

**EMPLOYMENT ALLOCATION POLICY HB2 (BD11),
FORMER LANDFILL SITE, BROCKHAMPTON WEST
HAVANT, PO9 1HS**

**LANDSCAPE AND VISUAL IMPACT
ASSESSMENT (LVIA)**

ON BEHALF OF CLOWES DEVELOPMENTS (UK) LTD

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1. INTRODUCTION

1.1 This Landscape and Visual Impact Assessment (LVIA) has been prepared on behalf of Clowes Developments (UK) Ltd in support of the outline application to develop the site for new employment units with flexible use across use classes E (light industrial), B2 and B8 with ancillary offices, of up to 29,000 sqm / 312,153 sqft. The site is located at close proximity to Junction 5 of the A3 (M) and the A27 and is allocated for employment use under Policy HB2 (BD11) of the adopted Havant Borough Local Plan.

1.2 This assessment has been undertaken by a Chartered Member of the Landscape Institute (CMLI) in accordance with the best practice guidelines within GLVIA3¹ which states in paragraph 1.1 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."²

1.3 GLVIA3 recognises in paragraph 2.23 that:

"Professional judgement is a very important part of LVIA. While there is some scope for quantitative measurement of some relatively objective matters much of the assessment must rely on qualitative judgements."³

1.4 The site has already been the subject of an LVIA (January 2019) undertaken by Havant Borough Council in support of the employment allocation (Appendix 4). Pegasus Group have also submitted a Landscape and Visual Appraisal on 31st June 2020 for pre-application consultation. The recommendations of the Council's landscape officer have been included within the development parameters as far as possible.

1.5 The purpose of this LVIA is to review the development parameters for the proposed employment units with a total floorspace of up to a 29,000 sqm / 312,153 sqft. The maximum height of the employment units would be 12.5 to 15 metres to haunch and 18.5 metres height to ridgeline. The Finished Floor Level (FFL) would be 11.30 metres to 14.00 metres AOD depending on the site layout option although the overall height of the employment units would appear consistent.

¹ Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013) - Landscape Institute / Institute of Environmental Management and Assessment

² Paragraph 1.1, Page 4, GLVIA3

³ Paragraph 2.23, Page 21, GLVIA3

- 1.6 The detailed methodology for this LVIA is provided in Appendix 1.

Author's Background

- 1.7 The author of this appraisal is Rob French, an Associate Landscape Architect within Pegasus Group with over 15 years' experience in environmental consultancy, working on behalf of both public and private sector clients including government departments, agencies, local authorities, utility providers, private developers and national housebuilders.
- 1.8 Rob French is a Chartered Member of the Landscape Institute (CMLI) and holds a Bachelor of Science Degree in Landscape Design and Ecology (BSC Hons) and a Diploma in Landscape Architecture (DipLA) from the University of Sheffield. Operating within multidisciplinary teams, the author has wide project experience within the residential, mixed use, commercial, industrial, minerals, renewables and telecommunications sectors including Nationally Significant Infrastructure Projects (NSIPs).
- 1.9 The environmental planners and landscape architects within Pegasus Group frequently advise upon developments located within or affecting statutory protected landscapes such as National Parks (NPs) or Areas of Outstanding Natural Beauty (AONB) and non-statutory designations such as Special Landscape Areas (SLAs). Pegasus Group has successfully advised upon the promotion of the award winning Gloucester Motorway Services Area (MSA) within the surroundings of the Cotswolds AONB, the redevelopment of a grade II listed building at Cemex House within the Thorpe Conservation Area and advised Guildford Borough Council (GBC) on strategic areas of Green Belt release as part of the evidence base for their Adopted Local Plan.
- 1.10 The landscape architects within Pegasus Group undertake all their work in compliance with the Landscape Institute's Code of Standards of Conduct and Practice for Landscape Professionals (May 2012).

2. BASELINE CONDITIONS

- 2.1 The site is located on land to the west of Brockhampton and to the north of Harts Farm Way at close proximity to Junction 5 of the A3 (M) and A27 as shown on Figure 1. The site covers approximately 8.3 ha of reclaimed landfill between the A27 to the north, the Hermitage Stream to the east, Harts Farm Way to the south, and the A27 junction to the west. Access into the site is via an existing track and security gate leading off Harts Farm Way. The site is located within the Havant Urban Area Boundary (Policy AL2) within the Adopted Local Plan (Figure 3).
- 2.2 The site generally appears as a disused area of grassland, scrub and trees with the historic landscape features removed through the previous landfill and drainage operations. The site is generally characterised by two main areas including a broadly level plateau with sloping sides to the west and a more elevated, rounded and undulating tip to the east. The site topography generally rises between 9.71m to 10.59m AOD to the west and between 7.16m and 15.20m to the east. By comparison, the A27 is located at a lower level at approximately 3m AOD to the north with Harts Farm Way at approximately 4m AOD to the south (Figure 4).
- 2.3 The site benefits from the visual enclosure provided by the swathes of tree cover located along the site boundaries including the A27 to the north, the Hermitage Stream to the east, and along Harts Farm Way to the south. Gaps in the boundary vegetation are present to the south east near the Hermitage Stream overbridge and to the west on the A27 junction permitting partial views into the site. The site has been used informally for recreation by dog walkers for a number of years although no defined public rights of way (PROW) are located within the site.
- 2.4 The site is not located with any statutory or non-statutory protected landscapes although is within the surroundings of a number of environmental designations as shown on Figures 2 and 3:
- Ecology designations including an Important Site for Brent Geese and Waders (DM23) covers the site (albeit a low use category) as well as the Langstone Harbour SSSI, RAMSAR, SAC and SPA to the south;
 - Heritage designations including the Conservation Areas and Grade II listed buildings within Old Bedhampton to the north, Brockhampton to the north east, and Mill Lane to the south; and
 - Other Key Commercial Development Sites within the adopted Local Plan including Harts Farm Way North (BD9) and Land North of the Regional

Business Centre (BD10) to the east, and Kingscroft Farm (BD19) to the north east of the site.

2.5 The site is located within the surroundings of the following published Landscape Character Areas (LCAs) and Landscape Character Types (LCTs):

- Natural England, South Coast Plain, National Character Area Profile 126 (NCA 126);
- Hampshire County, Havant and Emsworth Coastal Plain (LCA) and the Coastal Plain Open (LCT); and
- Havant Borough, South Moor and Broadmarsh Coastal Park (LCA 41) and the Open Lower Harbour Plain (LCT H).

