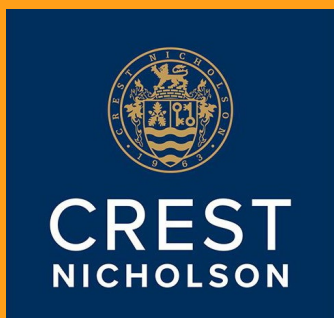


Barkham Square, Arborfield Green, Wokingham

Environmental Impact Assessment Scoping Opinion Report for
Crest Nicholson Operations Limited (Chiltern Division)
6 December 2024
Our Ref: SRS/24-02200/EIASco



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Quality Assurance

This report has been prepared within the quality system operated at Rapleys LLP according to British Standard ISO 9001:2015.

We confirm that the undersigned is an appropriately qualified and experienced Chartered Surveyor/Planner [delete as appropriate] experienced in the commercial property sector.

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1 INTRODUCTION

- 1.1 Rapleys LLP has been instructed by Crest Nicholson Operations Limited (Chiltern Division) ('Crest') to undertake an Environmental Impact Assessment (EIA) Scoping Opinion Report for the Proposed Development of Barkham Square, Wokingham (the 'Site').
- 1.2 An outline planning application is being prepared for the scheme to comprise up to 660 residential C3 dwellings, up to 50 Elderly Care C2 dwellings, associated open space, allotments, green and blue infrastructure including the provision of Suitable Alternative Natural Greenspace (SANG) and associated highway/drainage and other services to the north of the immediately adjacent the Arborfield Green Garden Village. Access is proposed off Langley Common Road, with allotments and SANG car park only accessed off Commonfield Lane.
- 1.3 The Site is concurrently being promoted through the Wokingham Local Plan review process and there have been a number of discussions which are ongoing, with the Council. **Appendix 1** identifies the boundaries of the Site. The Scoping Area generally reflects this, although for some topics such as transport, ecology and landscape/visual impact, depiction of the scoping area on a plan is not practicable as the potential influence of the Proposed Development extends beyond the Site boundaries and immediately adjacent land (see paragraph 5.5).
- 1.4 The intention is to submit an outline planning application with access in detail, in the Autumn, in order to show deliverability and support the promotion of the Site through the Local Plan review.

LEGISLATIVE CONTEXT

- 1.5 The requirement for an EIA is derived from EU Directive no. 2011/92/EU. This directive is transposed into UK law through the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ('The Regulations'). The EIA Regulations require that prior to the grant of planning permission the likely significant effects of a project on the environment should be assessed.
- 1.6 The outcome of this process will be the production of an Environmental Statement (ES) submitted with the planning application. The ES shall consist of the Scoping Study, the EIA main text, a set of Technical Appendices and a Non-Technical Summary (NTS).

Screening Opinion

- 1.7 A Screening Opinion has not been requested in this instance. The client has made the decision to undertake an EIA for the Proposed Development to accompany any planning application that may ultimately be submitted.

Scoping Report/Opinion

- 1.8 In order to refine the information and aspects of the environmental topics that the EIA will consider, this Scoping Report has been produced with the intention that the Council can subsequently adopt this document as the formal Scoping Opinion confirming the EIA content to accompany the planning application for the Site. The ES is being prepared on this basis and will take account of any subsequent matters identified by the Council as necessary. Giving this ongoing review process, this Scoping Opinion Report will not be revised and re-issued. Changes to the scope in response to findings or stakeholder comments will be summarised in the ES.
- 1.9 The purpose of the Scoping Opinion Report is to identify the likely SIGNIFICANT effects of the Proposed Development that need to be considered in depth within the EIA and the scope of this assessment. Potential environmental effects have been considered in relation to the following key stages of development –
- Construction,
 - New infrastructure and land use change – the development,
 - Operation of the completed scheme.
- 1.10 Regulation 15 of the EIA Regulations allows for a request for a Scoping Opinion from the Local Planning Authority (LPA) and requires the following to be submitted:
- A plan sufficient to identify the land,
 - A brief description of the nature and purpose of the development, including its location and technical capacity,
 - An explanation of the likely significant effects of the development on the environment, and

- Such other information or representations as the person making the request may wish to provide or make.

1.11 The Scoping Report includes, as a minimum, the information required. It is produced in accordance with the requirements of the EIA Regulations. It is not concerned with matters under other environmental regulatory contexts, albeit there may be some overlap.

1.12 The Scoping Report identifies those topics which have been scoped out of the ES and the reasons why these are considered not to cause SIGNIFICANT effects as a result of the Proposed Development. Where appropriate, stand-alone assessment reports for these topics, outside of the remit of the EIA Regulations, will be submitted as part of the planning application documentation in any event.

Structure Of the Scoping Report

1.13 This Scoping Report is structured as follows –

- Background Context of the Development – providing a summary of the background history to the development as well as the physical environment context (site and surroundings,)
- Proposed Development – providing information of the proposal,
- Alternatives – describing alternatives considered, where appropriate,
- Approach to the Environmental Impact Assessment – setting out the approach, describing the baseline conditions, construction methods and approach to cumulative assessment where relevant,
- Technical Assessment chapters – setting out the likely significant effects,
- ES Structure – identifying the intended structure of the resulting ES.

EIA TECHNICAL TEAM

1.14 This Scoping Report is prepared by Rapleys LLP with technical input from competent experts as set out in the table. The ES will be prepared by the competent experts and will be accompanied by a statement outlining the relevant expertise or qualifications of such experts.

Scoping Topic Areas For Consideration	Responsibility
Transportation	I-Transport
Ecology including Trees	RPS/SJA Trees
Historic Environment	RPS – Archaeology Iceni – Built Heritage
Landscape and Visual	Bradley Murphy Design
Water/Drainage/Flood Risk	Ardent
Air Quality	Create Consulting
Noise/Acoustics	Create Consulting
Ground Conditions	GRM Development Solutions
Climate Change	AES
Society Economy and Population	Rapleys
Cumulative Impacts	Rapleys

2 BACKGROUND CONTEXT OF THE DEVELOPMENT

SITE

- 2.1 The Site extends to circa 61.3ha and is presently principally comprised of poor-quality agricultural grassland, DEFRA classification Grade 4. It is relatively unconstrained by physical constraints, with a narrow corridor in the central spine of the Site within Flood Zone 3 based around the Barkham Brook which flows northwards into the River Loddon. The remainder of the Site lies within Flood Zone 1. Ditches within the Site are associated with the linear boundary vegetation which includes native hedgerows. Three ponds are found within the Site.
- 2.2 There is sporadic mature tree coverage across the Site, including veteran trees and parcels of ancient woodland. Tree Preservation Orders (TPOs) are found along the southern boundary of the Site (individual trees) and a woodland TPO on the northern boundary of the western part of the Site.
- 2.3 The Site is gently undulating, rising to the north. The western part of the Site features a localised plateau at circa 55+AoD beyond the central hedgerow with the landform sloping gently downhill east towards the Barkham Brook corridor; the eastern part of the Site features a localised ridgeline at circa 60m+ AoD running east/west centrally with the landform then gently sloping westwards towards the Barkham Brook corridor.
- 2.4 There is an existing access into the Site from Commonfield Lane to the east.
- 2.5 There are no listed buildings or Scheduled Ancient Monuments (SAM) within the Site and the Site is not included within any conservation area.
- 2.6 There are no landscape or ecological designations within the Site boundary.

SURROUNDINGS

- 2.7 The Site is located adjacent to the northern boundary of Arborfield Green and circa 1km south-west of Barkham Village. Wokingham lies to the north-east at circa 2km and Reading a circa twenty-minute drive to the north.
- 2.8 Arborfield Green is a strategic development site (the regeneration of the former Arborfield Garrison), where Crest are the lead developer. Crest has planning permission for circa 2,000 dwellings and associated infrastructure and facilities, including a district centre. It is currently under construction.
- 2.9 Barkham Village also provides a range of local facilities, including a pub, restaurants and a supermarket.
- 2.10 The Site lies within the buffer zone to the Thames Basin Heaths Special Protection Area (SPA). The Longmoor Bogg SSSI and Local Nature Reserve (LNR) lie some 230m to the east of the Site.

PLANNING HISTORY

- 2.11 There is no planning history of relevance associated with the Site.
- 2.12 As already noted, the Site is being promoted as a location for between 500-1,000 dwellings as part of the Wokingham Local Plan review process, with representations submitted at appropriate times, including –
- The call for sites, and
 - The two Regulation 18 consultations.
- 2.13 The Site is a proposed allocation for 600 dwellings in the Regulation 19 Plan which is currently out for consultation.

PLANNING POLICY

- 2.14 The Development Plan comprises the Retained Policy NRM6 of the revoked SouthEast Plan, the Berkshire Mineral and Waste Local Plan alongside the Wokingham Core Strategy, adopted 2010, and the Adopted Managing Development Delivery Local Plan of February 2014 (MDD) and the Gypsy and Traveller Local Plan. It identifies development and growth up to 2026 and includes the allocation of Arborfield Green.
- 2.15 The Site lies outside of any defined settlement boundary and is therefore 'countryside'. The Site is not located within any national designations or protected landscapes although the very north-eastern edge is partially within the Barkham and Bearwood Valued Landscape. The Site is not a conservation area and does not contain any listed buildings, although Barkham Square farmhouse is Grade II listed and lies to the north-east of the Site's northern boundary.
- 2.16 Within the ES, the individual environmental technical topic chapters will detail the policies, both national and local, relevant to the topic chapter.

3 PROPOSED DEVELOPMENT

- 3.1 The Proposed Development is as a north-eastern urban extension to Arborfield Green on a total Site area of circa 61.3ha, comprising:
- Up to 660 C3 dwellings including affordable,
 - Up to 50 Elderly Care dwellings, Class C2,
 - Open space/play space/landscaping,
 - Green/blue infrastructure including new wetlands, drainage/attenuation ponds,
 - Circa 18.63ha Sustainable Alternative Natural Green Space (SANG)/natural/semi-natural space,
 - Access – the main vehicular access is provided from Langley Common Road in the west. A secondary vehicle access is also provided to the east from Commonfield Lane to serve the allotments and SANG car park only,
- 3.2 A Concept Masterplan is evolving as further survey and study work progresses, however, the Proposed Development parameters identified above are not expected to be exceeded.
- 3.3 The following principles form the basis of the Proposed Development design:
- Retention of existing central watercourse corridor and associated woodland,
 - Retention of woodland, hedgerows and trees within the Site and along boundaries as far as possible and existing ponds, and using these as part of a network of green/blue infrastructure corridors linking open spaces of high natural and amenity values within and outside the Site and where biodiversity enhancement can take place,
 - Creation of SANG,
 - Encouraging travel by sustainable modes through high quality pedestrian/cycle links throughout the Site and linking to the existing and to be created facilities of the Arborfield Green development and the wider area.

Enabling Works and Phasing

- 3.4 Various enabling works will be required to take place prior to the development of the Site. Construction will take place over a number of years (circa 8 years). The enabling works are therefore likely to be phased in accordance with the overall scheme and are likely to involve:
- Provision/relocation of services,
 - Drainage infrastructure to manage surface water run-off,
 - Off-site transport improvements to support the construction and operation of the Proposed Development. These will be reported within the ES.
- 3.5 The likely phasing is as follows:
- February 2027 – start on Site
 - October 2027 - first house delivery with circa 32 delivered in 2027/28
 - Completion of housing delivery and Site in 2034/35.
- 3.6 Green infrastructure and SANG would be delivered in accordance with requirements of a S106 Agreement.

4 ALTERNATIVES

- 4.1 Under Schedule 4 Part 2 of the Regulations, an ES must provide 'an assessment of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects'.
- 4.2 The consideration of alternatives can be viewed in a number of ways, including alternative site locations and different designs/layouts/access strategies, etc.
- 4.3 Crest has acquired control of the Site subject to this scoping report and as such therefore no appropriate alternative site locations that can be considered. Furthermore, the Council is considering the Site as a potential development location alongside a number of other alternative locations through its Local Plan process. It is not, therefore, necessary for Crest to consider these further.
- 4.4 Alternatives, therefore, will be considered in terms of alternative designs/layouts/access strategies and the 'no development' scenario.

5 APPROACH TO ENVIRONMENTAL IMPACT ASSESSMENT

5.1 The approach to identify the scope of the ES is set out below.

SCOPING METHODOLOGY

5.2 This report considers all the aspects of the environment which are likely to be significantly affected by the Proposed Development, and which are identified in paragraph 4 of Schedule 4 of the EIA Regulations.

5.3 The potential effects of the Development on these topics will be considered during the construction and operational phases (as relevant). The EIA Regulations require only an assessment of the likely significant effects, and thereby a judgement of significance must be applied. Therefore, those environmental topics, or specific elements of topics, which are not considered to have significant environmental effects (notably as a result of survey work already undertaken) are to be excluded, i.e., SCOPED OUT.

5.4 In this Scoping Report, the aspects of the environment are considered on a topic-by-topic basis and the baseline conditions, likely receptors (particularly those classed as sensitive) and any likely significant environmental effects that would arise from the Development are set out. If potential significant effects are identified, the assessment sets out the methodology which will be adopted in reviewing those effects.

5.5 The **spatial scope** of the assessment takes into account the following –

- The physical extent of the Proposed Development as defined by the redline area of the Site Location Plan (and ultimate application boundary),
- The nature of the baseline environment and the way the impacts are likely to be propagated, for example, through defining source-pathway-receptor approaches, or visual envelopes/zones of theoretical visibility or specific highways/junctions within the wider network, and
- The pattern of governmental administrative boundaries providing the planning policy context.

5.6 Appropriate study areas for each technical topic chapter will be defined by the specialists undertaking the assessment and set out in those chapters within the final Environmental Statement (ES).

5.7 The **temporal scope** of the assessment relates to the time periods over which impacts may be experienced, i.e., permanent, temporary, long term, short term and will be established for each technical topic chapter. The anticipated project construction programme is referenced in chapter 3 of this Scoping Report and will be refined and reported within the ES.

Description of environmental baseline and future baseline

5.8 The existing and likely future environmental conditions in the absence of the Proposed Development are known as the 'baseline conditions' and form the basis of the assessment. Each technical topic chapter will include a description of the current baseline conditions.

5.9 The future baseline represents the conditions that would exist in the absence of the Proposed Development at the time that the development is likely to be implemented – for example these changes might include construction and operation of other consented developments in the immediate locality.

5.10 Arborfield Green is immediately adjacent to the Proposed Development with a permission for Crest of circa 2,000 dwellings – circa 1,802 have reserved matters consent of which 1,389 are occupied and a further 207 are under construction. It is anticipated, that at the commencement of construction of this Barkham Square Proposed Development (anticipated to be circa 2027 earliest), the remaining Crest Arborfield Green will have been built out. Therefore, for the purposes of this ES, Arborfield Green is considered to be part of the baseline.

5.11 The Studios area immediately south of the Proposed Development is included within the Crest Arborfield Green development from a spatial/physical site and landscape and visual point of view (i.e., as part of the original permission); however, an additional circa 320 dwellings are actually likely to be built on this part of the Site taking the overall Crest Arborfield Green development beyond the permitted 2,000. These additional dwellings are therefore to be considered as a planned future development and will be assessed as part of the cumulative effects assessment, notwithstanding that there is no planning permission for them as yet.

5.12 In all other instances, projects that have an existing allocation, extant planning permission or are under construction will be considered as part of the cumulative effects assessment (see Chapter 6 for cumulative effects assessment methodology and projects).

Approach to identifying significant effects

- 5.13 The approach to identifying significant effects is one that develops an understanding of the baseline (as set out above in this case); identifying environmental effects and evaluating the magnitude of their effect to determine significance; considering whether there will be cumulative effects; designing mitigation methods to minimise significance of effects and identifying residual effects post mitigation.

Approach to assessing significant effects

- 5.14 The methodology used to assess the relative magnitude of significance of the effects to be reviewed in the ES is based on a standardised scale, as set out in Tables below. Each of the specialist consultants have based their assessment on this general approach, but the accepted good practice criteria within each topic may lead, in some cases, to modifications to this general approach.
- 5.15 The magnitude of an impact is judged by comparing the extent of the change with particular standards and criteria relevant to each environmental topic. The magnitude is generally estimated as combination of the magnitude of the impact and the sensitivity or value of the affected receptor. The process is described in tables 5.1 and 5.2.

Table 5.1 Magnitude of impact

Magnitude of Impact	Description – include subject specific examples
High	Very large or large change in environmental conditions (e.g., pollution levels, destruction of habitat). This could result in exceedance of Statutory objectives and/or breaches of legislation.
Medium	Intermediate change in environmental conditions.
Low	Small change in environmental conditions.
Negligible	No discernible change in environmental conditions.

Table 5.2: Sensitivity/value of receptor

Sensitivity/value of a Receptor	Description
Very High	Change resulting in a high degree of deterioration or improvement.
High	Change resulting in a material deterioration or improvement.
Medium	Change resulting in a low degree of deterioration or improvement.
Low	Change resulting in a negligible degree of deterioration or improvement.
Neutral	No change.

- 5.16 Table 5.3 proves a matrix showing impact significance and magnitude of change. The effect is determined by combining the predicted magnitude of impact with the assigned sensitivity of the receptor. The level at which a significant effect arises will be provided within the topic method section of each chapter of the ES. Unless stated otherwise, effects of moderate significance or above are considered to be significant in EIA terms.

Table 5.3: Impact significance matrix

	Magnitude of Impact			
Sensitivity/ value of a Receptor	High	Medium	Low	Negligible
Very High	Substantial	Substantial	Moderate	Slight
High	Substantial	Moderate	Slight	Negligible
Medium	Moderate	Slight	Negligible	Negligible
Low	Slight	Negligible	Negligible	Negligible

5.17 The following commentary in the technical topic chapters is not meant to be exhaustive but rather a brief description of the potential sources of environmental impact, in order that the appropriate level of resources can be applied to surveys, predictive assessments and where necessary mitigation of the potential impacts.

5.18 The purpose of the scoping process is to ensure, by means of proper responses from consultees, that all of the relevant issues are set out and agreed to provide a basis for the EIA process.

6 TECHNICAL ASSESSMENT CHAPTERS

- 6.1 This chapter of the report reviews the potential environmental topics on a sequential basis and follows an identical format in terms of presenting the information:
- Baseline conditions setting out those conditions with reference to any assessments already undertaken and any likely receptors,
 - Potential environmental effects,
 - Assessment methodology to be adopted, and
 - Potential mitigation.
- 6.2 It should also be noted that in each case, the ES will identify and consider appropriate mitigation measures and resulting residual impacts. Cumulative impacts will be covered within each topic chapter, but then drawn together in a separate chapter.
- 6.3 Similarly in each case, appropriate national and local policy and guidance, technical guidance and industry references will be used throughout the assessment process and ES.
- 6.4 The baseline for the assessment assumes that the adjacent Arborfield Green development, as currently under construction, will be built out by the time the Proposed Development commences, thus providing the social and community facilities that are part of the planning permission. It is therefore anticipated that there will be no overlap in terms of the construction periods.

TRANSPORT

Baseline Conditions

- 6.5 Traffic surveys will be undertaken to understand the existing traffic flows on the local highway network in proximity of the Site. These will be classified surveys which will determine the type of vehicle, including heavy goods vehicles. Data for the following highway links will be obtained:
- Langley Common Road,
 - Barkham Road,
 - Barkham Street,
 - Commonfield Lane,
 - Biggs Lane.
- 6.6 Background traffic flows are predicted to increase on local roads irrespective of whether the Proposed Development goes ahead. The baseline data will incorporate background traffic growth using TEMPro factors for the assessment year and take into account any planned improvements to the local highway network capacity.
- 6.7 The future year, generally the completed and operational development, for the assessment is 2035.

Assessment Methodology

- 6.8 Categories of sensitivity and magnitude of impact will be defined and assessed following the principles set out by the Environmental Assessment of Traffic and Movement published by the Institute of Environmental Management and Assessment (July 2023) (the 'IEMA Guidelines').
- 6.9 The principles and methodologies held in the Design Manual for Roads and Bridges (National Highways) (DMRB) will also be referred to where appropriate and relevant for specific topic areas to support the assessment. In particular, the suite of documents in relation to Sustainability & Environment (LA 101 to LA 120).
- 6.10 The potential environmental effects in relation to transport mainly arise from increases in traffic flows and heavy goods vehicle movements along the adjacent highway links during operational and construction periods.
- 6.11 The scale and extent of assessment will focus on those highway links where traffic flows are predicted to increase by more than 30% or the number of heavy goods vehicles will increase by more than 30%.
- 6.12 The effect of significance is to be derived from measures of the magnitude (or scale) of the change and the sensitivity (or importance) of the receptors affected. Categories of sensitivity and magnitude will be defined and assessed to determine the significance of the effect following the principles set out by the IEMA Guidelines.

6.13 The IEMA Guidelines list the following environmental impacts relative to transport:

- Severance of communities,
- Road vehicle driver and passenger delay,
- Non-motorised user delay,
- Non-motorised user amenity,
- Fear and intimidation on and by road users,
- Road user and pedestrian safety,
- Hazardous/ large loads.

Potential Mitigation

6.14 Appropriate mitigation will be identified. Such mitigation may include:

- Travel Plan to encourage future occupants of the development to travel sustainably,
- Appropriate vehicle access strategy, providing connections to influence traffic distribution,
- Comprehensive sustainable travel strategy to encourage sustainable modes of travel and reduce car use,
- High quality walking and cycling connections between Arborfield Green, the wider area and through the Site,
- Environmental improvements along the adjoining road network and within the Site,
- Traffic management measures along sensitive local roads, including traffic calming.

Areas to be Scoped Out of the EIA

6.15 There are no specific areas of the standard transport assessment to be scoped out of the EIA.

ECOLOGY

6.16 The evaluation of ecological resources will be made with reference to the guidance on ecological impact assessments published by the Chartered Institute on Ecology and Environmental Management (CIEEM 2018 v1.2). This process includes:

- Identifying those ecological features likely to be affected, and
- Evaluating the features to identify those of importance i.e. those which if their integrity or conservation status were affected, national or local policies (or in some cases legislation) would be triggered.

6.17 The level of value of specific ecological receptors will be assigned using a geographic frame of reference using the following terms: International; National; Regional; County; District; Local; and/or within the Site boundary only.

Baseline Conditions

6.18 Preliminary Ecological Appraisals have previously been undertaken by AECOM in 2017, by CSA Environmental in March 2023, consisting of a desk study and field walkover. More recently, RPS has been undertaking detailed surveys during the 2023/24 season.

