



The Sizewell C Project

8.1 Main Development Site Design and Access Statement Second Addendum

June 2021

Planning Act 2008
Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Revision: 2.0
Applicable Regulation: Regulation 5(2)(o)
PINS Reference Number: EN010012



ΤΟ ΠΡΟΓΡΑΜΜΑ ΤΗΣ ΕΡΕΥΝΑΣ ΚΑΙ ΤΗΣ ΑΝΑΠΤΥΞΗΣ ΕΙΝΑΙ ΕΝΕΡΓΗΤΙΚΑ
ΥΠΟΝΟΜΙΑ





Chapter 5

Design Principles - Framework for Good Design

5.0 Design Principles

“[Design] Principles should act as reminders to the delivery organisation, a steer in the right direction, and a means of restoring focus to the big picture.....Design Principles should be a point of departure, setting out a common understanding [of] the issues to be addressed.”

Developing Design Principles for National Infrastructure (NIC, 2018)

5.1 Design Principles - Framework for Good Design

- 5.1.1 The evolution and application of the design principles set out in this chapter align with the core purposes and ambitions of the National Infrastructure Commission design principles. They have been informed by the site context, project requirements and consultation feedback, which are described in **Chapters 2 to 4** of this document.
- 5.1.2 The design principles have been informed through design review by CAGE at Design Council undertaken in March 2014 and November 2019. Further details are provided in **Chapter 4** and **Appendix B** of this statement.
- 5.1.3 The design principles have also been informed by consultation with the relevant local authorities (SCC and ESC, formerly Suffolk Coastal District Council (SCDC)) and Natural England during the early stages of the design process.
- 5.1.4 The design brief established with stakeholders in 2014, has heavily informed the design process and forms the basis of many design principles contained within this chapter.
- 5.1.5 Collectively, the design principles help to define and establish how the project will fulfil the criteria of ‘good design’, set out in Overarching National Policy Statement for Energy (EN-1) (NPS EN-1) (Ref 7.3) and NPS EN-6 (Ref 7.4).

“Applying “good design” to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible.”

National Policy Statement EN-1; Section 4.5

- 5.1.6 The design principles are split into two categories as set out in **Figure 5.2**:
 - **Overarching Design Principles:** detailed designs submitted and approved in this application have been informed by the overarching design principles. Alternative designs, or where details have not yet been submitted to the local planning authority for approval, will be informed by the overarching design principles, but they do not control the project.
 - **Detailed Design Principles:** detailed designs submitted and approved in this application must be carried out in accordance with these design principles. Alternative designs, or where details have not yet been submitted to the local planning authority for approval, must be in general accordance with these design principles. The detailed design principles are sub-divided into those within the main platform and those beyond the main platform as set out in **Figure 5.1** and **5.3**. Further details are set out below.
- 5.1.7 This Design and Access Statement will be a certified document, which means it controls delivery of the project. The specific parts of this chapter that control the project are the detailed design principles contained within **Tables 5.2** and **5.3**.
- 5.1.8 Further details on the specific functions the detailed design principles perform are set out in **Section 1.3** of this document.
- 5.1.9 **Table 5.1** provides the Overarching Design Principles. **Tables 5.2** and **5.3** provide the Detailed Design Principles.

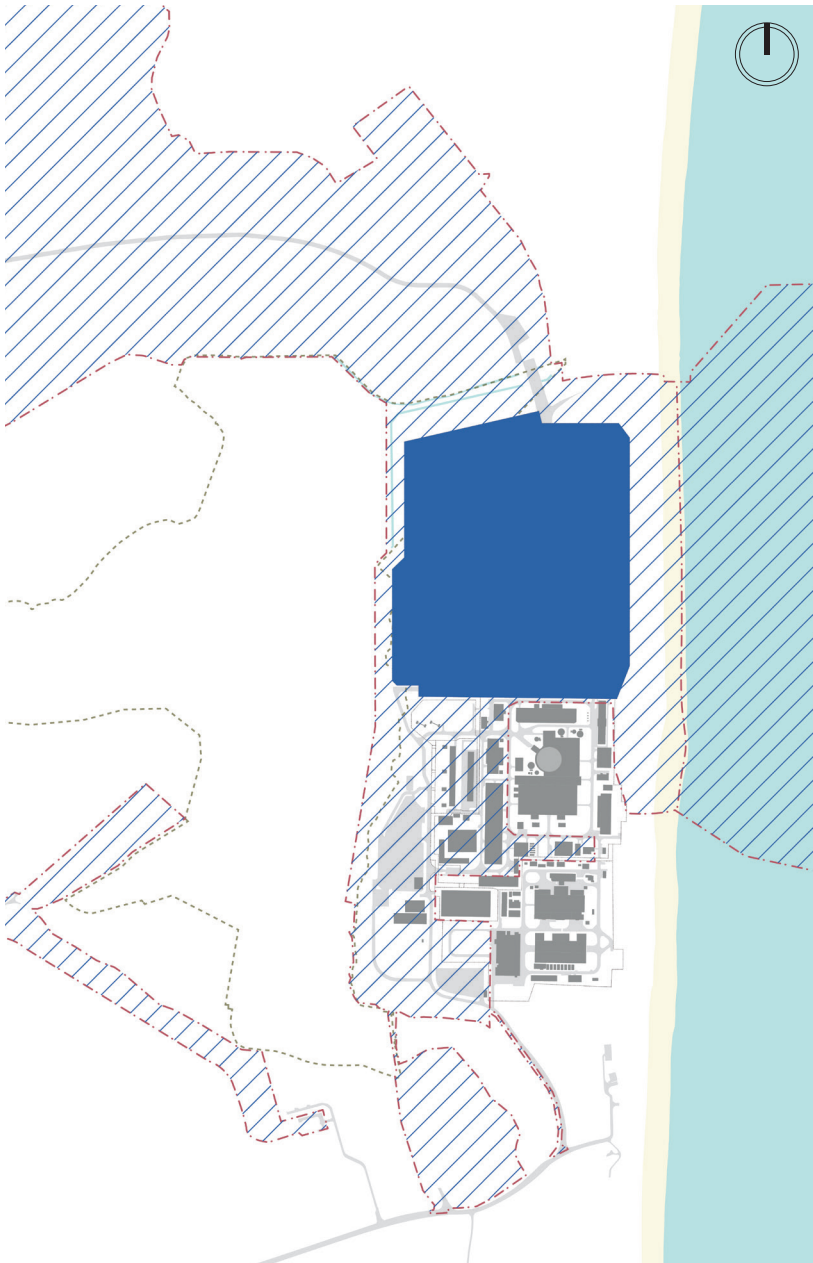


Figure 5.1: Sizewell C main platform extents

Legend

- Within Sizewell C main platform
- Beyond Sizewell C main platform

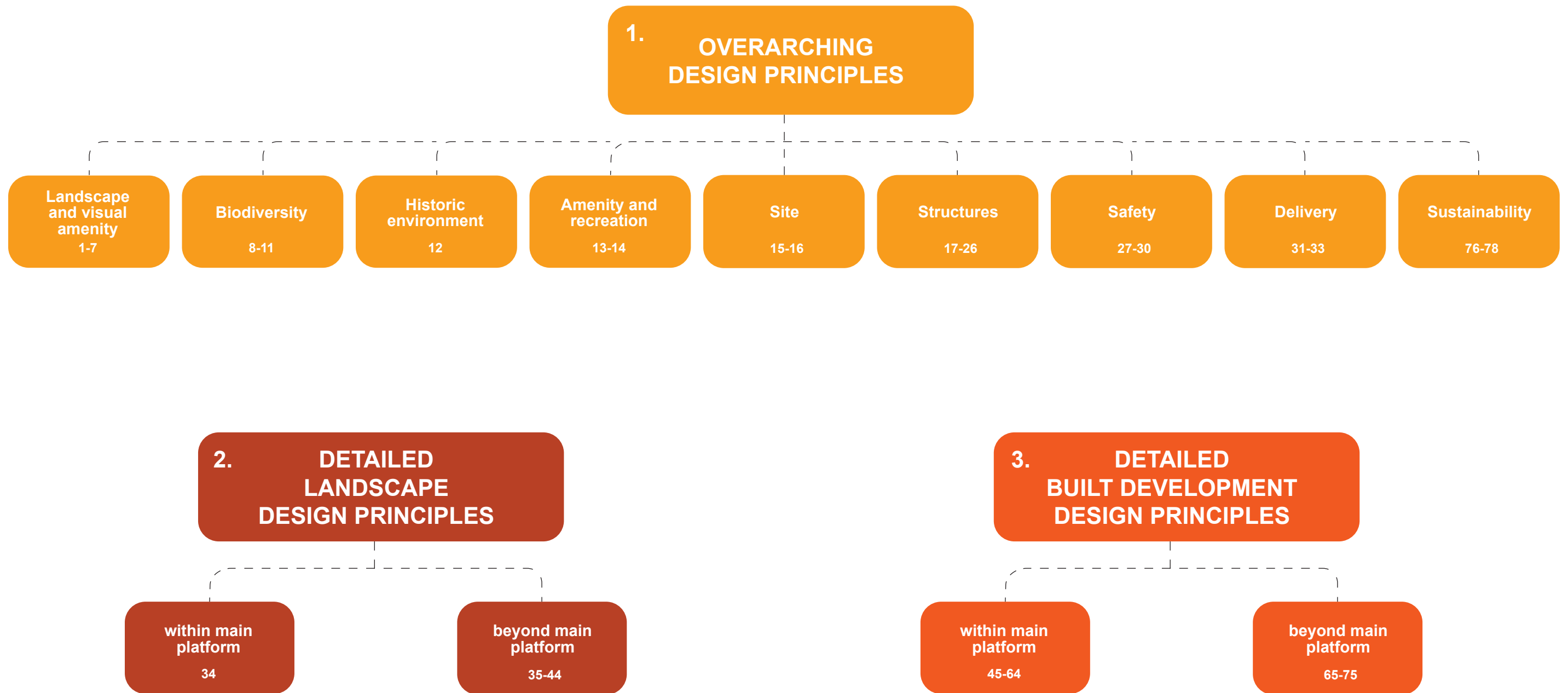


Figure 5.2: Diagram to show organisation of the design principles

Table 5.1 Overarching Design Principles

1. OVERARCHING DESIGN PRINCIPLES	
LANDSCAPE & VISUAL AMENITY	
1	Minimise land take and mitigate landscape and visual effects where practical.
2	Retain existing screening landscape features, where reasonably practicable, and promote appropriate new landscape design (planting and landform) to mitigate the landscape and visual effects of the development.
3	Establish new planting and landform at the earliest practicable opportunity.
4	Plan the development and design of structures to respect the rural and in part wilderness character of the landscape.
5	Select finishes (materials, colour and texture) to be sympathetic to local landscape and seascape and built context, where reasonably practicable
6	Design associated infrastructure, including lighting, access and fencing, to minimise, where reasonably practicable, landscape, seascape and visual effects.
7	Minimise, where reasonably practicable, visual effects at night from lighting and light spill without compromising either safety or security.
BIODIVERSITY	
8	Minimise the likely significant adverse biodiversity effects and seek opportunities post construction through retention of existing habitats, where reasonably practicable, and creation of new habitats.
9	Seek to retain areas of habitat connectivity and continuity as far as possible
10	Design the development, including lighting, access and fencing, to minimise disturbance to protected species, including at night, and severance of habitats, where reasonably practicable.
11	Minimise land take from the SSSI.
HISTORIC ENVIRONMENT	
12	The design of the development will consider potential effects on designated and non-designated heritage assets, including buried archaeology and historic landscape character.
AMENITY & RECREATION	
13	Create and maintain safe public access (pedestrian, equestrian, cycle), integrated with existing networks, where reasonably practicable.
14	Ensure that facilities for public use and enjoyment take into account the balance of other considerations including landscape character, the historic environment and ecology.
SITE	
15	The development will incorporate proportionate security provisions in accordance with ONR requirements and SZC Co. standards.
16	Permanent access to and within the site will meet all operational requirements.
STRUCTURES	
17	Sizewell C will be an efficient and well-ordered facility. It will provide visible reassurance of a properly functioning and safe site, considerate of the area of environmental sensitivity.

1. OVERARCHING DESIGN PRINCIPLES (CONT.)	
18	Sizewell C structures will complement the existing structures within the landscape, most notably Sizewell A and B, as far as reasonably practicable.
19	Design will be a planned composition with Sizewell A and Sizewell B, balancing proportions and impacts across the sites, as far as reasonably practicable.
20	The power station will be a masterplanned composition as far as reasonably practicable, and not an unplanned series of individual buildings and structures.
21	Design will utilise techniques to reduce the perceived scale of buildings from a distance by manipulating the size and arrangement of visible components and façade details, subject to operational requirements.
22	The crucial differences between the Sizewell C UK EPR™ and Sizewell B will be recognised, including the consequent impacts upon form, construction, materials and appearance.
23	Building finishes will be durable, low maintenance and suitable for a marine environment.
24	Subject to project requirements, visibility from public viewpoints and good masterplanning, where possible, the built forms of Sizewell C will generally be treated with an external colour palette that is responsive to and will aim to form an integrated part of the natural landscape they sit within.
25	SZC Co. will provide a high-quality workplace for the entire power station workforce.
26	New buildings located outside the main Sizewell C platform will be responsive to their individual local context whilst maintaining a coordinated high-quality approach to the whole development.
SAFETY	
27	Sizewell C will be designed to comply with regulatory requirements namely the outcome of the UK EPR™ GDA.
28	The proposed design will ensure that the power station can be constructed safely.
29	Detailed design will ensure the power station can be operated and maintained safely in accordance with the Nuclear Site Licence and other applicable regulations and consents.
30	The power station site and structures will consider safe decommissioning as part of the design
DELIVERY	
31	Detailed design will maintain the commercial viability of the project and will not delay the assumed construction programme.
32	Detailed designs approved for Hinkley Point C power station will be replicated wherever practicable to avoid redesign costs and ensure consistency of the operational and maintenance regime.
33	SZC Co. will continue to be dedicated to good design for the Sizewell C development.
SUSTAINABILITY	
76	Design and Construct for a Low Carbon Future.
77	Adopt a circular economy model.
78	Use Water Wisely.

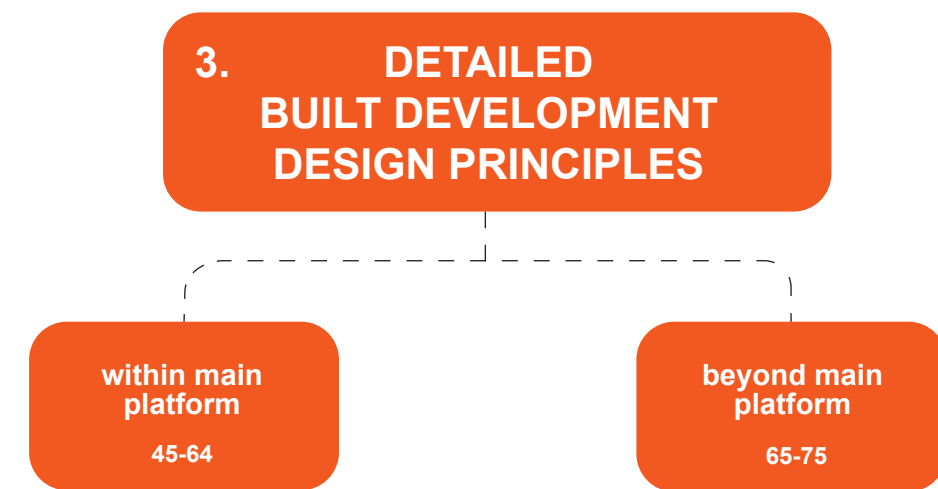
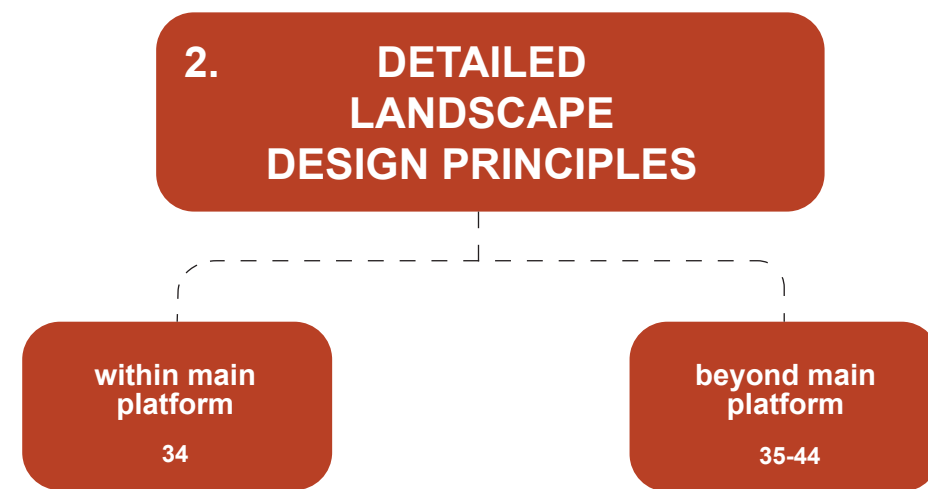


Figure 5.3: Diagram to show organisation of the detailed design principles

Table 5.2 Detailed Landscape Design Principles

2. DETAILED LANDSCAPE DESIGN PRINCIPLES	
WITHIN MAIN PLATFORM	
34	Landscape design will provide character to those external areas and routes within the main platform that are used most intensively by workers on foot.
BEYOND MAIN PLATFORM	
35	Land within the main development site required for operation of the power station will be optimised and disturbance will be minimised to as small an area of the landscape as reasonably practicable.
36	Wherever practicable, existing established plantation woodlands and tree belts will be retained where they contribute to the layers of vegetation that screen views to the power station.
37	Existing retained features, such as woodlands, forested areas and hedgerows will form part of the landscape design.
38	Mature screening, will exploit the existing woodland at Goose Hill and Sizewell Belts to retain and complement the architectural composition of the existing power station with the new Sizewell C structures.
39	New planting and landforms will be established at the earliest practicable opportunity.
40	Landscape design will create a diversity of conditions that will provide subtle variation in grassland habitats allowing a diverse flora to establish, reflecting the floristic diversity of existing Suffolk Sandlings dry grasslands.
41	Any public rights of way, permissive footpaths, access land, promoted cycle routes and all other pre-existing linear and area access (outside the power station complex, on the coast and inland) affected by construction will be restored to at least their original standard and alignment.
42	Facilities for public use and enjoyment will have regard to landscape character, the historic environment and biodiversity.
43	Existing habitats and habitat connectivity will be retained where reasonably practicable and new habitats will be created.
44	Disturbance to protected species and severance of habitats will be minimised, where reasonably practicable.