2.6 The site is located within the surroundings of the following highways and public rights of way (PROW):

- A27 dual carriageway located within a cutting to the north;
- Public Footpath No. 30 following the Hermitage Stream to the east extending between the Broadmarsh Coastal Park and Bedhampton via the A27 pedestrian bridge;
- Harts Farm Way to the south;
- Junction 5 of the A3 (M) and the A27 to the west;
- Solent Way recreational route and cycleway following the coastline of Langstone Harbour between Farlington Marshes, Broadmarsh Coastal Park and Brockhampton located approximately 160m to the south at its closest point; and
- Wayfarers Way recreational route following Portsdown Hill to the north west of the site extending between Bedhampton, the Hermitage Stream and Brockhampton.

3. PROPOSED DEVELOPMENT

- 3.1 The proposed development would comprise modern employment units with flexible use across use classes E (light industrial), B2 and B8 (storage and distribution) with ancillary offices, HGV loading docks and service yards and landscape mitigation. The site allocation Policy HB2 (BD11) advises an indicative floor space of 23,400 sqm based upon site area, access arrangements and other environmental constraints.
- 3.2 For the purposes of this LVIA, the development parameters are set as follows:
- Proposed Use Classes - *Flexible use across use Class E (light industrial), Class B2 (general industry) and Class B8 (storage and distribution) with ancillary uses*
 - Maximum Floorspace – *29,000 sqm / 312,153 sqft (GIA)*
 - Maximum Building Heights – *15m to 18.5m above FFL*
 - Finished Floor Levels – *11.3m to 14m AOD*
- 3.3 The development parameters for the outline application includes a number of site layout options which may come forward as part of the proposed development:
- Option 1 – *Single Unit Scheme – MSA dwg. 31383/PL/202*
 - Option 2 – *Two Unit Scheme – MSA dwg. 31383/PL/203*
 - Option 3 – *Three Unit Scheme – MSA dwg. 31383/PL/204*
- 3.4 The site is located within an area of former landfill and will therefore require an enhanced capping layer to provide a fixed surface slab level or finished floor level for the development platforms. The FFL for the single unit scheme would be 11.3m AOD. The building height for the single unit scheme would be 15m to haunch and 18.5m to ridgeline (26.5m AOD). The FFL for the multiple two or three unit scheme would be 11.3m AOD for the unit to the west and 14m AOD for the units to the east. The building heights would 15m to haunch and 18.5m to ridgeline to the west and 12m to 15m to the east. This is intended to ensure that the proposed employment units appear at a consistent ridgeline height across the site.
- 3.5 We note that the assessment parameters for the Council's LVIA acknowledged that *'the warehousing and distribution building(s) would require high ridgelines for efficient internal stacking of floorspace'* (paragraph 5.2) and that *'the market for such uses is for buildings up to 15 metres high'* (paragraph 2.18).

- 3.6 The mass, scale and form of the proposed employment units have been designed to respond to the surrounding landscape context and the environmental constraints. The employment units would be positioned to the north of the site adjacent to the A27 boundary in order to provide suitable offset distances and woodland screening from Harts Farm Way, the Broadmarsh Coastal Park and Langstone Harbour to the south. The proposals would include +5m high bund to the south excluding the 10m easement for the overhead powerlines and a +3m high bund to the west of the site. These bunds would include proposed woodland buffer planting to enhance visual screening.
- 3.7 Office units with an attractive architectural frontage have been proposed to 'bookend' the development to the west. The architectural building materials and cladding would be designed with an appropriate muted colour palette and non-reflective finish to blend into their surroundings and appear continuous with the character of Brockhampton Industrial Estate.
- 3.8 The proposals would retain the existing boundary vegetation as far as possible and provide strategic woodland buffers to reinforce the existing treecover. This would reduce the visual effects and mitigate views from Harts Farm Way, the Hermitage Stream, Broadmarsh Coastal Park, the Solent Way and Langstone Harbour in compliance with the allocation Policy HB2 (BD11).

4. EFFECTS ON LANDSCAPE ELEMENTS

- 4.1 The effects on landscape elements are limited to within the site and includes the direct physical change to the fabric of the land, such as the removal of site topography, woodland, trees or grassland vegetation. The site has previously been used for landfill and drainage operations therefore the historic landscape features have been removed.

Site Topography

- 4.2 The site is generally characterised by two main areas including a broadly level plateau with sloping sides to the west and a more elevated, rounded and undulating tip to the east. The site topography generally rises between 9.71m to 10.59m AOD to the west and between 7.16m and 15.20m AOD to the east. The landform slopes down to approximately 2m AOD to the north with the A27 dual carriageway in a shallow cutting, 1m AOD to the east along the public footpath following the Hermitage Stream, 4m AOD to the south along Harts Farm Way, and 8m AOD to the west on the A27 junction. Given the previous landfill use and modifications, the site topography is considered to be of low susceptibility, value and overall sensitivity.
- 4.3 In order to make the site viable as an employment allocation, regrading and cut and fill operations will be required to provide a capping layer to the former landfill facility. The development parameters will require a general levelling of the site at 11.3m AOD FFL to provide a sufficient capping layer for the single unit (Option 1) at 11.3m and 14m AOD FFL development platforms for the proposed multi-unit options (Options 2 and 3).
- 4.4 In addition, proposed bunds will be provided at +5m height to the south and +3m height to the west to provide visual screening. The proposals would inevitably result in a high a magnitude of change and a moderate effect on site topography. However, this change in landform is entirely necessary to bring the site back into viable use as an employment allocation.

Woodland and Trees

- 4.5 The existing woodlands and trees on the site boundaries will contribute to the physical and visual enclosure of the proposals within the site. A separate arboricultural survey in accordance with BS5837 has been undertaken for the site as shown in Appendix 3. There are no Tree Preservation Orders (TPO's), ancient or veteran trees currently identified within the site that would pose a constraint to

development. The arboricultural survey has identified a number of moderate (Category B) and low (Category C) quality individual trees and groups. The existing trees are generally suppressed in growth due to the vegetation density, bramble encroachment and lack of management. On balance, the existing vegetation is considered to be medium susceptibility, value and overall sensitivity.

- 4.6 The proposals would conserve and enhance the majority of the woodland and trees along the site boundaries. The development footprint will inevitably require a degree of woodland and tree group removal as identified within the arboricultural survey. The trees that would require either full or partial removal would include T1, T2, T3, G1 (partial), G2 (partial), G3, G4, G6 (partial), G7, G8, G9, G11, G12 (partial), G13, G14, G15 and G16 (partial for the drainage outfall pipe route). These tree losses would be compensated through the provision of 7615m² native woodland planting on the bunds to the south and west of the site. The existing and proposed vegetation would be actively managed for improved health, longevity and structure in the long term. On balance, the proposals would result in a medium magnitude of change and a moderate (beneficial) effect.