6.19 There are no statutory ecological designations covering any part of the Site. The Thames Basin Heaths SPA closest parcel lies 3.5km to the south-west. The SPA itself covers approximately 8,275ha across Surrey, Hampshire and Berkshire and is characterised by open heathlands, scrub and woodland and is regularly used by Dartford Warblers, woodlarks and nightjars. The Longmoor Bog SSSI and the Longmoor Bog LNR are within circa 230m to the south of the Site. It is an example of a base-poor mire, with its main feature being well-developed carr of alder, grey willow, downy birch and alder buckthorn as well as an area of wetland heath dominated by purple moor-grass. There are also some 12 non-statutory designations within 2km of the Site which are predominantly woodland habitats.

6.20 Within the Site there are several small parcels of Ancient Woodland, several veteran and notable trees.

- 6.21 Species-poor grassland dominates the Site with the field rotationally used for various types of animal grazing. Scattered bracken encroaches along the southern boundary. Dense scrub is found along most field boundaries, mainly bramble with some hawthorn and blackthorn.
- 6.22 Barkham Brook provides a riverine habitat through the centre of the Site and is circa 1-2m in width with a slow flow heading north to the River Loddon. Three ponds are present, two natural and one man-made. A number of ditches are also present associated with hedgerow boundaries. A number of oak trees are also present within a number of the hedgerows.
- 6.23 In terms of fauna, there are a considerable number of records of **Bats** in the vicinity of the Site, particularly to the south within the Arborfield Green development area. The mature trees on Site may contain potential roosts. The woodland, ponds, ditches and vegetated field boundaries provide suitable habitat for foraging and dispersing Bats.
- 6.24 An active **Badger** sett was identified within the Arborfield Green development area in the 2014 AECOM survey, and whilst the subject Site provides suitable habitat for foraging and sett building, there were few signs identified in 2023. Mammal holes and runs were present, but these could also be attributed to rabbits.
- 6.25 There is no evidence of **Dormouse** on the Site, although the woodland parcels and vegetated boundaries provide suitable habitat for nesting and foraging Dormouse.
- 6.26 There is no evidence of **Water Vole** or **Otter**.
- 6.27 The open grassland and woodland are suitable for a variety of **Bird** species. The Thames Basin Heaths SPA is designated for the presence of breeding **Dartford warbler**, **nightjar** and **woodlark**, but these species have specific habitat requirements (heathland and rotationally managed coniferous woodland) which are absent from the Site and are therefore considered to be unlikely present on the Site. The ponds provide ideal habitat for wintering birds and waterfowl.
- 6.28 Perimeter habitats adjacent to hedgerows within the Site are suited to **reptiles**; surveys identified both grass snake and slow worms on the Site.
- 6.29 The Site provides suitable habitat for **Great Crested Newt** and there are a number of potential breeding ponds within the immediate vicinity of the Site. Their presence on Site cannot be ruled out.
- 6.30 The Site is suitable for a variety of **invertebrates** including white-clawed crayfish, stag beetle and damsel and dragonflies although such habitat is restricted to the Barkham Brook corridor and blocks of ancient woodland.

Receptors

- 6.31 The key ecological receptors and features within the Site are:
- Hedgerows,
 - Trees/broadleaved woodland,
 - Scrub and ephemeral vegetation,
 - Ponds and watercourses,
 - Fauna found in the surveys.
- 6.32 In addition, the SSSI/SPA/LNR referenced are ecological receptors.

Potential Environmental Effects

- 6.33 The main potential effects are considered to be:

Construction Phase

- Land-take, i.e., habitat destruction and loss – temporary and permanent,
- Disturbance (visual, noise),
- Hydrology and pollution (dust generation, pollution of aquatic habitats), including changes to the hydrological regime of the and dust deposition in the SSSI/LNR,
- Lighting (construction),
- Construction site hazards.

Operation Phase

- Degradation of habitats,

- Disturbance to the identified fauna, notably Bats in terms of roosts, foraging and commuting corridors,
- Increased recreational pressure particularly on the Thames Basin Heaths SPA and the Longmoor Bog SSSI/LNR,
- Air quality, pollution and hydrology, and
- Permanent lighting.

Potential Mitigation

6.34 Mitigation measures will be employed to reduce any impacts that could occur as a consequence of the Proposed Development and a range of compensation and enhancement measures will be implemented in order to increase biodiversity and to create an overall ecological enhancement post-development, including -

- Construction Environmental (and Traffic) Management Plan,
- Replacement planting,
- Creation of buffer zones,
- Protection of root zones,
- Inclusion of bird and bat boxes, creation of new habitat,
- Sensitive lighting strategies,
- Creation of SANG, drainage mitigation strategies.

Assessment Methodology

6.35 The Site was subject to a Preliminary Ecological Appraisal based on a walk-over survey in early Spring 2023. Phase 2 surveys have also been undertaken (during 2023/24) for vegetation, badgers, bats, breeding birds, dormouse, great crested newt, invertebrates and reptiles due to the presence of suitable habitat on the Site. The most up-to-date survey data will be submitted as part of the ES. Where survey work is ongoing past the point of the submission of the ES and planning application, then that survey data will be submitted at the earliest opportunity in the context of Regulation 25 'further information'.

6.36 A background data search was completed, whereby the Berkshire Environmental Records Centre were contacted for any records of protected, rare or notable species within 2km of the Site. The MAGIC website was also interrogated.

6.37 An impact assessment will be carried out in accordance with best ecological practice.

Areas to be scoped out of the EIA/ES

6.38 There are no areas of standard ecological assessment that are to be scoped out of the EIA/ES.

HISTORIC ENVIRONMENT – BUILT HERITAGE AND ARCHAEOLOGY

6.39 The historic environment consists of archaeological remains, monuments, structures or heritage landscape within or immediately around the development site that are considered significant because of their historic, communal or aesthetic interest. Significance derives not only from a heritage asset's physical presence, but also from its setting. The setting of a heritage asset comprises the surroundings in which it is experienced. The extent of an asset's setting is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.

Baseline Conditions

6.40 There are no designated heritage assets within the Site boundary. There are no World Heritage Sites, Registered Parks and Gardens or Battlefields within 1km of the study area.

6.41 Two Scheduled Ancient Monuments (SAMs) are located within the existing Arborfield Garrison – a medieval moat (HER ref:01007) and Arborfield Infirmary Stables (HER Ref:01008) – these are considered unlikely to be subject to any effects arising from the Proposed Development as there is no intervisibility between them and the Proposed Development Site; consequently, the Proposed Development is not considered to have an impact on these designated assets through the alteration of their setting. A further Scheduled Monument, The Moated Site and Associated Enclosure at Church Farm (NHLE

ref.1013181) is located to the immediate east of the Site parcel proposed for Biodiversity Net Gain use. This moated site and associated enclosure at Church Farm comprises a moat ditch and below ground archaeological remains. There is no intervisibility between the proposed residential development Site and this Scheduled Monument. Principally, this is due to the mature and extensive tree cover around the boundaries of the monument itself, the intervening distance and intervening built development along Barkham Street. The Site parcel immediately to the west of the monument, proposed for Biodiversity Net Gain (BNG), will remain undeveloped. The proposed development is considered to have no potential to impact the significance of this designated archaeological heritage asset through the alteration of its setting.

- 6.42 There are several grade II listed buildings and a conservation area within the study area, but are not considered to be particularly sensitive to the Proposed Development –
- some 100m to the north-east of the Site – Barkham Square farmhouse,
 - to the north – Sparks Farm and the Bull Inn,
 - To the west - Arborfield Cross conservation area.
- 6.43 There are 5 Event entries recorded on the Berkshire HER that are located within the study site. These comprise the following:
- **EWK205** - A watching brief undertaken for Arborfield/Barking Relief Sewer Scheme recorded a possible section of a prehistoric burnt mound within the study site (MWK7238).
 - **EWK28, EWK31 and EWK32** - Between 1990 and 1993 the Berkshire Field Research Group undertook systematic fieldwalking within the study site.
 - **ERM278** - During the 1980s a survey of East Berkshire's archaeology was undertaken with the aim to obtain a fuller picture of past human activity in the area. Fieldwalking and Aerial Photographic interpretation was undertaken for the field to the south of the stream. No finds were retrieved during the fieldwalking (the entry shown on Figure 2a, MWK8592, is erroneous and refers to an Iron Age coin found in a back garden).
- 6.44 There have been a large number of archaeological investigations undertaken within the vicinity of the study site particularly in relation to the redevelopment of Arborfield Garrison. Previous archaeological works undertaken on the Garrison site between 2000 and 2016.
- 6.45 No evidence of human activity or artefacts of Palaeolithic date are recorded within the area. No evidence for Neolithic settlement or ritual activity is recorded within the area. Within the area the number of entries on the HER for the Bronze Age is low to moderate. Overall, the potential for the Site for the Neolithic is low/nil, whilst for the Bronze Age the potential is moderate.
- 6.46 Finds and features of the Iron Age are more numerous within the area, including at Arborfield Green, the Arborfield Cross Relief Road, Rooks Nest Farm and the Well House, Barkham Street. The potential for Iron Age activity to be present on the Site is therefore considered moderate.
- 6.47 Evidence of Roman activity is generally limited within the area. Individual artefacts have been found, such as fragments of tiles, pottery and ditches and gullies. The potential for Roman settlement is considered to be low/nil, but a moderate potential for Roman field ditches.
- 6.48 Early Medieval and late Medieval activity is low in the area and therefore the potential on the Site is considered to be low.

Receptors

- 6.49 The following are identified as potential receptors –
- Undiscovered buried archaeological evidence,
 - Nearby designated archaeological assets (SAM),
 - Setting of listed buildings and conservation area within the study area.

Potential Environmental Effects

- 6.50 Given the possibility of buried heritage assets within the Site, there is the potential for these to be truncated or wholly removed/destroyed during the construction works for the Proposed Development.

Potential Mitigation

- 6.51 Potential mitigation is likely to consist of -
- Archaeological evaluation to either remove/record potential buried assets,

- Preservation in situ where necessary and appropriate,
- Considerate scheme design such as use of green infrastructure/open space to avoid destruction of buried archaeological evidence.

Assessment Methodology

Built Heritage

- 6.52 The Council's consultants, AECOM, has considered the potential impact of development at Barkham Square on the built heritage assets in the vicinity as part of the Sustainability Appraisal work supporting the Local Plan review. The conclusion of this was that the Barkham Square site was 'notably free from constraint'.
- 6.53 Subsequent to the above, a desk-based assessment of the built heritage, alongside a site visit, has been undertaken by Icen Projects (January 2023), based on a concept of development across the eastern and western portions of the Site. This identified that there is only 1 Grade II listed building (Barkham Square farmhouse) within 100m of the Site boundary. This, alongside the historic southern part of Barkham around the church of St James some 200m to the north-east is potentially sensitive to encroachment and urbanisation of its immediate setting. However, the revised Masterplan Concept with the emphasis of SANG and additional planting in the eastern part of the Site (and the removal of all the previously proposed built development here), limits the urban encroachment and thus minimises the sensitivity. It is therefore considered that the Proposed Development would not have any impact on the significance of Barkham Square farmhouse.
- 6.54 Further north are the Grade II listed Sparks Farm and the Bull Inn. Both of these have undergone considerable later alteration which has harmed their significance. Whilst potentially sensitive to intrusions, they are of sufficient distance from the Site, which when combined with the proposed planting, landscaping and SANG (as now proposed), is not considered to be significant.
- 6.55 The Arborfield Cross conservation area lies to the west of the Site, but it is considered that the Proposed Development would not impact, given the distance from the conservation area together with the substantial buffering from existing tree cover and buildings. The conservation area is not a sensitivity.
- 6.56 The Icen desk-based assessment consequently concurs with the Council's Sustainability Appraisal that the Site is 'notably free from constraint'.

Archaeology

- 6.57 A Desk-Based Assessment (DBA) has been undertaken by RPS with respect to archaeology, the key findings of which have been referenced as part of the baseline conditions above.
- 6.58 Given the surrounding area and the historic environment work undertaken as part of the adjacent Arborfield Green Environmental Impact Assessment and planning application, and other field work assessments in the area, the DBA considers it highly likely that there is potential for buried remains to be located within the Site with resultant potential for significant environmental effects. The DBA recommends a geophysical survey of the Site prior to determination (this was undertaken in October 2024). An archaeological evaluation will also be undertaken, the scope and timing of which will be agreed in advance with the Council's Archaeological Advisors.

Areas to be Scoped out of the EIA/ES

- 6.59 Bearing in mind the above commentary in respect of the built heritage (paragraphs 6.52-6.56), it is proposed that consideration of the **built heritage is SCOPED OUT** of the EIA - a Heritage Setting Assessment in respect of the potential impact on the few listed buildings in the vicinity of the Site is to be submitted as a separate report outside of the remit of the EIA/ES.
- 6.60 As noted in paragraph 6.41 above, the DBA considers that there will be no impact on the SAMS arising from the Proposed Development. Consequently, further consideration of these are **SCOPED OUT** of the EIA/ES.

LANDSCAPE AND VISUAL

Assessment Methodology

- 6.61 A combination of desk-based and field assessment has been undertaken to establish the baseline conditions, identify and evaluate the sensitivity and value of key receptors, and to establish the level of predicted impacts upon them as a consequence of the Proposed Development (construction and operational effects would be assessed). Where impacts are identified and considered to be of importance, specific mitigation would be proposed to avoid or reduce the level of impact to an acceptable level.

- 6.62 The LVIA will aim to identify and describe the nature, scale and thus the importance of landscape and visual effects likely to arise, as a result of the Proposed Development, on the existing landscape features and character within the site and surrounding area, along with views from publicly accessible locations surrounding the site.
- 6.63 The LVIA methodology has been developed in accordance with the principles of good practice set out in the following published guidance, produced by the relevant professional organisations concerned with landscape and visual assessment:
- Guidelines for Landscape and Visual Impact Assessment, Third Edition (2013), (GLVIA3), Landscape Institute and the Institute of Environmental Management & Assessment,
 - GLVIA3 Statements of Clarification (2013 - 2015), Landscape Institute,
 - Natural England's 'An Approach to Landscape Character Assessment' (2014),
 - An Approach to Landscape Sensitivity Assessment (Natural England, 2019),
 - Landscape Institute Technical Guidance Note 06/19: Visual Representation of Development Proposals (LI, 2019), and
 - Landscape Institute Technical Guidance Note 02/21: Assessing Landscape Value Outside National Designations (LI, 2021).
- 6.64 Whilst linked, an assessment of the effects of development on landscape features, character and visual amenity are treated separately in LVIA. The overall approach used to identify and assess landscape and visual effects is summarised as follows (for detailed methodology, see Annex XX LVIA Methodology (Appendix 2)):
- Agree the scope of the assessment as set out within this scoping note (to be discussed separate to EIA Scoping with Wokingham Borough Council),
 - Collate baseline information through desk study research and field-based survey work, select appropriate landscape and visual receptors and establish their value,
 - Review the Proposed Development and determine the susceptibility of landscape and visual receptors to the nature of development proposed,
 - Combine value with susceptibility to determine sensitivity of landscape and visual receptors to the nature of the Proposed Development,
 - Describe the nature and magnitude of impact likely to be experienced by landscape and visual receptors as a result of the Proposed Development, without mitigation measures,
 - Judge the combination of sensitivity and impact to assess the scale of effects for landscape and visual receptors, without mitigation measures,
 - Describe mitigation measures to avoid or reduce the magnitude of any adverse impact,
 - Assess the scale of residual effects for landscape and visual receptors, following implementation of mitigation measures, and
 - Identify those effects that are considered important and relevant to decision making.
- 6.65 The LVIA will include an assessment of the likely effects for both the construction phase and for the operation of the site. Operational effects will be considered for both the year on completion of the development and for 15 years in the future when proposed mitigation planting would be maturing.
- 6.66 The LVIA will include an assessment of effects during the winter and summer, along with an assessment of effects during the daytime and night-time.
- 6.67 The LVIA will also include a review of relevant legislation and key National, Regional and Local Planning Policies – of relevance to the consideration of judgements on the value and sensitivity of the landscape or specific views.
- Baseline Conditions**
- 6.68 The baseline landscape and visual conditions have been informed by a combination of desk and field study, undertaken at various points during 2023 – 2024.
- 6.69 There are no statutory landscape designations within the 2km study area. The Site is not within a National Landscape, or National Park. It is not green belt.

Landscape Character

- 6.70 The preliminary study included a review of the following existing landscape character assessments, which describe National and District character within the study area:
- The Character of England: Landscape, Wildlife and Natural Features (2014), Natural England, and
 - Wokingham Borough Landscape Character Assessment (2019).
- 6.71 The Site lies within the following character areas which will be considered as part of the LVIA:
- National Character Area 129: Thames Basin Heaths,
 - Landscape Character Type LCT J: Settled and Farmed Clay,
 - Landscape Character Area LCA J2: Arborfield Cross and Barkham Settled and Farm Clay.
- 6.72 Given the extent of existing intervening urban form and substantial green infrastructure in the context surrounding the Site, the effect on all other district landscape character types and areas identified by the assessments noted above would be **negligible** at most. Therefore, no other National or District landscape character areas would be considered as part of the LVIA.
- 6.73 The Site lies within the Arborfield Cross and Barkham Settled and Farmland Clay Landscape Character Area (LCA). The Site demonstrates key characteristics associated with the LCA, including a gently undulating landscape, shallow wooded valley associated with the Barkham Brook, a strong wooded context provided by the mature hedgerows and in-field trees, combined with woodland belts, large arable and pasture fields bound by hedgerows and woodland and a sense of visual enclosure created by the wooded context.
- 6.74 The Wokingham Borough Landscape Character Assessment (2019) concludes that LCA J2: Arborfield Cross and Barkham Settled and Farmed Clay landscape has a *“modest capacity to accommodate change without detriment to character within an overall objective to enhance existing character. The key characteristics to be retained / respected in any change are the historic field system, habitats, moats, rural lanes and wooded valleys. Enhancements should include attempting better integration of the garrison in its landscape setting, and more general improvements to woodland, farmland and habitat management.”*
- 6.75 The contribution made by designated features to the value and character of the landscape will also be considered within this part of the assessment. Care will be taken to avoid double counting of effects assessed as part of other topics, such as heritage or ecology.
- 6.76 Features of note within 2km of the Site boundary include the following:
- There are no statutory ecological designations covering any part of the Site,
 - The Thames Basin Heaths SPA (Special Protection Area) lies within 10km, the closest part of the SPA being within 3.5km to the south-west of the Site - therefore in accordance with Local Plan Policy CP8, Proposed Development of the Site will require the provision of SANG,
 - The Longmoor Bog SSSI (Site of Special Scientific Interest) and the Longmoor Bog LNR (Local Nature Reserve) are circa 230m to the south of the Site. There are also 12 non-statutory designations within 2km of the Site, predominantly woodland habitats,
 - There are no statutory heritage designations covering any part of the Site,
 - **Listed Buildings** - Barkham Square Farmhouse (Grade II) and associated parkland setting are located directly adjacent to the Site, on the eastern boundary. Further afield, approximately 350m east of the Site (in the village of Barkham), are the Church of St James and Church Cottage (both Grade II). The northern part of Barkham village (at the junction between Barkham Street and Barkham Road, which is approximately 350m north of the Site) includes several other Grade II listed buildings including Sparks Farmhouse, The Bull Public House and Barkham Manor.
- 6.77 Within 2km of the Site lie Arborfield Cross Conservation Area and Bearwood College Historic Park and Garden (Grade II*). It is currently considered that these sites will not be impacted by the Proposed Development, however this will be considered further as part of the LVIA.

Landscape Resource

- 6.78 The Site extends to circa 62ha and is presently principally comprised of poor-quality agricultural grassland, with a DEFRA Agricultural Land Classification Grade 4. The Site parcels are relatively physically unconstrained, however the Barkham Brook corridor separates Site Parcels A & B - with the brook corridor within Flood Zone 3 and flowing northwards into the River Loddon. The remainder of the Site lies within Flood Zone 1. There is sporadic mature tree coverage across the Site, including veteran trees and parcels of ancient woodland. Ditches within the Site are associated with linear boundary

vegetation, which includes native hedgerows, and a series of three ponds are found within the Site. The Site is currently private and inaccessible to the public. Landscape features of note within the Site boundary, include the following:

- Ancient Woodland - Historic OS mapping 1892 - 1908 indicates that the Site once featured 'Kidgem Copse' - which overtime has been cleared, but remnants remain as part of the blocks of Ancient Woodland along the Site's southern boundary and along the Barkham Brook corridor,
- Ancient / Veteran Trees - A review of the Woodland Trust Ancient Tree Inventory (Woodland Trust, 2024), as of 26/06/2024, highlighted several veteran trees located on the north-eastern boundary and several 'notable' trees on the southern boundary of Site Parcel A,
- Tree Preservation Order (TPOs) - The Wokingham Borough Tree Preservation Orders map, highlights there are a number of single trees covered by TPO - along the southern boundary of Site Parcel A, southern boundary of Site Parcel B and a woodland TPO on the northern boundary of Site Parcel A,
- Barkham Brook and associated wetland - provide important ecological habitats including wet meadow and BAP priority habitat wet woodland.

6.79 As required by GLVIA3, the LVIA will assess the contribution that these resources make to the character and value of the landscape (including landscape quality / condition, scenic quality, rarity, representativeness, conservation interests, recreation value, perceptual aspects and any cultural associations), along with the likely impact and effect on this landscape resource.

Visual Impact

6.80 This initial visual analysis is based on the findings from a combination of desk-based and field survey work and is supported by a number of representative viewpoints (**Appendix 3** - Viewpoint Photographs).

6.81 From testing within the field, during both summer and winter seasons, there are several visual receptors and viewpoints that were discounted (due to lack of intervisibility with the Site) and it is not considered that residential development on the western part of the Site would substantially impact on these receptors (**Appendix 4** – Discounted Viewpoints).

6.82 The western part of the Site is generally visually well contained by existing tree, woodland and hedgerow boundaries, resulting in limited intervisibility with the wider landscape.

6.83 The majority of views towards the Site are enclosed, beyond anything more than near views, particularly from the north and south - with the exception of middle to long distance views experienced from Edneys Hill in the north-east and Arborfield Court in the west, due to the elevated, open, less vegetated nature of the pastoral landscapes in these locations.

6.84 The mature wooded nature of the area (provided by characteristic mature hedgerow and in-field trees, combined with woodland belts and ancient woodland) and the wooded horizons of the surrounding hills (Barkham Hill and The Coombes), creates a sense of enclosure and limits intervisibility with the Site.

6.85 Following consideration of the preliminary study area and extent of likely visual receptors (residential properties, PRoW and other publicly accessible locations) within and surrounding the Site, a series of viewpoint locations have been identified to represent the range of likely views of the Proposed Development and are summarised below.

