Dioxide (NO_2)	Annual	40	30	20	-	10
	24-hour [a]	120	50	-	-	24
Particulate Matter (PM_{10})	Annual	70	50	30	20	15
	24-hour [a]	150	100	75	50	45
Particulate Matter ($PM_{2.5}$)	Annual	35	25	15	10	5
	24-hour [a]	75	50	37.5	25	15

Notes: [a] 99th percentile (i.e. 3–4 exceedance days per year).

6.11 The WHO recognises that while the achievement of the AQG levels should be the ultimate goal, this might be a difficult task for many countries. Therefore, gradual progress in improving air quality, marked by the achievement of interim targets, should be considered a critical indicator of improving health conditions for populations.

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023

6.12 The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 sets the following targets:

- Annual Mean $PM_{2.5}$ concentration in ambient air must be equal to or less than 10 µg/m³ by the end of 31st December 2040; and
- At least a 35% reduction in population exposure when compared with the average population exposure in the baseline period (1st January 2016 to 31st December 2018) by the end of 31st December 2040.

Construction Methodology

Sensitivity of Receptor

6.13 For the Air Quality Assessment, the sensitivity of all receptors were determined to be high. The construction assessment does not consider individual sensitive receptors. All sensitive receptors within 350m of the Application Site boundary or within 50m of the routes used by construction vehicles on the public highway up to 500m from the entrance(s) to the Application Site have been considered.

Dust Emissions

6.14 The assessment of the effects from demolition and construction activities in relation to dust has been based on the IAQM's Guidance on the Assessment of Dust from Demolition and Construction, 2014 (IAQM Construction Guidance) and the following:

- Consideration of the Works and their phasing; and
- A review of the sensitive uses in the area immediately surrounding the Site.

6.15 The IAQM Construction Guidance indicated that receptors within 350m of the boundary of a site, and within 50m of construction routes, would be sensitive to emissions and nuisance dust from construction activities. Following the IAQM Construction Guidance, construction activities can be divided into the following four distinct activities:

- Demolition – any activity involved in the removal of an existing building;
- Earthworks – the excavation, haulage, tipping and stockpiling of material, but may also involve levelling the site and landscaping;
- Construction – any activity involved with the provision of a new structure; and
- Trackout – the movement of vehicles from unpaved ground on a site, where they can accumulate mud and dirt, onto the public road network where dust might be deposited.

6.16 The IAQM Construction Guidance considers three separate dust impacts, with the proximity of sensitive receptors being taken into consideration for:

- Annoyance due to dust soiling;
- Potential impacts on human health due to significant increase in exposure to PM_{10}; and
- Harm to ecological receptors (any sensitive habitat affected by dust soiling).

6.17 A summary of the four-step process undertaken for the demolition and construction dust assessment, as set out in the IAQM Construction Guidance, is presented in **Table 6.3**.

Table 6.3: Summary of the IAQM Construction Guidance for Undertaking a Dust Assessment

STEP		DESCRIPTION
1	Screen the Need for a Detailed Assessment	Simple distance-based criteria are used to determine the requirement for a detailed dust assessment. An assessment would normally be required where there are 'human receptors' within 350m of the boundary of the site and/or within 50m of the route(s) used by construction vehicles on public highway, up to 500m from the site entrance or 'ecological receptors' within 50m of the boundary of the site and/or within 50m of the route(s) used by construction vehicles on public highway, up to 500m from the site entrance.
2	Assess the Risk of Dust Impacts	The risk of dust arising in sufficient quantities to cause annoyance and/ or health or ecological impacts should be determined using three risk categories: low, medium and high based on the following factors: The scale and nature of the works, which determines the risk of dust arising (i.e., the magnitude of potential dust emissions) classed as small, medium or large; and The sensitivity of the area to dust impacts, considered separately for ecological and human receptors (i.e., the potential for effects) defined as low, medium or high.
3	Site Specific Mitigation	Determine the site-specific measures to be adopted at the site based on the risk categories determined in Step 2 for the aforementioned four activities. For the cases where the risk is 'insignificant' no mitigation measures beyond those required by legislation are required. Where a local authority has issued guidance on measures to be adopted these should be taken into account.
4	Determine Significant Effects	Following Steps 2 and 3, the significance of the potential dust effects should be determined, using professional judgement, taking into account the factors that define the sensitivity of the surrounding area and the overall pattern of potential risks.

Construction Vehicle and Plant Exhaust Emissions

6.18 The IAQM Construction Guidance on assessing construction impacts states:

"Experience of assessing the exhaust emissions from on-site plant (also known as non-road mobile machinery or NRMM) and site traffic suggests that they are unlikely to make a significant effect on local air quality, and in the vast majority of cases they will not need to be quantitatively assessed. For site plant and on-site traffic, consideration should be given to the number of plant/ vehicles and their operating hours and locations to assess whether a significant effect is likely to occur. For site traffic on the public highway, if it cannot be scoped out, then if should be assessed using the same methodology and significance criteria as operational traffic impacts."

6.19 For the outline application, as the construction vehicle numbers and construction phasing is indicative, it was considered that a quantitative assessment of the exhaust emissions from construction vehicle and plant exhaust emissions is not required. Accordingly, a qualitative assessment is deemed appropriate and is provided in this Chapter.

6.20 In accordance with the IAQM Construction Guidance and EPUK / IAQM Guidance, if required, the impact of construction vehicle exhaust emissions would be modelled for each detailed phase of the Development - secured by a suitably worded planning condition.