Meadow Grassland

- 4.7 The proposals are located within approximately 8.3 ha of reclaimed landfill which is generally covered with meadow grassland with large areas colonised by saplings and encroached by bramble. The meadow grassland is considered to be of medium susceptibility, value and overall sensitivity. The proposals would inevitably require the removal of the existing grassland within the development footprint although extensive areas have been proposed to be managed for slow worm habitat within the easement of the overhead powerlines. A separate reptile area management specification has been provided by Applied Ecology Ltd. This area would be cleared of bramble and saplings and managed as meadow grassland and habitat for slow worms both during and after the construction phases. The meadow grassland would be managed to encourage wildflowers and would include a number of hibernacula's to enhance biodiversity. With a medium sensitivity and a high magnitude of change, the proposals would inevitably result in a major effect on the meadow grassland within the development footprint.

4.8 The effects on landscape elements within the site are summarised in Table 1:

Table 1, Summary of Effects on Landscape Elements					
Landscape Elements	Value	Susceptibility	Sensitivity	Magnitude	Effect
Site Topography	Low	Low	Low	High	Moderate
Woodlands and Trees	Medium	Medium	Medium	Medium	Moderate (Beneficial)
Meadow Grassland	Medium	Medium	Medium	High	Major

5. EFFECTS ON LANDSCAPE CHARACTER

- 5.1 The effects on landscape character considers how the introduction of new landscape elements physically alters the landform, landcover, landscape pattern, and perceptual attributes of the site or how visibility of the proposals changes the way in which landscape character is perceived. Landscape character is defined in GLVIA3 as the:

"Distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse."⁴

- 5.2 The site is located within the surroundings of the following published Landscape Character Areas (LCAs) and Landscape Character Types (LCTs):

- Natural England, South Coast Plain, National Character Area Profile 126 (NCA 126);
- Hampshire County, Havant and Emsworth Coastal Plain (LCA) and the Coastal Plain Open (LCT); and
- Havant Borough, South Moor and Broadmarsh Coastal Park (LCA 41) and the Open Lower Harbour Plain (LCT H).

Natural England, South Coast Plain, National Character Area Profile 126 (NCA 126)

- 5.3 Natural England has identified 159 geographical areas of similar landscape character known as National Character Areas (NCAs). This mapping, sometimes described as 'The Character of England Map' provides a description of landscape character at the national scale. It is considered that whilst the NCA's provide a national spatial framework, the scale of the mapping and information is of limited use as a strategic planning tool at the local scale. The site is located within the Natural England, South Coast Plain, National Character Area Profile 126. The relevant key characteristics includes:

- **"A chain of prominent limestone hills, cored by Devonian and Silurian rocks, extending inland from the coast and rising up sharply from the surrounding lowlands. An open limestone plateau with karst features including complex underground caves and river systems gives the area a unique character. Sandstone outcrops form the highest features. Dramatic gorges, cliffs and escarpment slopes surround the plateau. To the west the land breaks into individual hills;**
- **The plateau and hill tops are largely treeless, except for a few old ash pollards, wind-shaped shelterbelts and conifer**

⁴ Glossary, Page 157, GLVIA 3rd Edition

plantations. The slopes and valleys surrounding the plateau have a wide range of woodlands forming an attractive mosaic with calcareous grassland and agriculture. There is a more wooded nature to the eastern Mendips;

- Along the exposed, open coastal plain and shoreline, tree cover is limited to isolated wind-sculpted woodlands and shelterbelts;
- The area has significant urban development, with settlements along the coastline dominated by the Portsmouth conurbation, suburban villages and seaside towns including Bognor Regis, Littlehampton and Worthing linked by major road and rail systems; and
- Historic fortifications along the coast include the Roman fort at Portchester and 19th-century defences and later naval installations built to protect the Portsmouth naval dockyard."

Hampshire County, Havant and Emsworth Coastal Plain (LCA) and the Coastal Plain Open (LCT)

5.4 At the County level, the site is located within the Havant and Emsworth Coastal Plain (LCA) and the Coastal Plain Open (LCT) of the Integrated Hampshire Landscape Character Assessment. The key characteristics include:

- "A former river terrace landscape of Pleistocene origin with extremely fertile and national important agricultural silty loam alluvial soils;
- Springs emerge on the chalk clay boundary and form short crystal clear chalk streams;
- An early small scale enclosure landscape which has been substantially modified to larger open fields in the northern half of the character area;
- Remnant mature oaks in suburban settings along verges and stream courses likely to have been associated with former field hedges;
- Varying tranquillity levels declining in proximity to modern development/busy transport infrastructure;
- Good access for walkers from settlements down to the harbour shore;
- Well preserved setting of the Saxon origin settlement of Warblington church and manor;
- A historically nucleated settlement pattern that has expanded massively in post second world war – including social housing area of Leigh park; and
- A particular concentration of historic tide mills and ponds which have now been converted and adapted to modern uses and evidence of relatively small scale Salterns."

Havant Borough, South Moor and Broadmarsh Coastal Park (LCA 41) and the Open Lower Harbour Plain (LCT H)

5.5 At the District level, the site is located within the Havant and Emsworth Coastal Plain (LCA) and the Coastal Plain Open (LCT) of the Havant Borough Townscape, Landscape and Seascape Character Assessment, February 2007 (Appendix 2). The key characteristics include:

- **“Part of a flat coastal plain, although there are artificial areas of elevated land south of Harts Farm Way and around Southmoor Hill which have been created from imported fill;**
- **The junction of the A3 (M) and A27 (T) creates a large artificial form on the flat harbour plain, although roadside tree planting has partly reduced its visual dominance;**
- **Artificial harbour shoreline to the south of the Coastal Park and artificial bunding adjacent to Budds Farm produces a reminder of its history as part manmade landform;**
- **Surface drainage includes the tidal section of the Hermitage Stream which forks into a narrow inlet and a drainage channel west of Langstone. These are both fed by a number of adjacent streams and man made ditches;**
- **From the east a harbour side sequence of fields includes an area of arable land, rough pasture, amenity grassland with pockets of arable land which forms the Broadmarsh Coastal Park and an area used for market gardening to the north of the A27 (T);**
- **Intermittent thick hedgerows separate the fields to the east, while the areas of amenity grassland are surrounded by tree belts;**
- **The visual impact of the highway degrades the northern end of Langstone Harbour;**
- **The Brockhampton industrial estate is visually intrusive;**
- **Constant traffic noise from the A27 (T) and the A3 (M) and to the east from the A3023;**
- **Good pedestrian access to the harbour edge with the Solent Way and Wayfarers Walk, both leading and providing access back into Havant;**
- **Additionally there are two car parks adjacent to the waters edge both lead off from Harts Farm Way;**
- **Poor access to South Moor, where the car park at Budds Wall is presently closed.”**

5.6 The site is undesignated in landscape terms and located between existing infrastructure including the A27 dual carriageway to the north, the Brockhampton Industrial Estate to the east, Harts Farm Way to the south, and the A3 (M) and A27 junction to the west. The historic landscape features within the site have been removed through the previous landfill and drainage operations. The site benefits

from the visual enclosure provided by swathes of treecover both within the site and the Broadmarsh Coastal Park to the south. As such, the site itself is considered to be of low susceptibility, value and overall sensitivity in landscape character terms.