6.86 Key visual **receptors** (places with potential views of the Site) include the following:

- Residential properties on the outer settlement edges of Arborfield Green whose properties directly interface with the Site,
- Residential properties on Langley Common Road whose properties directly interface with the Site,
- Residential properties on Barkham Road and Barkham Street, at Barkham village, in close proximity to the Site,
- Residential properties within Barkham old village – Area of Special Character (Policy TB26),
- The footpaths and bridleways that pass directly and in close proximity to the Site including - walkers on public footpath BARK 7 (adjacent to the Site's northern boundary, running east / west between Barkham Road and Barkham Street and walkers on public footpath BARK 9 on Church Lane,
- The footpaths and bridleways surrounding the Site in the near to middle distance including - receptors on the outer edge of California Country Park and Longmoor Bog Nature Reserve, on public bridleway BARK 14, walkers from Edneys Hill, on public footpath BARK 10 and walkers on public footpath ARBO 17 from the edge of Arborfield Court,
- Barkham Square Listed Building (Grade II) which directly interfaces with the Site,

- Road users on Langley Common Road and Commonfield Lane who directly interface with the Site.

Potential Mitigation

- 6.87 In terms of retaining the local character and protecting the visual amenity, the key elements of the proposed development design and embedded mitigation process are:
- The design of the proposed structure(s),
 - The siting and massing of the proposed structure(s),
 - The design and use of materials,
 - Colour scheme considerations, and
 - Landscape scheme design.
- 6.88 Further mitigation measures considered as part of the detailed LVIA (i.e., embedded mitigation) would include landscape buffer planting that would help to integrate the development into the local landscape. The landscape structure planting would strengthen the local landscape characteristic of rectilinear field patterns and a network of tree belts, whilst providing some screening and softening of the development's hard edges when experienced in local views. A landscape structure plan, with proposals for potential advance planting prior to construction, will be explored to aid the development of screening and integration of the landscape with the scheme.

Areas to be Scoped Out of the EIA/ES

- 6.89 There are no areas of the LVIA that are proposed to be scoped out of the EIA/ES.

WATER/DRAINAGE AND FLOOD RISK

- 6.90 The water resources chapter of the ES will assess the potential impacts of the development upon the hydrogeology and hydrology within the Site and surrounding area and also consider the effects of liquid waste generation and its subsequent management.
- 6.91 In terms of flooding, the ES will assess the impacts the development will have on fluvial, surface and foul water within the Site and surrounding area, including existing watercourses. Consideration of techniques to mitigate these influences will also be included.

Baseline Conditions

- 6.92 The Site lies within the catchment of the Barkham Brook which runs through the Site and is a tributary of the River Loddon. Boundary/hedgerow ditches and three ponds are also found within the Site.
- 6.93 The River Loddon is a tributary of the River Thames joining it at Wargrave, north-east of Reading. The tidal limit of the Thames is 30km downstream at Teddington and therefore there is no prospect of tidal flooding at the Site.
- 6.94 The majority of the Site lies within Flood zone 1, albeit a very small area associated with the Barkham Brook through the centre of the Site is Flood Zone 3 – this is considered manageable through the Masterplan Design Concept as all the proposed buildings and drainage features will be located outside the flood risk area.
- 6.95 Underlying geology is believed to be predominantly impermeable London Clay, with small areas of drift and Bagshot Beds. Consequently, there is potential for localised groundwater flooding.
- 6.96 The Site is not within a groundwater Protection Zone and does not overlie superficial deposit aquifer, although it does overlie a principal bedrock aquifer (Lower Greensand Group).

Receptors

- 6.97 The following receptors will be considered in the assessment:
- Ground water,
 - The on-site watercourses,
 - Future occupiers of the development and adjacent landowners,
 - The nearby SSSI/SPA/LNR hydrological regime.

Potential Environmental Effects

- 6.98 The following potential environmental effects will be considered:

- Risk of pollution of surface and/or ground waters on and off-site during construction,
- Risk of pollution of ground and surface waters on and off-site from the operational phase,
- Changes in run-off characteristics due to changes in impervious areas on the Site, both on and off-site, and
- Flood risks to, and generated by, the Proposed Development.

Potential Mitigation

- 6.99 Mitigation measures would be proposed to either avoid or reduce the impact of the Proposed Development, including the use of standard practices including CEMP.
- 6.100 The Drainage Strategy will be designed to deal with the 1:30 year and 1:100-year event, plus 40% climate change. It will be considered in the context of the hierarchy set out in H3 of the Building Regulations, 2010.
- 6.101 Ground conditions on the Site indicate infiltration is unlikely as an option. Attenuation basins and Suds are likely to be used, including other measures to reduce attenuation requirements such as porous paving, green roof, rain harvesting, etc.

Assessment Methodology

- 6.102 A Flood Risk Assessment (FRA) is required due to the size of the Site and will therefore be prepared in accordance with National Planning Policy Framework and its Technical Guidance. The FRA will be proportional to the scale and nature of the Proposed Development and will aim to demonstrate that it does not increase the risk of flooding elsewhere, particularly with regards to surface water runoff and fluvial flooding. The intention is to initially examine the flooding potential, outline storage requirements and locations, review existing drainage connections, and identify any offsite improvements that are required in relation to foul discharge.
- 6.103 The preparation of the FRA and an outline Drainage Strategy Report will be undertaken in line with the requirements for an outline planning application. The following will be undertaken:
- Liaison with the EA, Thames Water and the Council (acting as Lead Local Flood Authority) to agree scope of the FRA and obtain all relevant information,
 - Review the baseline information and the survey data of the final Site masterplan,
 - Review EA flood maps, historical flooding records and Site levels in order to confirm the extent of flooding,
 - A site visit to assess drainage constraints and flood risk,
 - Review existing drainage and make comments or recommendations including the purchase of sewer record plans,
 - Review geological desk study/site investigation and consider groundwater risk assessment in relation to groundwater flooding based upon discharge,
 - Prepare a preliminary drainage strategy (both foul and surface water networks) including calculations of greenfield discharge and development surface water attenuation requirement, and
 - Make allowance for the effects of climate change.

Areas to be Scoped Out of the EIA/ES

- 6.104 There are no areas of this topic that are proposed to be scoped out of the EIA/ES.

AIR QUALITY

- 6.105 Wokingham Borough has a declared Air Quality Management Area (AQMA) encompassing properties along the M4 and along part of the A329 as it passes under the M4, due to exceedances of NO₂. The Site is circa 3km south of this AQMA. Given the distance between the AQMA and the Site it is considered unlikely to be significantly affected by Site traffic.
- 6.106 The Council undertakes passive monitoring at background sites, the closest being WOK854, circa 3 km to the north-west at The Manor, Shinfield. No monitoring is undertaken for PM₁₀. As part of the environmental work for Arborfield Green, diffusion tube monitoring was undertaken at a large number of roadside locations surrounding the site. NO₂ concentrations were predicted to decrease at all monitoring locations in the future (2026) due to anticipated improvements to vehicle emissions.

regardless of development, however, detrimental effects were predicted as a result the development, although this was considered 'negligible' overall and 'slight adverse' at worst in the cumulative development scenario.

6.107 NO_x concentrations and nitrogen deposition within the Longmoor Bogg SSSI were also considered as part of the Arborfield assessment and predicted to be well below the EU limit of 30ug/m³ and therefore insignificant.

6.108 Similar conclusions were drawn for PM₁₀.

Potential Environmental Effects

6.109 The following potential environmental effects are identified as:

- The effects of construction phase dust and particulate matter (PM₁₀) emissions on public amenity, human health, and nearby ecologically sensitive sites, as well as emissions from construction equipment and construction traffic. The main air pollutants related to construction equipment and traffic are nitrogen dioxide (NO₂) and fine particulate matter (PM₁₀ and PM_{2.5}),
- Post-construction phase effects associated with emissions from road traffic. The main air pollutants related to traffic are nitrogen dioxide (NO₂) and fine particulate matter (PM₁₀ and PM_{2.5}), including their deposition within the ecologically sensitive locations – Thames Basin Heaths SPA and Longmoor Bogg SSSI.

Receptors

6.110 The following potential receptors are:

- Existing sensitive receptors which have the potential to experience adverse impacts such as any nearby schools or existing residents,
- Ecologically sensitive areas such as the SPA, SSSI, LNR.

Potential Mitigation

6.111 Potential mitigation measures are identified as:

- Best practice methods,
- Use of planning conditions to require restricted hours of operation, submission of a CETMP,
- Damping down and covering of lorries prior to leaving the Site,
- Use of wheel washing facilities on site to prevent dust migration,
- Careful stockpiling of soils.

Assessment Methodology

6.112 Information on existing air quality in the area proposed for development will be obtained from the UK Air Quality Archive, Defra website, relevant Wokingham Review and Assessment documents.

6.113 A desktop study would be undertaken to identify the location of any receptors that could be affected by the Proposed Development and an initial review of the existing or baseline air quality in the area.

6.114 The Council's Air Quality Officer will be consulted if monitoring is required.

6.115 The assessment will provide an evaluation of the potential changes in air quality arising from the construction of the proposed development. It would identify the potential sources of emissions and consider (through a qualitative assessment following IAQM guidance on the assessment of dust from demolition and construction) their potential effect regarding local air quality. Following assessment of construction impacts, appropriate dust mitigation measures would be proposed to minimise any adverse air quality impacts and reduce potential impacts to an acceptable level. Any potential effects during construction, however, are likely to be temporary and short-term and insignificant in air quality terms.

6.116 During the operational phase, potential air quality effects will be assessed using the ADMS Urban Dispersion Model, based on traffic data provided by the project transport consultant and the client/applicant. The assessment will establish the impact of the proposals on local air quality by modelling concentrations of NO₂, PM₁₀ and PM_{2.5} both with and without the development at identified receptor locations. Calculations will be undertaken for an agreed baseline year and the proposed year of opening with and without development in place.

6.117 Fundamental to determining the significance of air quality effects is the consideration of the magnitude of any changes in concentrations of the critical pollutants, NO₂, PM₁₀ and PM_{2.5}. Changes in pollutant

concentrations will be evaluated in terms of their relative effect on prescribed levels of air quality (as detailed within the IAQM and Environmental Protection UK Significance Criteria) to determine the priority consideration for the Proposed Development.

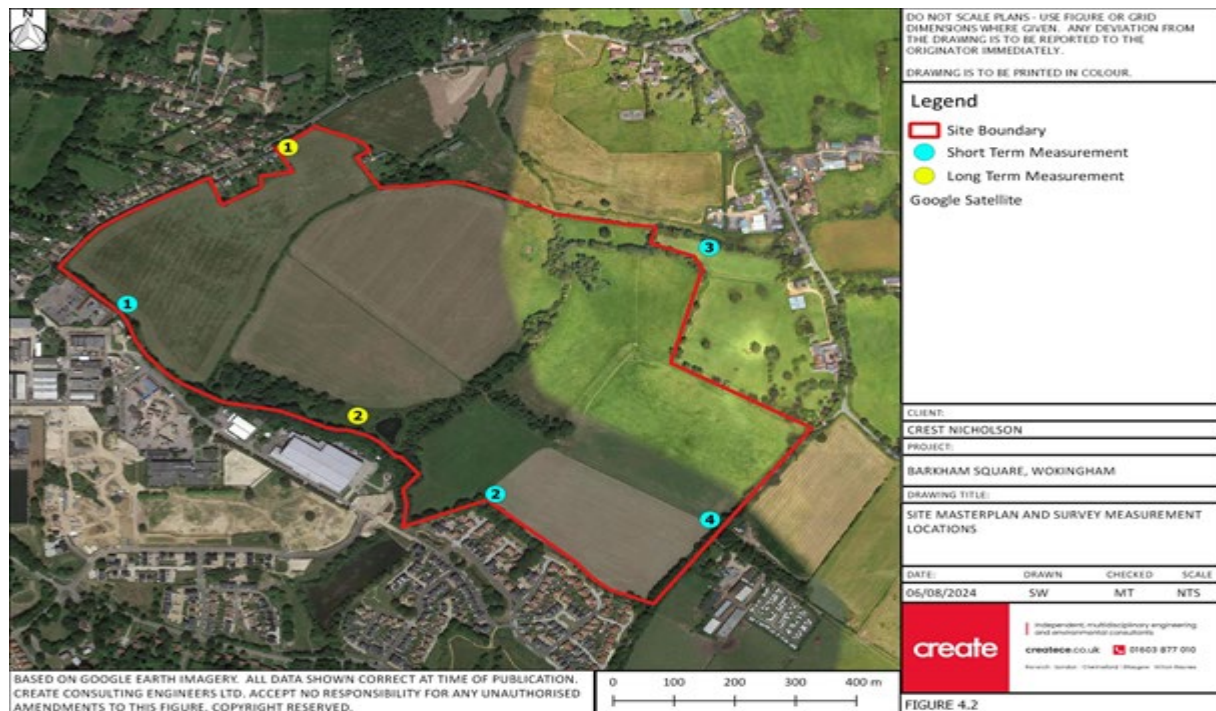
Areas Scoped Out of the EIA/ES

- 6.118 There are no areas of the standard air quality assessment that are to be scoped out of this EIA/ES.

NOISE AND VIBRATION

Baseline Conditions

- 6.119 A broad Site description is given in paragraphs 2.1-2.9 of this Scoping Opinion Report. The following additional observations pertain to the topic of noise.
- 6.120 Create Consulting has undertaken a baseline background noise survey – long term monitoring took place from 23 July 2024 for nine days, whilst short term monitoring took place on 1 August 2024. This has then been used to determine the level of risk across the Site.



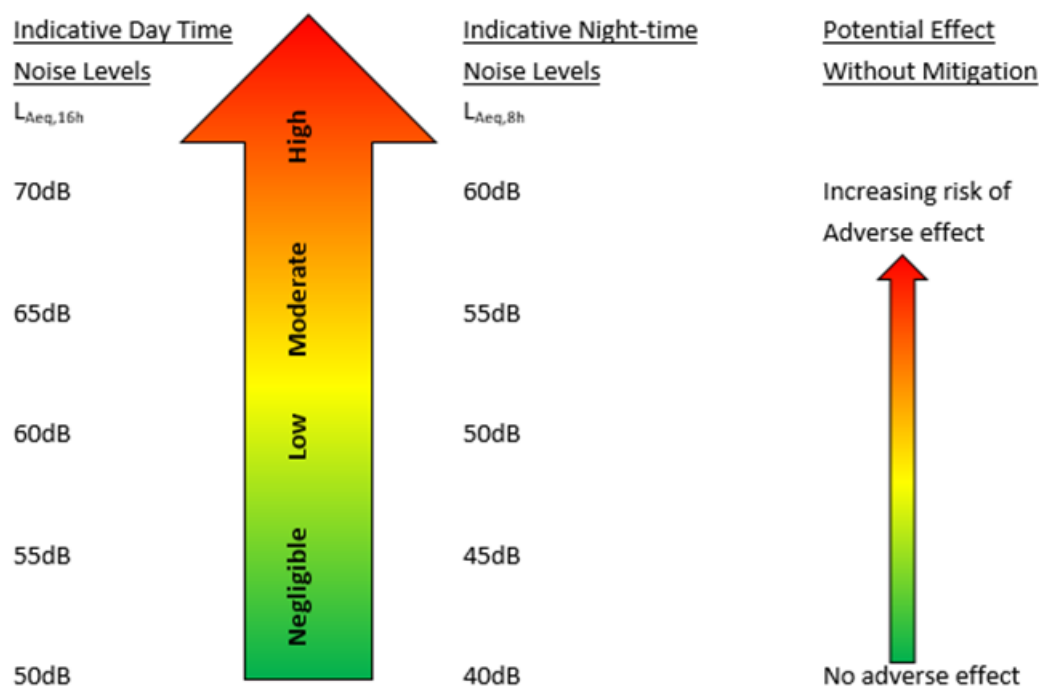
- 6.121 The existing ambient sound levels at long term location 1 was 60 dB $L_{Aeq,16h}$ and 51 dB $L_{Aeq,8h}$ for the day and night time periods respectively. The existing ambient sound levels at long term location 2 was 45 dB $L_{Aeq,16h}$ and 39 dB $L_{Aeq,8h}$ for the day and night-time periods respectively. The existing background sound levels at long term location 1 was 46 dB $L_{A90,1h}$ and 28 dB $L_{A90,15mins}$ for the day and night-time periods respectively. The existing ambient sound levels at long term location 2 was 40 dB $L_{A90,1h}$ and 28 dB $L_{A90,15mins}$ for the day and night-time periods respectively.

Site Noise Risk Assessment

- 6.122 The noise risk of the Site has been defined by comparing the ambient levels recorded during the survey against the indicative Site noise risk assessment criteria from ProPG, 2017. The approach detailed in this guidance includes a framework to clearly determine situations where noise is not an issue, and to help identify the extent of risk at noisier sites. The ProPG advocates a systematic, proportionate, risk based, 2-stage approach to assessing the risk of noise to future development, as follows:

- Stage 1 – an initial noise risk assessment of the proposed development site, considered to support wider Government planning and noise policy, and
- Stage 2 – a systematic consideration of four key elements,
 - Element 1 – demonstrating a “Good Acoustic Design Process”,
 - Element 2 – observing internal “Noise Level Guidelines”,
 - Element 3 – undertaking an “External Amenity Area Noise Assessment”, and
 - Element 4 – consideration of “Other Relevant Issues

6.123 The ProPG advocates an assessment in a graduating manner from Negligible to High Risk as shown in the following figure:



6.124 The ProPG states that *“an indication that there might be more than 10 noise events at night (23:00 – 07:00) with $L_{Amax,F} > 60$ dB means the site should not be regarded as negligible risk.”*

6.125 The measurement results for each monitor location have therefore been categorised as:

- Location 1: Noise Risk Category 1 – Low
- Location 2: Noise Risk Category 0 – Negligible

Potential Environmental Effects

6.126 Given the Site’s location and the proposed uses within the Proposed Development, the following potential environmental effects are –

- Increase in road traffic noise on local roads during operational phase,
- Localised noise from any commercial operations within the adjacent Arborfield Green development and immediate surrounding area,
- Noise arising from the construction of the Proposed Development,
- Vibration arising from the construction of the Proposed Development.

Receptors

6.127 The following are potential receptors –

- New residents and on-site users near existing surrounding roads, notably Langley Common Road to the west,
- New residents within the Studios area of the Arborfield Green Development,
- Existing residents in properties surrounding the Proposed Development.

Potential Mitigation

6.128 Potential mitigation measures are identified as:

- Best practice methods,
- Use of planning conditions to require restricted hours of operation during construction,
- Submission of a Construction Environmental Traffic Management Plan,
- Use of close boarded fencing of a mass of at least 10kg/m^2 ,

- Façade mitigation in the form of acoustic rated windows and trickle vents so that internal noise levels can be met.

Assessment Methodology

- 6.129 The assessment will take into account current guidance including –
- the ProPG 2017,
 - World Health Organisation (WHO) Guidance for Community Noise,
 - DMRB LA 111, May 2020 – Noise and Vibration,
 - BS 4142 (2014) + A1 (2019) Methods for Rating and Assessing Industrial and Commercial Sound,
 - BS8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings,
 - BS 5228-1 2009 + A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise
 - BS 5228-2 2009 + A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration.
- 6.130 Noise modelling will be undertaken to determine likely changes in traffic noise levels around the Site.

Areas to be Scoped Out of the EIA/ES

- 6.131 The topic of vibration during the operational phase of the Proposed Development is **SCOPED OUT** of the EIA/ES.

GROUND CONDITIONS

- 6.132 GRM have undertaken Phase 1 Desk Study of the Site and surroundings, including a Site walkover in March 2024 (**Appendix 5**). The data from the GRM Phase I Site Appraisal has been fully assessed to identify the pollutant linkages relating to the baseline conditions and the proposed development. Impacts are assessed in line with the current regulatory framework and consider the construction, post construction and ‘no development’ scenario to facilitate a comparative assessment of each impact against the environmental quality baseline.
- 6.133 The fundamental principle behind the contaminated land regulatory regime in the UK is the ‘pollutant linkage’ concept, which encompasses the source (potential contaminants or pollutants which may cause harm) – pathway (a potential route by which contaminants can move from the source to the receptor) – receptor (a target that may be harmed (e.g. humans, groundwater or surface water bodies)) approach.

Baseline Conditions

- 6.134 The Site is presently used as grazing land, with some areas vegetated with trees and hedgerows (various species identified). A stream crosses the approximate centre of the Site, running south-west to north-east. A pond is present close to the stream, adjacent to the central part of the southern boundary, and bounded to the north by an area of trees fenced off from the field. A wooden storage shed is present in the north-eastern area, adjacent to a gated entrance. The topography of the Site is undulating and generally sloping down towards either side of the stream.
- 6.135 Service covers were noted near the stream, indicating the presence of underground drainage. No further evidence of buried services was noted.

Historical

- 6.136 A review of the available historical Ordnance Survey (OS) maps gives an insight into the development of the site and can highlight potential hazards.
- 6.137 The earliest map reviewed (1871) records the central part of the Site as ‘Kidgem Copse’, densely vegetated with trees, with open fields to the east and west. A stream is recorded running through the area of trees, flowing from south to north. By 1960, Kidgem Copse is reduced significantly in size and is confined to the southern central area. The map for 1967 no longer records the Copse, though a reduced area of trees is shown along the southern boundary and either side of the stream. Drains are also recorded in the north-western part of the Site and in the south-eastern area, adjoining the stream. The map for 2001 shows a large pond adjacent to the central southern boundary, just west of the stream. Subsequent maps show no further changes to the Site area.

- 6.138 The Site was originally surrounded by open fields, with Commonfield Lane to the south-east and Langley Common Road to the north-west. In close proximity of the Site, the following has also been identified over time; residential properties, tanks (unknown purpose), sewage works, rifle range, educational facility and a builders yard with a water tower.
- 6.139 In summary, the Site comprises agricultural land and has no recorded history of development.

Geology

- 6.140 The BGS Geological Sheet for this area shows the following:
- Superficial deposits of Alluvium along the course of the stream, but absent elsewhere on Site; comprising clay, silt, sand and gravel.,
 - Solid geology of the London Clay Formation present throughout the site with the exception of the south-eastern extents; comprising clay, silt, and sand with selenite crystals (which can result in upgraded concrete requirements),
 - Solid geology of the Bagshot Formation present in the south-eastern extents of the Site, comprising sand,
 - Topsoil will be present above the superficial deposits or solid geology across the whole of the Site. Made ground is not expected to be present except where there is underground drainage near the stream.

Hydrogeology

- 6.141 No detailed information regarding the depths to groundwater is available; however, the groundwater level is likely to be subject to seasonal variations.
- 6.142 The Environment Agency has classified the underlying strata as follows:
- Alluvium (Superficial Deposits) – Secondary A Aquifer,
 - London Clay Formation (Solid Strata) – Unproductive Strata,
 - Bagshot Formation (Solid Strata) – Secondary A Aquifer.
- 6.143 The London Clay Formation recorded beneath the majority of the Site is anticipated to comprise predominately impermeable clay strata and unlikely to contain any significant volumes of groundwater. It is possible that 'spring lines' will be present at the cohesive granular interface in the south-eastern area of the Site. However, the information available at this stage suggests a groundwater table at depth. This does not preclude the risk from perched water within granular strata.
- 6.144 There are no recorded groundwater / potable water abstraction licenses within 500m of the Site, and the Site is not recorded to be within a Groundwater Source Protection Zone.