Table 5.3 Detailed Built Development Principles

3. DETAILED BUILT DEVELOPMENT PRINCIPLES		
WITHIN MAIN PLATFORM		
Placemaking	45	The influence of the future form and appearance of Sizewell A will be considered in detailed designs, as far as reasonably practicable.
	46	A sense of place and community for the workplace will be created on the main platform.
	47	Workforce buildings, occupied by large numbers of staff, will respond to occupants' needs for access, daylight, shading and ventilation.
	48	The principal Sizewell C structures will be located in close east-west alignment with the Sizewell B dome and continue the existing axis of Sizewell structures to replicate the 'behaviour' of them in views as platonic geometric forms above a vegetated datum.
Lighting & light spill	49	Eastern facades on the main platform will generally be formed of solid components without glazed openings to reduce light spill.
	50	The external lighting design will respond to the maintenance and security brief but where practicable will minimise light spill beyond the perimeter of the power station site, particularly on the eastern side of the platform.
	51	Security systems and lighting will be integrated, evenly set-out and applied consistently to all facades to reduce the appearance of visual clutter as far as reasonably practicable.
Roof plant and ancillary structures	52	Subject to operational requirements, all roof level plant equipment and protrusions will be concealed behind a raised building parapet as far as is reasonably practicable. Roof parapets will be of a generally consistent design and detail across site structures. A bespoke design will be considered for particularly prominent parapets.
	53	The need for permanent access systems, railings and other secondary structures attached to buildings will be minimised and, where visible from public viewpoints, will maintain a coordinated approach, where reasonably practicable.
Turbine halls / operational service centre	54	The arrangement of the turbine halls on the north-south axis of the site will be spaced symmetrically within the immediate foreground of the nuclear island buildings to provide clear separation of the volumes.
	55	The turbine halls and operational service centre will comprise a formal set-piece with a consistent material finish. The silhouette of these structures would be identifiable as a clean simple profile from coastal views.
	56	The turbine halls cladding will seek to provide a responsive surface treatment which changes in colour and tone, subject to surrounding lighting and climatic conditions. The colour palette shall be discussed and agreed with East Suffolk Council and shall include details of the manufacturer's maintenance specification for external facing cladding.
Interim spent fuel store	57	The external treatment of the interim spent fuel store will seek to comprise a simple form with minimal external projections and a colour which responds to its setting as far as is reasonably practicable, taking into account the operational and nuclear safety requirements of the building. Reserved Matters applications shall include details of the available colour options, including an explanation of how the proposed colour choice has responded to the building's setting.
Ancillary and plant buildings	58	The treatment of ancillary and plant buildings within the main platform will seek to comprise pure simple, orthogonal forms and will minimise external projections and add-ons as far as reasonably practicable
	59	Ancillary and plant buildings will have a consistent façade treatment, comprising a visually recessive colour as far as reasonably practicable.

3. DETAILED BUILT DEVELOPMENT PRINCIPLES (CONT.)		
Building finishes	60	All materials will be specified in accordance with the operational and performance requirements for the structure and its constituent components.
	61	<p>There will be a unifying design approach to provide architectural continuity between each of the three material groups. The three main material groups will be:</p> <ul style="list-style-type: none"> nuclear island, cooling water pumphouse and associated buildings - concrete structures; conventional island primary structures (turbine halls and operational service centre) - anodised aluminium cladding panels and glass-fibre reinforced concrete plinth or similar; and ancillary and plant buildings – majority of which will be profiled sheet metal cladding or similar, subject to operational requirements.
	62	The structural concrete of the safety related buildings will be exposed, without additional finishes and will be easily accessible without obstruction for ease of maintenance and inspection, in accordance with operational requirements.
	63	Exposed concrete will have a consistent pale grey finish as far as reasonably practicable. Careful on-site attention will be given to the change in batch of aggregates and setting-out of day joints to ensure a consistent even finish can be achieved, subject to operational requirements.
	64	The reactor stack will be a recessive colour appropriate to the backdrop of sky that it will be visible against. The colour palette shall be discussed and agreed with East Suffolk Council.
BEYOND MAIN PLATFORM		
Placemaking	65	Peripheral buildings that fall outside of the main platform will be treated with an understated external aesthetic which serves to root them in their environment.
	66	Designs for built forms will respond to the ‘wilderness quality’ of the power station environment by reducing the appearance of human habitation, through reduced human scale openings and external fixtures being visible from coastal views as far as reasonably practicable and within operational requirements.
	67	The material palette for the peripheral buildings will make use of colour tones appropriate to the surrounding landscape and in keeping with the development proposals on the main platform.
Access and parking	68	A power station access road will be provided to the B1122 (Abbey Road) from the north-west of the main platform, which will take into account the surrounding environment.
	69	The access road will be reduced in width post-construction and the surrounding landscape will be reprofiled to create naturalistic landforms covered with Sandlings grassland and pockets of mixed scrub, heath and stands of trees. This area will be designed to also integrate the SSSI crossing into the local landscape and screen / filter views to moving vehicles.
	70	A second independent access point to the power station will be provided, for security purposes.
	71	Access to the main platform will be provided for workers on foot and by cycle.
	72	The Sizewell B outage car park at Pillbox Field will be located and designed to minimise, as far as practicable, its visibility and vehicles using it, deploying sensitive reprofiling of landform working with existing topography.
Coastal defences	73	The design of the coastal defences will be given careful consideration to control the views to the operational site buildings, with a view to minimising visibility of smaller buildings and structures.
	74	The coastal defences will be planted with appropriate species to integrate the new defensive structure into its sensitive coastal landscape and enhance screening over time.
	75	The land take and seaward extent of the Hard Coastal Defence Feature shall be minimised as far as practicable within operational and safety constraints.

APPENDIX A

Appendix A

Accommodation Campus

Accommodation Campus

A.1 Introduction

A.2 Purpose

- A.2.1 This Appendix to the Sizewell C Design and Access Statement has been prepared in order to set out the indicative proposals for the accommodation campus and the rationale behind them.
- A.2.2 Delivery of the accommodation campus will be carried out in general accordance with the design principles set out in Table A.1 and in accordance with the Parameter Plans set out in Schedule 6 of the draft DCO. Further details on how this document controls the design of the project are set out in Section 1.3.
- A.2.3 The accommodation campus forms part of the wider Sizewell C development site and will provide accommodation and amenity facilities for up to 2,400 non-home based workers during the 9-12 year construction period of Sizewell C. As set out in Chapter 3 of this document, it is part of a worker accommodation strategy for non-home based workers, which also includes a caravan site, private rented accommodation and serviced and self-catered tourist accommodation, as well as park and ride facilities for transporting workers to the site.
- A.2.4 The proposals for the accommodation campus include the strategy for the site once the construction of Sizewell C has been completed, with further details provided within **Chapter 12** of this document.
- A.2.5 All drawings shown in this section of the Design and Access Statement are for illustrative purposes only.

A.3 Relationship with the Design and Access Statement

- A.3.1 This Appendix should be read in conjunction with the main part of the Design and Access Statement, which will form part of a suite of supporting documents for the Development Consent Order (DCO) application. Before reviewing this Appendix specific reference should be made to the following Chapters, which have informed the accommodation campus proposals:
- Chapter 2: Site context
 - Chapter 3: Project requirements
 - Chapter 4: Consultation and evolution of design
 - Chapter 5: Design principles
 - Chapter 6: Site response
 - Chapter 7: Building proposals

A.4 Document structure

- A.4.1 The structure of this Appendix to the Design and Access Statement is as follows:

NAME	PURPOSE OF SECTION
Introduction	Not for approval except Table A.1, which is for approval.
Site and planning context	
Site analysis	
Design proposals	

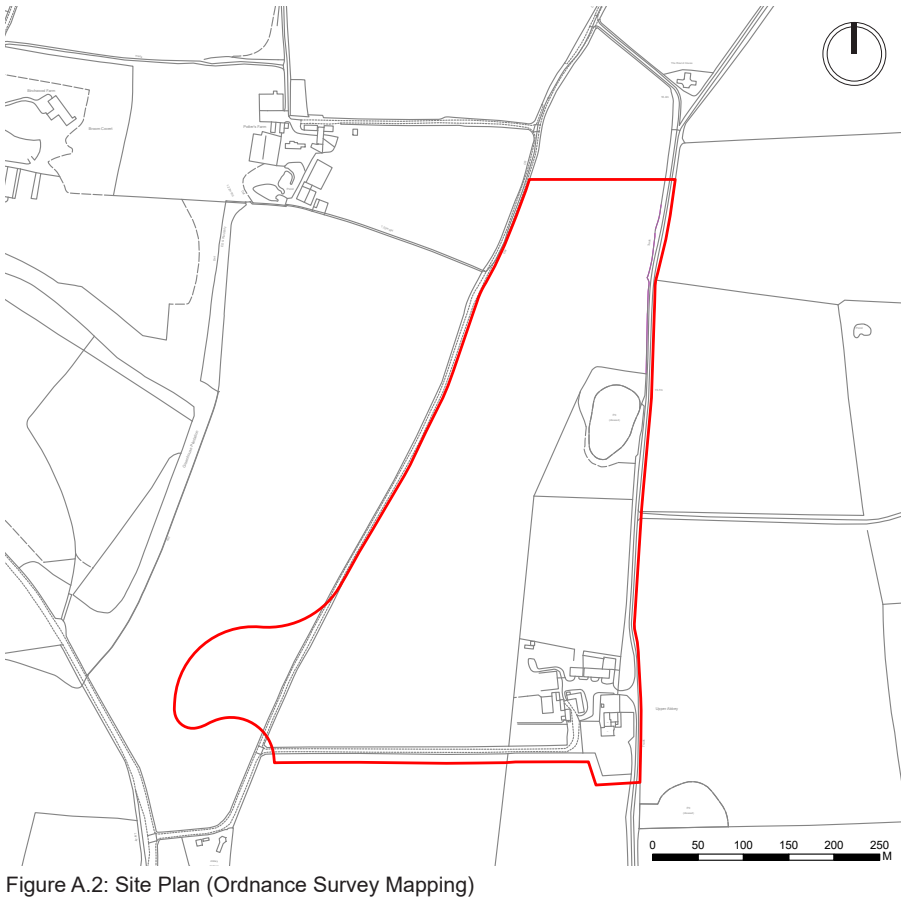
A.5 Site and planning context

A.6 Site location and context

- A.6.1 As shown in **Figure A.1** the accommodation campus site is located to the north west of the existing Sizewell C power station, approximately 2km north of the town of Leiston and 1km south of the village of East Bridge.
- A.6.2 The setting of the site largely comprises open agricultural fields, though there are some large parcels of woodland located to the east and south east of the site. The closest buildings to the site are: Abbey Cottage, which is located off the junction between Eastbridge Road and the access lane to Upper Abbey Farm; Old Abbey Farm, located approximately 300m to the south of the site, and Potter's Farm, located approximately 250m to the west. Leiston Abbey, which is a Scheduled Monument is located approximately 0.5km to the south west of the site.
- A.6.3 The site is defined to the west by Eastbridge Road, which connects the settlement of East Bridge with the B1122, and to the south by the access lane leading to Upper Abbey Farm. The eastern periphery of the accommodation campus site is defined by Bridleway 19, which also marks the westernmost extent of the Suffolk Coast and Heaths AONB. There are a number of other Public Rights of Way located within the vicinity of the site, including route E-363/010/0 which runs on a north to south axis to the west of the site and passes by Leiston Abbey.

A.7 Site description

- A.7.1 The accommodation campus site is essentially flat and, as shown in **Figure A.3**, principally comprises open agricultural fields. On the eastern edge of the site, approximately half way up, there is a former sand pit, which comprises rough grassland and hawthorn scrub, as well as a cluster of trees in the south east corner. Aside from the pit, vegetation within the site is largely restricted to the hedgerows and trees located around the periphery, the rectangular field boundary located in the south east corner of the site, and Upper Abbey Farm.



A.7.2 Vehicular access into site is currently provided via the access lane which connects Upper Abbey Farm with Eastbridge Road. The farm features a number of buildings, including two grade II listed structures, as well as a number of outbuildings and barns, several of which are in poor condition. Non-vehicular access into the site is also provided by Bridleway 19, which runs along the eastern edge of the site and forms part of Sandlings Walk, a long distance walking route.

A.8 Planning history and consultation process

A.8.1 As set out in **Chapter 4** of the main body of this Design and Access Statement, the proposals for Sizewell C have gone through an extensive consultation process prior to the DCO stage, helping to shape the concept put forward.

A.8.2 The indicative proposals set out for the accommodation campus in this Appendix have developed the scheme presented in the Sizewell C Stage 3 Pre application Consultation report (January 2019), taking into consideration the feedback on this received from the various stakeholders. They have also responded to the various issues that were raised at the stakeholder meeting, which took place on 10th July 2019 at the East Suffolk Council offices in Melton.

A.9 Site analysis

A.10 Access and movement

A.10.1 The accommodation campus site is located immediately east of Eastbridge Road, which links the B1122 with Eastbridge to the north. Vehicular access into the site is currently only possible via the access lane to Upper Abbey Farm, which feeds off Eastbridge Road.

A.10.2 It is considered that the most appropriate location for a vehicular access into the accommodation campus site is at the south west corner of the site, to the north of the junction between the B1122 and Eastbridge Road. This would create the opportunity to establish a combined new junction / roundabout providing a vehicular access into the main construction site.

A.10.3 Non-vehicular access into the site is currently provided via Bridleway 19, which runs along the eastern periphery and forms part of the Sandlings Walk, a long distance walking route. The development of the site as an accommodation campus will require Bridleway 19 to be closed for the 9-12 year construction period and, as such, an alternative route will be provided during this period.

A.10.4 This route could potentially be provided along the western edge of the accommodation campus adjacent to Eastbridge Road (see **Figure A.6**).

A.11 Topography

A.11.1 As shown in **Figure A.4**, the accommodation campus site is essentially flat with the exception of the sand pit, which is located half way along its eastern edge. There would not be any structural issues associated with filling in the pit if required to accommodate development.

A.11.2 Within the immediate vicinity of the site, the landform remains relatively flat. However, beyond this the topography is more pronounced and the significance of this in terms of landscape and visual impact should be given careful consideration in the design of the accommodation campus proposals.

A.12 Landscape

A.12.1 The accommodation campus site principally comprises open, agricultural fields, with the exception of Upper Abbey Farm and the sand pit, which comprises rough grassland and hawthorn scrub, as well as a cluster of trees (hawthorn, oak, ash, wild cherry and elm). Aside from the pit, vegetation within the site is largely restricted to the tree clusters located between the buildings at Upper Abbey Farm and the hedgerows and trees located along the site periphery and along the rectangular field boundary located in the south east corner. Beyond the site, the immediate setting largely comprises open agricultural fields, though there are large parcels of woodland located to the south east of the site, as well as some smaller pockets of woodland located to the west and south. Various visual receptors have been identified in close proximity to the site with potential for views to the accommodation campus during its operation, including visitors to Leiston Abbey and users of the local Public Rights of Way network.

A.13 Arboriculture

A.13.1 As shown in **Figure A.5**, there are a total of 6 category A trees, 15 category B trees and 3 category B tree groups located within or overlapping with the accommodation campus site boundary. The majority of these are located within Upper Abbey Farm or around the periphery of the site. However, there are two large category B trees located within the hedgerow that runs on a north to south axis to the north of Upper Abbey Farm. The proposals for the site should seek to retain all of the existing category A trees and as many of the category B and C trees as possible.