- 5.7 The proposed site layout would inevitably change the character of the site itself from a former landfill facility with disused areas of open grassland, scrub and trees to modern employment units with offices, HGV and car parking, service yards and loading docks. The effects would be localised due to the existing character of the Brockhampton Industrial Estate to the east and the woodland screening provided as landscape mitigation. The proposed employment units would appear as an extension to the character of the existing industrial estates to the east whilst benefiting from the close proximity to the A3 (M) and A27 junction to the west of the site.
- 5.8 Beyond the site boundaries, the proposed employment units would be visible to varying degrees from Harts Farm Way to the west (Viewpoint 5), the overbridge of the Hermitage Stream to the south east (Viewpoint 7), Portsdown Hill to the north west (Viewpoints 11 and 12) together with sections of the Solent Way within the Broadmarsh Coastal Park (Viewpoint 4) and Farlington Marshes to the south west of the site (Viewpoints 13 and 14).
- 5.9 The proposed employment units would not generally be visible from near Langstone Bridge to the north of Hayling Island (Viewpoint 1) or from the Wayfarer Way at South Moor (Viewpoint 2) to the south east due to the intervening landform and treecover within the Broadmarsh Coastal Park.
- 5.10 The effects on the character of the close proximity views from Harts Farm Way and Broadmarsh Coastal Park would be limited by the proposed bund and woodland buffer. Within the distant elevated views from Portsdown Hill, the proposed employment units would appear as part of the developed coastal plain and as an extension to the existing commercial buildings within the Brockhampton Industrial Estate.
- 5.11 In more distant views, the proposed employment unit would be partially visible from the Solent Way within Farlington Marshes to the south west of the site (Viewpoints 13 and 14). The views across Langstone Harbour are considered to be of high sensitivity. The time lapse visualisations at year 1 and 15 on Figure 12 shows that the western elevation and roofline would be partially visible above the intervening landform and treecover within the Broadmarsh Coastal Park. However,

the southern elevation would be generally screened by the proposed 5m high bund and woodland buffer with only the upper roofline remaining visible by year 15. Although the roofline would remain partially visible from the Solent Way at Farlington Marshes, it would be seen in the context of other glimpse views of existing commercial buildings on the fringes of Langstone Harbour. The proposed employment units would appear as a continuation of this characteristic and therefore not as an unusual occurrence.

- 5.12 The Council's LVIA acknowledges that the effects on the landscape character of the Havant Borough, South Moor and Broadmarsh Coastal Park (LCA 41) containing the site would be limited stating within paragraph 6.19 that:

"When considering the overall LCT, it is thought that as the development would only directly affect only a small part of it, the effects on the wider landscape would be less significant and not alter the overall character type."⁵

- 5.13 The Council's LVIA also notes that the effects on landscape character would be limited by the commercial and industrial context noting within paragraph 6.20 that:

"...any significant effects being limited to a small part of the LCT with the immediate vicinity of the site already commercial/industrial in character."⁶

- 5.14 On review of the proposed site layout and visualisations within Figure 12, we remain broadly in agreement with the findings of the Council's LVIA (Appendix 4). However, the Council's LVIA has attributed a 'medium to high' value to the Open Lower Harbour Plain (LCT H) character type containing the site. Whilst this may be appropriate to the wider character type, the site itself would not be considered to be of 'medium to high value.'

- 5.15 Overall, the proposed site layout would result in a low magnitude of change and a minor adverse effect on landscape character. We do not consider that the proposed site layout for a 29,000 sqm floorspace scheme would result in any significant effects above those previously assessed within the Council's LVIA. The effects on landscape character would be localised in nature given the commercial and industrial context.

⁵ Appendix 4, Paragraph 6.19, Page 31, HBC Brockhampton West LVIA (Jan 2019)

⁶ Appendix 4, Paragraph 6.20, Page 31, HBC Brockhampton West LVIA (Jan 2019)

5.16 The effects on landscape character are summarised in Table 2:

Table 2, Summary of Effects on Landscape Character					
Landscape Character	Value	Suscept- ibility	Sensitivity	Magnitude	Effect
Natural England, South Coast Plain, National Character Area Profile 126 (NCA 126)	Medium	Medium	Medium	Low	Minor
Hampshire County, Havant and Emsworth Coastal Plain (LCA) and the Coastal Plain Open (LCT)					
Havant Borough, South Moor and Broadmarsh Coastal Park (LCA 41) and the Open Lower Harbour Plain (LCT H)					

6. EFFECTS ON VISUAL AMENITY

- 6.1 The effects on visual amenity considers the changes in views arising from the proposals in relation to visual receptors including the surrounding settlements, residential properties, highways, public rights of way (PROW) together with the effects on representative viewpoints. Visual amenity is defined in GLVIA3 as the:

“Overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area.”⁷

Zone of Theoretical Visibility (ZTV) mapping

- 6.2 In order to understand the potential visibility of the proposed employment units, a Zone of Theoretical Visibility (ZTV) mapping terrain model has been provided in Figure 9. This provides an indication of the extent and pattern of visibility assuming a height of 15m for existing woodland and 8m for existing buildings. The ZTV does not account for individual hedgerows, minor changes in landform, or seasonal variations in leaf coverage. The ZTV model is therefore a ‘worst case scenario’ based upon a maximum height of 2.3 metres above ground level. The actual extent and pattern visibility would be less than indicated on Figure 9 as shown on representative viewpoints 1 to 14 (summer and winter) on Figure 11 and the wireline visualisations on Figure 12.

General Visibility

- 6.3 In general terms, the proposed employment units would be partially visible at close proximity from the A27 junction to the west (Viewpoint 5), Hart’s Farm Way to the south (Viewpoints 6 and 7) and the Hermitage Stream to the east. Medium proximity views would be perceptible from within Broadmarsh Coastal Park to the south west (Viewpoint 4) and the A27 dual carriageway to the north (Viewpoint 8). Distant views of the proposed employment units would also be visible to a lesser extent from Portsdown Hill to the north west (Viewpoint 11 and 12) and from the Solent Way within Farlington Marshes to the south west of the site (Viewpoints 13 and 14).
- 6.4 The proposed employment units would be partially visible to the north east from Lower Road, Bedhampton to a limited degree beyond the intervening treecover following the A27 and railway line (Viewpoint 9). However, this area of land to the

⁷ Glossary, Page 158, GLVIA 3rd Edition

south of Lower Road has been identified within the HBC Landscape Sensitivity and Capacity Study (May 2015) as a '*recommended area for housing and green infrastructure*' (Appendix 5). As such, this land is deemed to be of lesser sensitivity within the Council's Local Plan evidence base and is likely to come forward as a future residential development which will alter the baseline context of the view.