General Environmental Information

- 6.145 No significant environmental hazards, which are considered likely to pose a potential risk to the Site, have been identified from the available information.
- 6.146 The remnant areas of Kidgem Copse, along the stream and in the southern part of the Site, are designated as ancient woodland.
- 6.147 There are no recorded landfills within the vicinity of the Site.
- 6.148 Potential site-specific contaminants identified include:
- Potential metal contamination in near surface soils due to adjacent rifle range,
 - Unknown contaminants from historical off-site tanks (potential hydrocarbons),
 - Biological contaminants associated with the adjacent historical sewage treatment works (considered negligible risk).
- 6.149 Due to the Site's current and past use as mainly pasture / grazing land, the risk from pesticides is considered negligible.
- 6.150 Overall, the risk of ground contamination is considered to be very low.
- 6.151 Local surface water features and potential surface water receptors include:
- A stream bisects the centre of the Site flowing north-east,
 - A drain is present in the north-western area of the Site,
 - There is also a pond present in the southern part of the Site next to the stream.

Gas

- 6.152 The Site has been assessed following the guidelines in 'Radon: guidance on protective measures for new dwellings (including supplementary advice for extensions, conversions and refurbishment projects)' (BR211 2023). The Site is not within an area recorded to require radon protection measures.
- 6.153 The only potential source of ground gases (methane / carbon dioxide) is the presence of Alluvium. This is not considered significant, and the risk is considered very low.

Potential Mitigation

- 6.154 Mitigation would involve the use of Construction Environmental Management Plan (CEMP) with appropriate measures for handling and storage of potentially hazardous substances, use of Personal Protection Equipment and basic hygiene measures, for example.

Areas to be Scoped Out of the EIA/ES

- 6.155 From the information provided above, in summary, the risk from ground contamination is considered to be very low and the risk from ground gas is considered to be low. The Proposed Development is unlikely to give rise to significant effects. Consequently, it is considered that Ground Conditions can **SCOPED OUT** in its entirety from the EIA/ES.
- 6.156 The Phase I Report will be included within the planning application documentation as a stand-alone report. The need for any further potential ground investigations prior to the development of the Site could be conditioned.

CLIMATE CHANGE

Baseline Conditions

- 6.157 Climate change is anticipated to have a significant impact on the UK climate, leading to more frequent periods of weather extremes including higher peak and average temperatures, increased winter rainfall and decreased summer rainfall. As per the Guide to Climate Change Resilience and Adaption (IEMA, November 2015) and best practice examples, climate change comprises two distinct areas.
- Climate Change Mitigation - an assessment of likely significant effects upon climate change resulting from the Proposed Development and their mitigation, including an estimate of greenhouse gas emissions,
 - Climate Change Adaptation - an assessment of likely significant effects of climate change upon the project, including its vulnerability and the need for any adaptation measures to build project resilience to projected climate change scenarios.
- 6.158 Projected climate (UKCP18) data for the closest meteorological station shall be utilised to establish how the current baseline position may alter as a result of climate change that has already been set in motion.
- 6.159 Given it is not possible to precisely predict future global GHG emissions, the UKCP18 climate projections make assumptions about the economic, social and physical changes to our environment that will influence climate change. Representative Concentration Pathways (RCPs) are a method for capturing those assumptions with a set of scenarios to establish the future baseline.
- 6.160 RCPs specify concentrations of greenhouse gases that will result in total radiative forcing increasing by a specific amount by the year 2100 relative to pre-industrial levels which then have a resultant change in temperature as outlined in Table 6.1 below.

Table 6.1: Representative Concentration Pathways

RCP	Change in Temperature (°C) by 2081-2100
RCP 2.6	1.6 (0.9-2.3)
RCP 4.5	2.4 (1.7-3.2)
RCP 6.9	2.8 (2.0-3.7)
RCP 8.5	4.3 (3.2-5.4)

- 6.161 Whilst RCP 4.5 would broadly align with the aims of the Paris Agreement to keep global temperature increases within 2°C of pre-Industrial levels, current best practice guidance from IEMA22 recommends the use of the high emissions scenario (RCP 8.5) to identify the 'worst case' range of potential future climate conditions at the site.
- 6.162 As such, the RCP 8.5 (high) emissions scenario has been selected for use within these assessments through this may over-estimate climate risks should global efforts to reduce GHG emissions begin to take effect and result in a 'medium' or even 'low' emissions scenario in the years ahead.
- 6.163 The table below indicates the quantitative future baseline for key climatic variables (mean temperature and precipitation) using probabilistic data under RCP 8.5 (50th percentile). This information should be used to inform the design process and help to determine the significance of effects on sensitive receptors and need for mitigation in the absence of any topic specific guidance.

Table 6.2 Future Baseline for Key Climatic Variables

Season	Variable	Time Period	Projected Change (50th Percentile)
Winter	Mean Temperature (°C)	2030s	0.9
		2050s	1.7
		2070s	2.5
		2090s	3.5
	Mean Precipitation (%)	2030s	7
		2050s	12
		2070s	19
		2090s	24
Summer	Mean Temperature (°C)	2030s	0.4
		2050s	1.1
		2070s	1.8
		2090s	2.9
	Mean Precipitation (%)	2030s	-9
		2050s	-20
		2070s	-29
		2090s	-40

Potential Non-Significant Environmental Effects

- 6.164 The following are identified:
Non-significant - Increased carbon emissions from traffic during construction
- 6.165 There will be a temporary increase in traffic (including HGVs) during the construction phase of the Proposed Development. A strategy for traffic management will also be prepared to define local routes

to be used by lorries generated by construction activities. Construction traffic levels and likely emissions arising will be considered within the Transport Chapter and the stand-alone Air Quality Report.

Non-significant - Increase in summer temperatures during construction

- 6.166 Increasing summer temperatures (mean and daily) may lead to health and safety risks for construction workers. However, appropriate measures to reduce the risks, such as the provision of additional shaded refuges and drinking water supplies will reduce any risk to a low level will be implemented, managed and recorded via the CEMP. Therefore, an increase in summer temperatures is unlikely to be considered significant.

Non-significant - Decrease in summer rainfall and reduced water supplies during construction

- 6.167 Decreasing summer rainfall may reduce water supplies during construction, disrupting construction activities. However, measures to reduce these risks, such as monitoring of water supplies and setting and implementation of water reduction targets will reduce the risk to a low level. Therefore, an increase in summer rainfall is unlikely to be significant.

Non-significant - Changing temperatures and rainfall levels and impact to existing ground conditions

- 6.168 Changing temperatures and rainfall may change the ground conditions at the Site, which in turn may impact proposed building foundations and structures, causing future risks to building users. However, Building Regulations require new development to consider the impact of ground conditions on foundation design and therefore there is a high level of certainty through the compliance with current Building Regulations that such risks will be designed out. Therefore, an increase in changing temperatures and rainfall is unlikely to be considered significant.

Non-significant - Changing temperatures and rainfall levels and impact to existing biodiversity

- 6.169 Changing temperatures and rainfall may change the habitats within the Site. As part of the Proposed Development, any compensatory habitat, delivered through public realm and areas of green infrastructure will enhance the biodiversity of the Site, mitigating the anticipated impacts of climate change in accordance with the England Biodiversity Strategy. This can include the selection of climate change tolerant species as part of the projects biodiversity strategy. Therefore, an increase in changing temperatures to existing biodiversity is unlikely to be considered significant.

Non-significant - Changing summer temperatures and reduction in demand for heating/increased demand for cooling

- 6.170 Increased summer temperatures could reduce the need for heating (and associated energy use), whilst the need for cooling requirements (and associated energy and GHG emissions) may increase. Any reduction in heating is likely to be beneficial, although not to a degree where a likely significant effect is anticipated. Buildings will be designed in accordance with Building Regulations which include an assessment of overheating based on climatic conditions. Where required, cooling will be designed in accordance with the cooling hierarchy to minimise potential energy use and GHG emissions. Therefore, an increase in summer temperatures is unlikely to be considered significant.

Non-significant - Disruption of transportation patterns and infrastructure due to severe weather conditions

- 6.171 Pedestrians and cyclists will be sensitive to extreme weather conditions which could affect transportation patterns. The increased likelihood of overheating could have a detrimental effect on the comfort of public transport users. The Transport Assessment chapter of the ES will consider the transport related impacts of the Proposed Development. In addition, a Travel Plan will be prepared setting out a range of measures to encourage sustainable modes of travel and will include an implementation and monitoring strategy.
- 6.172 The Proposed Development will seek to create as many sustainable low-carbon travel choices as possible that minimise time, distance, and effort, providing an advantage over private motor traffic. Therefore, the potential disruption of transportation patterns and infrastructure caused by severe weather conditions is unlikely to be considered significant.

Non-significant - Increased winter rainfall and risk to essential infrastructure and human health

- 6.173 The risk of all types of flooding and consideration of increased rainfall due to climate change will be considered within the Flooding and Drainage chapter of the ES. As a result, primary mitigation resulting from the design will reduce any risk to essential infrastructure and human health to a level that is not considered significant.

Non-significant - Enjoyment of social infrastructure in a changing climate

- 6.174 From a socio-economic point of view, the use and enjoyment of social infrastructure and amenity space is sensitive to the potential effects of climate change such as extreme hot or cold weather and increased risk of flooding. To support the Proposed Development being resilient to climate change and being capable of meeting relevant socio-economic needs, the buildings and infrastructure around them will be designed to meet the relevant design standards and industry best practice which in many instances include an allowance for climate change. The effects of climate change on social infrastructure are unlikely to be significant.

Potential Significant Environmental Effects

Potentially Significant - Green House Gas emissions from the operation of the Proposed Development in terms of consumed mains electricity to heat and power dwellings

- 6.175 The following are identified:
- Increased carbon emissions from traffic during operation,
 - Increased regulated/unregulated emissions from operational new development.
- 6.176 The latest IPCC (Intergovernmental Panel on Climate Change) and CCC (Committee on Climate Change) reports conclude that the UK and the world as a whole is not currently on track to meet necessary future carbon budgets to avoid potentially dangerous temperature increases above 2 degrees centigrade.
- 6.177 There are currently no published or recommended significance criteria for GHG emissions in the UK EIA Regulations. Therefore, the assessment will follow the recommendations and best practice contained within the IEMA guidance to Assessing Greenhouse Gas Emissions and Evaluating their Significance (2022) when determining the magnitude and significance of effect for GHG emissions as well as the professional judgement of the Smart Energy and Sustainability consultants.
- 6.178 A GHG assessment will be carried out to estimate the baseline and future GHG emissions at the Site and as a result of the Proposed Development. Calculated emissions will be appraised within the context of current and future GHG emissions at the local authority, regional and national levels to establish magnitude and significance.
- 6.179 In order to avoid under-estimating future climatic impacts on the Project from climate change, the RCP 8.5 scenario is proposed for use within the assessment.
- 6.180 The climate change mitigation assessment will take into account the following types of emissions the Proposed Development will produce over its lifetime:
- Direct emissions - typically produced by vehicles during operation stages,
 - Indirect emissions - arising from the energy produced using fossil fuels during the operational phase (i.e. energy for heating, cooling, lighting for other demands),
 - Embodied carbon - as far as possible given the outline nature of the application, encompassing the total impact of GHG emissions by the construction and materials of the built environment, including impacts of sourcing raw materials, manufacturing, transport and wastage in the process.
- 6.181 The Air Quality and Transport ES Chapters will be cross-referenced to understand direct emissions from vehicle traffic, and the associated Energy Strategy with the project will provide detail on the indirect and embodied carbon emissions.
- 6.182 Embodied carbon is an area which has undergone significant development in recent years. With the ongoing decarbonisation of the UK electricity grid, embodied carbon is expected to assume an ever-increasing significance in the overall carbon footprint of developments. The Royal Institution of Chartered Surveyors (RICS)'s Building Carbon Database captures the following life cycle stages:
- A1-A3 Product stage
 - A4-A5 Construction processes stage
 - B1-B5 Use stage (material impacts)
 - B6 Operational water use
 - C1-C4 End of life stage
 - D Benefits and loads beyond system boundary

- 6.183 There are several embodied carbon databases available on the market which provide industry benchmarks. For example, the OneClick LCA is a life cycle metrics software tailored to the construction industry which is likely to be utilised for this project.

Potentially significant – increased risk of overheating in the summer (vulnerable groups)

- 6.184 Anticipated rising temperatures and more frequent heatwaves increase the risk of overheating experiences in enclosed spaces. Hotter weather and stronger sunlight intensity could affect the quality of the indoor living environment affecting occupants. To effectively manage the risk of overheating, suitable glazing ratios, shading and solar control glazing will be specified for the Proposed Development alongside appropriate ventilation levels and minimisation of internal heat gains. Detailed overheating assessments will be carried out for residential uses to support that key habitable spaces pass the CIBSE Technical Memorandum TM59 Design methodology for assessment of overheating risk in homes. Whilst the risk of overheating is likely to be low, with the inclusion of extra care dwellings, and therefore vulnerable occupants, within the scheme, it is considered appropriate to scope this into the assessment at this stage.

Assessment Methodology

- 6.185 This method of assessment adopted to assess Climate Change Mitigation will comprise the following components in accordance with IEME GHG guidance:
- Review of legislation, planning policy and guidance relating to climate change,
 - Establish GHG assessment scope and boundaries,
 - Establish current GHG emissions baseline for the Site,
 - Estimate GHG emissions from the construction and operational phases of the Proposed Development, following a modular reporting approach in line with BS EN 15978,
 - Consider opportunities for GHG emissions reductions from the development through appropriate mitigation measures in accordance with IEMA's GHG mitigation hierarchy, and
 - Evaluate residual GHG emissions following mitigation within the context of baseline conditions, local and regional GHG emissions and also future UK Carbon Budgets to establish their context, magnitude and significance.

Areas to be Scoped Out of the EIA/ES

- 6.186 It is considered that all of the areas of potential effects identified above as '*non-significant*' should be **SCOPED OUT** of the EIA/ES.

SOCIETY, ECONOMY AND POPULATION

- 6.187 A preliminary desk-based study has been carried out to examine the existing socio-economic situation within the area where the Site is situated. Baseline information has been obtained from the Office of National Statistics, in the form of 2011 and 2021 Census data (where available) and being the most up-to-date information.
- 6.188 Potential environmental effects are likely to include –
- Impact on social community services and facilities, including education and healthcare, and
 - Impact on the local economy, local businesses and employment during both the construction and operation of the Development.
- 6.189 The impacts arising from the above are considered to be both positive and negative. These impacts are not considered to be significant given the size of the Proposed Development.
- 6.190 Mitigation to counter any potential negative impacts such as the need for additional school places and health facilities would include financial contributions secured via a S106 Agreement or CIL to mitigate the effects of the Development.
- 6.191 Consequently, Society, Economy and Population is **SCOPED OUT** of the EIA/ES.

MAJOR ACCIDENTS AND NATURAL DISASTERS

- 6.192 The EIA Regulations refer to the consideration of major accident and natural disasters. The definition of a 'major accident' for this Scoping Report draws on the Control of Major Accident Hazards Regulations 2015 (COMAH2015). These are applicable in this context as their purpose is to prevent major accidents and limit the consequences to people and the environment. A major accident is one such as fire, emission, or explosion resulting from uncontrolled developments in the course of the operation of any establishment and leading to serious danger to human health or the environment inside or outside the establishment.
- 6.193 A naturally occurring event such as extreme weather or ground-related hazard event (landslip) can also meet the definition of major accident.
- 6.194 Assessment of major accidents and hazards has been **SCOPED OUT** of the EIA on the basis that the likely significant effects to human health and the environment from major accidents or disasters given mitigation measures being put in place are not significant. Various risk management legislation will apply to the Proposed Development including the Health and Safety at Work Act, etc and various design and technical specifications which require consideration of potential hazards. As part of the detailed design risk assessments will be undertaken and will consider maintenance and operational activities.

HUMAN HEALTH

- 6.195 A separate chapter on Human Health is not considered necessary as the individual topic chapters presented within this EIA Scoping Report propose to assess potential impacts on human receptors where relevant. Consequently, this is **SCOPED OUT** of the ES.

CUMULATIVE EFFECTS

- 6.196 Cumulative effects are the result of multiple actions on receptors or resources. Each technical topic chapter will consider cumulative effects. The Cumulative Effects Chapter of the ES will draw all of this together into an overarching assessment of cumulative effects.
- 6.197 There are principally two types of cumulative effect:
- Type 1 – Where different environmental topic impacts are acting on one receptor, as a result of the scheme, and
 - Type 2 – Where environmental impacts are acting on one receptor but are the result of multiple projects in combination (including the scheme being assessed).
- 6.198 The first stage is to create a list of potential developments with the possibility of cumulative effects and then to screen this to a short list, removing developments where on review of available information, no cumulative effects in any EIA topic areas are considered likely.
- 6.199 The approach to identifying the long and short list will follow the following steps –
- Establishing a potential zone of influence – for example in this case, south of the M4 and within a 4km radius around the Proposed Site,
 - Undertaking a desk study of planning applications, existing and proposed local plan allocations,
 - Screening and shortlisting those developments based on temporal scope, scale and nature of development – in this instance developments above 100 dwellings – and other relevant factors.
- 6.200 Bearing in mind the above, and the fact there that are no sites either allocated or with permission within the 4km radius, the initial short list, based on applications submitted and consented, is –
- South of Cutbush Lane, Shinfield (18/1499),
 - East of Shinfield (phase 2), South of Church Lane, Shinfield (17/2450),
- 6.201 The cumulative list will ultimately be agreed with the Council through this scoping process.
- 6.202 In some cases, where limited environmental information about other proposed developments is available, specific magnitudes of impacts and degrees of significant effect (such as moderate or major) may not be possible to predict. In such cases, the assessment still seeks to discuss where there is the potential for cumulative effects to occur and to provide details of whether cumulative effects are likely to be significant. A statement is made as to whether the cumulative effects have the potential to be more significant than the effects of the Proposed Development alone and, if so whether this change would be adverse or beneficial.

6.203 When considering type 2 cumulative effects, the receptors experiencing effects of moderate or major significance will be assessed to understand how they would be affected by other proposed development projects. A two-stage approach will initially consider whether the receptors affected by the proposed scheme would be affected by other development projects. Following this, the second stage will identify the significance of the cumulative impacts.

6.204 The significance of cumulative effects will be determined using the criteria shown in Table 6.4 below, which is taken from DMRB Volume 11, Section 2, Part 5.

Table 6.4 Determining Significance of Cumulative Effect

Significance	Effect
Severe	Effects that the decision-maker must consider as the receptor/resource is irretrievably compromised.
Major	Effects that may become key decision-making issues.
Moderate	Effects that are unlikely to become issues on whether the project design should be selected, but where future work may be needed to improve on current performance.
Minor	Effects that are locally significant.
Not Significant	Effects that are beyond the current forecasting ability or are within the ability of the resource to absorb such change.

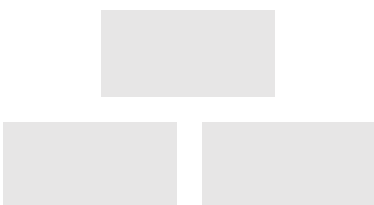
7 STRUCTURE OF THE ES

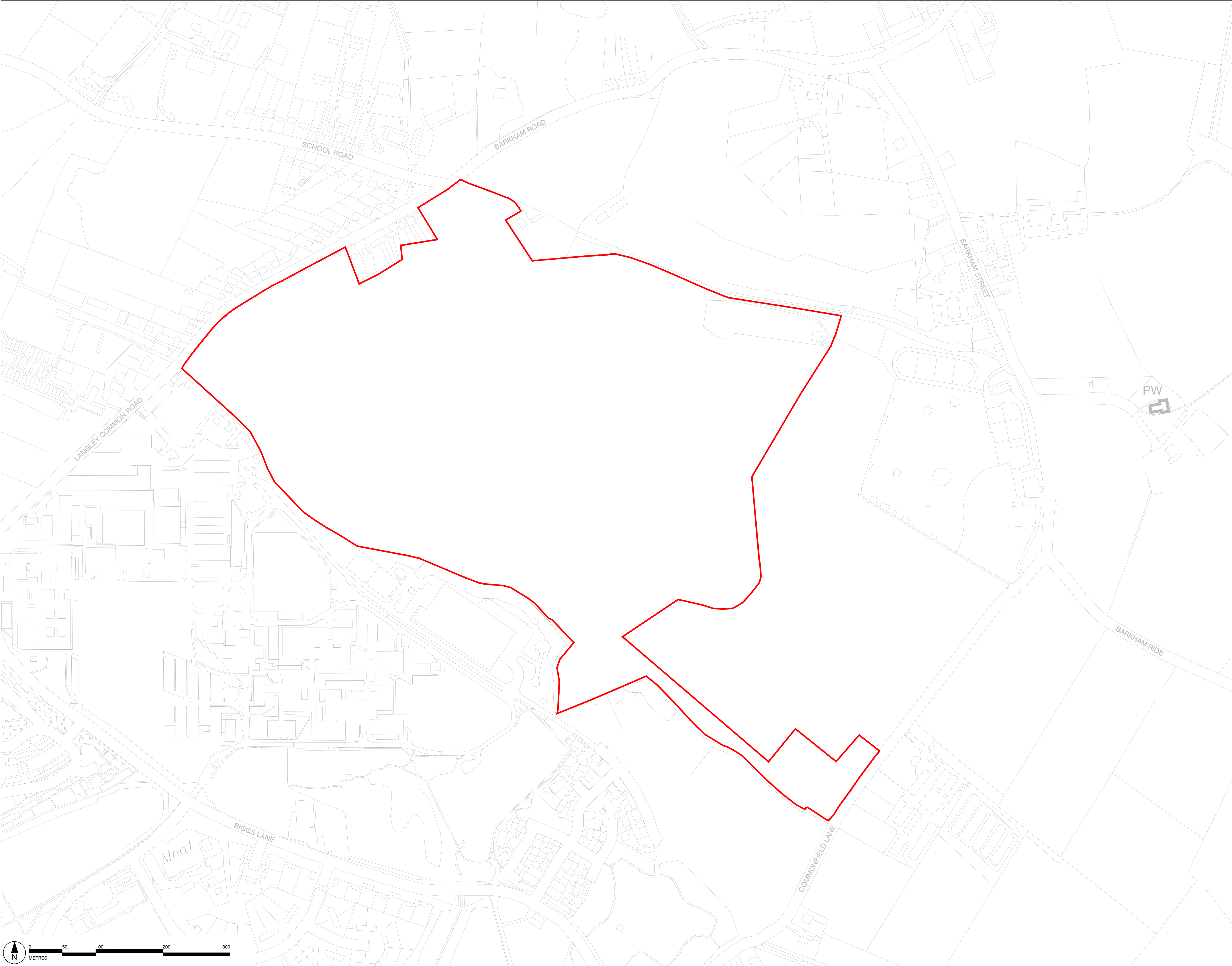
7.1 The structure for the ES will adhere to the requirements of the relevant regulations and other good practice guidance. Essentially, as outlined above, the ES will comprise three parts, the main text, the supporting appendices and the non-technical summary. The proposed structure of the ES is provided below.