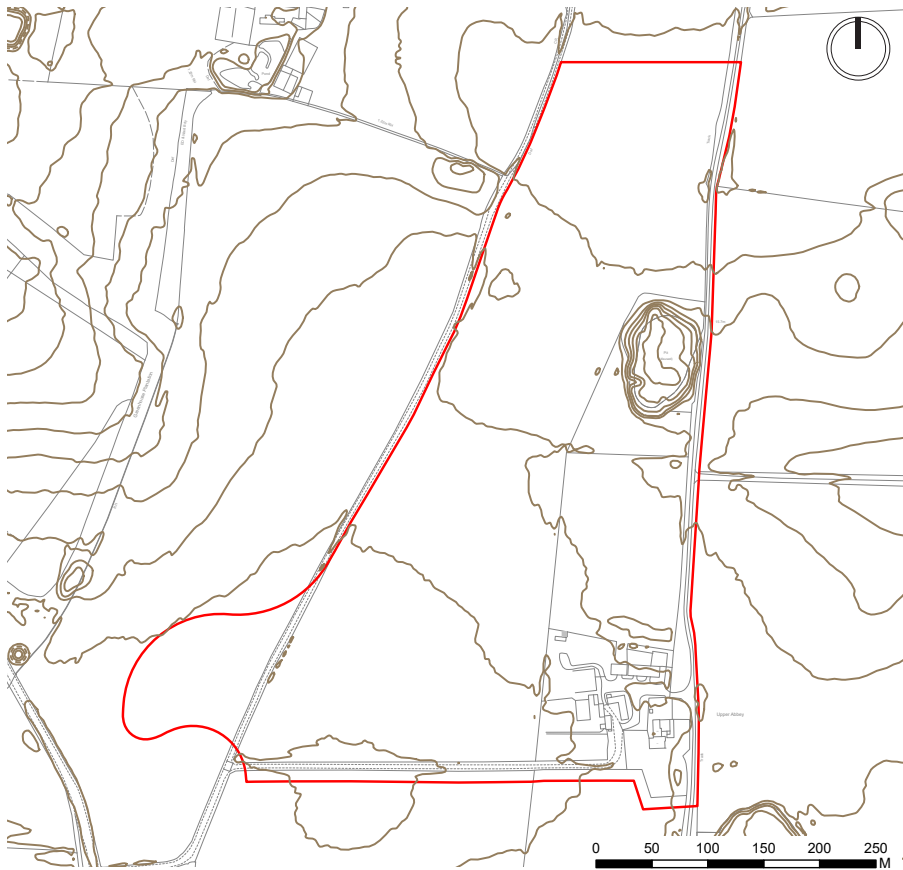


Figure A.4: Topography (1m contours)

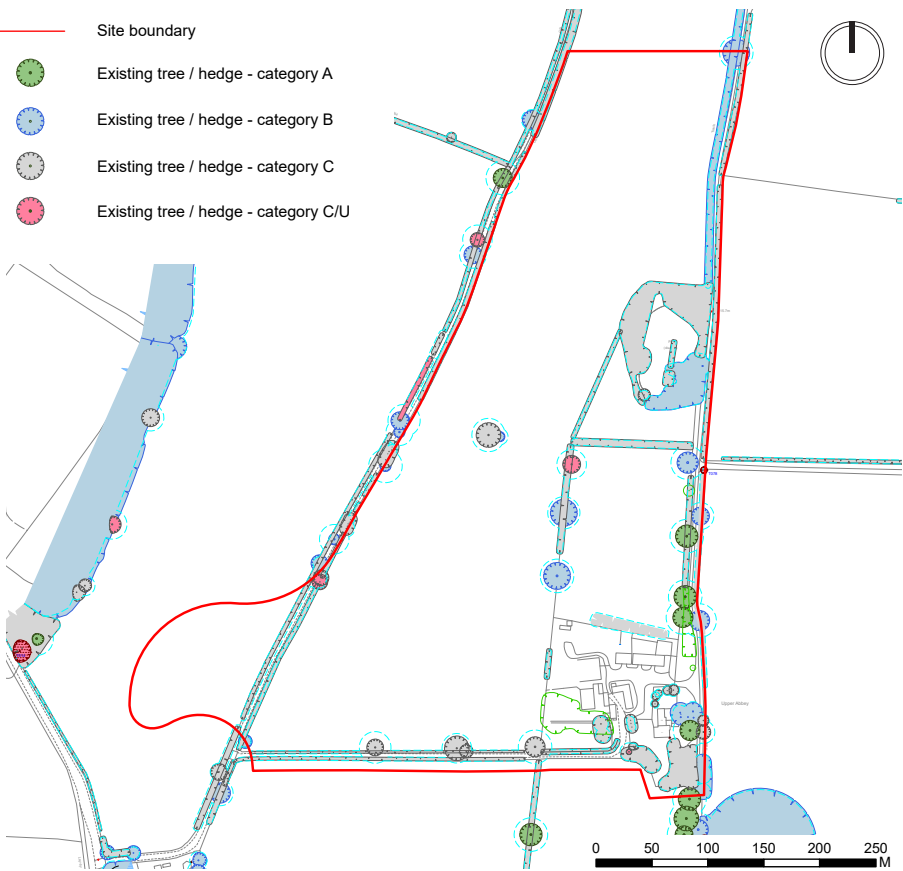


Figure A.5: Arboricultural Survey

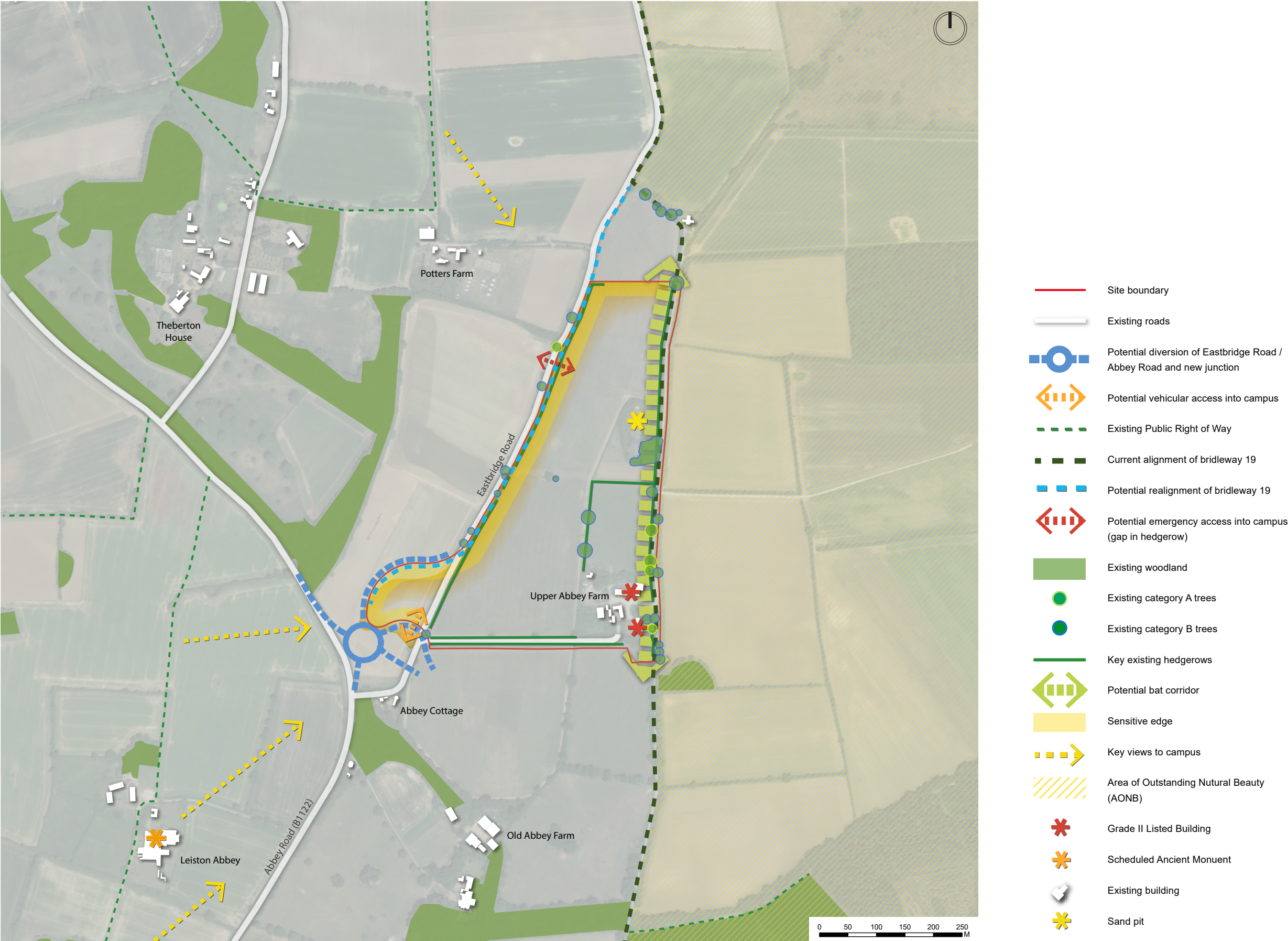


Figure A.6: Opportunities and Constraints

A.14 Ecology

- A.14.1 The accommodation campus site is not covered by any statutory designations.
- A.14.2 A survey of the former sand pit has been carried out. The base of the pit supports a common coarse grassland community (MG1a in the National Vegetation Classification (NVC)) dominated by False Oat Grass (*Arrhenatherum elatius*) and Cock's foot (*Dactylis glomerata*) with locally abundant Red Fescue (*Festuca rubra*). The grassland is herb poor although there is a small stand of Houndstongue (*Cynoglossum officinale*). The pit slopes are dominated by hawthorn (*Crataegus monogyna*) scrub over Ivy (*Hedera helix*) with frequent Elder (*Sambucus nigra*) on the lower edge and some large stands of bramble (*Rubus fruticosus* agg) invading the margins of the grassland. The Hawthorn scrub is typical of the widespread habitat type W21 in the NVC (*Crataegus monogyna* - *Hedera helix* scrub).
- A.14.3 There is a small group of planted Cypress (probably *Cupressus × leylandii*) and a mature Cherry (*Prunus avium*) in the south-east corner which would be lost if the pit is infilled, but it should be possible to retain the mature trees located along the western side of Bridleway 19.
- A.14.4 The habitats within the pit are common habitats throughout most of lowland Britain and Suffolk and of only local value in their own right. Bird species recorded during survey visits to-date have included both Yellowhammer and Bullfinch, both of which are relatively widespread in the wider landscape.

A.15 Noise

- A.15.1 Detailed modelling of construction noise has been used to predict noise levels on the accommodation campus during phases 3 and 4 when the accommodation campus will be operational. **Figure A.7** shows the predicted noise levels on the site without the accommodation campus buildings (which will reduce levels further). The predicted noise levels are not particularly high and it will be possible to achieve a reasonable standard of internal and external acoustic amenity (defined in accordance with BS 8233) through appropriate acoustic design and specification of the building envelope. Acoustic performance specifications for the external building envelope of accommodation campus buildings (including façades, roofs, windows, door and ventilators) could be provided for individual blocks and / or façades at a later stage once the accommodation campus design has been finalised, contractors are on board and the main development site construction noise predictions have been refined and finalised.

A.16 Archaeology

- A.16.1 A programme of archaeological evaluation, comprising desk-based appraisal (regression mapping and archival / documentary research) and field survey (comprising geophysical survey followed by archaeological trial trenching) has been undertaken across the main development site, including the accommodation campus location. Results indicate that within the accommodation campus area there is potential for remains associated with prehistoric activity which could be of low to medium heritage importance. Remains of medieval activity, which could be of regional, or medium heritage importance, including medieval agricultural and industrial exploitation associated with Leiston Abbey may also be present to the west of Upper Abbey Farm.
- A.16.2 Disturbance or removal of archaeological heritage assets as a result of the proposed development could give rise to loss of archaeological interest. However, no archaeological remains have been identified where policy would require preservation in-situ and mitigation can be achieved through an agreed programme of archaeological investigation and recording.

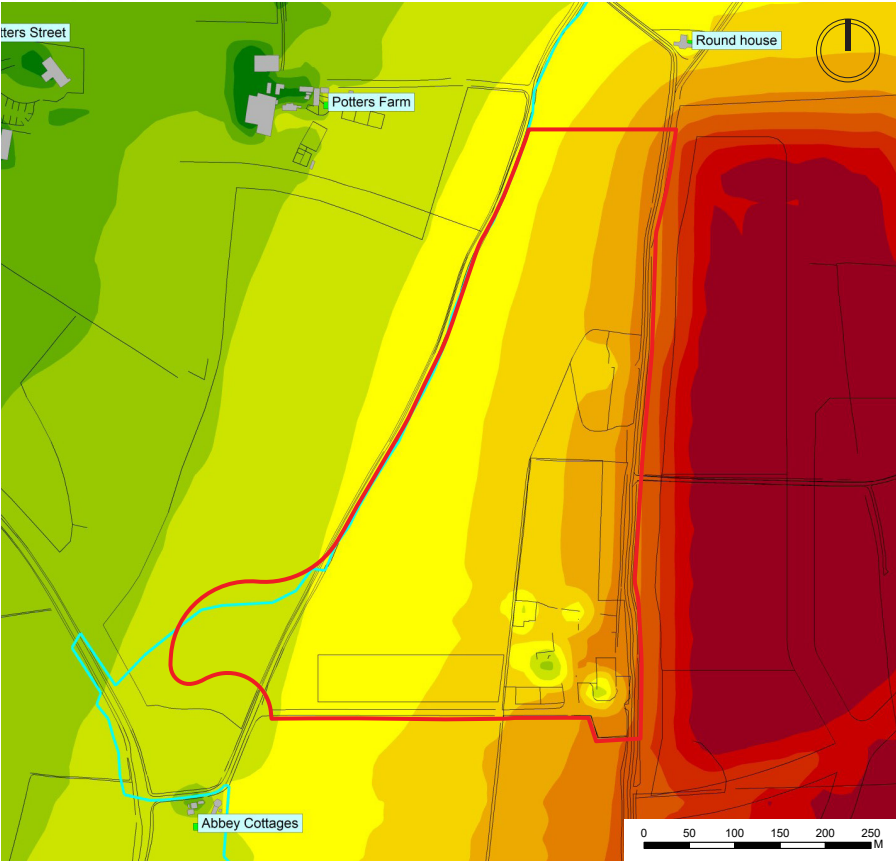


Figure A.7: Noise Contours (site baseline)

A.17 Built form and heritage

- A.17.1 Upper Abbey Farm is located in the south east corner of the site and consists of the farmhouse (recently restored following fire damage) and barn, both Grade II listed, plus a number of outbuildings and one other residential property. Suffolk Wildlife Trust currently operate from Upper Abbey Farm in their management of the SSSI.
- A.17.2 The key buildings at Upper Abbey Farm are arranged in clusters around a number of yards on the east side of the farm complex. The main farmhouse is situated within its own 'garden' setting, with a low wall and fence boundary and is surrounded by a number of mature trees. The most westerly barn is a more recent addition to the farm complex and is not laid out as part of a cluster or around a yard. Similarly, the house in the north-west corner of the farm complex is removed from the main collection of farm buildings and yards.
- A.17.3 A historian has recently completed a survey of the Upper Abbey Farm site and identified a number of buildings that are considered of no heritage value, some of which are in poor condition. These buildings could be demolished if required, either to accommodate development or as part of a conservation strategy for the farm. The access lane to Upper Abbey Farm is considered an important part of its setting and should be retained in the accommodation campus proposals.
- A.17.4 Beyond the site, Leiston Abbey (second site) is located approximately 0.5km to the south west. The Abbey dates from the mid-14th century, 15th century (the Barn and Guesten Hall) and 17th century (the Retreat House, formerly a farmhouse). The Abbey is a Scheduled Monument and the impact of the accommodation campus on its rural setting will be given careful consideration in the proposals.

A.18 Drainage

- A.18.1 Due to the absence of any watercourses in the vicinity of the accommodation campus which could provide a suitable connection for surface water discharge, it will be necessary to store rainfall runoff below ground and allow gradual infiltration. This has been considered as part of a high level risk assessment and subsequent drainage strategy, which seeks to implement sustainable drainage (SuDS) features, such as permeable surfacing, infiltration trenches and soakaways.
- A.18.2 The depth to ground water is sufficient to explore the opportunity to utilise methods of surface water management including rainwater harvesting and treating surface water at source through detention and infiltration.

A.19 Foul water

- A.19.1 The welfare facilities provided as part of the accommodation campus will require a foul water network and sewage treatment. However, because the work force numbers will not exceed 10,000 they will not be required to comply with the Urban Waste Water Directive.
- A.19.2 The proposed sewage treatment plant located within the construction site will receive and treat all domestic foul water generated by the accommodation campus during the construction period. A foul water pump station will need to be accommodated within the accommodation campus site to convey the foul water to this treatment plant.

A.20 Other utilities

- A.20.1 Investigations have shown that there are no existing utilities located within the accommodation campus site that will affect or constrain the layout of the proposed accommodation campus and that there are no issues with providing the required infrastructure for the operation of the accommodation campus e.g. communications, potable water and power. Options for these are discussed further in the Design Proposals section.

A.21 Design process

A.22 Site selection

A.22.1 The selection of the accommodation campus site has been given careful consideration as part of the design process. **Figures A.8 to A.10** show the three site options that were considered at Stage 2 of the consultation process. These were:

- Option 1: Campus buildings and sports facilities located on both sides of Eastbridge Road.
- Option 2i: Campus buildings consolidated to the east of Eastbridge Road and sports facilities located to the west of Eastbridge Road.
- Option 2ii: Campus buildings consolidated to the east of Eastbridge Road and sports facilities located off-campus at Leiston Leisure Centre.



Figure A.8: Site option 1



Figure A.9: Site option 2i



Figure A.10: Site option 2ii

A.22.2 Following analysis of the three site options, option 2ii was taken forward and forms the basis of the proposals set out in this Design and Access Statement. The principle reasons for its selection were:

- The benefits of reducing the land-take in terms of the impact on the setting of the AONB and Leiston Abbey and the effects on key visual receptors to the west of the site were considered to outweigh the potential need to build the accommodation blocks one storey higher.
- Locating the sports facilities at Leiston offers the potential to leave a positive legacy for the town post construction.

A.23 Design development

A.23.1 Following selection of the site, the indicative design and layout of the accommodation campus process has gone through a number of iterations in getting to the DCO stage. **Figures A.11 to A.13** show the three principal arrangements (options 3, 4 and 5) that were explored following the Stage 2 consultation. Variables explored at this stage included the location and arrangement of the different accommodation campus facilities, as well as building heights.

A.23.2 The heights analysis work included the preparation of wireframe visualisations for each of the three options from the following three key locations:

- Leiston Abbey;
- The Public Right of Way located to the north of Leiston Abbey (see **Figures A.14 to A.16**); and
- Whin Hill.