- 6.5 The proposed employment units would not generally be visible from the Wayfarer Way at South Moor to the south east (Viewpoint 2) or more distantly from Langstone Bridge to the north of Hayling Island due to the distance, intervening landform and tree cover within the Broadmarsh Coastal Park (Viewpoint 1).

Public Highways

- 6.6 The proposals would be partially visible from the A27 junction to the west (Viewpoint 5), Hart's Farm Way to the south (Viewpoints 6 and 7), the A27 dual carriageway and slipway to the north (Viewpoint 8), and more distantly from Portsdown Hill Road to the north west of the site (Viewpoints 11 and 12).
- 6.7 Views from motorists using heavily trafficked A roads or motorways are generally considered to be of low value, susceptibility and overall sensitivity due to the oblique, transient nature of views during travel. Views from B roads or rural lanes are considered to be of medium sensitivity.
- 6.8 The proposals would inevitably be visible from the A27 junction to the west and Hart's Farm Way to the south. Although these viewpoints are located on a national cycle route that would usually be regarded as being of high sensitivity, the viewpoint is characterised by the busy A27 junction and highways infrastructure with reduced levels of tranquillity at this point. For these reasons, the viewpoints are considered to be low sensitivity.
- 6.9 The proposed employment units would be set back by approximately 60m from the A27 junction and Hart's Farm Way. Following construction at year 1, the proposed employment units would appear prominent although the HGV docking bays and parking areas would be partially screened by the landscaped bunds with recent planting. The western elevation has been designed with office units to create an attractive architectural frontage to 'bookend' the development on the A27 junction to the west with a glazed frontage and *bris soleil*.
- 6.10 The Council's landscape officer has requested additional woodland buffer planting on the western boundary to fully enclose the development on all sides. This has

been shown on the Indicative Landscape Masterplan (Figure 7) and Indicative Landscape Sections (Figure 8) in response to these comments. The proposals would inevitably result in a high magnitude at year 1 reducing to a low magnitude at year 15 resulting in a minor effect in the long term.

- 6.11 The proposed employment units would also be visible at close proximity from Harts Farm Way through the vegetation gap near the Hermitage Stream overbridge to the south east of the site (Viewpoint 7). The viewpoint is partly characterised by the highway and Brockhampton Industrial Estate visible at close proximity and is therefore considered to be of low sensitivity.
- 6.12 The proposed employment units would be set back by approximately 80m from Harts Farm Way to the south of the site although would be visible through the gap in the vegetation on the eastern HGV highways access point. The proposed employment units would be partially screened by the landscaped bunds with recent woodland planting. The view would extend across the proposed meadow grassland and slow worm translocation area to the south of the bund within the easement of the overhead powerlines. The existing band of trees adjacent to the highway boundary would be retained to provide a degree of instant screening from the southern section of Harts Farm Way. The proposed woodland planting would infill the vegetation gap although would result in a high magnitude at year 1 reducing to a low magnitude at year 15 resulting in a minor effect in the long term.
- 6.13 The massing model and wirelines on Figure 12 shows that the proposed employment units would be partially visible within distant elevated views from Portsdown Hill Road to the north west of the site (Viewpoints 11 and 12). The upper elevations and roofline of the buildings would be visible amongst the treecover on the lower coastal plain. The lower elevations would be screened by the existing treecover. On review, it is considered that the proposals would result in a low magnitude of change and a minor effect. Within these elevated views, the proposed employment units would appear as an extension to the existing Brockhampton Industrial Estate and therefore part of the character of the developed coastal plain.

Public Rights of Way (PROW)

- 6.14 The proposals would be partially visible from public footpath No. 30 following the Hermitage Stream to the east, limited sections of the Wayfarers Way on Portsdown Hill to the north west (Viewpoint 11 and 12), and sections of the Solent Way recreational route and cycleway following the coastline of Langstone Harbour to the

south of the site (Viewpoints 3, 4, 13 and 14). Views from PROW used by local residents and walkers are generally considered to be of high value, susceptibility and overall sensitivity.

6.15 The wireline visualisations on Figure 12 shows that the proposed employment units would be screened from the Wayfarers Way near South Moor to the south east of the site (Viewpoint 2).

6.16 The proposed employment units would be partially visible from the Solent Way within Broadmarsh Coastal Park near the car park (Viewpoint 4) and further to the south west within Farlington Marshes (Viewpoint 13 and 14). The views across Langstone Harbour from the Solent Way within Farlington Marshes are considered to be of high sensitivity.

6.17 The time lapse visualisations at year 1 and 15 on Figure 12 shows that the western elevation and roofline would be partially visible above the intervening landform and treecover within the Broadmarsh Coastal Park and Farlington Marshes. However, the visual effects along the Solent Way would be reduced over time by the proposed bunds and woodland planting along the southern and western boundaries that would provide additional visual screening. The western elevation and roofline would remain partially visible by year 15 although this would be in the context of the other glimpse views of existing commercial buildings on the fringes of Langstone Harbour.

6.18 The effects on representative viewpoints are summarised in Table 3:

Table 3, Summary of Effects on Representative Viewpoints					
Representative Viewpoint	Value	Suscep- tibility	Sensitivity	Magnitude	Effect
Viewpoint 1 – Public Footpath No. 12, Shipwrights Way at Hayling Island	High	High	High	Yr1 Negligible	Yr1 Negligible
				Yr15 Negligible	Yr15 Negligible
Viewpoint 2 – Public Footpath No. 45, Wayfarers Way near South Moor	High	High	High	Yr1 Negligible	Yr1 Negligible
				Yr15 Negligible	Yr15 Negligible

Viewpoint 3 – Solent Way at Broadmarsh Coastal Park (south)	High	High	High	Yr1 Negligible	Yr1 Negligible
				Yr15 Negligible	Yr15 Negligible
Viewpoint 4 – Solent Way at Broadmarsh Coastal Park (south west)	High	High	High	Yr1 Medium	Yr1 Major
				Yr 15 Low/ Negligible	Yr 15 Minor
Viewpoint 5 – Harts Farm Way near the A27 junction to the west	Low	Low	Low	Yr1 High	Yr1 Moderate
				Yr15 Low	Yr15 Minor
Viewpoint 6 – Harts Farm Way near the car parking junction to the south	Low	Low	Low	Yr1 High	Yr1 Moderate
				Yr15 Low	Yr15 Minor
Viewpoint 7 – Harts Farm Way near the Hermitage Stream overbridge	Low	Low	Low	Yr1 High	Yr1 Moderate
				Yr15 Low	Yr15 Minor
Viewpoint 8 – Public Footpath No. 30 on the A27 pedestrian bridge	Low	Low	Low	Yr1 Low	Yr1 Minor
				Yr15 Negligible	Yr15 Negligible
Viewpoint 9 – Lower Road, Bedhampton	Medium	Medium	Medium	Yr1 Low	Yr1 Minor
				Yr15 Negligible	Yr15 Negligible
Viewpoint 10 – Public Footpath No. 45, Wayfarers Way near Bedhampton	High	High	High	Yr1 Negligible	Yr1 Negligible
				Yr15 Negligible	Yr15 Negligible
Viewpoint 11 – Portsdown Hill Road near Beverley Grove	Medium	Medium	Medium	Yr1 Low	Yr1 Minor
				Yr15 Low	Yr15 Minor