CHAPTER	TITLE	GENERAL SCOPE
VOLUME 1: PART A - THE SCOPING REPORT		
PART B –THE ENVIRONMENTAL IMPACT ASSESSMENT		
1	Introduction	Outline the proposed development, legislative framework, structure of ES and details of the design team.
2	Methodology	Confirming the scope of the ES and methodology adopted, confirming the terminology for assessment of effects, committed development and assumption and limitations
3	Background to Development	Description of site and surrounding area and evolution of the proposals.
4	Development Description	Summary of proposed land use and form of development, including phasing where appropriate.
5	Alternatives	Summary of the alternatives considered.
6	Planning Policy	Identification of appropriate Planning Policy affecting the site.
7	Transport	Assessment in line with relevant guidance and Regulations.
8	Ecology/Conservation	Assessment in line with relevant guidance and Regulations.
9	Historic Environment - Archaeology	Assessment in line with relevant guidelines and Regulations in respect of buried archaeology.
10	Landscape & Visual	Assessment in line with relevant guidelines and Regulations.
11	Water/Drainage/Flood Risk	Assessment in line with relevant guidelines and Regulations.
12	Air Quality	Assessment in line with relevant guidelines and Regulations.
13	Climate Change	Assessment in line with relevant guidelines and Regulations.
14	Noise	Assessment in line with relevant guidelines and Regulations.

CHAPTER	TITLE	GENERAL SCOPE
15	Cumulative Effects	Assessment and summary of likely cumulative effects of the development.
16	Overview of Residual Effects and Conclusions	Summary of the residual and effects of the development.
17	References, Glossary, Abbreviations	
Volume 2 – TECHNICAL APPENDICES as necessary		
Volume 3 – NON-TECHNICAL SUMMARY		

Site Boundary Plan





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NOTES:

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INDICATIVE APPLICATION BOUNDARY
BASED ON SITE LOCATION PLAN FROM BARKHAM SQUARE SITE VISIT
INSTRUCTIONS (FARM INSTRUCTIONS).PDF

B	Updates to the allotment	18.11.24
A	Updated to reflect BNG changes	18.11.24
Rev	Description	Date
Purpose of Issue		
INFORMATION		
Bradley Murphy Design Ltd 6 The Courtyard Hatton Technology Park Dark Lane Hatton Warwickshire CV35 8XB		
t: 01926 676496 e: info@bradleymurphydesign.co.uk www.bradleymurphydesign.co.uk		
Client		
CREST NICHOLSON		
Project		
BARKHAM SQUARE		
Drawing Title		
SITE LOCATION PLAN		
Drawn ED	Checked MP	Approved RW
Job No. 23.0016	Scale 1:2500	Sheet Size A1
Drawing Number BMD.23.0016.DR.P003		
Date 16/07/2024		
Revision		
B		

LVIA Methodology



A. ASSESSMENT METHODOLOGY

A.1 Introduction

- A.1.1 This assessment aims to identify and describe the nature and importance of the effects likely to arise as a result of the proposed development on the existing landscape and the visual amenity of people.

A.2 Approach

- A.2.1 This methodology has been developed in accordance with the principles of good practice set out in the following published guidance produced by the relevant professional organisations concerned with landscape and visual assessment:

- Guidelines for Landscape and Visual Impact Assessment, Third Edition (2013), (GLVIA3), Landscape Institute and the Institute of Environmental Management & Assessment;
- GLVIA3 Statements of Clarification (2013 - 2015), Landscape Institute;
- An Approach to Landscape Sensitivity Assessment (Natural England, 2019)
- Natural England's 'An Approach to Landscape Character Assessment' (2014); and
- Landscape Institute (2019), Technical Guidance Note 06/19, Visual Representation of Development Proposals.

- A.2.2 The GLVIA3 states that:

"Landscape and Visual Impact Assessment (LVIA) is a tool used to identify and assess the significance of and the effects of change resulting from development on both the landscape as an environmental resource in its own right and on people's views and visual amenity."

- A.2.3 Whilst linked, the assessment of landscape and visual effects are treated separately in LVIA. The overall approach used to identify and assess landscape and visual effects is summarised as follows:

- Determine the scope of assessment;
- Collate baseline information through desk study research and field based survey work, select appropriate landscape and visual receptors and establish their value;
- Review the proposed development and determine susceptibility of landscape and visual receptors to the nature of development proposed;
- Combine value with susceptibility to determine the sensitivity of landscape and visual receptors to the nature of development proposed;
- Describe the nature and magnitude of change likely to be experienced by landscape and visual receptors as a result of the proposed development;
- Describe any measures to avoid or reduce the magnitude of any adverse change;
- Describe the nature and magnitude of residual change likely to be experienced following establishment of vegetative mitigation;
- Assess the importance of effects for landscape and visual receptors in relation to the proposed development through a clear description of judgements on sensitivity and magnitude; and
- Identify those effects that are considered relevant to decision making.

Purpose of LVIA

- A.2.4 The overriding aim of LVIA is to draw out the key landscape and visual issues that are likely to arise as a result of a Proposed Development and to ensure that the importance of effects and the scope for reducing any adverse effects are properly understood by the public and the competent authority. Whilst it is important to identify the range of effects likely to be experienced by receptors, the aim should be to identify and describe in detail any important effects that are likely to be most relevant to decision making.

Professional Judgement in LVIA

- A.2.5 The GLVIA3 asserts that professional judgement is a very important part of LVIA as much of the assessment must rely on qualitative judgements about the nature of change and whether it is positive, neutral or negative. However; professional judgement must be informed by clear and transparent methods, as clarified in paragraph 2.24 of the GLVIA3:

“In all cases there is a need for the judgements that are made to be reasonable and based on clear and transparent methods so that the reasoning applied at different stages can be traced and examined by others.”

Limitations of LVIA

- A.2.6 Landscape results from the interplay between the natural, physical and cultural components of the environment and as such the assessment of landscape and visual effects is a process closely linked with other topics, notably ecology and the historic environment. The LVIA considers the contribution heritage and ecological features make to the character and value of the landscape and visual receptors, along with an assessment of the likely effect of the Proposed Development on the landscape character and views associated with heritage features. The LVIA has been carried out in landscape and visual terms only, as an assessment of effects on heritage assets and their wider cultural setting (e.g. impacts on cultural and historic associations) are considered to be beyond the remit of this LVIA. The LVIA does not assess direct or any other indirect effects on heritage or ecological resources.
- A.2.7 The LVIA is based on views from publicly accessible locations. Where an impact on residential and other private views (e.g. commercial properties) is noted this has, necessarily, been estimated (unless access is provided by a landowner). The viewpoints identified in the LVIA are illustrative of the worst-case potential impact from a representative range of receptors including residences, rights of way, public open spaces, private open space, commercial operations, the road and rail network etc. This LVIA does not necessarily identify all locations from where the Proposed Development would potentially be visible.
- A.2.8 In the absence of a detailed design and layout the effects of lighting cannot be accurately determined however an assessment is provided on: the likely effects of temporary lighting resulting from construction; the change to the baseline sky glow; and, the change to the landscape and views as a result of the introduction of lighting as part of the Proposed Development.

A.3 Scope of Assessment

Spatial Scope

- A.3.1 A preliminary study area has been identified, the extent of which considers the nature and scale of the Proposed Development in relation to the existing physical characteristics of the landscape as well as existing landscape studies and assessments. The preliminary study area is based on an approximate radius of 2km from the boundary of the site, which is considered to be sufficient to account for potential important effects that may arise as a result of the Proposed Development.

Zones of Theoretical Visibility

- A.3.2 Zones of theoretical visibility (ZTV) have been modelled digitally to identify those areas of the landscape that theoretically are visually connected with the Proposed Development, in order to refine the extent of the study area further. Two ZTVs have been modelled that illustrate both worst case and more realistic scenarios.
- A.3.3 ZTV 1: represents the proposed built form within the Site that would theoretically be visible, based on the building heights for the Proposed Development, taking account of the effect that settlements and significant woodland blocks / belts would have on views toward the Proposed Development and therefore illustrates a reasonably realistic area within which the Proposed Development could theoretically be visible during the summer months.
- A.3.4 ZTV 2: represents the proposed built form within the Site that would theoretically be visible during the winter months, when leaf cover on existing vegetation is reduced and views towards the Proposed Development have potential to be increased, based on the building heights for the Proposed Development, taking account of the effect that only the existing settlements would have on views toward the Proposed Development.
- A.3.5 These ZTVs consider the potential visibility of a developable volume encompassing all built form proposed within the site, rather than the visibility of individual buildings. This 'jelly mould' approach has been adopted to represent the worst-case parameters with regard to building locations, footprint dimensions and heights to ridgeline.
- A.3.6 The ZTVs were modelled using the Key Terra-Firma ZTV module for AutoCAD 2024 and are based on the following parameters and data sources:
- Ordnance Survey mapping at 1:25,000 scale
 - Ordnance Survey Landform Profile contour data at 5m height intervals
 - Viewer eye height set at 1.6m above landform
 - The developable volume has been set at a range of heights up to three storey (12m), based on the Concept Masterplan (BMD.23.0016.SK.004)
 - Settlements are set at 9m high following landform and set as visually impermeable
 - Woodland blocks are set at 12m high following landform and set as visually impermeable

Determining the Study Area

- A.3.7 The final 2km extent of the study area has been determined by considering together the preliminary study area, the results of the ZTV modelling and the initial findings of the baseline appraisal and assessment process.
- A.3.8 It is considered that any direct or indirect landscape or visual effects arising as a result of the Proposed Development at a distance of greater than 2km would be negligible and are therefore not included within this assessment.

Temporal Scope

- A.3.9 This assessment considers landscape and visual effects at the following stages of the proposed development:
- Effects during construction: Assesses the likely impact of temporary construction activities and considers the changing nature of the site itself.
 - Effects during operation at Year 0: Assesses the completed development assuming structural landscape treatments would have been implemented and would be establishing, albeit not to a level sufficient to provide a screening function.
 - Effects during operation at Year 15: Assumes structural landscape treatments would have reached semi-maturity allowing for an assessment of likely landscape and visual effects that takes established mitigation measures into account.
 - Effects during summer and winter are considered where these would substantially differ as a result of vegetation growth or leaf cover.
 - Effects at night are considered where these would substantially differ from day time effects.

A.4 Determining Baseline Conditions

- A.4.1 Information has been collated through desk study and field survey in order to describe the baseline situation in relation to landscape character, landscape features / elements and the visual amenity of people within the study area.

Desk Study

- A.4.2 A variety of sources have been reviewed to gain an understanding of the quality, variety and sensitivity of the features and elements that contribute toward landscape character and visual amenity in order to identify potential landscape and visual receptors.
- A.4.3 These include relevant published local policy and guidance documents, existing published landscape character studies, Ordnance Survey mapping and aerial photography.

Data Sources

- A.4.4 The desk study has included a review of the following sources of information:
- The National Planning Policy Framework (2023)
 - Natural England, The Character of England : Landscape, Wildlife and Natural Features (2014)
 - Wokingham Borough Adopted Core Strategy (January 2010)

- Managing Development Delivery Local Plan (February 2014)
- Local Plan Update: Revised Growth Strategy Consultation (Nov 2021 – Jan 2022);
- Natural England National Character Areas No 115: Thames Valley
- Natural England National Character Areas No 129: Thames Basin Heath
- Wokingham Borough Landscape Character Assessment (November 2019)
- Ordnance Survey Mapping at 1:25,000 scale
- Aerial photography of the site and wider area (Google Earth, www.maps.google.co.uk and www.bing.com/maps)
- Multi Agency Geographic Information for the Countryside (MAGIC) interactive mapping (www.magic.gov.uk)
- Natural England Green Infrastructure interactive mapping (<https://designatedsites.naturalengland.org.uk/GreenInfrastructure/Map.aspx>)
- National Heritage List for England Map Search, English Heritage (<http://www.english-heritage.org.uk/>)
- National Cycle Network mapping (www.sustrans.org.uk)
- British Geological Survey, Geology of Britain Viewer (<https://www.bgs.ac.uk/>)
- Ancient Tree Inventory. Woodland Trust (<https://ati.woodlandtrust.org.uk/>)

Site Survey

- A.4.5 Initial field work provides a context for LVIA and helps to identify likely opportunities and constraints for a proposed development. In best practice, the findings of initial field work can be used to influence and guide the design of the proposed development in order to avoid or reduce potential impacts and to achieve the best fit with the landscape. Survey work for this LVIA was undertaken in early April 2023 to establish the winter baseline which presents the worst-case scenario and in July 2023 to establish summer baseline, to further identify those features or elements that contribute to the character of the area and determine the potentially visibility of the Proposed Development.

Photography

- A.4.6 A series of representative and specific viewpoint photographs were captured during field work using a digital SLR camera with a fixed 50mm lens (equivalent focal length) at approximately 1.6m in height. The method used to capture and present the photographs was consistent with Landscape Institute Advice Note 06/19. These are presented as a series of panoramic viewpoints that were stitched together using Adobe Photoshop CC – Photomerge and have been used to inform the assessment.

Selection of Landscape and Visual Receptors

- A.4.7 Landscape and visual receptors were identified during desk study and have been verified during field survey work to provide a baseline against which to describe those effects likely to arise as a result of the Proposed Development. Receptors used within this assessment include:
- Landscape character types or areas drawn from published documents;
 - Physical landscape features and elements; and

- Views experienced by people and their visual amenity.

Establishing Value

Landscape Value

- A.4.8 Landscape value describes the relative level of value or importance attached to a landscape or feature (that would potentially be affected by the Proposed Development) by the different stakeholders and parts of society that use or experience that landscape resource.
- A.4.9 Factors that have been considered in the determination of landscape value include landscape designations and the level of importance that they signify (i.e. whether international, national or local), relevant local planning policy and guidance, the status of individual areas or features (e.g. TPOs), the quality, condition and rarity of individual features or elements within the landscape and any verifiable local community interest (e.g. village greens, allotments etc.).
- A.4.10 The value of landscape receptors are determined against the criteria set out in Table A.01 in order to establish a consistent and objective baseline against which the potential effects arising as a result of the Proposed Development can be assessed. Professional judgement is applied to determine the value attributed in response to these criteria. The factors listed below are not considered to be exhaustive and for any one receptor, these factors may overlap between degrees of value. Therefore, not all criteria need to be attributed to any one receptor for that value to be assigned.

Table A.01 Criteria considered when determining landscape value.

Value	Criteria
Very High	International and National level designated areas (e.g. World Heritage Sites, National Parks, National Landscapes, Registered Parks and Gardens, Scheduled Monuments, Grade I or II* Listed Buildings, SSSIs etc) are present within the receptor. The area is considered to be an important component of the country's character and is experienced by a high number of tourists. The condition of the landscape and its individual elements is good and is generally maintained to a high standard. Rare or distinctive elements and / or features are key components that contribute to the character of the area / quality of the landscape resource.
High	Regional or County level designated areas (e.g. Areas of Great Landscape Value (AGLV), Green Belt, Country Parks, Grade II Listed Buildings, Conservation Areas etc) are present within the receptor. The area is considered to be an important component of the region or county's character and is experienced by a reasonable proportion of its population.

Value	Criteria
	The condition of the landscape and its individual elements is good and is generally well maintained. Rare or distinctive elements and / or features may be present and would contribute to the character of the area / quality of the landscape resource.
Medium	No designated landscape are present, but the landscape may be valued locally (e.g. village greens, allotments or public open spaces etc). Use of the area is likely to be limited to the local community with informal recreational use / greenspace. The condition of the landscape and its individual elements are good to fair, but has good potential for flora and fauna. If present, rare or distinctive elements and / or features are not notable components that contribute to the character of the area.
Low	A landscape of low importance, of low quality and in fair to poor condition, with few features of value or interest. The landscape has little or no amenity value. Rare or distinctive elements and / or features are not present. The landscape has low potential for biodiversity.
Very Low	Industrial or contaminated land. The landscape has no amenity value. A landscape of very low quality and in poor condition, with very low potential for biodiversity.

Value Attached to Views

- A.4.11 A view is valued through formal designation and / or indicators of value attached by people. **Table A.02** sets out the value attached to visual receptors, in order to establish a consistent and objective baseline against which the potential effects arising as a result of the proposed development can be assessed. As noted for Landscape Value above, the list of factors noted in the criteria below is not considered exhaustive and professional judgement is applied to determine an appropriate value for each view.

Table A.02 Criteria for determining value attached to views

Value	Criteria
Very High	Views from / over / toward landscape of International and National importance (e.g. World Heritage Sites, National Parks, National Landscapes, Registered Parks and Gardens, Scheduled Monuments, Grade

Value	Criteria
	I or II* Listed Buildings, SSSIs etc), particularly where the view provides a contribution to the significance of the asset. Views from viewpoints within highly popular visitor attractions / tourist destinations. Protected views.
High	Views from / over / toward landscape of Regional or County importance (e.g. Areas of Great Landscape Value (AGLV), Country Parks, Long Distance Trails, Grade II Listed Buildings, Conservation Areas etc). Views from viewpoints within moderately popular, well used visitor attractions / tourist destinations, including long distance trails, rights of way etc. Views to which receptors have a proprietary interest (excluding residential properties).
Medium	Views from / over / toward landscape of local importance, which may be subject to designation (e.g. village greens, allotments or public open spaces etc). Views from landscape viewpoints not used by substantial numbers of people, including public rights of way, touring routes, cycle paths, canals, public open spaces etc.
Low	Views from landscape with no designations and of at most local importance. Views from viewpoints which are not particularly popular or recognised as being destinations in their own right, including infrequently used rights of way. Views with no cultural associations.
Very Low	Views from landscape of no importance, of poor scenic quality or with no sense of tranquillity.

A.5 Assessment of Likely Effects

A.5.1 Having determined the baseline conditions for the site and study area, the assessment process then proceeds with the following stages:

- Evaluate the sensitivity of landscape and visual receptors in relation to the proposed development;
- Assess the magnitude of change (impact) arising as a result of the proposed development in relation to: landscape character, physical features and elements of the landscape; and the visual amenity and views of people;
- Combine judgements on the nature of receptor (sensitivity) with the nature of change (magnitude of impact) to arrive at a clear and reasoned professional judgement regarding the importance of effects.

- A.5.2 The criteria used for each of these stages of the assessment process in relation to both landscape and visual receptors are detailed in the following section of the methodology and are arranged in word scales in line with the preferred approach described within the GLVIA3.
- A.5.3 Criteria detailed within these scales provide examples of the different thresholds used within the assessment process. It is important to note that these criteria act as a guide for professional judgement but do not replace it.

Assessment of Landscape Effects

Landscape Sensitivity

- A.5.4 In LVIA, the sensitivity of landscape receptors is specifically related to the particular development that is being proposed and its location. Whilst the landscape generally have some intrinsic sensitivity, these receptors have different features and elements that can accommodate different types of development and levels of change.
- A.5.5 The sensitivity of receptors is assessed by combining judgements on the value attached to the landscape resource and its susceptibility to the type of change proposed, i.e. a judgement about the nature of the proposed development and the baseline capacity of the landscape to accept that type of change. The sensitivity of receptors will vary therefore, depending on the type and nature of development proposed.

Landscape Susceptibility

- A.5.6 Landscape susceptibility describes the ability of a receptor to accommodate change (i.e. the proposed development) without undue consequences for the maintenance of the baseline situation and / or the achievement of landscape planning policies or strategies.
- A.5.7 **Table A.03** sets out the criteria that have been considered when determining landscape susceptibility. As noted for landscape value, the criteria for determining susceptibility are not considered exhaustive and are applied using professional judgement.

Sensitivity of Landscape Receptors

- A.5.8 Receptors are selected to describe the likely effects on the landscape resource arising as a result of the proposed development at a range of scales and can include wider landscape character areas / types as well as specific features or elements within the site and the surrounding area.
- A.5.9 Sensitivity is specific to each landscape receptor and reflects a balanced judgement on the value attached to the receptor and its susceptibility to the type of change proposed. The matrix in **Table A.04** illustrates how sensitivity is determined by a combination of value and susceptibility of the landscape receptor.
- A.5.10 The sensitivity of landscape receptors is described using a five-point word scale. Intermediate levels of sensitivity can also be attributed to receptors where relevant. **Table A.03** sets out the examples of criteria to determine landscape susceptibility. The criteria identified in the table

indicates criteria along the varying scale of their adjacent descriptor, ranging from Very High to Very Low. This list is not considered exhaustive and professional judgement is used to attribute susceptibility with consideration to these criteria. Not all criteria need to be met for a specific value to be attributed to any one receptor.

Table A.03 Criteria for determining landscape susceptibility

Susceptibility	Criteria
Very High	The proposed development would conflict with relevant or specific national planning policies or strategies. The landscape is of a very large scale and / or there is a negligible level of containment, resulting in a significant degree of interaction between landform, topography, urban grain, development pattern, city skyline, and vegetation cover. There is no existing reference or context within the receptor to the type of development proposed. The majority of existing element(s) would not be easy to replace (e.g. ancient woodland, mature trees etc). Detracting features or major infrastructure are not present in the area. The receptor has a very low level of ability to accept the type of development proposed and there are very limited opportunities for mitigation.
High	The proposed development would conflict with relevant or specific local planning policies or strategies. The landscape is of a large scale and / or there is a low level of containment, resulting in a moderate degree of interaction between landform, topography, urban grain, development pattern, city skyline, and vegetation cover. There is little or no existing reference or context within the receptor to the type of development proposed. The majority of existing element(s) would not be easy to replace (e.g. ancient woodland, mature trees etc). Detracting features or major infrastructure are not present in the area or, where present, these have little influence on the character or experience of the landscape. The receptor has a low level of ability to accept the type of development proposed and there are limited opportunities for mitigation.
Medium	The proposed development would not be supported by specific local planning policies or strategies but may be in line with general policy, guidance or strategies. The landscape is of a medium scale and / or there is a moderate level of containment, resulting in a minor degree of interaction between landform,

Susceptibility	Criteria
	topography, urban grain, development pattern, city skyline, and vegetation cover There is some existing reference or context within the receptor to the type of development proposed. There are limited opportunities for replacement of existing elements. Detracting features or major infrastructure are present in the area and these have a noticeable influence on the character or experience of the landscape. The receptor has a medium level of ability to accept the type of development proposed and there are good opportunities for mitigation.
Low	The proposed development would be in line with local planning policies, strategies or guidance and the site may be allocated for the type of development proposed. The landscape is of small scale and / or has a high level of containment, resulting in only a slight degree of interaction between landform, topography, urban grain, development pattern, city skyline, and vegetation cover There are many existing references within the receptor to the type of development proposed. Few / no existing landscape elements are present (e.g. brownfield sites) or, where these are present, these can easily be replaced. Some existing features are detracting and / or major infrastructure is present which has an obvious influence on the character or experience of the landscape. The receptor has a high level of ability to accept the type of development proposed and there are good opportunities for mitigation and enhancement.
Very Low	The proposed development would be in line with local and national planning policies, strategies and guidance and the site may be allocated for the type of development proposed. Due to the scale of enclosure, the receptor has no interaction with the surrounding landscape. The proposed development would be in keeping with the land use of the site and the surrounding landscape. All landscape elements are easily replaceable. Existing features are detracting and / or major infrastructure is present which heavily influences the character or experience of the landscape. The receptor has a very high level of ability to accept the type of development proposed and there are very good opportunities for mitigation and enhancement.