A.23.3 Following the completion of this appraisal work and consideration of the feedback received from the consultees, the decision was made to take option 4 forward for the Stage 3 consultation. The principal reasons for the selection of this option were:

- The consolidation of the amenity hub facilities at the main entrance to the site creates a clearly defined, attractive gateway into the accommodation campus.
- The visual impact was significantly lower from the Public Right of Way viewpoint and similar or lower than options 3 and 5 for the other two viewpoints assessed.
- Locating the amenity hub at the entrance to the site provides the most practical location for the reception building and avoids the need for vehicles servicing the recreation building to travel past the accommodation areas.
- Consolidating the amenity hub utilities with the CHP generator and emergency equipment store at Upper Abbey Farm is the most practical/efficient arrangement and ensures that they are largely screened by the recreation building in views from within the campus and from the sensitive visual receptors to the west of the site.
- It provides a better-defined entrance space and more attractive entrance vista than option 3.
- It allows the Upper Abbey Farm access road and adjacent hedgerows to be largely retained.
- It contains the fewest 5 storey accommodation units of the three options.



A.23.4 Following on from the Stage 3 consultation, the proposals underwent further analysis and refinement as part of the design process. This included a formal survey of the sand pit to investigate the opportunity to build on this area of the site in order to reduce accommodation building heights.

A.23.5 As set out in **section A.14**, the survey results showed that there are no significant ecological constraints associated with the pit, while testing showed that filling it in would allow the accommodation blocks to be reduced from a maximum of five storeys down to four, reducing visual impact. It was therefore decided that, in balance, the scheme should be amended to build on the pit, whilst seeking to retain the majority of the trees located along its eastern edge.



Figure A.14: Footpath north of Leiston Abbey - Option 3

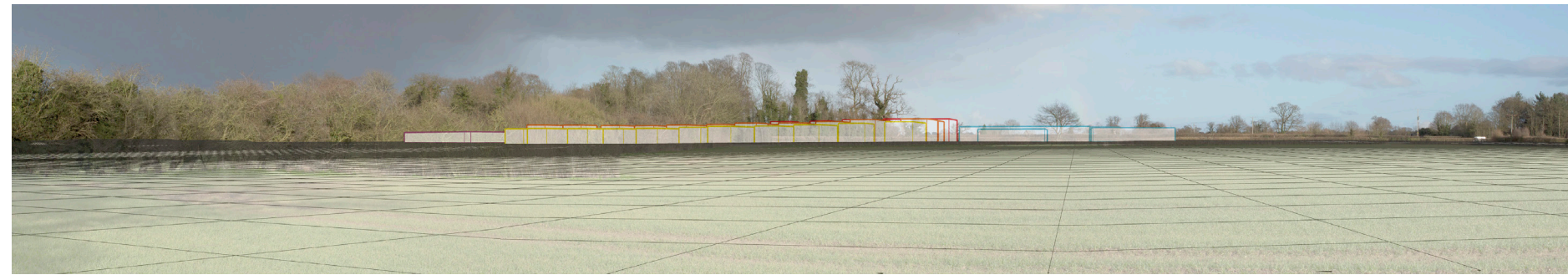


Figure A.15: Footpath north of Leiston Abbey - Option 4

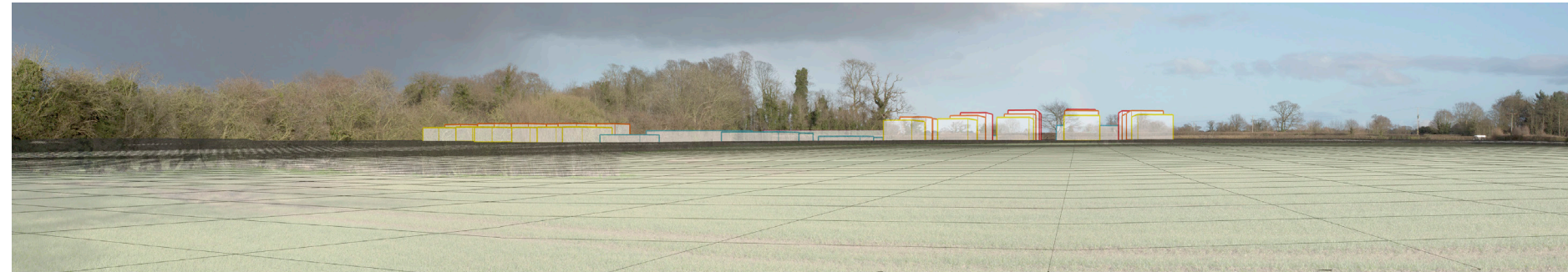


Figure A.16: Footpath north of Leiston Abbey - Option 5

A.24 **Design proposals**

A.25 **Illustrative layout**

A.25.1 **Figure A.17** shows an illustrative layout for the proposed accommodation campus. The proposals incorporate the following key components:

- Up to 2,400 bed spaces, including 60 ground floor accessible bed spaces;
- A two storey recreation building, including a restaurant, kitchen, 2 bars, gym, multi-functional room, prayer / quiet room, plant and services;
- A two storey reception building, incorporating administration / management space and a medical facility;
- An emergency equipment store for the wider Sizewell site;
- A CHP generator (optional depending on the energy strategy taken forward);
- A total of 1,643 car park spaces (excluding drop-off spaces within the accommodation access streets), including a 1,278 space, two level car park and 60 disabled spaces within the accommodation access streets; and
- 120 motorcycle parking spaces and 120 cycle parking spaces.

A.25.2 The layout of the accommodation campus has been informed by the analysis set out in the Site Analysis section above, previous consultation with stakeholders, and extensive option testing. Further detail on the proposals are set out in the rest of this section, but the key design principles incorporated within the concept are set out in the table opposite.

ACCOMMODATION CAMPUS DESIGN PRINCIPLES	
1.	Creation of a high quality environment in which workers can rest and socialise between shifts.
2.	Development contained within the land to the east of Eastbridge Road, reducing the visual and heritage impacts.
3.	Orientation of accommodation blocks (siding on to Eastbridge Road) and massing (units of up to 3 storeys closer to Eastbridge Road) to minimise the visual impact on sensitive receptors to the west of the site, including Leiston Abbey (second site) and the realigned section of Bridleway 19.
4.	Visual impact of the accommodation blocks minimised by limiting heights to four storeys.
5.	Accommodation blocks (the tallest buildings on the accommodation campus) consolidated generally towards the middle of the accommodation campus area to minimise the visual impact from Leiston Abbey (second site) and Public Right of Way E-363/010/0.
6.	No built development or perceptible light spill within 15m of the eastern edge of the accommodation campus area to establish a bat corridor.
7.	Retention of the majority of existing trees and hedgerows to help establish an attractive, high quality environment for workers.
8.	Realignment of Bridleway 19 to run adjacent to Eastbridge Road. Configuration and landscape treatment to minimise views to the accommodation campus buildings and help retain its rural character as far as reasonably practicable.
9.	Provision of a footpath generally around the inner edge of the perimeter of the site, where appropriate, to allow workers to exercise within the accommodation campus boundaries.
10.	Recreation building designed to create a well-defined entrance to the accommodation campus, with a strong relationship between the internal uses and open space.
11.	Parking (with the exception of drop-off points and disabled parking) provided within a two level decked car park and adjacent to non-residential buildings to minimise the disturbance to workers on different shifts.
12.	A reasonable standard of internal and external acoustic amenity (defined in accordance with BS 8233) will be achieved through acoustic design and specification of the building envelope. Plant associated with the accommodation campus, for example a combined heat and power unit (CHP) plant, air source heat pump network (ASHP) and/or back-up generator will be designed to achieve a rating level of noise not exceeding 35dB LAr,15mins at the closest off-site residential receptor, when assessed in accordance with British Standard 4142: 2014+A1: 2019.

Table A.1 Key design principles

A.26 **Parameters**

- A.26.1 The accommodation campus layout shown in **Figure A.17** is for illustrative purposes only. A separate parameters plan including the accommodation campus is referred to above and contained within **Main Development Site Plans** (Doc. Ref. 2.5).
- A.26.2 The parameter plan indicates the maximum extents and heights of the building envelope for the following development areas within the accommodation campus site: the accommodation blocks; the decked car park; and the amenity buildings.

- 1 Main entrance / security point
- 2 Reception / administration / medical
- 3 Parking for operations work force / residents
- 4 Recreation building
- 5 Main campus square
- 6 Service area
- 7 Foul water pump station
- 8 External plant
- 9 CHP generator
- 10 Emergency equipment store
- 11 Parking for operations work force / residents
- 12 5m wide security zone and fence
- 13 Landscape buffer
- 14 Accommodation buildings
- 15 Green streets
- 16 Realigned bridleway
- 17 Access streets, including disabled parking and drop-off bays
- 18 15m wide bat corridor
- 19 Emergency vehicular access
- 20 Two level car park for residents
- 21 Landscape buffer



Figure A.17: Illustrative Layout

A.27 Landscape and green infrastructure

A.27.1 **Figure A.18** shows an indicative landscape strategy for the accommodation campus proposals. The concept incorporates the following key features:

- A 15m wide bat corridor located along the eastern edge of the accommodation campus. This will incorporate existing vegetation, as well as supplementary planting. The orientation and design of the accommodation blocks (side elevations will not feature any fenestration or entrances) will ensure that any noise and light disturbance will be minimised.
- Bridleway 19 is realigned to run along the western edge of the accommodation campus, adjacent to Eastbridge Road. As shown in **Figure A.19**, the existing vegetation along the edge of the road will be supplemented and additional planting introduced between the bridleway and the security fence. This will help to retain the rural character of the bridleway and minimise the visual impact of the proposed built development in views from key receptors e.g. Leiston Abbey, Public Right of Way E-363/010/0, and the realigned bridleway.
- A landscape buffer along the northern edge of the site to help screen the accommodation campus in views from key receptors to the north e.g. Whin Hill.
- Green streets (see **Figure A.20 and A.21**) are provided on the non-street side of the accommodation blocks. These spaces will provide workers with an attractive, informal space to enjoy between shifts, as well as an alternative route between the accommodation blocks, the amenity hub and the parking areas.
- Tree planting between the disabled parking spaces and drop-off points within the access streets, helping to integrate the parking into the streetscape and provide an attractive, leafy environment between the accommodation blocks.
- A formal tree planting arrangement is provided within the space defined by the recreation building in order to help create an attractive setting for the amenity facilities at the entrance to the accommodation campus.
- All existing category A trees and all but three of the existing category B trees / tree groups are retained in their entirety and integrated within the accommodation campus proposals, helping to retain the mature landscape character of the site and establish an attractive setting for workers.
- The majority of the existing hedgerows within the site are retained, including those located along: the access lane to Upper Abbey Farm; the periphery of the Farm; the existing bridleway; and Eastbridge Road. This will help to retain existing ecological corridors and the mature landscape character of the site.

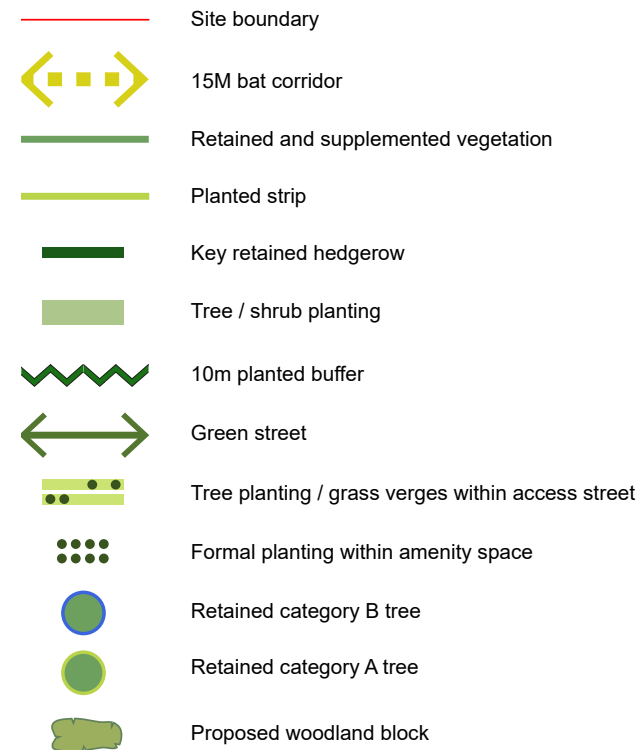


Figure A.18: Landscape Strategy

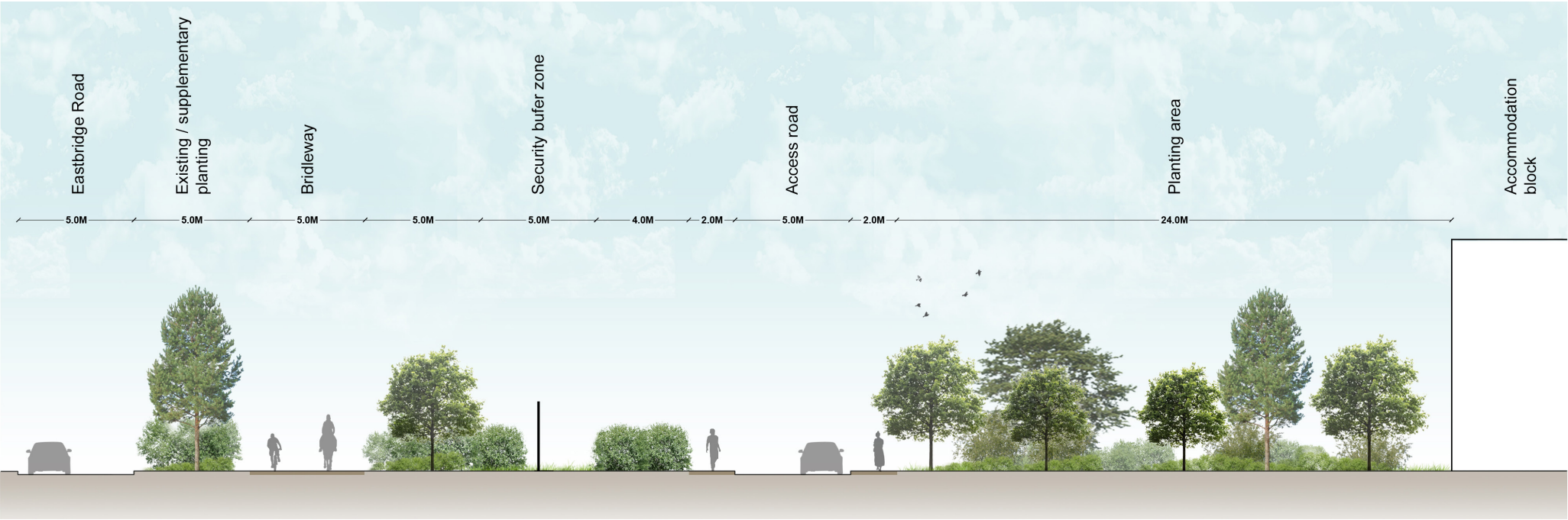


Figure A.19: Typical Section Through Interface With Eastbridge Road

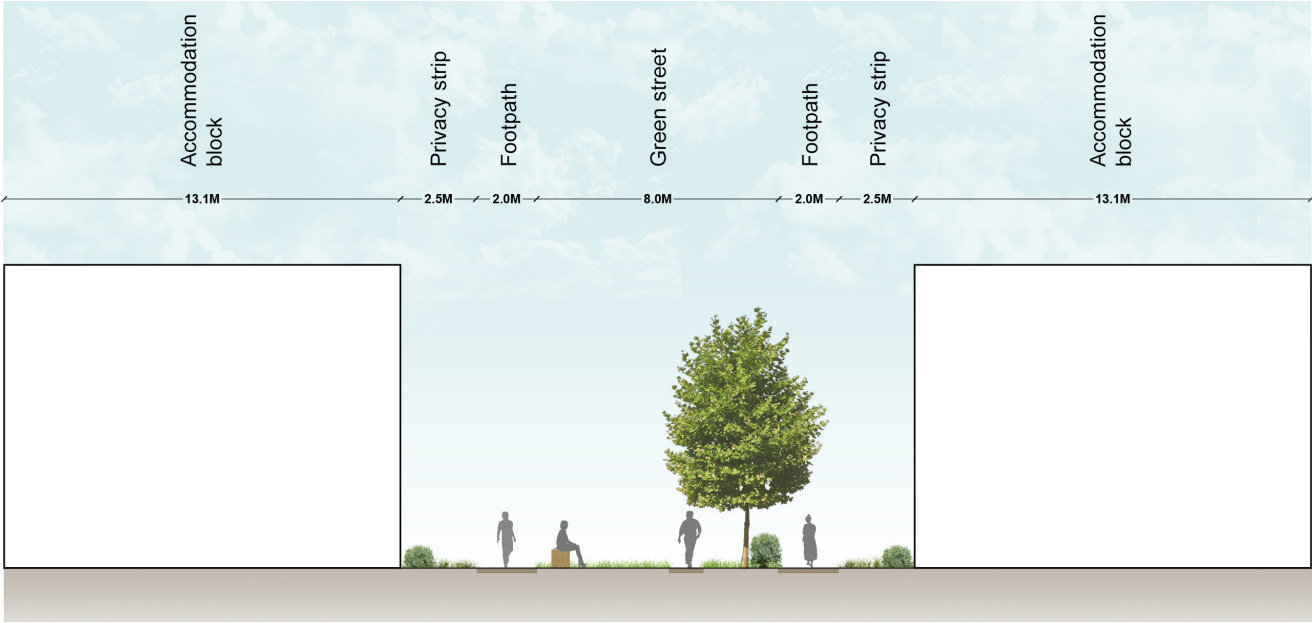


Figure A.20: Typical Section Through Green Street

A.27.2 Green streets

A.27.3 The green streets that run along the non-access side of all of the accommodation blocks are a key component of the green infrastructure strategy. As shown in **Figures A.20 and A.21**, the green streets will provide workers with an attractive, informal recreational space to enjoy between shifts, incorporating lawns, tree planting, seating and opportunities for informal recreation e.g. table tennis. At the centre of each amenity street there will be a hard space that could be used for any informal events or gatherings and will link in with the main north to south footpaths through the accommodation area of the campus, helping to enhance the legibility of the routes. The green streets will also provide an alternative to the access streets for east-west movement. Direct access from the accommodation blocks into the green streets will be provided from the entrance hallways.