Viewpoint 12 – Portsdown Hill Road on the A3(M) overbridge	Low	Low	Low	Yr1 Low	Yr1 Minor
				Yr15 Low	Yr15 Minor
Viewpoint 13 – Solent Way near Lincolns Pond at Farlington Marshes	High	High	High	Yr1 Low	Yr1 Moderate
				Yr15 Low/ Negligible	Yr15 Minor
Viewpoint 14 – Solent Way near North Binness Island at Farlington Marshes	High	High	High	Yr1 Low	Yr1 Moderate
				Yr15 Low/ Negligible	Yr15 Minor

7. LANDSCAPE AND VISUAL MITIGATION

7.1 The development parameters for the outline application would include the following landscape and visual mitigation measures:

- Positioning of the proposed employment units to the north of the site adjacent to the A27 to provide a greater offset distance and to reduce the visual prominence of the buildings from Harts Farm Way to the south and the A27 junction to the west;
- Retention of the existing treecover on the site boundaries together with additional woodland buffer planting to provide further visual screening to public footpath No. 30 along the Hermitage Stream to the east and along Harts Farm Way to the south;
- Provision of office units on the western elevation to 'bookend' the employment units and to provide an attractive architectural frontage on the A27 junction leading into Brockhampton (until the boundary vegetation has matured);
- Provision of a 5m high bund to the south and a 3m high bund to the west with a proposed woodland buffer to provide additional visual screening and to further mitigate views from Harts Farm Way, Broadmarsh Coastal Park and Farlington Marshes in accordance with Policy HB2 (BD11);
- Provision of wildflower grassland to south of the site between the proposed bund and Harts Farm Way to provide suitable habitat for slow worm translocation and mitigation during and after construction;
- Specification of building materials, cladding and finishes with an appropriate colour palette and non-reflective finish to blend into their surroundings:
 - The cladding for the proposed employment unit would include Sirius (RAL 9006) and Orion (RAL 9007);
 - The proposed office units would comprise of Anthracite (RAL 7016) flat cladding, Orion (RAL 9007) on office window areas, Dark Grey (RAL 9004) on window frames, and Sirius (RAL 9006) on the Brise Soleil/Columns;
- The proposed finishes are non-reflective standard colours in a colorcoat HPS200 ultra TATA finish.

8. LANDSCAPE PLANNING POLICY

- 8.1 The relevant landscape planning policies are contained within the National Planning Policy Framework (NPPF), the adopted Havant Borough Local Plan (Allocations, July 2014) DPD and the emerging Pre-submission Draft Local Plan 2036.

National Planning Policy Framework

- 8.2 The National Planning Policy Framework (February 2019) sets out the governments planning policies for England and how these are expected to be applied. NPPF paragraph 10 advises that:

“So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development.”

- 8.3 Section 12, Achieving Well-Designed Places, paragraph 127 on page 38 states that:

“Planning policies and decisions should ensure that developments:

...b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;

c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change...”

- 8.4 Section 15, Conserving and Enhancing the Natural Environment, paragraph 170 on page 49 states that:

“Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes...in a manner commensurate with their statutory status or identified quality in the development plan...”

- 8.5 Section 15, Conserving and Enhancing the Natural Environment, paragraph 171 on page 49 states that:

“Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value...”

Havant Borough Local Plan (Allocations) Development Plan Document

- 8.6 The site is allocated for employment use under Policy HB2 (BD11) of the adopted Havant Borough Local Plan (Allocations) DPD. Policy HB2 advises that the site at Brockhampton West (BD11) has an area of 9.41 ha and an indicate floorspace

capacity of 23,400 sqm based upon the site area, access arrangements and other environmental constraints. The policy further notes that:

“Planning permission will be granted provided that detailed proposals:

- 1. Are broadly consistent with the indicative provision of floorspace;**
- 2. Take account of the site specific development requirements set out in the relevant site profile.”**

8.7 The site specific development requirements for Policy HB2 (BD11) includes:

- Extensive screening and careful design of buildings to mitigate changes to the views from Langstone Harbour;
- Impacts on the undeveloped gap;
- Enhancements to Broadmarsh Coastal Park to mitigate the loss of green space; and
- Consideration of a landscape buffer to the A27 and the Hermitage Stream Corridor.

8.8 The landscape constraints for BD11 have been identified as:

- Adjacent to the undeveloped gap;
- Elevated western part of the site visible from Langstone Harbour causing potential conflict with the Langstone Harbour Management Plan; and
- Adjacent to the Hermitage Stream.

8.9 The landscape opportunities for BD11 have been identified as:

- Ideally parts to the east and west of the site should remain undeveloped and utilised for landscape and screening;
- To improve the Hermitage Stream and its setting (Policy AL7); and
- To enhance the habitat of Broadmarsh Coastal Park and/or the surrounding area, including for the use of Brent Geese and Waders.

Havant Borough Council Pre-submission Draft Local Plan 2036

8.10 The site has also been re-allocated within the unadopted Pre-submission Draft Local Plan 2036 under Policy C10. Paragraph 8.42 advises that:

“The site comprises a grassed/vegetated open area of land, with an area of hardstanding within the southern part of the site. It is located near the junction of the A3(M) and the A27 overlooking Langstone Harbour. The site has an area of 9.3 ha.

Site Opportunities & Constraints:

- Major gateway to the Borough adjacent to the interchange of the A3(M) and the A27;
- The site is part greenfield, part previously developed;
- The development would involve the loss of semi-natural open space;
- There is an opportunity to enhance the habitat of Broadmarsh Coastal Park opposite and to the south of the site;
- Mature trees and hedgerows exist on the south, east and northern boundaries of the site;
- There is an opportunity to improve the Hermitage Stream and its setting, including the retention and upgrading of Havant Footpath 30 (on the eastern edge of the site) and the Solent Way long distance route;
- The site is accessed via Harts Farm Way which forms part of National Cycle Route 22; and
- Western part of the site is slightly elevated and more visible from Langstone Harbour."