Table A.04 Matrix for determining landscape sensitivity

	VALUE					
		Very Low	Low	Medium	High	Very High
SUSCEPTIBILITY	Very Low	Negligible	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	High
	Medium	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Very High
	Very High	Medium	High	High	Very High	Very High

Magnitude of landscape Change

- A.5.11 The magnitude of impact for landscape change is influenced by a number of factors including the extent to which landscape features are lost and / or altered, the introduction of new features into the landscape and the resulting change in the physical and / or perceptual characteristics of the landscape. It is determined by, but not necessarily limited to:
- The size and scale of the impact;
 - The extent of the geographical area over which change is likely to be felt;
 - The duration of the impact and its potential reversibility; and
 - The proximity of the landscape receptor to the site and the nature of the effect.
- A.5.12 Consideration has been given to the location of character areas in relation to the proposed development as it is recognised that landscape features in close proximity to a proposed development would usually have a much stronger influence on the sense of the landscape character than more distant features. It is however acknowledged that more distant features can also have an influence.
- A.5.13 The magnitude of impact for landscape change is described using a five point word scale. Intermediate levels of magnitude can also be attributed to receptors where relevant. Magnitude is assessed as being very large, large / very large, large, medium / large, medium, small / medium, small or negligible.
- A.5.14 The magnitude of impact for landscape change has been assessed with reference to the criteria set out in **Table A.05** with professional judgement applied in its determination.

Table A.05 Criteria for determining magnitude of impact for landscape change

Magnitude	Criteria
Very Large	The size and scale of change is considered to be very high due to the total loss of or alteration to existing landscape character or highly distinctive / important features and elements, and / or the addition of uncharacteristic

Magnitude	Criteria
	conspicuous features and elements, resulting in a complete change to key aesthetic or perceptual qualities. The geographical extent of change would influence the landscape at a national level. Impacts would be considered long term and would either be irreversible or very difficult to reverse in practical terms.
Large	The size and scale of change is considered to be high due to the notable loss of or alteration to existing landscape character or distinctive / important features and elements, and / or the addition of uncharacteristic noticeable features and elements, degrading the integrity of key aesthetic or perceptual qualities. The geographical extent of change would influence the landscape at a regional level. Impacts would be considered long term and would either be irreversible or very difficult to reverse in practical terms.
Medium	The size and scale of change is considered to be medium due to the partial loss of or alteration to existing landscape character or features and elements, and / or the addition of uncharacteristic features and elements, resulting in key aesthetic or perceptual qualities out of scale or at odds with the local pattern and landform. The geographical extent of change would influence the landscape at a local level. Impacts would be considered medium term and / or potentially reversible, although it may not be practical to do so.
Small	The size and scale of change is considered to be low due to minor loss or alteration of existing landscape features and elements, resulting in a discernible negative effect to key aesthetic or perceptual qualities. The geographical extent of change would influence the immediate setting of the proposed development. Impacts would be considered short term and / or potentially reversible and in practical terms would easily be achievable.
Negligible	The size and scale of change to existing landscape features and elements is considered to be barely discernible. The geographical extent of change would influence the site only. Impacts would be considered short term / temporary and / or easily reversible and in practical terms would very easily be achievable.

Assessment of Visual Effects

Visual Sensitivity

- A.5.15 Visual receptors are people and comprise individuals or groups of people who are likely to be affected by the proposed development at specific viewpoints or a series of viewpoints. The sensitivity of visual receptors is determined by balancing judgements about the susceptibility of receptors to changes in their views and visual amenity (i.e. by the proposed development) with the baseline value attached to the view by the receptor. The sensitivity of visual receptors will therefore vary depending on the type and nature of development proposed.

Susceptibility of Visual Receptors

- A.5.16 The susceptibility of different receptors to changes in their views and visual amenity is a function of the occupation or activity of people experiencing a view at a particular location and the extent to which their attention is focussed on the view and visual amenity they experience.
- A.5.17 **Table A.06** sets out the criteria that have been considered when determining the susceptibility of visual receptors to change. As noted for the value of views, the criteria for determining susceptibility are not considered exhaustive and are applied using professional judgement.

Table A.06 Criteria for determining susceptibility of visual receptors

Susceptibility	Criteria
Very High	Tourists and visitors to heritage assets or other attractions where views of the surroundings are an important part of the experience.
High	Occupiers of residential properties with clear views toward the development. People engaged in outdoor recreation whose attention is likely to be focussed on the landscape and / or particular views, or for whom their appreciation of views is an important factor in the enjoyment of the activity. People travelling through the landscape on roads, rail or other routes on recognised scenic routes or where there is a distinct awareness of views of their surroundings and their visual amenity.
Medium	Occupiers of residential properties with oblique or partially screened views. People at work and in educational institutions for whom the appreciation of setting is important to the quality of working / school life, with oblique or partially screened views. People staying in hotels and healthcare institutions who are likely to appreciate views of their surroundings. People engaged in outdoor recreation or sport which involves an appreciation of views (including public rights of way, touring routes, cycle paths, public open spaces etc), but not used by substantial numbers of people.

Susceptibility	Criteria
	People travelling through the landscape for short periods of time on roads, rail, canals or other routes who are likely to experience and appreciate views of their surroundings or are passing through the landscape to enjoy the view.
Low	Occupiers of residential properties with limited views of the development. People at their place of work where the appreciation of the setting is of limited importance to the quality of working life. People staying in hotels and healthcare institutions who are unlikely to appreciate views of their surroundings. People engaged in outdoor recreation or sport which does not involve an appreciation of views. People travelling through the landscape who have limited views of their surroundings or for whom the appreciation of views is of limited importance to their journey (e.g. on main roads, rail corridors, infrequently used public rights of way or footways adjacent to carriageways).
Very Low	People travelling through the landscape often at high speed (e.g. on motorways and main line railways). People who have no views of their surroundings or for whom views of their surroundings are not important.

Sensitivity of Visual Receptors

- A.5.18 Receptors have been selected to describe the range of likely effects on the views of people and their visual amenity arising as a result of the proposed development, taking into account a range of factors including the number and sensitivity of viewers likely to be affected.
- A.5.19 Sensitivity is specific to each visual receptor and reflects a balanced judgement on the value attached to the view by the receptor, their visual amenity and its susceptibility to the type of change proposed. The matrix in **Table A.07** illustrates how sensitivity is determined by a combination of value and susceptibility of the visual receptor.
- A.5.20 The sensitivity of visual receptors is described using a five point word scale. Intermediate levels of sensitivity can also be attributed to receptors where relevant. Sensitivity is assessed to be very high, high / very high, high, moderate / high, moderate, low / moderate, low or negligible.

Table A.07 Matrix for determining visual sensitivity

	VALUE					
		Very Low	Low	Medium	High	Very High
SUSCEPTIBILITY	Very Low	Negligible	Low	Low	Moderate	Moderate
	Low	Low	Low	Moderate	Moderate	High
	Medium	Low	Moderate	Moderate	High	High
	High	Moderate	Moderate	High	High	Very High
	Very High	Moderate	High	High	Very High	Very High

Magnitude of Visual Change

- A.5.21 The impact on visual receptors is assessed with regard to the magnitude of change (impact) to the views and visual amenity of people arising as a result of the proposed development. The magnitude of visual impact is evaluated in relation to its size or scale, its geographical extent and its duration and reversibility.
- A.5.22 The magnitude of visual change is described using a five point word scale. Intermediate levels of magnitude can also be attributed to receptors where relevant. Magnitude is assessed as being very large, large / very large, large, medium / large, medium, small / medium, small or negligible.
- A.5.23 The magnitude of visual impact has been assessed with reference to the criteria set out in the **Table A.08** with professional judgement applied in its determination.

Table A.08 Criteria for determining magnitude of visual impact

Magnitude	Criteria
Very Large	The scale of change is considered to be very high due to the total loss or major alteration to key elements / features / characteristics of views. The proposed development creates a new focus and has a defining influence on the view. The geographical extent of change is considered to be very high due to the adjacent or close proximity of the receptor to the development, the full and / or direct view and the substantial extent of the view that would change as a result of the development. Impacts would be considered long term and would either be irreversible or very difficult to reverse in practical terms.
Large	The size and scale of change is considered to be high due to the major loss / addition / alteration of features within the view, the change to the composition of the view, the degree of contrast / integration of the proposal with the baseline situation and the nature of the view.

Magnitude	Criteria
	The geographical extent of change is considered to be high due to near distance proximity of the receptor to the development, the full and / or near direct to slight angle of view and the substantial extent of the view that would change as a result of the development. Impacts would be considered long term and would either be irreversible or very difficult to reverse in practical terms.
Medium	The size and scale of change is considered to be medium due to the reasonable extent of loss / addition / alteration of features within the view, the change to the composition of the view, the degree of contrast / integration of the proposal with the baseline situation and the nature of the view. The geographical extent of change is considered to be medium due to the middle distance of the receptor to the development, the partial and / or oblique angle of view and the reasonable extent of the view that would change as a result of the development. Impacts would be considered medium term and would potentially be reversible, although it may not be practical to do so.
Small	The size and scale of change is considered to be low due to the limited extent of loss / addition / alteration of features within the view, the change to the composition of the view, the degree of contrast / integration of the proposal with the baseline situation and the nature of the view. The geographical extent of change is considered to be low due to the middle to long distance of the receptor from the development, the glimpsed and / or indirect angle of view and the minimal extent of the view that would change as a result of the development. Impacts would be considered short term, would potentially be reversible and in practical terms would easily be achievable.
Negligible	The size and scale of change is considered to be very low due to the barely perceptible extent of loss / addition / alteration of features within the view, the change to the composition of the view, the degree of contrast / integration of the proposal with the baseline situation and the nature of the view. The geographical extent of change is considered to be barely perceptible due to the long distance of the receptor from the development, the glimpsed and / or indirect angle of view and the extent of the view that would change as a result of the development. Impacts would be considered short term or temporary, would easily be reversible and in practical terms would very easily be achievable.

Definitions of Terms used to Describe Change

- A.5.24 The GLVIA3 emphasises the importance of clarifying any assumptions underlying professional judgements, therefore where verbal scales are used to describe the nature and magnitude of

changes (impacts) likely to occur as a result of the Proposed Development, which differ from the previously defined scales, the following definitions apply.

Nature of Change

A.5.25 The nature of change is defined as follows:

- Direct (resulting directly from the development) or Indirect (consequential change resulting from the development);
- Permanent or Temporary (if temporary a timescale will be described); and
- Positive, Negative or Neutral.

A.5.26 The GLVIA3 acknowledges that determining whether change is positive, negative or neutral is a challenging issue and requires informed professional judgements to be made with reference to the following criteria as a minimum:

- The degree to which the proposal fits with existing landscape character; and
- The contribution to the landscape that the development may make in its own right, usually by virtue of good design, even if it is in contrast to the existing character of the landscape

Nature of View

A.5.27 This criterion describes the nature and relative amount of time over which views of the Proposed Development are likely to be experienced. Views are described as being:

- Full: views would be relatively open / unscreened and of a duration sufficient to appreciate the scale of the Proposed Development;
- Partial: views of the Proposed Development would be partially screened / filtered and / or would be of a limited duration that would not allow the full scale of the development to be fully appreciated; or
- Glimpsed: views of the Proposed Development would be largely screened and / or the duration of views would be so limited that the scale of the development cannot be appreciated by the receptor.

Distance of Receptor from Site Boundary

A.5.28 This is expressed in metres or kilometres and considers the following thresholds in relation to the site boundary:

- Adjacent: next to or in very close proximity to the site;
- Near Distance: up to 500m;
- Middle Distance: between 500m and 2km; or
- Long Distance: 2km and above.

Area of Landscape Affected

A.5.29 This criterion provides thresholds that describe the geographical extent of the landscape over which change arising as a result of the Proposed Development would be felt. Change is described as being of the following scales:

- Regional: likely to influence more than one landscape type or character area;
- Local: at the scale of a landscape type or character area;

- Immediate Setting: within close proximity to the site; or
- Site only: within the development itself.

Angle of View of Visual Receptors

A.5.30 This criterion describes the angle of the view toward the Proposed Development that a visual receptor is likely to experience in relation to the activity they are undertaking, e.g. walking along a public footpath:

- Direct: in line with the activity being undertaken.
- Indirect: not in line with the activity being undertaken.

Duration of Impact

A.5.31 The duration of impacts are considered against the following thresholds:

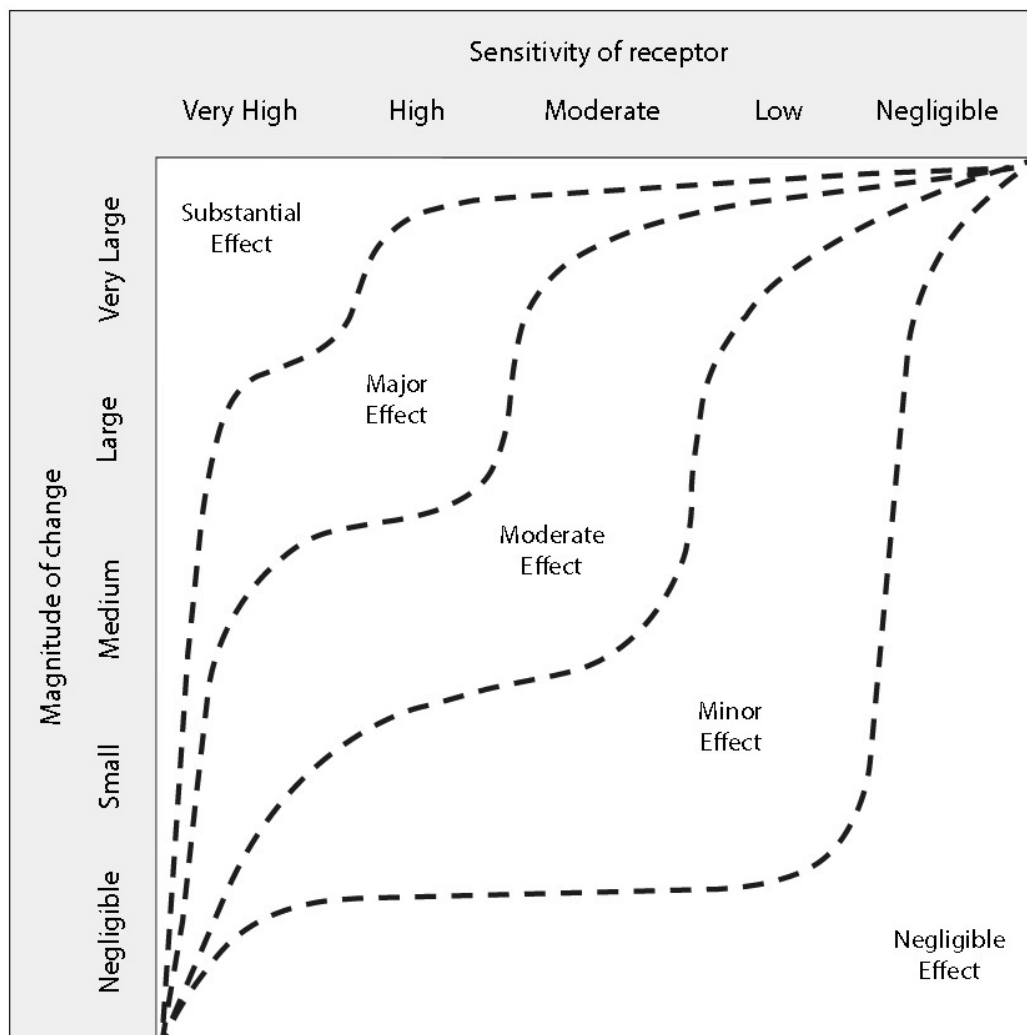
- Temporary : During Construction
- Short term: up to 5 years
- Medium term: between 5 and 10 years
- Long term: over 10 years

A.5.32 The reversibility of impacts is also considered. These are recorded as either reversible or irreversible and comprise a judgement about the prospects and practicality of a particular impact being reversed over a defined timescale.

A.6 Determining Effects

A.6.1 The final conclusions for both landscape and visual effects are based on a combination of sensitivity of the receptor and magnitude of change (impact). The overall judgement on the nature and level of these effects is based on the sequential combination of each criteria, leading to a balanced justification as described by the criteria provided in **Tables A.10 & A.11**, with professional judgement applied to inform this determination. The matrix in **Table A.09** provides an indicative illustration of how the effect is determined by this combination of sensitivity and magnitude but is not applied without due consideration of the specific details of the site and development under assessment.

Table A.09 Matrix for determining importance of effect



- A.6.2 GLVIA3 Statement of Clarification 1/13 states that for LVIA outside of the EIA process, it is not necessary to establish whether likely effects are significant, given that the term is enshrined in EIA Regulations. It goes on to note an approach that “is proportional to the scale of the project that is being assessed and the nature of its likely effects” also applies to LVIA being undertaken outside of the formal requirements of EIA. In this assessment, judgements are made therefore about the level of effects, referred to by their importance rather than significance, with the assessment then used to determine whether these effects are likely to be relevant to the decision making process.
- A.6.3 Describing the effects likely to arise as a result of the Proposed Development and determining their importance requires the application of professional judgement to weigh the findings of the sensitivity of receptors against the predicted magnitudes of change (impact), which can be beneficial, adverse or neutral.
- A.6.4 The importance of landscape and visual effects are described using a five-point word scale. Intermediate levels of significance can be attributed where relevant. Significance of landscape

effects is assessed as being substantial, major / substantial, major, moderate / major, moderate, minor / moderate, minor or negligible. A judgement of neutral effect can also be determined where there is no discernible change.

- A.6.5 The criteria used to determine the significance of both landscape and visual effects are set out in **Tables A.10** and **A.11** and are derived from guidance provided within the GLVIA3.

Table A.10 Criteria for determining landscape effects

Effect	Description. The proposed development would:
Substantial Adverse Effect	• Be at complete variance with the character of the landscape. • Permanently diminish the integrity of a wide range of characteristic features and elements. • Permanently damage the sense of place.
Major Adverse	• Be at considerable variance with the character of the landscape. • Degrade or diminish the integrity of a wide range of characteristic features and elements. • Substantially damage the sense of place.
Moderate Adverse Effect	• Conflict with the character of the landscape. • Have an adverse impact on some characteristic features and elements. • Diminish the sense of place.
Minor Adverse Effect	• Not quite fit with the character of the landscape. • Be at variance with characteristic features and elements. • Detract from the sense of place.
Negligible Adverse Effect	• Result in a barely perceptible deterioration of landscape character. • Have a barely perceptible impact on characteristic features and elements. • Barely degrade the sense of place.
Neutral Effect	• Maintain the existing character of the landscape. • Blend in with characteristic features and elements. • Enable the sense of place to be maintained.
Negligible Beneficial Effect	• Result in a barely perceptible improvement to landscape character. • Provide limited enhancement of characteristic features and elements. • Barely improve the sense of place
Minor Beneficial Effect	• Complement the character of the landscape. • Enhance characteristic features and elements. • Slightly enhance the sense of place.

Effect	Description. The proposed development would:
Moderate Beneficial Effect	- Slightly enhance the character of the landscape - Enable the restoration of characteristic features and elements partially lost or diminished as a result of changes from inappropriate management or development. - Enhance the sense of place.
Major Beneficial Effect	- Enhance the character of the landscape. - Enable the restoration of characteristic features and elements completely lost or diminished as a result of changes from inappropriate management or development. - Greatly enhance the sense of place.
Substantial Beneficial Effect	- Significantly enhance the character of the landscape. - Enable the restoration of characteristic features and elements of a very high value landscape, completely lost or diminished as a result of changes from inappropriate management or development. - Significantly enhance the sense of place.

Table A.11 Criteria for determining visual effects

Effect	Description. The proposed development would:
Substantial Adverse Effect	Cause a significant deterioration to the view of a receptor of very high sensitivity that would constitute a total change in the view or would introduce a major discordant element into the view.
Major Adverse Effect	Cause a major deterioration to the view of a receptor of high sensitivity that would constitute a total change in the view or would introduce a major discordant element into the view.
Moderate Adverse Effect	Cause an obvious deterioration to the view of a receptor of medium to high sensitivity that would constitute a clear change in the view or would introduce a discordant element into the view; or, a major deterioration to the view of a receptor of low sensitivity.
Minor Adverse Effect	Cause a limited deterioration to the view of a receptor of medium to high sensitivity that would constitute a noticeable change in the view or would introduce uncharacteristic features or elements into the view; or, an obvious deterioration to the view of a receptor of low sensitivity.
Negligible Adverse Effect	Result in a barely perceptible change in the view, associated with the introduction of uncharacteristic features or elements.
Neutral	Not be visible to the receptor. Any associated mitigation would represent an indiscernible change to the baseline situation.

Effect	Description. The proposed development would:
Negligible Beneficial Effect	Result in a barely perceptible change in the view, associated with the introduction of characteristic features or elements.
Minor Beneficial Effect	Result in a limited improvement to the view of a receptor of medium to high sensitivity; or, an obvious improvement to the view of a receptor of low sensitivity.
Moderate Beneficial Effect	Result in an: obvious improvement to the view of a receptor of medium to high sensitivity; or, a major improvement to the view of a receptor of low sensitivity.
Major Beneficial Effect	Result in a major improvement to the view of a receptor of high sensitivity that would constitute a total change in the view or would introduce a major discordant element into the view.
Substantial Beneficial Effect	Result in a significant improvement to the view of a receptor of very high sensitivity.