A.27.4 As shown in **Figures A.22 to A.24**, the proportions of the green streets (17m wide and enclosed by accommodation blocks of a maximum of 4 storeys) will ensure that they benefit from good levels of daylight throughout the day.

A.27.5 Landscape detail

A.27.6 **Figure A.25** shows an illustrative landscape detail plan for the proposed accommodation campus. This plan shows possible treatments for the various hard and soft landscape features that are incorporated in the proposals. The intention will be to establish a high quality, attractive and robust public realm in which workers can rest and socialise between shifts, whilst recognising that the accommodation campus will be dismantled at the end of the 9-12 year construction period.

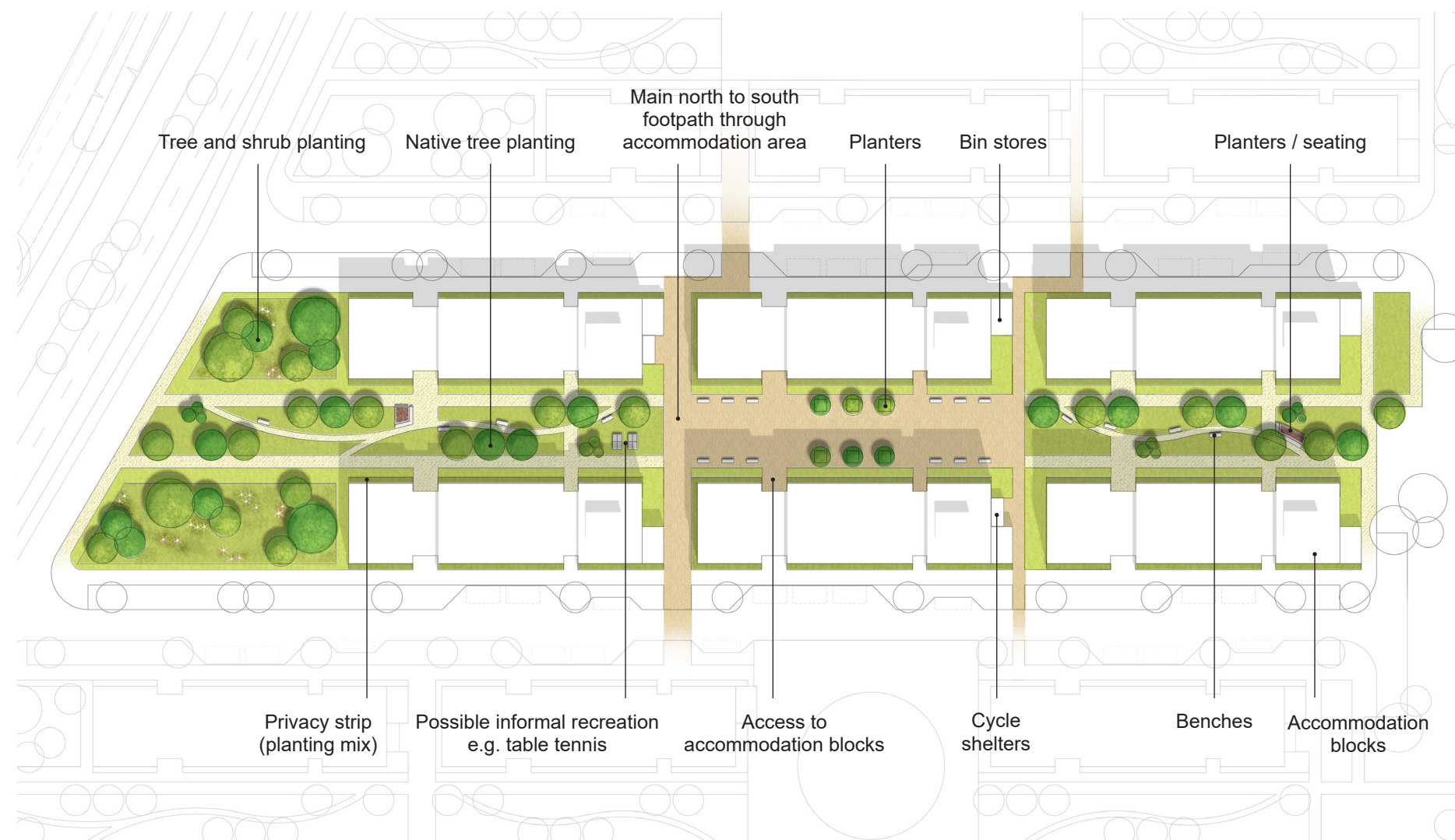


Figure A.21: Illustrative plan of typical green street

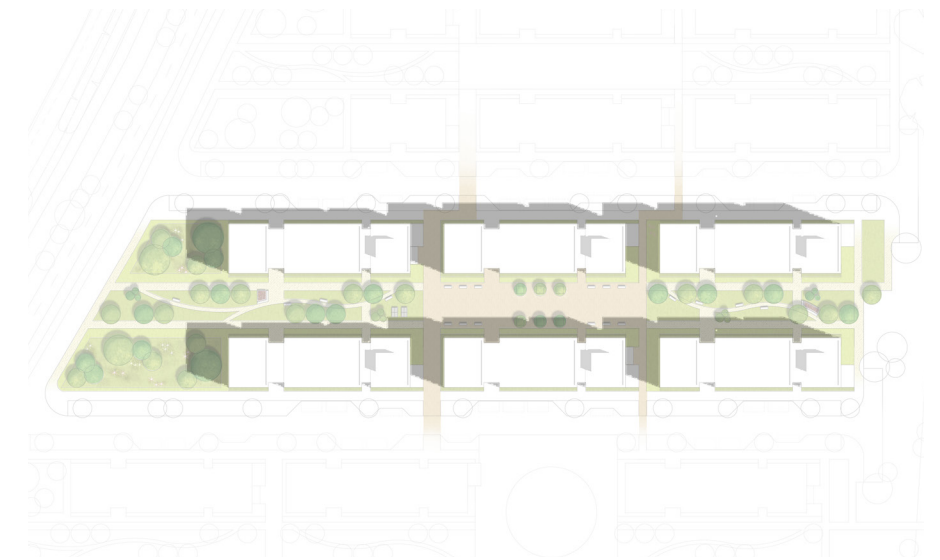


Figure A.22: Green street shadow plan (9am)



Figure A.23: Green street shadow plan (12 noon)

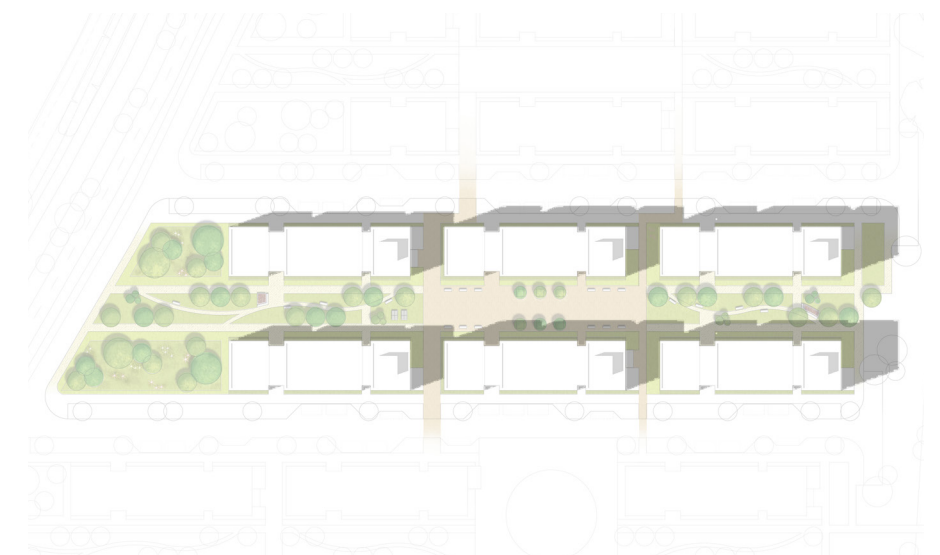


Figure A.24: Green street shadow plan (4pm)



Figure A.25: Illustrative Landscape Detail Plan

A.28 Access and movement

A.28.1 **Figure A.26** shows an indicative access and movement strategy for the accommodation campus proposals.

A.28.2 Vehicular access

A.28.3 A single, barrier-controlled vehicular entrance point into the accommodation campus is provided in the south west corner. This will be accessed via the north eastern arm of the proposed new roundabout located at the junction of Eastbridge Road and the B1122. An additional emergency access from Eastbridge Road will be provided at the northern end of the accommodation campus, where there is a gap in the existing hedgerow.

A.28.4 Vehicular movement

A.28.5 Within the site, the access lane to Upper Abbey Farm is retained and used to service the existing buildings, as well as the emergency equipment store and CHP generator. Due to the limited capacity of the Upper Abbey Farm access lane, a separate road is provided to allow access to the service area behind the proposed recreation building. This could potentially also serve the emergency equipment store and CHP generator during the 10 year construction period, but would subsequently be removed. An additional vehicular link into Upper Abbey Farm from the south will be provided following the completion of the construction period.

A.28.6 The accommodation blocks are served by a series of east-west access streets feeding off the main access road located along the western edge of the accommodation campus. The roads in these streets are 5m wide and feature turning heads at their eastern end to allow refuse vehicles and fire appliances to access the accommodation blocks and refuse stores.

A.28.7 Vehicles parking

A.28.8 The vehicle parking strategy for the accommodation campus has been designed to minimise the disturbance to workers caused by parking within the access streets. The access streets still provide drop-off points, as well as parking for the 60 accessible bed spaces. However, the majority of the parking (1,278 spaces) is provided within a two-level car park at the northern end of the site. This is located within 5 minutes walk of all accommodation blocks, though with workers being employed on-site and having immediate access to the accommodation campus facilities, they will not require regular access to their vehicles. An additional 305 parking spaces are provided within the amenity hub at the southern end of the site, providing a total of 1,643 spaces (excluding the drop-off points). Electric vehicle charging points will be provided in line with the Transport Strategy.

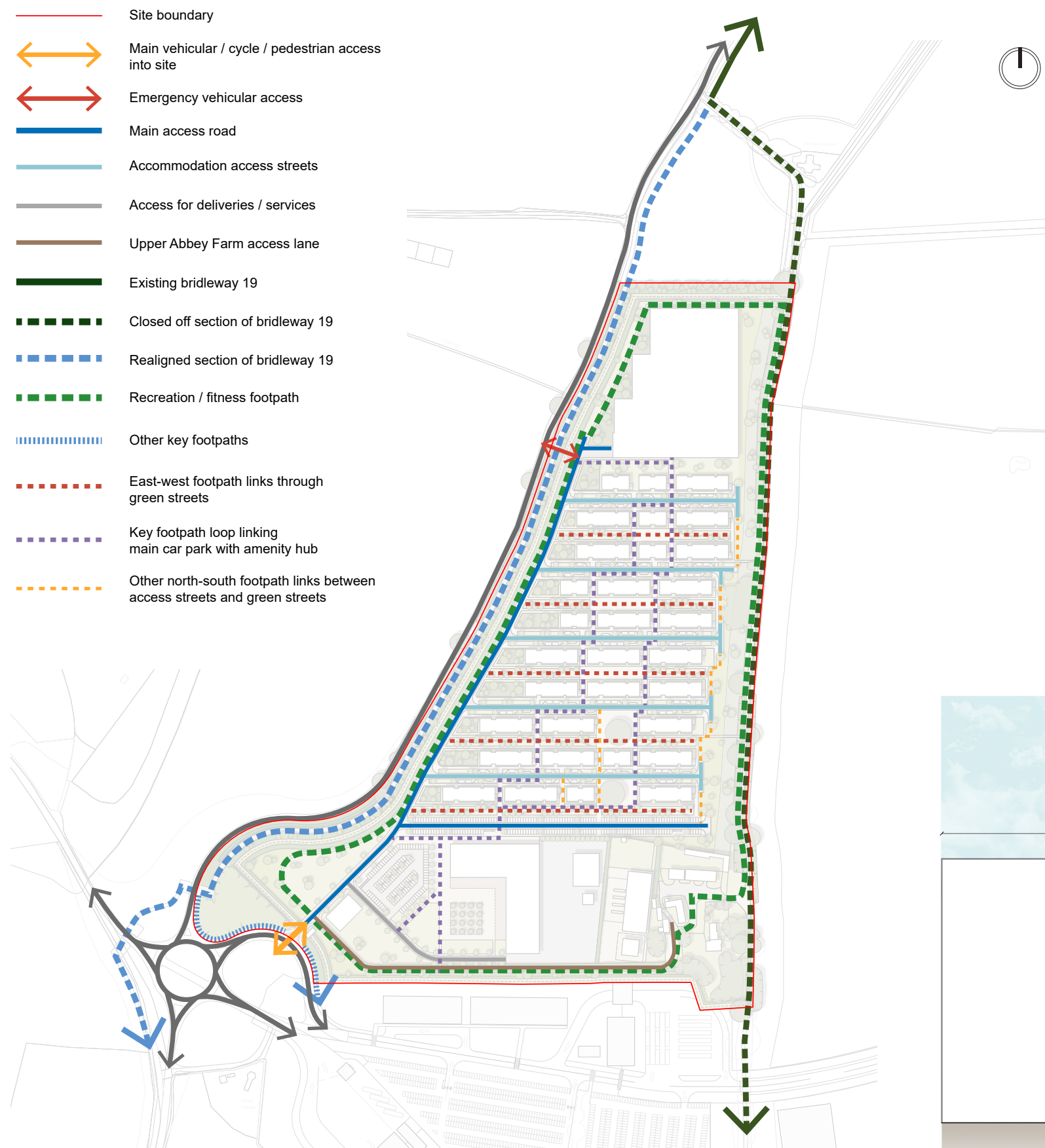


Figure A.26: Access and Movement Strategy

A.28.9 Pedestrians and cyclists

- A.28.10 Access into the accommodation campus for pedestrians and cyclists is provided via controlled gates located at the main vehicular entrance in the south west corner.
- A.28.11 Bridleway 19 will be realigned for the duration of the construction period to run between Eastbridge Road and the western edge of the accommodation campus. At the northern end of the accommodation campus the bridleway will exit the site via the northern boundary and continue separate from Eastbridge Road until it re-joins the original Bridleway 19 alignment. To the south it will cross the realigned section of Eastbridge Road and continue along the B1122 as shown in **Figure A.26**.
- A.28.12 Within the site, a network of footpaths is provided adjacent to the road network. Footpaths are also provided within the green streets and on a north to south axis between the accommodation blocks to ensure high levels of accessibility for workers between the various facilities. As shown in **Figure A.26**, this includes a key footpath loop linking the main car park in the north with the amenity hub and the open spaces incorporating the two retained category B trees. An additional footpath running around the periphery of the accommodation campus site is provided to give workers an outdoor exercise opportunity within the site.
- A.28.13 Parking spaces for 120 cycles is provided within the accommodation campus, including shelters within the amenity hub and attached to the gable ends of the accommodation blocks.

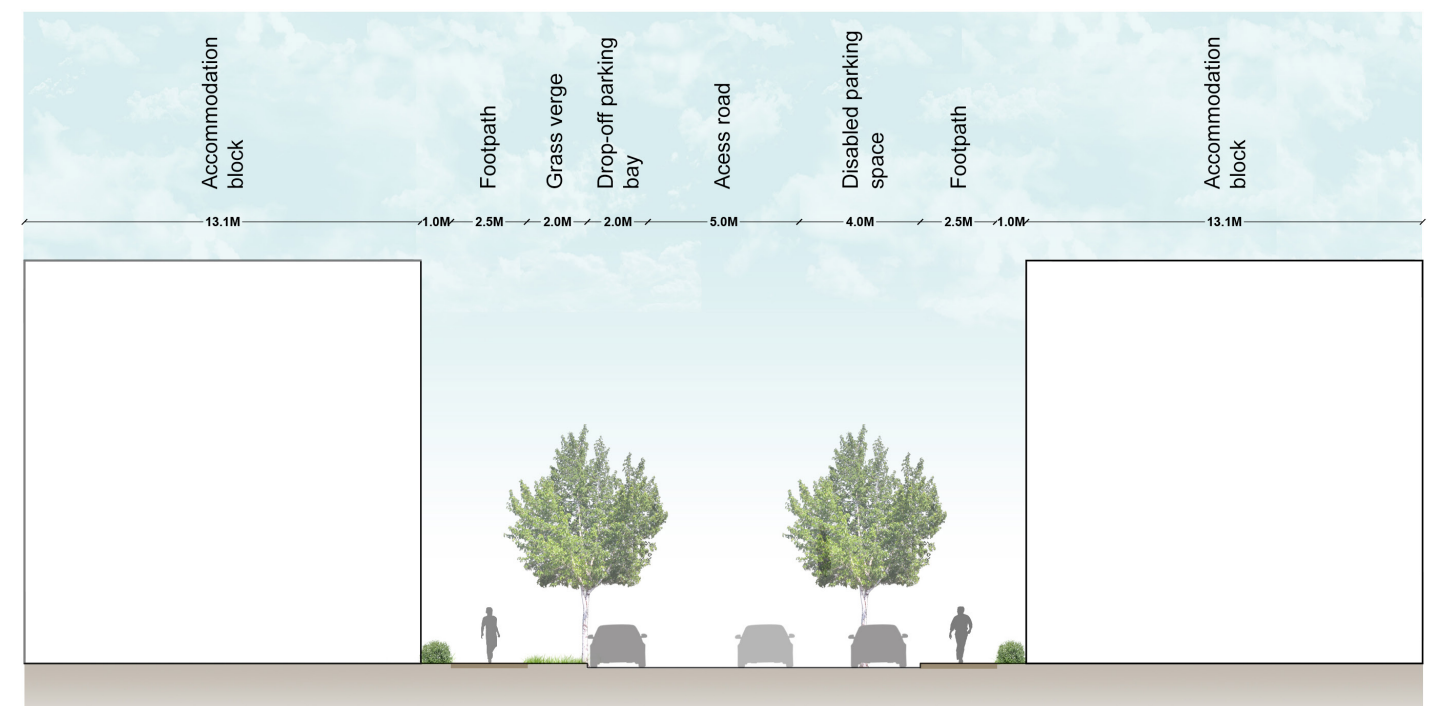


Figure A.27: Typical Section Through Access Street

A.28.14 Access streets

- A.28.15 The access streets that run on an east-west axis and serve the accommodation blocks are a key component of the access and movement strategy.
- A.28.16 As shown in **Figures A.27 and A.28**, the access streets incorporate disabled parking spaces as well as drop-off bays for convenience, but in order to minimise noise disturbance to the workers the main parking provision will be in the decked car park at the northern end of the site and within the amenity hub at the southern end.