8.11 Draft Policy C10 states that:

"Employment development of about 15,000 square metres (Class B8) will be permitted where:

a. Sufficient information is submitted to address the site-specific planning considerations. This is to be agreed at the pre-application stage and is expected to include the following:

vii. Landscape and Visual Impact Assessment;

viii. Tree Survey and Arboricultural Implications Appraisal;

b. Mitigation for Solent Waders and Brent Geese is provided on the western part of the site upfront, prior to development, and to the satisfaction of the Council in line with Policy E17.

c. Enhancements to Broadmarsh Coastal Park are secured to mitigate the loss of greenspace, in line with Policy E2.

f. The design and layout:

i. Locates the development within the site to minimise the landscape and visual impact of the development and retain sufficient landscaping areas;

ii. Retains and integrates the trees found on the site;

iii. Integrates extensive screening and ensures the careful design of buildings to mitigate any potential impact on changes to views from Langstone Harbour;

iv. Provides an appropriate easement and related safeguarding measures to ensure any significant negative impact on the Hermitage Stream is mitigated to an acceptable level.

v. Safeguards the public footpath (Havant 30) and retains and enhances pedestrian and cycle routes between the site and the Solent Way long-distance route and National Cycle Route.”

- 8.12 At this stage limited weight can be attributed to the unadopted Policy C10 although it does imply a direction of travel in terms of policy requirements.

Compliance with Planning Policy

- 8.13 The site is not located within a statutory or non-statutory landscape designation such as a National Park, Area of Outstanding Natural Beauty or a Special Landscape Area. The site is therefore considered to be of local value in the hierarchy of landscape designations or of low status in terms of the requirement for landscape protection as advised within paragraph 171 of the NPPF. As such, the site would also not constitute a valued landscape with regards to paragraph 170a of the NPPF.
- 8.14 The site is located at close proximity to Junction 5 of the A3 (M) and the A27 and is allocated for employment use under Policy HB2 (BD11) of the adopted Havant Borough Local Plan (Allocations) Development Plan Document. The location, mass, scale and form of the proposed employment units are considered appropriate to the character and appearance of the surrounding landscape.
- 8.15 The proposals would retain the existing boundary vegetation as far as possible and provide strategic woodland buffers to reduce the visual effects on Harts Farm Way, the Hermitage Stream, Broadmarsh Coastal Park, the Solent Way and Langstone Harbour. The proposed development would be designed and mitigated to meet the requirements of paragraphs 127, 170a and 171 of the NPPF and allocation policy HB2 (BD11) of the Adopted Local Plan.

9. CONCLUSIONS

- 9.1 This Landscape and Visual Impact Assessment (LVIA) has been prepared on behalf of Clowes Developments (UK) Ltd in support of the outline application to develop the site for new employment units with flexible use across use classes E (light industrial), B2 and B8 with ancillary offices, of up to 29,000 sqm / 312,153 sqft.
- 9.2 The site is located at close proximity to Junction 5 of the A3 (M) and the A27 and is allocated for employment use under Policy HB2 (BD11) of the Adopted Local Plan. The LVIA has been undertaken to inform the outline masterplan and the landscape mitigation strategy for the development parameters.

Effects on Landscape Elements

- 9.3 The site has previously been used for landfill and drainage operations therefore the historic landscape features have been removed. In order to make the site viable as an employment allocation, regrading and cut and fill operations will be required to provide a capping layer to the former landfill site. This will inevitably require a degree of woodland and tree removal although the losses would be compensated through the provision of extensive native woodland buffer planting on the bunds to the south and west of the site. The existing and proposed vegetation would be actively managed for improved health, longevity and structure in the long term.

Effects on Landscape Character

- 9.4 The site is undesignated in landscape terms and located between existing infrastructure including the A27 dual carriageway to the north, the Brockhampton Industrial Estate to the east, Harts Farm Way to the south, and the A3 (M) and A27 junction to the west. The site benefits from the visual enclosure provided by swathes of tree cover both within the site and the Broadmarsh Coastal Park to the south. As such, the site itself is considered to be of low susceptibility, value and overall sensitivity in landscape character terms.
- 9.5 The proposals would inevitably change the character of the site from a former landfill facility with disused areas of open grassland, bramble scrub and trees to modern employment units with offices, HGV loading bays, car parking and service yards. The effects would be localised due to the existing character of the Brockhampton Industrial Estate to the east and the woodland screening provided as landscape mitigation. The proposals would appear as an extension to the character of the existing industrial estates to the east whilst benefiting from the close proximity to the A3 (M) and A27 junction to the west of the site.

- 9.6 The proposals would be partially visible from the Solent Way within Farlington Marshes to the south west of the site. Although the roofline would remain partially visible from the footpath within Farlington Marshes, it would be seen in the context of other glimpse views of existing commercial buildings on the fringes of Langstone Harbour. The proposals would appear as a continuation of this characteristic and therefore not as an unusual occurrence.

Effects on Visual Amenity

- 9.7 In general terms, the proposals would be partially visible at close proximity from the A27 junction to the west, Hart's Farm Way to the south, and the Hermitage Stream to the east. Medium proximity views would be perceptible from within Broadmarsh Coastal Park to the south west and the A27 pedestrian bridge to the north east of the site.
- 9.8 The proposals would also be partially visible within distant views from the Solent Way at Farlington Marshes to the south west of the site. However, within these views, the lower elevations, docking areas and HGV parking would be generally screened by the intervening landform and treecover within the Broadmarsh Coastal Park. The proposed 5m high bund and woodland buffer would mitigate the visual effects from the Solent Way at Farlington Marshes in the long term.
- 9.9 Distant views of the proposals would also be perceptible from Portsdown Hill to the north west of the site. Within these distant elevated views, the proposed employment units would appear as part of the developed coastal plain and as an extension to the existing commercial buildings within the Brockhampton Industrial Estate.
- 9.10 The proposals would be partially visible to the north east from Lower Road, Bedhampton to a limited degree beyond the intervening treecover following the A27 and railway line. The proposals would not generally be visible from the Wayfarer Way at South Moor to the south east or more distantly from Langstone Bridge to the north of Hayling Island due to the distance, intervening landform and treecover within the Broadmarsh Coastal Park.

Summary

- 9.11 The site is currently allocated for employment use with an indicative floorspace capacity of 23,400 sqm based upon the site area, access arrangements and other environmental constraints. The adopted policy advises that planning permission would be granted provided that it is broadly in-line with the indicative floorspace provision and takes account of the site specific development requirements including landscape and visual effects.
- 9.12 The Council's LVIA summarised that there would be no significant landscape and visual effects arising from the employment allocation in overall terms. On review of the development parameters for the 29,000 sqm scheme, it is considered the proposals would not result in any significant landscape and visual effects above those previously assessed within the Council's LVIA. The mass, scale and form of the proposed scheme has been designed to mitigate the identified landscape and visual effects in compliance with Policy HB2 (BD11).