Describing the Importance of Effects to Decision Making

A.6.6 For the purposes of this assessment, effects are described in relation to their importance to decision making and have been defined as follows:

- **Substantial** – Considerable effect (by extent, duration or magnitude of impact) of more than local importance or in breach of recognised acceptability, legislation, policy and / or standards. Considered to be very important and material to decision making.
- **Major** – Obvious effect (by extent, duration or magnitude of impact) considered to be important and material to the decision making process.
- **Moderate** – Potential to be material to decision making.
- **Minor** – Slight, very short or highly localised effect, not important for decision making.
- **Negligible or Neutral** – No important effect, not relevant to decision making.

A.7 LVIA and the Design Process

Mitigation & Enhancement Measures

A.7.1 Mitigation measures are proposed to prevent, reduce and where possible offset any adverse landscape and visual effects and are typically developed in collaboration with members of the design team and environmental specialists.

A.7.2 In terms of LVIA, the aims of mitigation are to ensure the proposed development achieves the best fit with the local landscape character, retains and makes best use of existing landscape features and provides adequate screening for visual receptors. The type(s) of mitigation measures proposed are influenced by the surrounding landscape character and where possible would address opportunities to enhance biodiversity and improve nature conversation.

- A.7.3 Enhancement relates to any proposals that seek to improve the landscape and / or visual amenity of the proposed development site and its wider setting beyond its original baseline condition and as such is not specifically related to the mitigation of adverse effects.
- A.7.4 For the purposes of this LVIA it has been assumed that mitigation and enhancement measures would be implemented during the construction phase and would be in place at completion. Mitigation is therefore considered within this assessment as an integral part of the development proposals.

A.8 Glossary of Terms

- A.8.1 Definitions of the following terms used throughout this LVIA have been included for ease of reference.

Table A.09 Glossary of terms

Term	Definition
Baseline	Also referred to as the 'baseline situation', this term describes the existing nature of the landscape and the visual environment within the study area at a fixed point in time, as well as any changes likely to occur independently of the proposed development, including the legislative and planning context and any relevant published guidance.
Construction	Construction, also referred to as the construction phase, refers to the all activity on and offsite required to implement the proposed development. The construction phase is considered to commence with the first activity on site, for example the creation of site access or site clearance works, and ends with demobilisation.
Demobilisation	This term refers to the completion and the removal of physical and manpower resources from a construction site at the completion of the construction phase.
Designated Landscape	Area(s) of land identified as being of importance at international, national or local levels, either defined by statute or identified in development plan or other documents.
Development	Any proposal that results in a change to the landscape and / or visual environment.
Effect	The nature of the change(s) likely to occur as a result of a particular impact.
Direct effect	An effect that is directly attributable to the proposed development.
Indirect effect	An effect that results from the proposed development as a consequence of a direct effect(s), often occurring away from the site,

Term	Definition
	or as a result of a sequence of interrelationships or a complex pathway.
Element	Individual parts which make up the landscape, for example trees, hedgerows or buildings.
Enabling works	Enabling works cover those activities and preparations required to make a site construction ready and include the creation of access routes, and installation of security fencing, hoarding, signage and site compound(s). Enabling works are considered to occur during the construction phase.
Enhancement	Measures that seek to improve the landscape of the site and / or its wider setting beyond its baseline condition.
Façade	A façade is generally one exterior side of a building, usually the front or the side facing the public street/road.
Feature	Prominent or eye-catching elements in the landscape, such as wooded skylines, parkland trees, church spires, or a particular aspect of the proposed development.
Impact	This term describes the action being undertaken, for example construction of the proposed development or the removal of landscape features.
Importance of effect	The level or importance of landscape and visual effects, determined by considering together sequentially the sensitivity of the receptor with the magnitude of effect.
Key characteristic	The combination of elements which are particularly important to the current character of the landscape and help to give an area its particularly distinctive sense of place.
Land cover	This term relates to the surface cover of the land and is usually expressed in terms of vegetation cover or lack thereof.
Land use	This term refers to what land is used for and is based on broad categories such as urban, industrial, agriculture or forestry.
Landform	The shape and form of the land surface resulting from combinations of geology, geomorphology, slope, elevation and physical processes.
Landmark	A recognisable natural or artificial feature, historically used for navigation, stands out from its surrounding environment and also is seen from a long distance.
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.

Term	Definition
Landscape Character Area (LCA)	Single unique areas which are discreet geographical areas of a particular landscape type.
Landscape Character Assessment	The process of identifying and describing variation in the character of the landscape and using this information to assist in managing change in the landscape.
Landscape Character Type (LCT)	Distinct types of landscape that are relatively homogenous in character. They are generic in nature in that they may occur in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement pattern, and perceptual and aesthetic attributes.
Landscape quality / condition	A measure of the physical state of the landscape. It may include the extent to which the character typical of the area is represented in individual locations, the intactness of the landscape and the condition of individual elements.
Landscape receptor	The constituent features and elements of the landscape, its specific or perceptual qualities and its character considered in relation to the proposed development.
Landscape resource	This term refers to the character and all features, elements and qualities of the landscape, which is defined by the European Landscape Convention (ELC) as follows: " <i>Landscape is an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors</i> " (Council of Europe, 2000). The landscape resource concerns all types of landscape within the study area and covers " <i>natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as everyday or degrade landscapes</i> " (Article 2 of the ELC, Council of Europe, 2000).
(The) Landscape scheme	The landscape design for the proposed development, incorporating all landscape mitigation and enhancement measures.
Landscape value	The relative value that is attached to landscapes by society, which may vary depending on the nature of the stakeholder.
Magnitude of change	A judgement regarding the size and scale of the change, the geographical extent of the area that would be affected and the duration of the effect and its reversibility.
Mitigation	This term refers to those measures that are proposed to prevent / avoid, reduce and where possible offset any adverse effects.
Open Access Land	Land where the public have access either by legal right or informal agreement, within which certain activities may be restricted.

Term	Definition
Operation	Also referred to as completion, this term describes the operation phase of the completed development and is considered to commence at the end of the construction phase, after demobilisation. The duration of the operation phase is dependent on the nature of the proposed development.
Parameters	A limit or boundary which defines the scope of a particular process or activity.
Perception / perceptible	A term used to describe the sensory (i.e. received through human senses) with the cognitive (i.e. knowledge and understanding gained from many sources and experiences).
Permissive Paths	A path over which there is no formal right of access (i.e. not a public right of way) whose use by the public is allowed by the landowner.
(The) Proposed development	The proposed development, also referred to as development proposals, is the 'fixed' or 'frozen' design of the scheme for which planning consent is sought.
Public Realm	Public realm embraces the external spaces within the cities and towns that are accessible to all.
Public Right of Way	In England and Wales public rights of way are routes on which the public have a legally protected right to pass. These include footpaths, bridleways, byways open to all traffic and restricted byways.
Receptor	See 'Landscape Receptor' and 'Visual Receptor'.
Sensitivity (of a receptor)	A judgement regarding the susceptibility of a receptor to the change arising as a result of the proposed development and the value attached to the receptor.
Skyline	A skyline is a horizon created by a city's or town's overall structure against the sky.
Stakeholder	The whole constituency of individuals and groups who have an interest in a subject, place or landscape.
Study area	The area within which it is considered that changes arising as a result of the proposed development would result in the highest and / or most important direct or indirect effects.
Topography	Local detail or specific features of landform.
Townscape	The character and composition of the built up environment including the buildings and relationship between them, the interaction between built form and urban open space.

Term	Definition
Townscape Character	A distinct and recognisable pattern of townscape features that occurs consistently in a particular type of townscape and make it different from others. It reflects the particular combination of urban structure, urban grain, scale and height, architectural design, legibility, vegetation and open spaces.
Tranquil / tranquillity	A state of calm and quietude associated with peace and considered to be an important asset of landscape.
Urban grain	A description of the pattern of plots in an urban block.
Urban Structure	Urban structure is the arrangement of land use in urban areas.
Viewpoint	The location from which photographs that describe specific or representative views toward the proposed development are captured.
Visual amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides the setting or backdrop for the enjoyment of peoples activities.
Visual envelope	The approximate geographical area(s) from within which full or partial views of the proposed development would be possible.
Visual receptor	Individuals and / or defined groups of people who have the potential to be affected by the proposed development.
Worst case	Reasonable prediction of the scenario that would result in the highest level of effect(s).
Zone of Theoretical Visibility (ZTV)	Those areas of the landscape that theoretically are visually connected with the proposed development.

LVIA Viewpoints and Photos





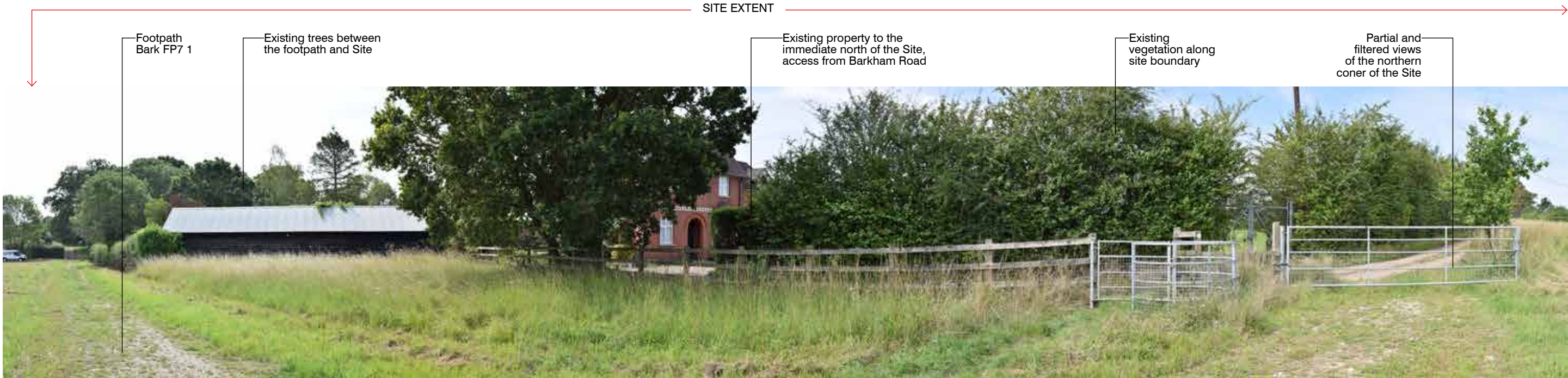
Existing winter baseline views (Extended Panorama)



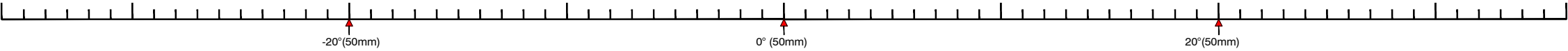
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 1a: BARKHAM FOOTPATH 7
Distance from the site boundary: 5m
OS Grid Reference: E: 477435, N: 166742
Direction of View: South
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 50.0m
Date and Time: 04.04.2023, 10:49
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: PROW users and Residents

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing summer baseline views (Extended Panorama)



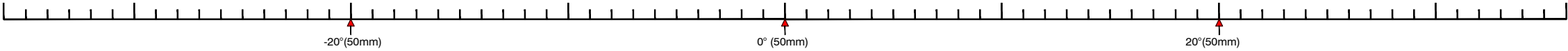
Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 1a: BARKHAM FOOTPATH 7
Distance from the site boundary: 5m
OS Grid Reference: E: 477461, N: 166734
Direction of View: South
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 50.0m
Date and Time: 26.07.2023, 10:17
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: PROW users and Residents

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



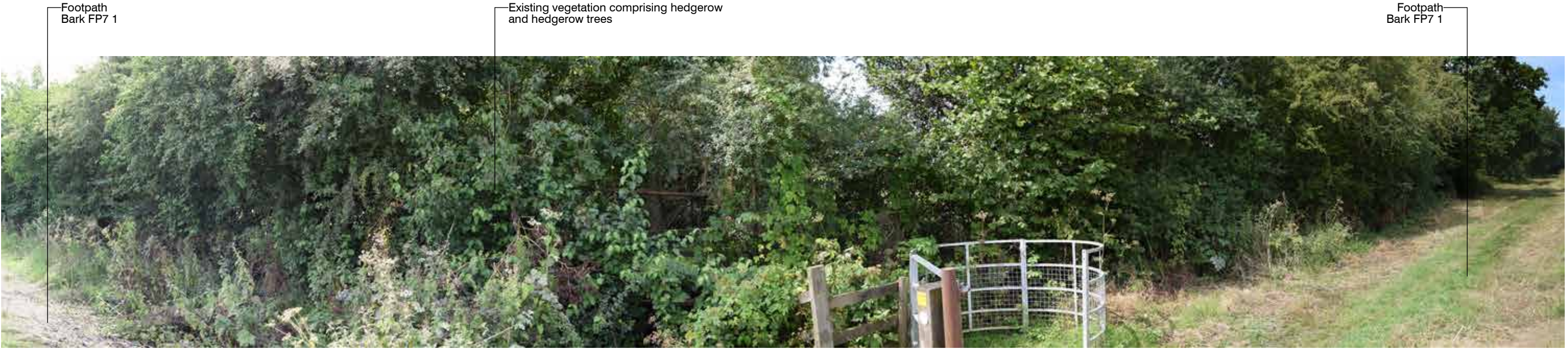
Existing winter baseline views (Extended Panorama)



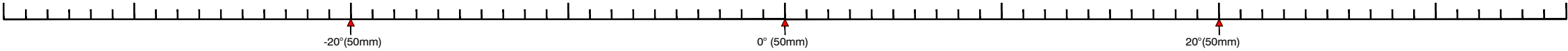
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 1b: BARKHAM FOOTPATH 7
Distance from the site boundary: 12m
OS Grid Reference: E: 477762, N: 166603
Direction of View: South
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 50.0m
Date and Time: 04.04.2023, 09:44
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: PROW users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing summer baseline views (Extended Panorama)



Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 1b: BARKHAM FOOTPATH 7
Distance from the site boundary: 12m
OS Grid Reference: E: 477762, N: 166603
Direction of View: South
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 50.0m
Date and Time: 26.07.2023, 10:26
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing winter baseline views (Extended Panorama)



Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 1c: BARKHAM FOOTPATH 7
Distance from the site boundary: 266m
OS Grid Reference: E: 478131, N: 166520
Direction of View: South West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 50.0m
Date and Time: 04.04.2023, 09:36
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: Pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing summer baseline views (Extended Panorama)



Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 1c: BARKHAM FOOTPATH 7
Distance from the site boundary: 266m
OS Grid Reference: E: 478131, N: 166520
Direction of View: South West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 50.0m
Date and Time: 26.07.2023, 10:34
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing winter baseline views (Extended Panorama)



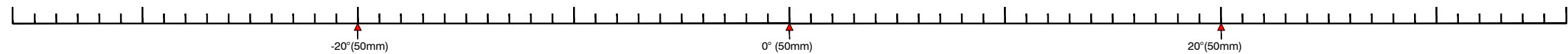
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 2a: BARKHAM FOOTPATH 9 / CHURCH LANE
Distance from the site boundary: 0m
OS Grid Reference: E: 478394, N: 166390
Direction of View: South West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 55.0m
Date and Time: 04.04.2023, 09:25
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: Visitors to St James Church and PROW users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



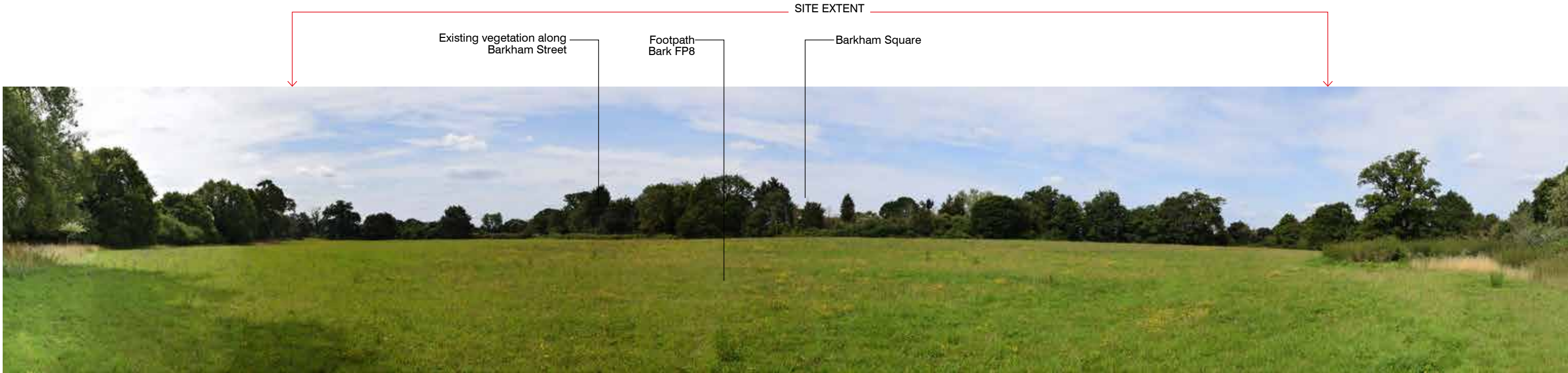
Existing summer baseline views (Extended Panorama)



Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 2a: BARKHAM FOOTPATH 9 / CHURCH LANE
Distance from the site boundary: 0m
OS Grid Reference: E: 478394, N: 166390
Direction of View: South West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 55.0m
Date and Time: 26.07.2023, 10:46
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Visitors to St James Church and PROW users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



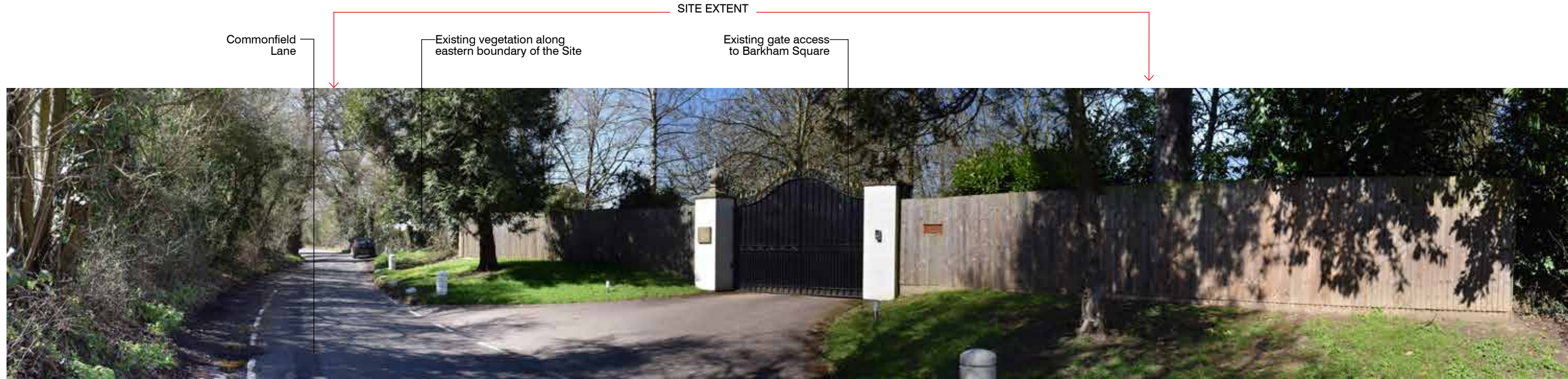
Existing summer baseline views (Extended Panorama)



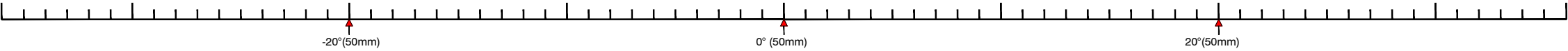
Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 2b: BARKHAM FOOTPATH 8 / SITE
Distance from the site boundary: 0m
OS Grid Reference: E: 478360, N: 166346
Direction of View: South West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 56.0m
Date and Time: 26.07.2023, 11:18
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Visitors to St James Church and PROW users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



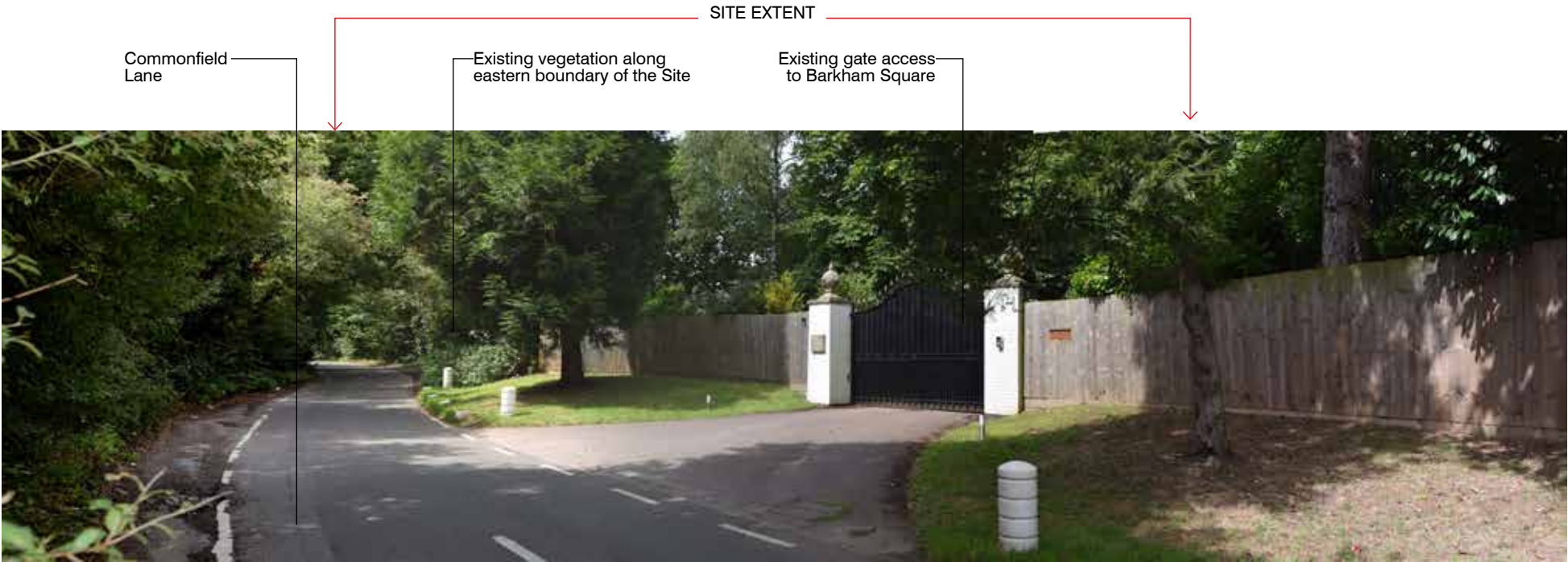
Existing winter baseline views (Extended Panorama)