- A.28.17 The parking bays provided are set within generous grass verges featuring native tree planting in order to help establish an attractive and positive street setting for residents. Bin storage and cycle shelters are located on the gable ends of the accommodation blocks where they will be convenient to access but have minimal impact on the street scene.
- A.28.18 As shown in **Figures A.29 to A.31**, the proportions of the access streets (20m wide and enclosed by accommodation blocks of a maximum of 4 storeys) will ensure that they benefit from good levels of daylight throughout the day.

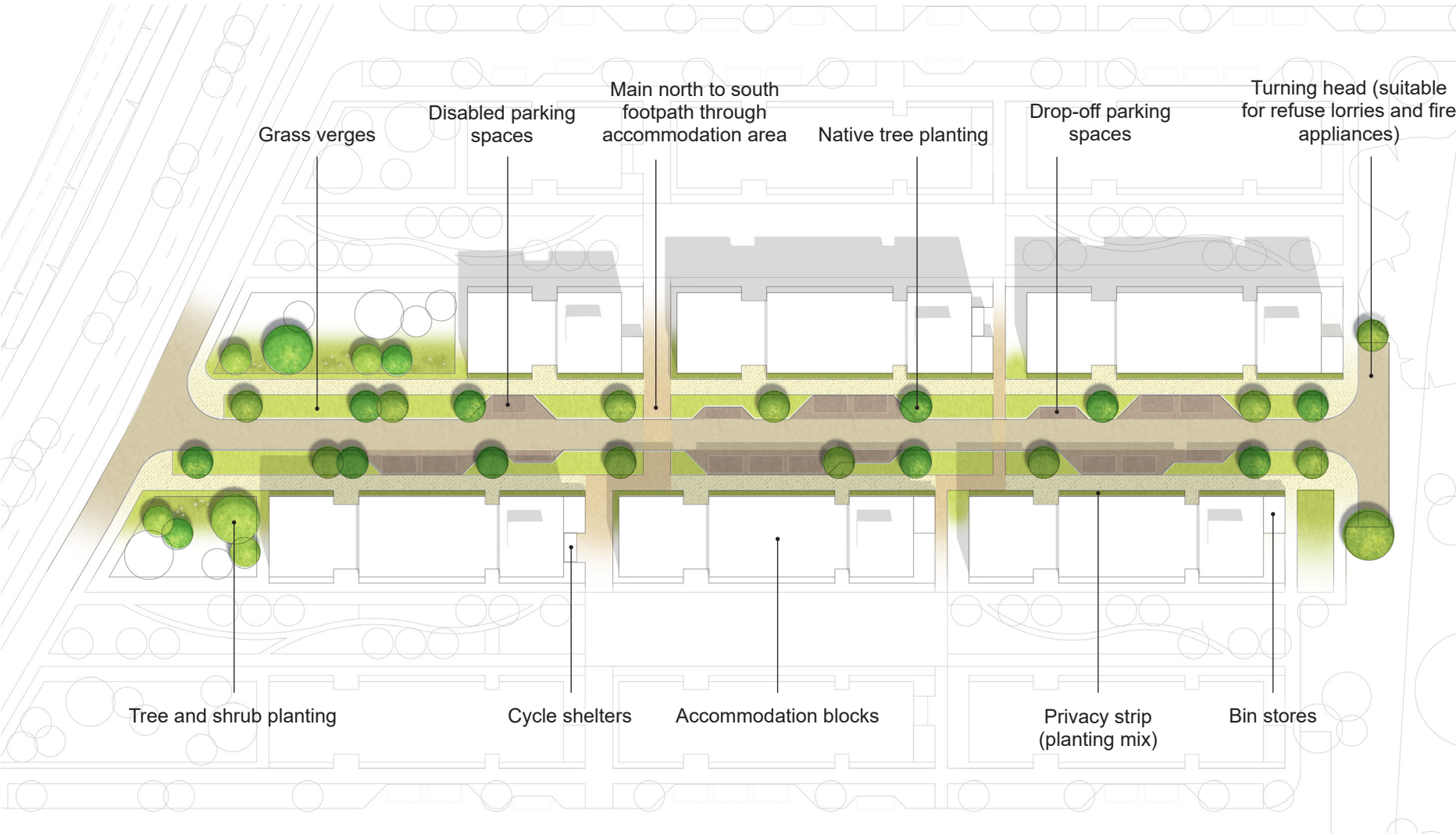


Figure A.28: Illustrative plan of typical access street

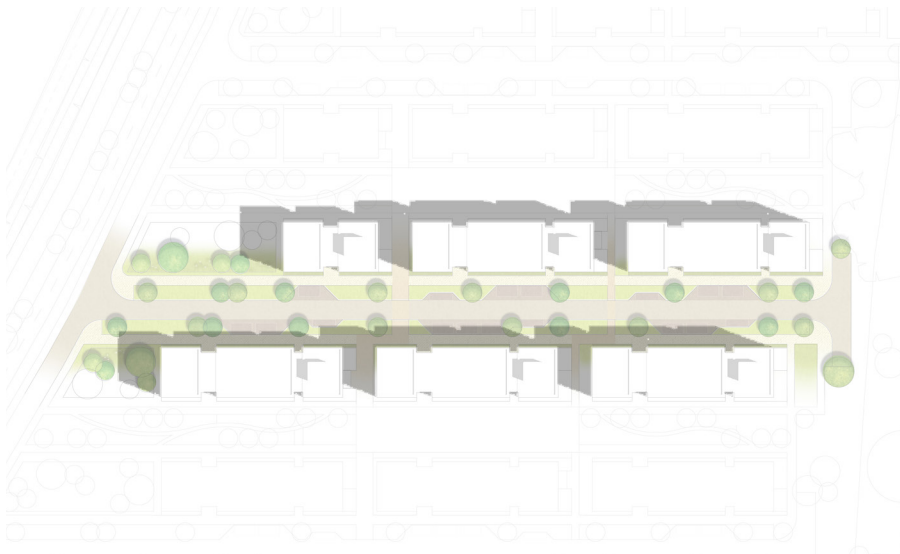


Figure A.29: Access street shadow plan (9am)

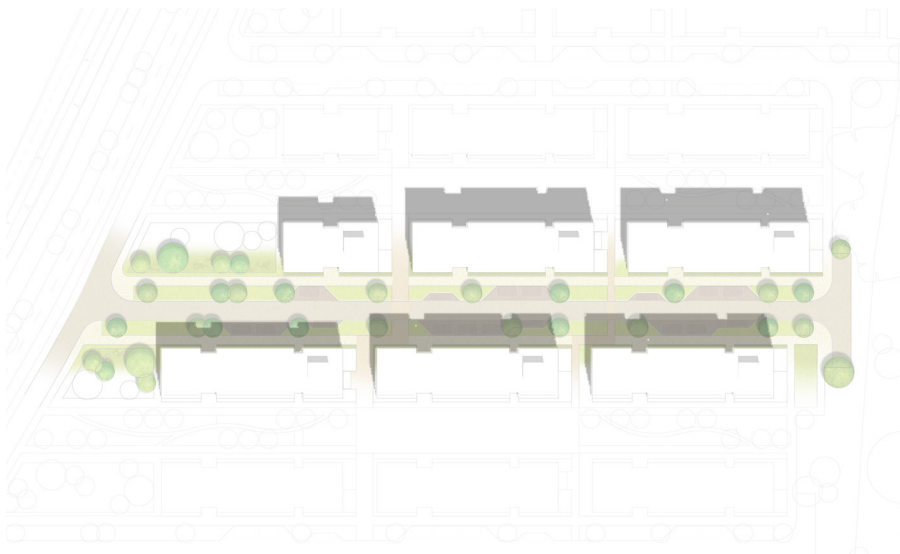


Figure A.30: Access street shadow plan (12 noon)

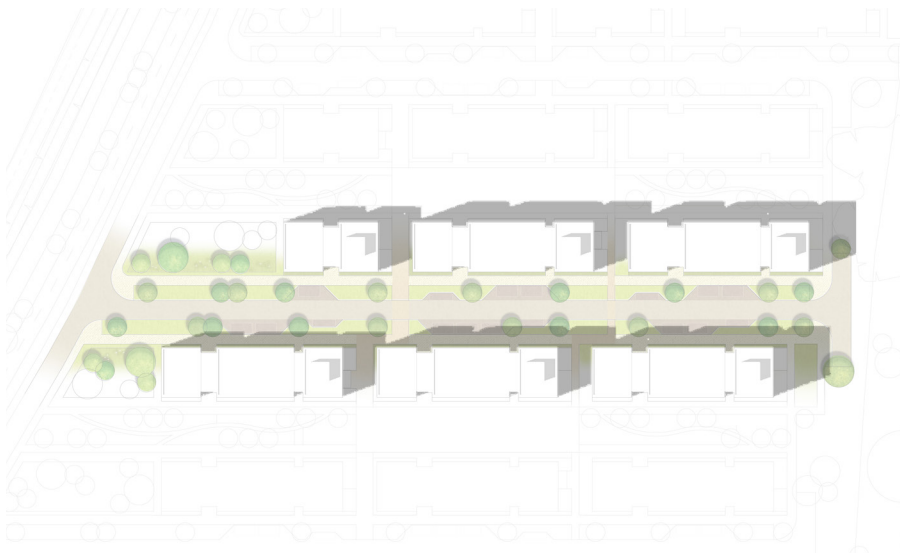


Figure A.31: Access street shadow plan (4pm)

A.29 Building layout, massing and heights

A.29.1 The massing and scale of the proposed buildings within the accommodation campus have been carefully considered, with particular attention given to potential visual and heritage impacts.

A.29.2 Accommodation blocks

A.29.3 As shown in **Figure A.32**, all of the accommodation blocks are aligned on an east to west axis. This ensures that the visual impact of the accommodation campus when viewed from the key receptors to the west of the site (e.g. Leiston Abbey and the realigned bridleway) is minimised. As shown in **Figure A.33**, this alignment also ensures that the accommodation blocks on the eastern edge of the accommodation campus 'side on' to the adjacent stock piles, thereby minimising their impact on views from within the accommodation (there will be no fenestration on the gable ends).

A.29.4 As shown in **Figures A.32 and A.34**, the three storey accommodation blocks are located on the western edge of the accommodation campus in order to minimise the impact of the four storey blocks on views from key receptors west of the site. To address stakeholder feedback 5 storey accommodation buildings were removed from the proposals between Stage 2 and 3 of the consultation process by building on the pit.

A.29.5 Visual impact has also been considered in the location of the accommodation blocks. These are the tallest buildings on the site and have been consolidated in the middle of the accommodation campus, which visual impact assessment work (see Stage 3 pre application report) has demonstrated to be the least visible area of the site from key receptors to the west.

A.29.6 Amenity buildings

A.29.7 As shown in **Figure A.32**, the recreation and reception buildings, both of which are 2-storey, are located at the southern end of the accommodation campus to reduce visual impact from the vicinity of Leiston Abbey.

A.29.8 The recreation building has been designed as a single building due to the benefits of collocating the various uses (see **section A.30** of this statement for further details). The L-shape is provided to define a well-enclosed, south facing open space that marks the entrance to the accommodation campus and could be used for the adjacent restaurant (and other uses) during the warmer months (see **Figure A.35**).

A.29.9 The two storey reception building is located at the main entrance to the site in a position that will allow staff to monitor and assist vehicular and pedestrian traffic heading to: Upper Abbey Farm; the service area behind the recreation building; and the accommodation area.



Figure A.32: Illustrative Massing

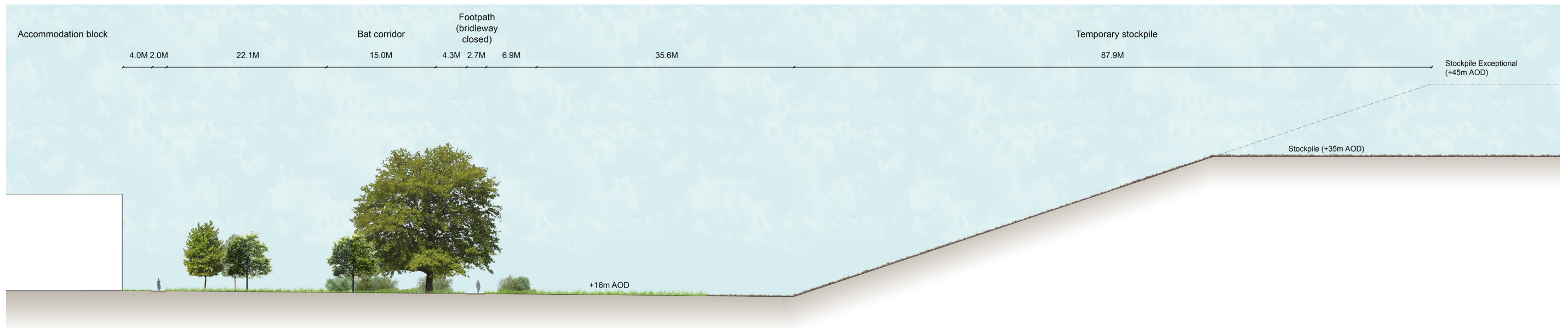


Figure A.33: Typical Section Through Eastern Edge of Campus and Temporary Stockpile



Figure A.34: Storey heights plan



Figure A.35: Illustrative view of main campus square (see location 1 shown on Figure A.32)

A.29.10 **Emergency equipment store and CHP generator**

- A.29.11 The emergency equipment store and the CHP generator (if required) are both located at Upper Abbey Farm, ensuring that they won't become isolated following the completion of the construction phase (they are the only two proposed buildings that will be retained on the site).
- A.29.12 The emergency equipment store is located within the western portion of Upper Abbey Farm, away from the existing buildings and allowing the sense of containment of the existing farmyard to be retained. Siting the emergency equipment store in this location requires the demolition of a modern barn, which is considered in the historian's assessment to be of no heritage value. It is proposed that vehicular access to the emergency equipment store would be provided by either creating an additional entrance off the access lane to Upper Abbey Farm, or by providing an entrance via the service area to the rear of the recreation building. The emergency equipment store would be largely obscured from views to the west by the recreation building.
- A.29.13 The CHP generator (if required) will be located immediately south of the emergency equipment store within the western portion of Upper Abbey Farm. It will not require the demolition of any existing structures and, as with the emergency equipment store, would either be accessed via an additional entrance from the access lane to Upper Abbey Farm or via the service area to the rear of the recreation building. The CHP generator would also be largely obscured in views from the west of the site by the recreation building, although the exhausts may be visible above it.
- A.29.14 **Decked car park**
- A.29.15 A two storey decked car park is provided at the northern end of the accommodation campus. The western edge of the building would be staggered to break up the massing of the building and replicate the staggered edge created by the accommodation blocks. The car park would be approximately 7m high and is located at the northern end of the accommodation campus in order to reduce visual effects from elevated locations to the north. The upper deck of the car park would be covered to minimise the potential visual impact of lighting.

A.30 **Building design and appearance**

A.30.1 **Accommodation blocks**

Layout and uses

- A.30.2 **Figures A.36-A.38** show illustrative plans for the small and large 3 and 4 storey accommodation blocks. Both the 3 and 4 storey blocks incorporate accessible bed spaces on the ground floor. Store rooms are provided on all levels and a plant room is provided on ground floors (the exact sizing of this will be determined once the energy strategy for the accommodation campus is confirmed). All standard and accessible bed spaces include an en-suite bathroom. Standard bed spaces have a gross internal area of 17m², while the accessible rooms have a gross internal area of 26m².

- A.30.3 **Table A.2** provides a summary of the accommodation provided with the proposed accommodation campus.

Appearance and materials

- A.30.4 Illustrative elevations and perspectives of the proposed small and large 3 and 4 storey accommodation blocks are shown in **Figures A.39-A.44**. Fenestration is limited to the front and rear elevations of the blocks to minimise the impact of lighting on views from key visual receptors to the west of the site and on the bat corridor to the east.
- A.30.5 Modular construction will be considered for the accommodation blocks and a simple, clean and contemporary architectural language is proposed, which responds to the local vernacular in terms of use of materials and colour palette (see **section A.31** for further details on colour strategy).
- A.30.6 The materials palette will not be fixed at this stage of the design process.

BLOCK TYPE	NUMBER OF BLOCKS	NUMBER OF STANDARD BED SPACES	NUMBER OF ACCESSIBLE BED SPACES	TOTAL NUMBER OF BED SPACES
Small block 3 storey (1 accessible bed space)	3	96*	3	99
Small block 4 storey (1 accessible bed space)	5	225	5	230
Large block 3 storey (1 accessible bed space)	7	483	7	490
Large block 4 storey Type A (1 accessible bed spaces)	3	276*	3	279
Large block 4 storey Type B (3 accessible bed spaces)	14	1260	42	1302
TOTAL	32	2340	60	2400

Table A.2 Bed space provision

* Assumes one ground floor bed space per block given over to additional storage provision

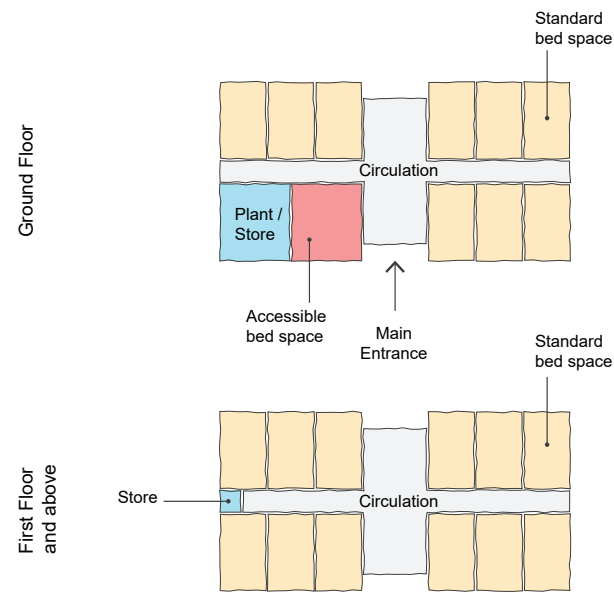


Figure A.36: Small Accommodation Block Layout (3 and 4 Storey)

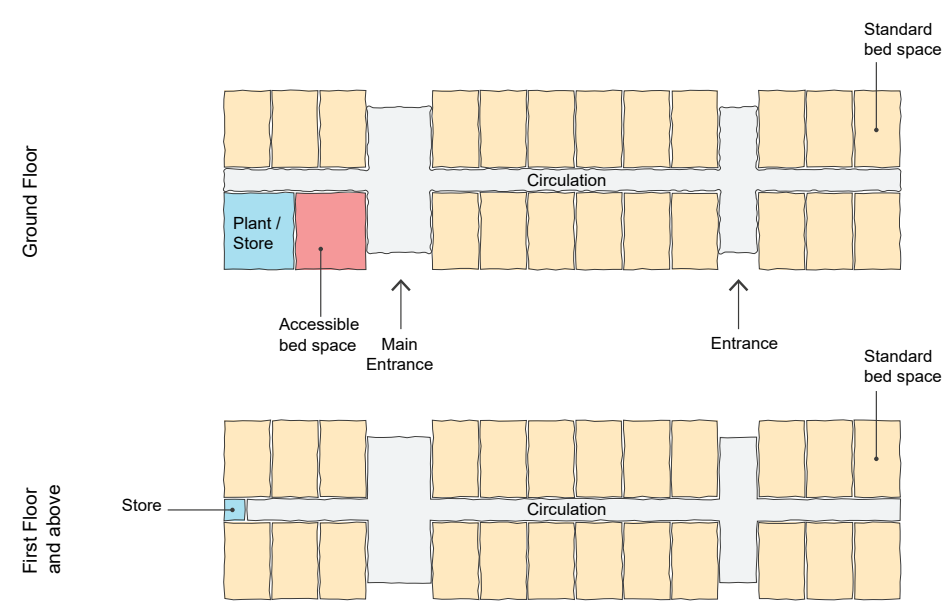


Figure A.37: Large Accommodation Block Layout (3 and 4 Storey) - Type A

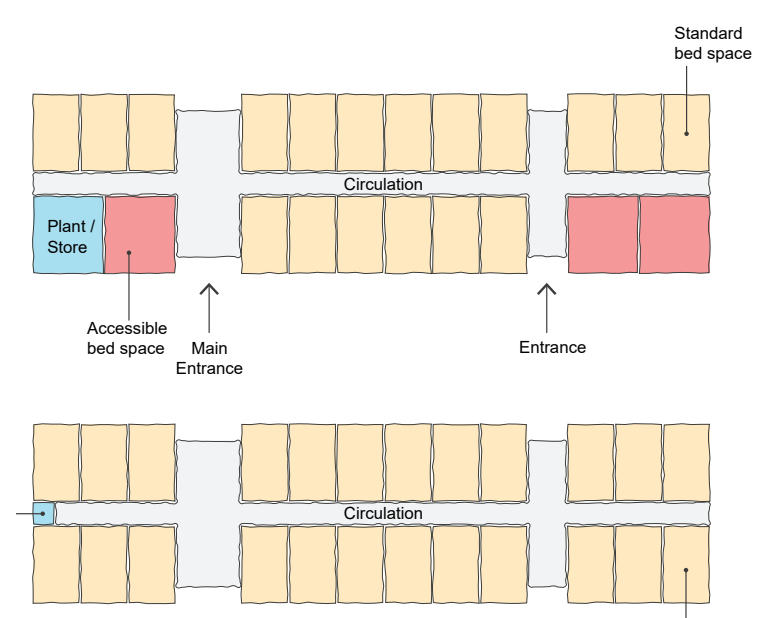


Figure A.38: Large Accommodation Block Layout (3 and 4 Storey) - Type B

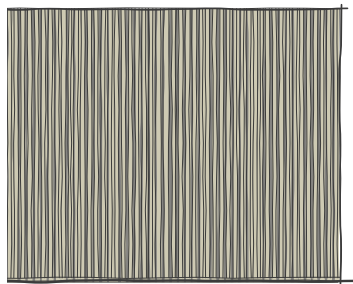


Figure A.39: Accommodation Block End Elevation (3 Storey)

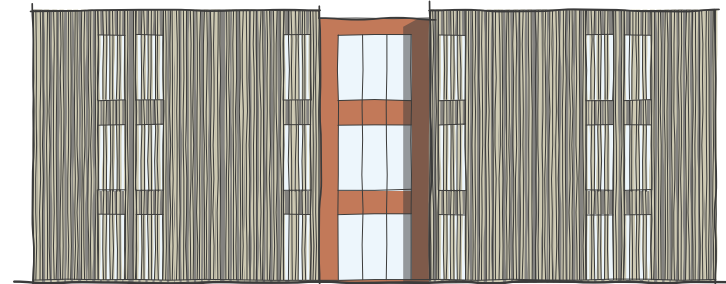


Figure A.40: Accommodation Block Front Elevation (3 Storey)

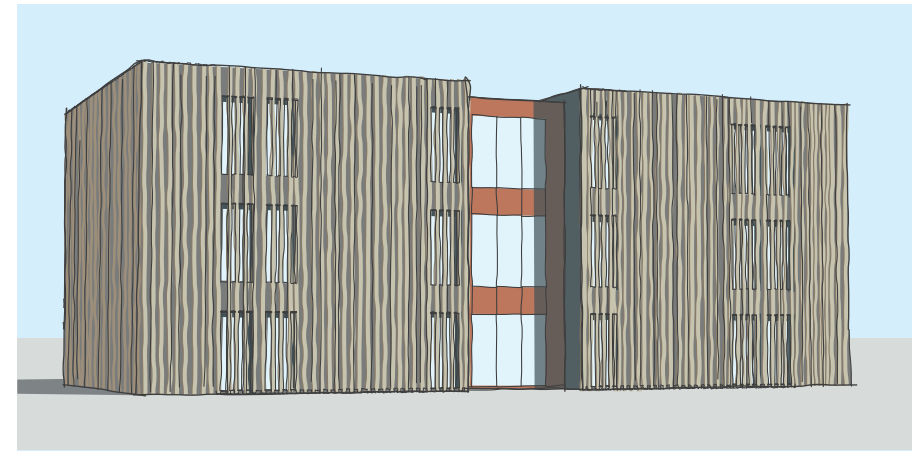


Figure A.41: Accommodation Block Perspective (3 Storey)

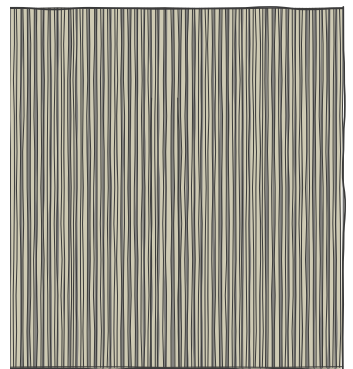


Figure A.42: Accommodation Block End Elevation (4 Storey)

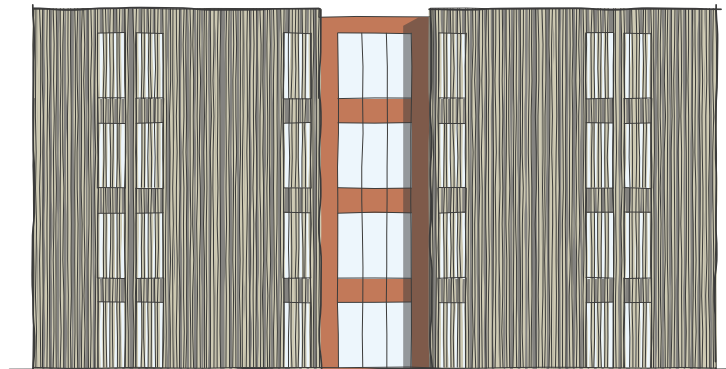


Figure A.43: Accommodation Block Front Elevation (4 Storey)



Figure A.44: Accommodation Block Perspective (4 Storey)

A.30.7 Recreation building

Layout and uses

- A.30.8 An illustrative layout of the proposed two storey recreation building is shown in **Figures A.45 and A.46**. The kitchen and restaurant were originally shown as a separate building in the Stage 3 Consultation. However, the decision has been made to combine these within a single recreation building following discussions with the accommodation campus operators, who outlined the benefits of collocating the facilities.
- A.30.9 An L-shaped building is proposed in order to define a well-enclosed, south facing open space that provides an appropriate entrance to the accommodation campus. The internal layout of the recreation building shown in **Figures A.45 and A.46** is illustrative only, but demonstrates how the key uses, e.g. restaurant, bars, gym and multi-function room could be distributed to ensure that they benefit from the most positive aspects onto the open space, with the services and plant located to the rear of the building. Providing the restaurant on the ground floor will allow this to spill out onto the open space during warmer months.

Appearance and materials

- A.30.10 **Figures A.47-A.49** show illustrative elevations and an illustrative perspective of the proposed recreation building. As with the accommodation blocks, modular construction will be considered for the recreation building and a simple, clean and contemporary architectural language is proposed.
- A.30.11 Materials to be considered for the recreation building include glass and metal cladding finished in two tones of grey (see **section A.31** for further details on colour strategy). The intention is that the ground floor will feature a predominantly glazed frontage in order to establish a strong relationship between the building and the main open space, and create an open and light internal restaurant space.

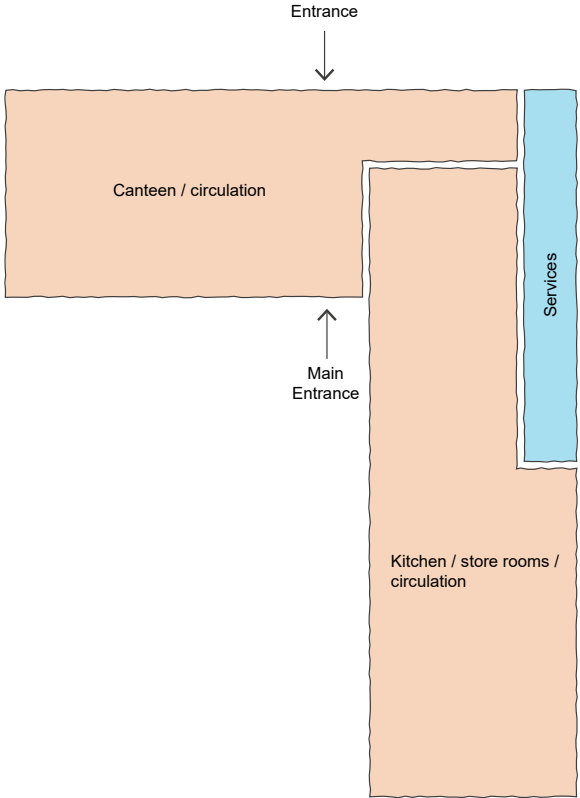


Figure A.45: Recreation Building - Ground Floor Layout

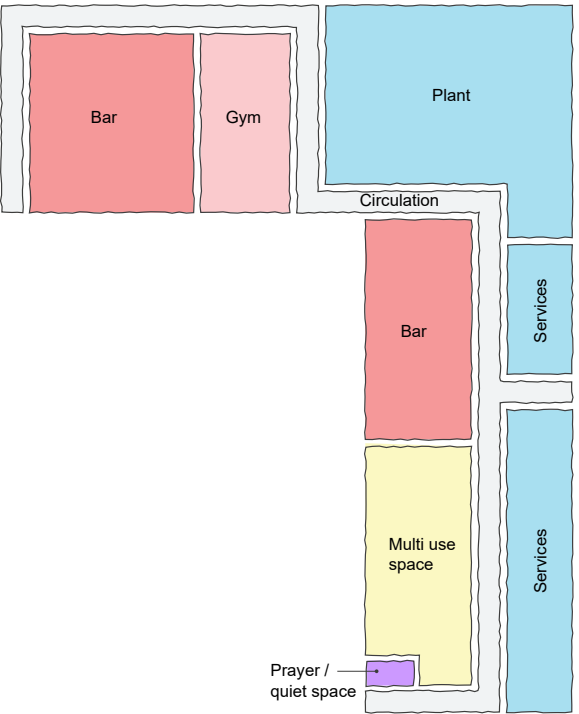


Figure A.46: Recreation Building - First Floor Layout

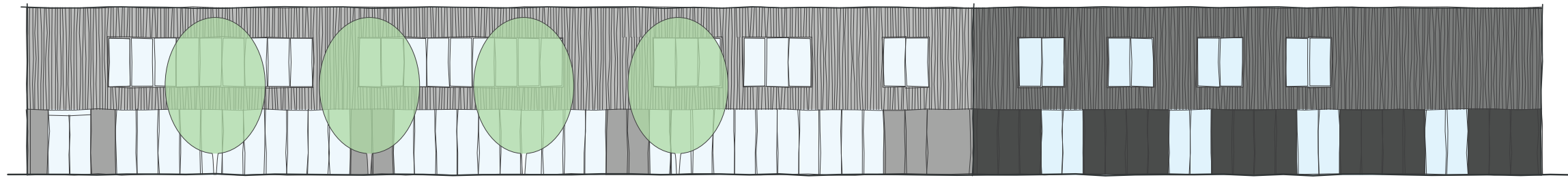


Figure A.47: Recreation Building South Elevation

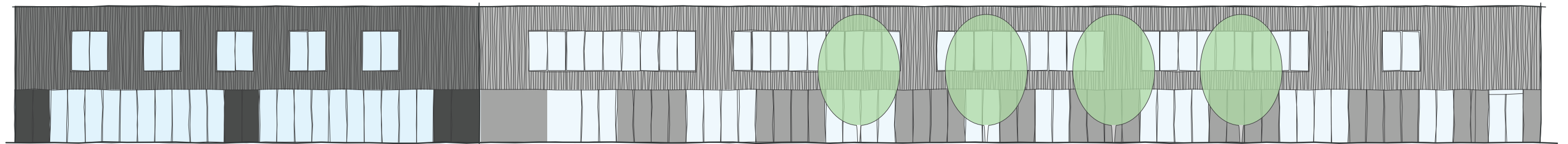


Figure A.48: Recreation Building West Elevation

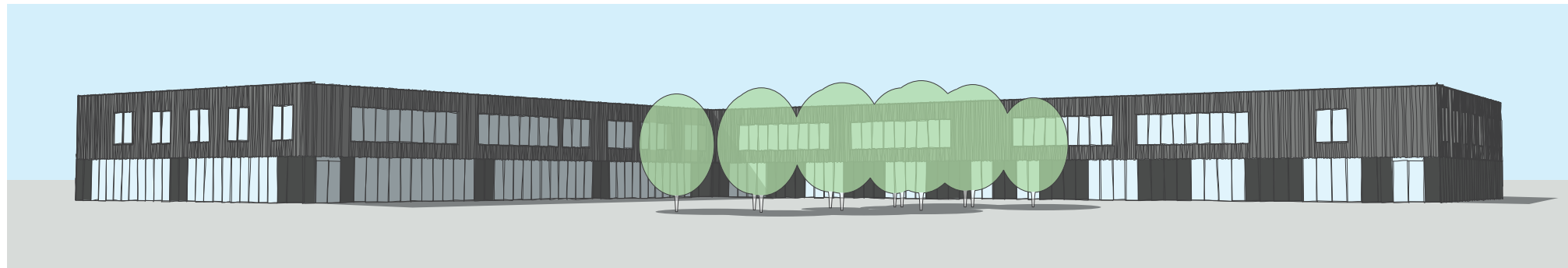


Figure A.49: Recreation Building Perspective

A.30.12 **Reception building**

Layout and use

A.30.13 **Figures A.50 and A.51** demonstrate how a two storey reception building could provide a reception and medical facility on the ground floor and administration facilities for the accommodation campus across both floors.