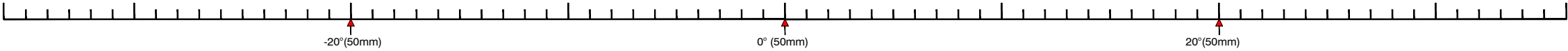
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 3: COMMONFIELD LANE
Distance from the site boundary: 35m
OS Grid Reference: E: 478239, N: 166212
Direction of View: West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 57.0m
Date and Time: 04.04.2023, 11:11
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: Road users and pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing summer baseline views (Extended Panorama)



Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 3: COMMONFIELD LANE
Distance from the site boundary: 35m
OS Grid Reference: E: 478239, N: 166212
Direction of View: West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 57.0m
Date and Time: 26.07.2023, 11:24
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Road users and pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing winter baseline views (Extended Panorama)



Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 4a: SHERMAN AVENUE, ARBORFIELD GREEN
Distance from the site boundary: 18m
OS Grid Reference: E: 477628, N: 166013
Direction of View: North East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 54.0m
Date and Time: 04.04.2023, 11:14
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: Pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



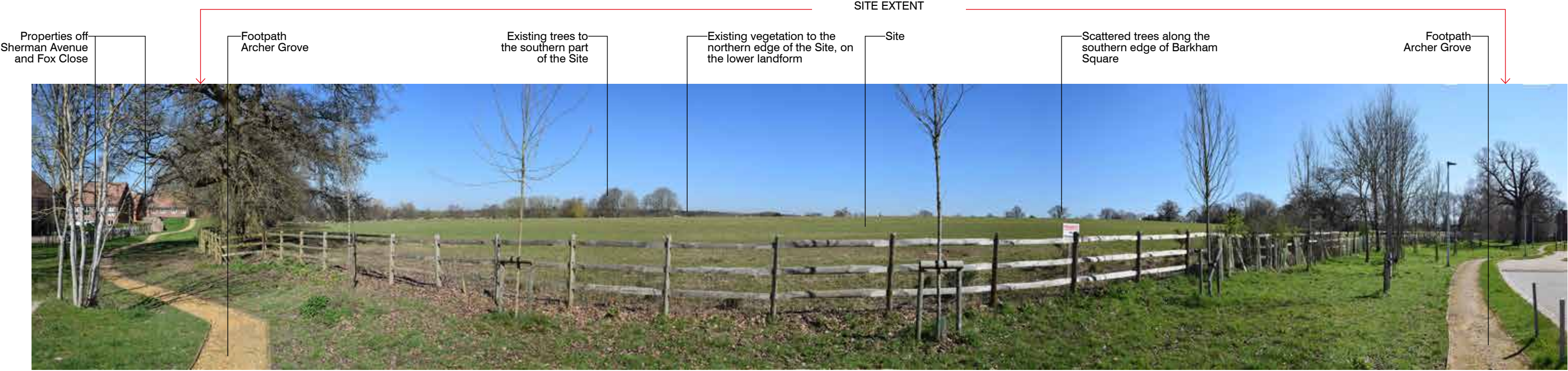
Existing summer baseline views (Extended Panorama)



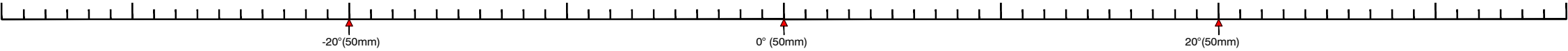
Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 4a: SHERMAN AVENUE, ARBORFIELD GREEN
Distance from the site boundary: 18m
OS Grid Reference: E: 477628, N: 166013
Direction of View: North East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 54.0m
Date and Time: 26.07.2023, 12:50
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



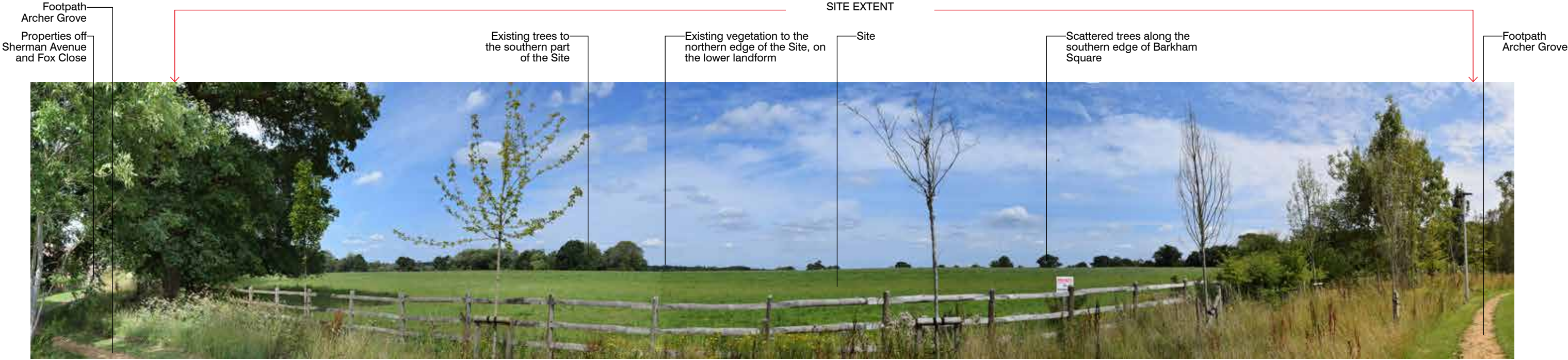
Existing winter baseline views (Extended Panorama)



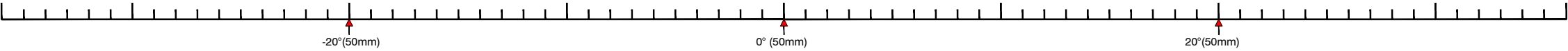
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 4b: ARCHER GROVE, ARBORFIELD GREEN
Distance from the site boundary: 8m
OS Grid Reference: E: 477749, N: 165911
Direction of View: North East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 55.0m
Date and Time: 04.04.2023, 11:22
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: Residents

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



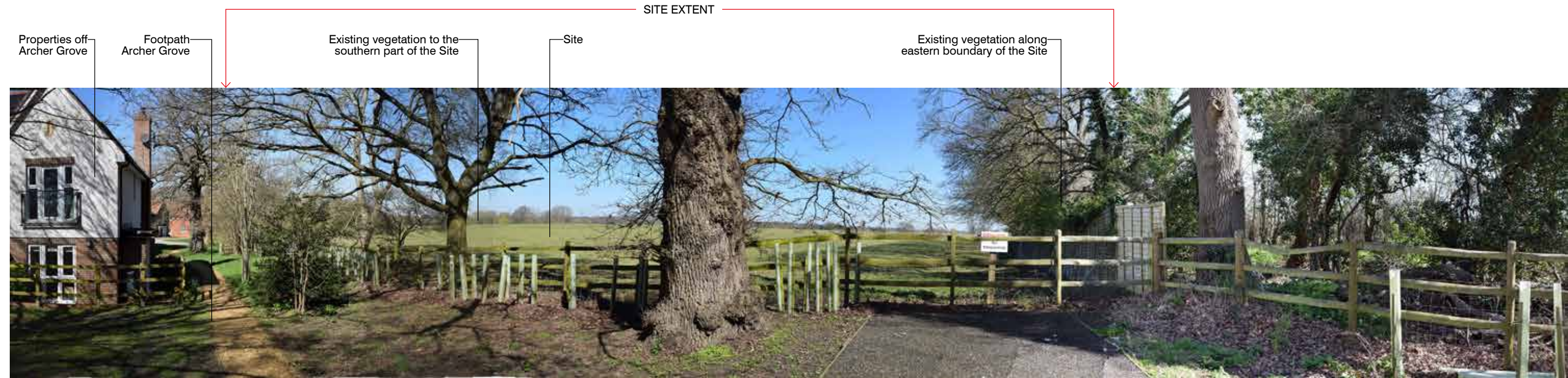
Existing summer baseline views (Extended Panorama)



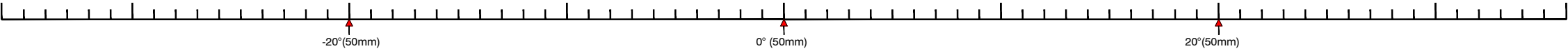
Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 4b: ARCHER GROVE, ARBORFIELD GREEN
Distance from the site boundary: 8m
OS Grid Reference: E: 477749, N: 165911
Direction of View: North East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 55.0m
Date and Time: 26.07.2023, 12:41
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing winter baseline views (Extended Panorama)



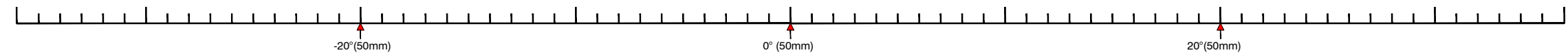
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 4c: ARCHER GROVE, ARBORFIELD GREEN
Distance from the site boundary: 5m
OS Grid Reference: E: 477890, N: 165817
Direction of View: North East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 59.0m
Date and Time: 04.04.2023, 11:28
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: Residents

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing summer baseline views (Extended Panorama)



Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 4c: ARCHER GROVE, ARBORFIELD GREEN
Distance from the site boundary: 5m
OS Grid Reference: E: 477890, N: 165817
Direction of View: North East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 59.0m
Date and Time: 26.07.2023, 12:35
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8

Filtered views
of properties
on Langley
Common Road

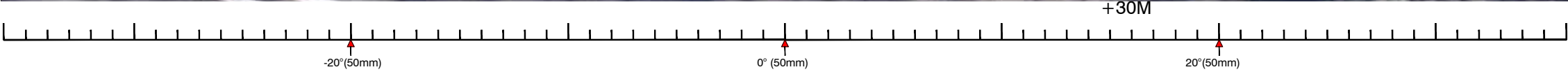
Langley
Common Road

Existing vegetation along north
western boundary of the Site

SITE EXTENT



Existing winter baseline views (Extended Panorama)



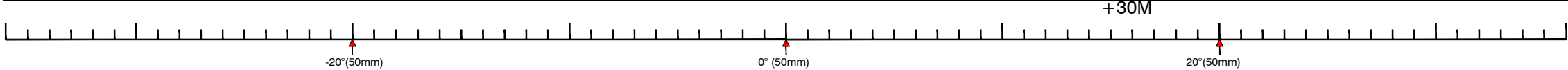
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 5: LANGLEY COMMON ROAD
Distance from the site boundary: 9m
OS Grid Reference: E: 476997, N: 166543
Direction of View: East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 55.0m
Date and Time: 04.04.2023, 13:38
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: Residents, pedestrian and road users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing summer baseline views (Extended Panorama)



VIEWPOINT 5: LANGLEY COMMON ROAD
Distance from the site boundary: 9m
OS Grid Reference: E: 476997, N: 166543
Direction of View: East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 55.0m
Date and Time: 26.07.2023, 09:33
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Residents, pedestrian and road users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing winter baseline views (Extended Panorama)



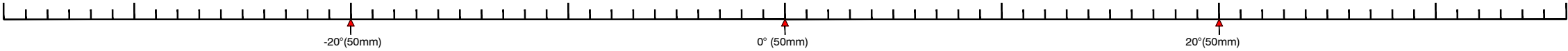
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 6: BARKHAM ROAD
Distance from the site boundary: 300m
OS Grid Reference: E: 477693, N: 166945
Direction of View: South
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 50.0m
Date and Time: 04.04.2023, 10:37
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: Residents, pedestrian and road users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing summer baseline views (Extended Panorama)



Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 6: BARKHAM ROAD
Distance from the site boundary: 300m
OS Grid Reference: E: 477693, N: 166945
Direction of View: South
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 50.0m
Date and Time: 26.07.2023, 09:46
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Residents, pedestrian and road users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing winter baseline views (Extended Panorama)



Winter view at recommended viewing distance of 300mm (When printed @ A3)

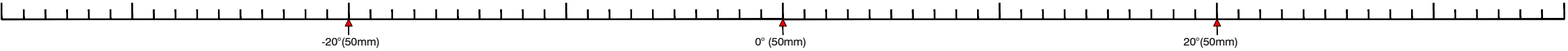
**VIEWPOINT 7:
BARKHAM BRIDLEWAY 14 /
LONGMOOR BOG NATURE RESERVE**

Distance from the site boundary: 480m
OS Grid Reference: E: 478229, N: 165482
Direction of View: North
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 56.0m
Date and Time: 04.04.2023, 12:28
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: PROW users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



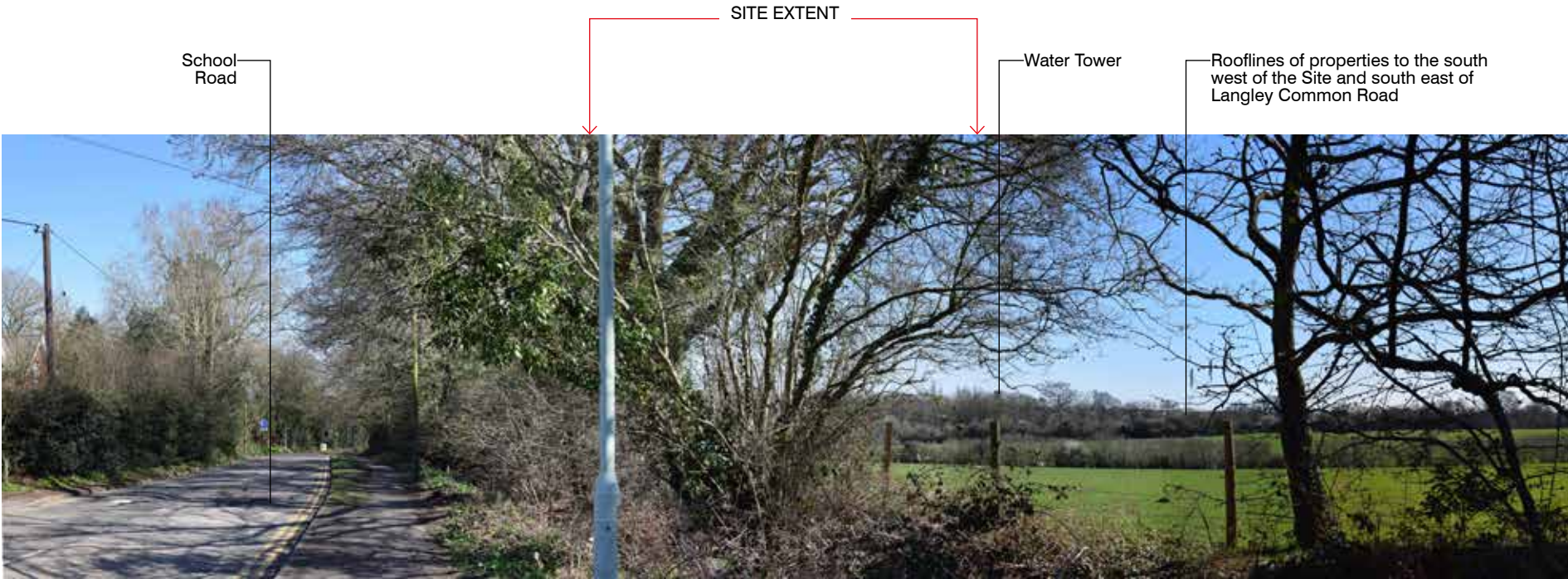
Existing summer baseline views (Extended Panorama)



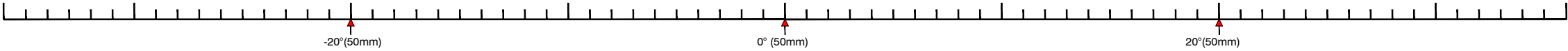
Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 7: BARKHAM BRIDLEWAY 14 / LONGMOOR BOG NATURE RESERVE
Distance from the site boundary: 480m
OS Grid Reference: E: 478229, N: 165482
Direction of View: North
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 56.0m
Date and Time: 26.07.2023, 12:18
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: PROW users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing winter baseline views (Extended Panorama)



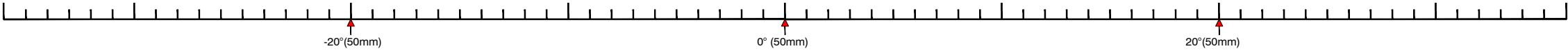
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 8: SCHOOL ROAD
Distance from the site boundary: 590m
OS Grid Reference: E: 476558, N: 166958
Direction of View: South East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 61.0m
Date and Time: 04.04.2023, 14:31
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: Road users and pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing summer baseline views (Extended Panorama)



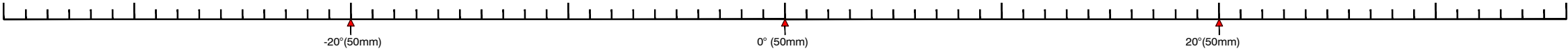
Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 8: SCHOOL ROAD
Distance from the site boundary: 590m
OS Grid Reference: E: 476558, N: 166958
Direction of View: South East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 61.0m
Date and Time: 26.07.2023, 13:54
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Road users and pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



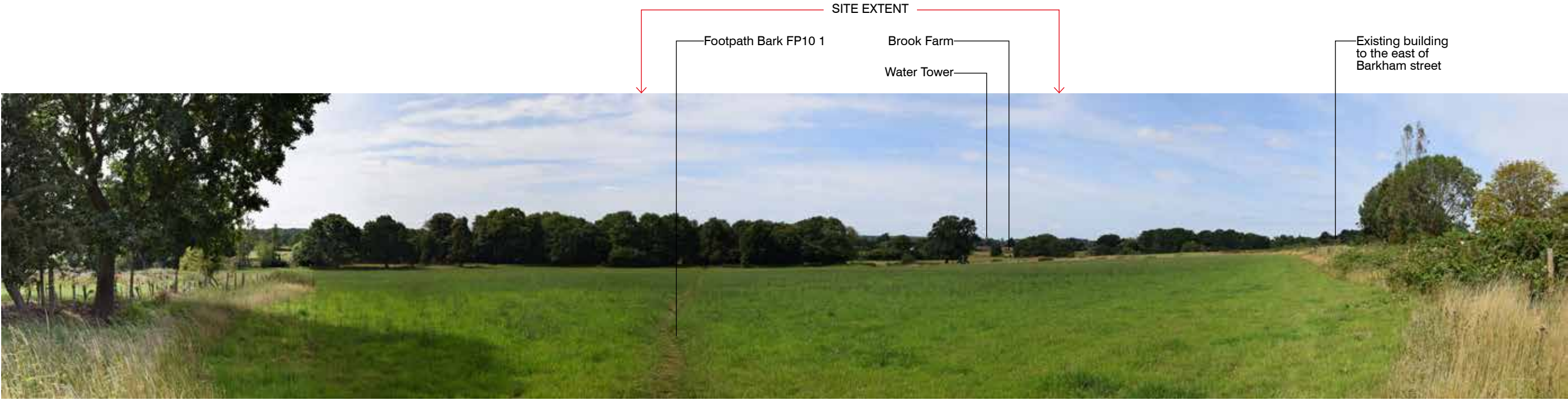
Existing winter baseline views (Extended Panorama)



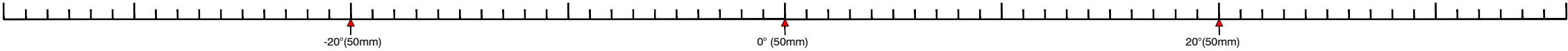
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 9: BARKHAM FOOTPATH 10 / EDNEYS HILL
Distance from the site boundary: 620m
OS Grid Reference: E: 478848, N: 166880
Direction of View: South West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 63.0m
Date and Time: 04.04.2023, 09:12
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: PROW users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing summer baseline views (Extended Panorama)



Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 9: BARKHAM FOOTPATH 10 / EDNEYS HILL
Distance from the site boundary: 620m
OS Grid Reference: E: 478848, N: 166880
Direction of View: South West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 63.0m
Date and Time: 26.07.2023, 11:01
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: PROW users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing winter baseline views (Extended Panorama)



Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 10: ARBORFIELD FOOTPATH 17 / ARBORFIELD COURT
Distance from the site boundary: 922m
OS Grid Reference: E: 476043, N: 166591
Direction of View: East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 76.0m
Date and Time: 04.04.2023, 13:59
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: Pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing summer baseline views (Extended Panorama)



Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 10: ARBORFIELD FOOTPATH 17 / ARBORFIELD COURT
Distance from the site boundary: 922m
OS Grid Reference: E: 476043, N: 166591
Direction of View: East
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 76.0m
Date and Time: 26.07.2023, 13:40
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: Pedestrian

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



Existing winter baseline views (Extended Panorama)



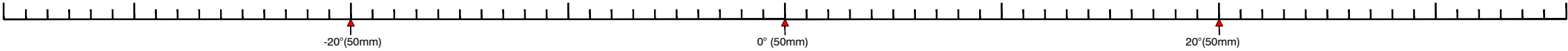
Winter view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 11: BARKHAM BRIDLEWAY 14 / CALIFORNIA COUNTRY PARK
Distance from the site boundary: 1.02km
OS Grid Reference: E: 479098, N: 165293
Direction of View: North West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 64.0m
Date and Time: 04.04.2023, 12:13
Camera Height Above AOD: 1.6m
Weather Condition: Sunny
Receptors: PROW users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



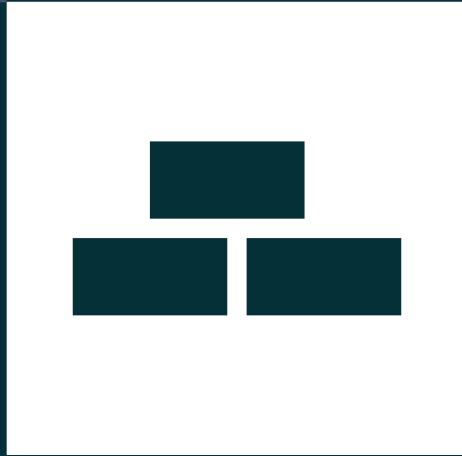
Existing summer baseline views (Extended Panorama)



Summer view at recommended viewing distance of 300mm (When printed @ A3)

VIEWPOINT 11: BARKHAM BRIDLEWAY 14 / CALIFORNIA COUNTRY PARK
Distance from the site boundary: 1.02km
OS Grid Reference: E: 479098, N: 165293
Direction of View: North West
Camera Make and Model: NIKON (D3300)
Len: Fixed 50mm (equivalent focal length)
Horizontal Field of View: 72°
AOD: 64.0m
Date and Time: 26.07.2023, 12:05
Camera Height Above AOD: 1.6m
Weather Condition: Sunny, light cloud
Receptors: PROW users

FOR VIEWPOINT LOCATIONS REFER TO:
LVIA APPENDIX B - FIGURE 8



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