Appearance and materials

A.30.14 **Figures A.52-A.54** show illustrative elevations and perspectives of the proposed reception building.

A.30.15 The architectural language and use of materials and colour being considered for the reception building are consistent with those set out above for the recreation building. The intention is that the ground floor will feature a predominantly glazed frontage in order to help staff monitor and assist vehicles and pedestrians entering the site.

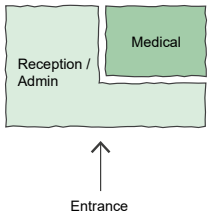


Figure A.50: Reception Building Ground Floor Plan

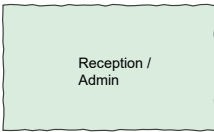


Figure A.51: Reception Building First Floor Plan

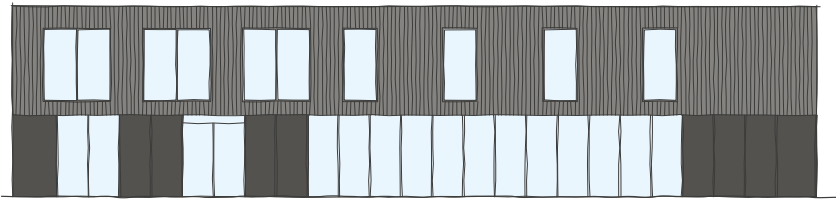


Figure A.52: Reception Building North-West Elevation

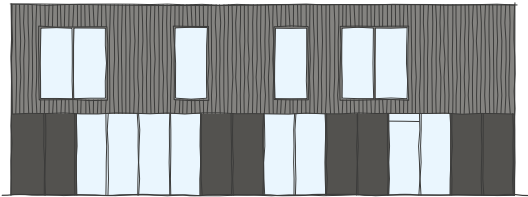


Figure A.53: Reception Building North-East Elevation



Figure A.54: Reception Building Perspective

A.30.16 Other structures

Decked car park

- A.30.17 The decked car park is likely to be of modular, steel framed construction and will feature a flat roof above the top deck in order to minimise light spill from the building.
- A.30.18 Cladding treatments being considered include vertical timber slats or other materials that would respond to the local vernacular and help to integrate the building into the landscape.

Combined Heat and Power (CHP) generator

- A.30.19 The CHP generator is likely to comprise of gas-fired generators installed side by side in modular containers. Each generator would have its own exhaust extending above the roof of the container. There would likely be additional smaller modular buildings to contain electrical switchgear, control systems, transformers, etc. All of this would be contained in a compound with vehicular access. The generators would be approximately 5m in height, and the exhausts up to 15m high.
- A.30.20 Materials being considered for the screening of the CHP generator include stained timber cladding, which would be sympathetic to the surrounding context.

Security building

- A.30.21 A dedicated security building is provided at the main entrance into the accommodation campus site. This will be a single storey structure with sufficient glazing to allow good visibility of the security barriers, turnstiles and gates. The building will also potentially feature an external canopy to provide security staff with some shelter when checking vehicles entering the site. Materials will be consistent with the palette used for the recreation and reception buildings.

Plant

- A.30.22 An area of plant is provided within the service area located to the rear of the recreation building. This will potentially incorporate facilities including a refuse store and back up boilers for the CHP generator (if provided).
- A.30.23 Timber cladding or other materials that help to integrate the plant into its context would be considered to match the finish of the car park and CHP generator screening, although it will largely be screened from the public areas of the accommodation campus by the recreation building and the adjacent existing and proposed planting.

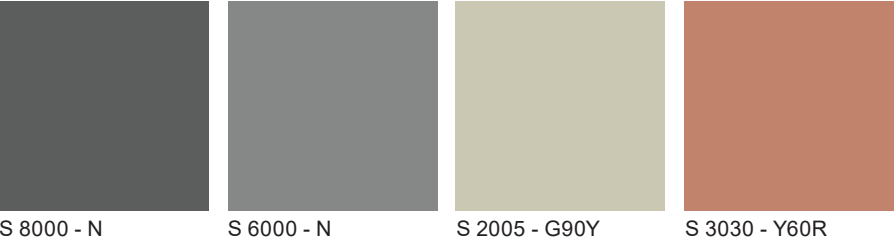
Foul water pump station

- A.30.24 A foul water pump station is provided within the service area located to the rear of the recreation building.

A.31 Colour strategy

- A.31.1 The proposals for the buildings on the accommodation campus site set out above give careful consideration to the Suffolk Coast and Heaths AONB Guidance on the selection and use of colour in development document.
- A.31.2 The accommodation campus site itself falls under the 'estate farmlands, clayland edge, farmed estate sandlands' landscape character type identified in the guidance, while the site context to the north and south and within the AONB to the east lies within the 'estate sandlands, woods and heath' landscape character type. Importantly, due to existing landscape features and the relatively flat topography of the site and its context, the later landscape character type will remain largely unseen in key views from receptors to the west of the site.
- A.31.3 The guidance also identifies a 'buildings and settlements' landscape character type. The accommodation campus site is not located within, or immediately adjacent to any areas of this type. Importantly, however, it is located immediately adjacent to Upper Abbey Farm, which incorporates a number of buildings similar to those which have been used to derive the colour palette for this landscape character type and it will form the immediate context to any development located in the south east corner of the site.

- A.31.4 Based on the above, careful consideration of the checklist set out in the guidance, analysis of the local vernacular (including Upper Abbey Farm), and the construction requirements for the various accommodation campus buildings, it is proposed that the following colour palette is considered for the accommodation campus buildings (see colour swatches overleaf):
- S 8000-N (buildings and settlements developed palette)
- A.31.5 It proposed that this integration colour is used for the main elevations of the accommodation blocks, amenity buildings and emergency equipment store. It is informed by the local vernacular, including painted timber and corrugated metal cladding, and will help the massing of the larger buildings e.g. recreational building and emergency equipment store, to recede in key views.
- S 6000-N (buildings and settlements developed palette)
- A.31.6 This is the associated grey neutral for S 8000-N. The intention is to provide an additional colour beyond the accent and trim colour (see below) to help provide variation and break up the larger building facades.
- S 2005-G90Y (buildings and settlements developed palette)
- A.31.7 This is the accent and trim colour and could be used for any timber cladding provided.
- S3030_Y60R (buildings and settlements / estate farmlands, clayland edge, farmed estate sandlands developed palette)
- A.31.8 This colour could be used to inform the brick intended for the emergency equipment store base and responds to the colour of the brick used in the immediately adjacent buildings at Upper Abbey Farm.
- A.31.9 It could also be used to provide an additional accent / trim colour for the accommodation units to help create a positive and vibrant feel to the accommodation campus. As shown in the illustrative elevations and perspectives (**Figures A.39-A.44**), one option would be to use this colour for the panels around the entrances to the accommodation blocks, which would also help to enhance their legibility.



A.32 Lighting

- A.32.1 In order to minimise the potential for light pollution, the accommodation blocks are orientated on an east-west alignment so that the gable ends present unlit facades towards key visual receptors to the west, including Leiston Abbey and locations on the local Public Rights of Way network.
- A.32.2 The lighting strategy for the wider accommodation campus area, including the access road and car park, will ensure that external lighting is only used where strictly needed and that the intensity of the lighting is matched to the need / use (with the potential for adjustment in level). Luminaires would be mounted as low to the ground as possible and shields will be provided where necessary to minimise light spill.
- A.32.3 Retained vegetation along both sides of the realigned bridleway, and new planting immediately west of the accommodation blocks will contribute to the filtering of views to lighting within the accommodation campus area.

A.33 Waste collection

- A.33.1 As shown in the illustrative landscape detail plan (**Figure A.25**) and also **Figures A.21** and **A.28**, dedicated refuse stores are provided on one of the gable ends of each of the accommodation blocks, where they will be easily accessible for both residents and refuse collection vehicles.
- A.33.2 The refuse stores will be approximately 2m high and will potentially feature timber cladding. A larger refuse store will be provided within the plant area to the rear of the recreation building.
- A.33.3 The road widths and hammerheads at the end of access streets are designed to ensure that refuse vehicles are able to manoeuvre as necessary to access all refuse stores.

A.34 Power and heating

- A.34.1 A number of low and zero carbon options to meet the energy needs of the accommodation campus have been considered. Initial studies have shown combined heat and power (CHP) and air source heat pumps (ASHP) to be the most appropriate options and flexibility in the design of the accommodation campus has been provided to accommodate either.
- A.34.2 **CHP**
- A.34.3 CHP generators burn a fuel (natural gas) to run an internal combustion engine, which then turns a generator to produce electricity. The heat from the combustion engine is piped away from the engine and used as a heat source for providing heating and hot water. CHP was initially the preferred option for the accommodation campus and, as shown in the illustrative layout (**Figure A.17**), a CHP generator could be accommodated within the Upper Abbey Farm site. An example of a typical CHP generator plant can be seen in **Figure A.55**.
- A.34.4 However, the government has recently provided amended Figures that more than halve the CO₂ value apportioned to grid electricity. This will potentially make air source heat pumps a more viable solution for the accommodation campus.
- A.34.5 **Air source heat pumps**
- A.34.6 Air source heat pumps (see **Figure A.56**) use a refrigerant cycle to gain energy from the available air temperature. They are powered by grid electricity, are very efficient and their service life fits well with the proposed accommodation campus lifespan. Their scalable and building mounted technology also offers greater flexibility in dealing with a accommodation campus population that will rise to a peak and then decline.
- A.34.7 If this option is proceeded with, an enclosure of up to approximately 3m in height would be required on part of the roof of all buildings as they would be too large to accommodate between the accommodation blocks. The exact sizing of this would need to be determined, but it is likely to be a relatively small part of the overall roof space and could be recessed from the edge of the building.



Figure A.55: CHP Generator



Figure A.56: Air Source Heat Pumps

A.35 Drainage and water strategy

- A.35.1 The drainage strategy for the accommodation campus seeks to incorporate sustainable urban drainage systems where possible. This will potentially include providing storage and infiltration opportunities through permeable paving e.g. below parking areas and other hard open spaces; shallow infiltration trenches along the perimeter of the accommodation campus and within the green spaces between the accommodation blocks; and the use of tree pits.
- A.35.2 Consideration is being given to the application of grey water recycling e.g. the re-use of water from showers, baths, sinks and washing machines for uses such as toilet flushing, landscape irrigation and other non-potable uses. Consideration will also be given in the design of the accommodation campus buildings to the integration of rainwater harvesting systems that allow the collection and re-use of roof water.

A.36 Site clearance and demolition

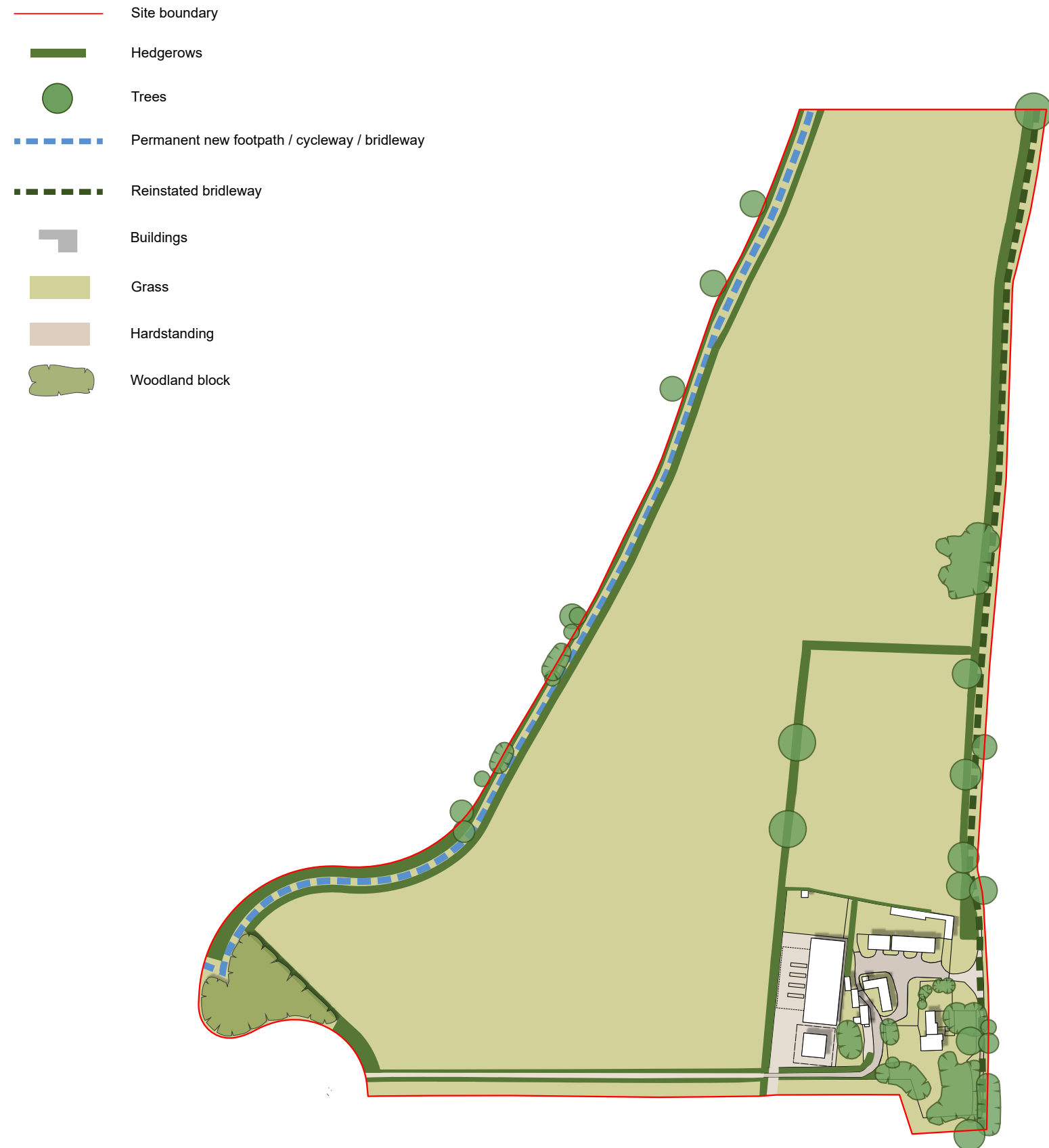
- A.36.1 **Figure A.57** shows the buildings, trees and hedgerows that will be removed as part of the proposed accommodation campus development.
- A.36.2 As referred to in **section A.29**, the construction of the emergency equipment store will require the demolition of an existing barn. An assessment of the Upper Abbey Farm site by a historian concluded that this structure is of no heritage value.
- A.36.3 The other building that will be demolished is the modern structure located immediately south of the dwelling in the north west corner of the farm. This is not considered in the assessment to be of any heritage value and will be demolished as part of the Conservation strategy for the Farm (though it is not required to accommodate any new development).
- A.36.4 Neither of these buildings is considered in the assessment to be of any heritage value and the L-shaped building is also in poor condition.
- A.36.5 As referred to in **section A.27**, all existing category A trees, and all but three of the category B trees / tree groups, are retained in their entirety and integrated within the accommodation campus proposals. The category B tree group affected is located within the existing pit and would need to be partially removed to accommodate the accommodation blocks. The individual category B trees to be removed are a small oak located in the centre of the site, to the west of the existing pit, and another oak located close to the site entrance.
- A.36.6 The majority of the existing hedgerows within the site are retained within the accommodation campus proposals, helping to retain existing ecological corridors and the mature landscape character of the site. The key hedgerows that would need to be removed are those located adjacent to the realigned section of Eastbridge Road at the southern end of the site, and the field boundary hedgerows located between the existing pit and Upper Abbey Farm.



Figure A.57: Clearance and Demolition Plan

A.37 Post construction

- A.37.1 Following the completion of the construction phase, temporary development, which includes the accommodation campus, would be removed. The details of the restoration and landscape design are secured by requirements included in Schedule 2 of the Draft DCO (Doc Ref. 3.1).
- A.37.2 As shown in **Figure A.58**, the only buildings that would be retained on the accommodation campus site would be the structures at Upper Abbey Farm, including the emergency equipment store and plant which would continue to serve the main site and be accessed via the farm access lane and from a new vehicular access to the south of the farm.
- A.37.3 In terms of vegetation, the existing north to south and east to west sections of the hedgerow located to the north of Upper Abbey Farm would be reinstated, as would the short sections of hedgerow located at the western end of the realigned section of the Upper Abbey Farm access road. All of the existing trees retained in the accommodation campus development proposals would be retained post construction.
- A.37.4 In order to return the site to its current open landscape character, the new tree and hedgerow planting located within the internal areas of the site will not be retained post construction.
- A.37.5 The following features around the periphery will be retained and reinforced:
- The bat corridor along the eastern edge of the site;
 - The retained and supplemented vegetation along the eastern edge of Eastbridge Road and the new landscape strip between the realigned bridleway and the (removed) security fence. This will help to retain the rural character of the bridleway, which will remain open post construction and form one of the main positive legacies of the accommodation campus. As shown in **Figure A.58**, the original bridleway located along the eastern edge of the site will be re-opened.
- A.37.6 It is considered that the tree species that will be suitable for planting within the accommodation campus (e.g. within the main campus square and along the access streets and green streets) will not be appropriate for replanting as part of the restoration strategy for the wider Sizewell site due to the different character of the proposed landscape. However, the opportunity to relocate these trees within nearby settlements will be explored through liaison with the relevant authorities and organisations.



0 100
M

Figure A.58: Site Restoration Plan

Figures may contain:

Reproduced from Ordnance Survey map with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationery Office © Crown Copyright (2019). All Rights reserved. NNB GenCo 0100060408.

Aerial Photography - © Bluesky International Limited