APPENDIX 1: DETAILED LVIA METHODOLOGY

1. LANDSCAPE AND VISUAL IMPACT ASSESSMENT (LVIA) METHODOLOGY

- 1.1 This Landscape and Visual Impact Assessment (LVIA) has been undertaken with regards to best practice, as outlined within the following publications:
- Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013) - Landscape Institute / Institute of Environmental Management and Assessment;
 - Visual Representation of Development Proposals (2019) - Landscape Institute Technical Guidance Note 06/19;
 - An Approach to Landscape Character Assessment (2014) - Natural England;
 - An Approach to Landscape Sensitivity Assessment - To Inform Spatial Planning and Land Management (2019) - Natural England.
- 1.2 GLVIA3 states within paragraph 1.1 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."*¹
- 1.3 GLVIA3 also states within paragraph 1.17 that when identifying landscape and visual effects there is a *"need for an approach that is in proportion to the scale of the project that is being assessed and the nature of the likely effects. Judgement needs to be exercised at all stages in terms of the scale of investigation that is appropriate and proportional."*²
- 1.4 GLVIA3 recognises within paragraph 2.23 that *"professional judgement is a very important part of LVIA. While there is some scope for quantitative measurement of some relatively objective matters much of the assessment must rely on qualitative judgements"*³ undertaken by a landscape consultant or a Chartered Member of the Landscape Institute (CMLI).
- 1.5 GLVIA3 notes in paragraph 1.3 that *"LVIA may be carried out either formally, as part of an Environmental Impact Assessment (EIA), or informally, as a contribution to the 'appraisal' of development proposals and planning applications."*⁴ Although the proposed development is not subject to an EIA requiring an assessment of the likely significance of effects, this assessment is also titled as an LVIA rather than an 'appraisal' in the interests of common understanding.

¹ Para 1.1, Page 4, GLVIA, 3rd Edition

² Para 1.17, Page 9, GLVIA, 3rd Edition

³ Para 2.23, Page 21, GLVIA, 3rd Edition

⁴ Para 1.3, Page 4, GLVIA, 3rd Edition

- 1.6 The effects on cultural heritage and ecology are not considered within this appraisal.

Study Area

- 1.7 The study area for this appraisal covers a 3km radius from the site. However, the main focus of the assessment was taken as a radius of 1km from the site as it is considered that even with clear visibility the proposals would not be perceptible in the landscape beyond this distance.

Effects Assessed

- 1.8 Landscape and visual effects are assessed through professional judgements on the sensitivity of landscape elements, landscape character, visual receptors and representative viewpoints combined with the predicted magnitude of change arising from the proposals. The landscape and visual effects have been assessed in the following sections:
- Effects on landscape elements;
 - Effects on landscape character; and
 - Effects on visual amenity.
- 1.9 Sensitivity is defined in GLVIA3 as *"a term applied to specific receptors, combining judgments of susceptibility of the receptor to a specific type of change or development proposed and the value related to that receptor."*⁵ Various factors in relation to the value and susceptibility of landscape elements, landscape character, visual receptors or representative viewpoints are considered below and cross referenced to determine the overall sensitivity as shown in Table 1:

Table 1, Overall sensitivity of landscape and visual receptors				
	VALUE			
SUSCEPTIBILITY		HIGH	MEDIUM	LOW
	HIGH	High	High	Medium
	MEDIUM	High	Medium	Medium
	LOW	Medium	Medium	Low

⁵ Glossary, Page 158, GLVIA, 3rd Edition

- 1.10 Magnitude of change is defined in GLVIA3 as *"a term that combines judgements about the size and scale of the effect, the extent over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration."*⁶ Various factors contribute to the magnitude of change on landscape elements, landscape character, visual receptors and representative viewpoints.
- 1.11 The sensitivity of the landscape and visual receptor and the magnitude of change arising from the proposals are cross referenced in Table 9 to determine the overall degree of landscape and visual effects.

2. EFFECTS ON LANDSCAPE ELEMENTS

- 2.1 The effects on landscape elements are limited to within the site and includes the direct physical change to the fabric of the land, such as the removal of woodland, hedgerows or grassland to allow for the proposals.

Sensitivity of Landscape Elements

- 2.2 Sensitivity is determined by a combination of the value that is attached to a landscape element and the susceptibility of the landscape element to changes that would arise as a result of the proposals – see pages 88-90 of GLVIA3. Both value and susceptibility are assessed on a scale of high, medium or low.
- 2.3 The criteria for assessing the value of landscape elements and landscape character is shown in Table 2:

Table 2, Criteria for assessing the value of landscape elements and landscape character	
HIGH	Designated landscape including but not limited to World Heritage Sites, National Parks, Areas of Outstanding Natural Beauty considered to be an important component of the country's character experienced by a high number of people. Landscape condition is good and components are generally maintained to a high standard. In terms of seclusion, enclosure by land use, traffic and movement, light pollution and presence/absence of major infrastructure, the landscape has an elevated level of tranquillity. Rare or distinctive landscape elements and features are key components that contribute to the landscape character of the area.

⁶ Glossary, Page 158, GLVIA, 3rd Edition

MEDIUM	Undesignated landscape including urban fringe and rural countryside considered to be a distinctive component of the national or local landscape character. Landscape condition is fair and components are generally well maintained. In terms of seclusion, enclosure by land use, traffic and movement, light pollution and presence/absence of major infrastructure, the landscape has a moderate level of tranquillity. Rare or distinctive landscape elements and features are notable components that contribute to the character of the area.
LOW	Undesignated landscape including urban fringe and rural countryside considered to be of unremarkable character. Landscape condition may be poor and components poorly maintained or damaged. In terms of seclusion, enclosure by land use, traffic and movement, light pollution and presence/absence of major infrastructure, the landscape has limited levels of tranquillity. Rare or distinctive elements and features are not notable components that contribute to the landscape character of the area.

2.4 The criteria for assessing the susceptibility of landscape elements and landscape character is shown in Table 3:

Table 3, Criteria for assessing landscape susceptibility	
HIGH	Scale of enclosure – landscapes with a low capacity to accommodate the type of development being proposed owing to the interactions of topography, vegetation cover, built form, etc. Nature of land use – landscapes with no or little existing reference or context to the type of development being proposed. Nature of existing elements – landscapes with components that are not easily replaced or substituted (e.g. ancient woodland, mature trees, historic parkland, etc). Nature of existing features – landscapes where detracting features, major infrastructure or industry is not present or where present has a limited influence on landscape character.
MEDIUM	Scale of enclosure – landscapes with a medium capacity to accommodate the type of development being proposed owing to the interactions of topography, vegetation cover, built form, etc. Nature of land use – landscapes with some existing reference or context to the type of development being proposed. Nature of existing elements – landscapes with components that are easily replaced or substituted.

	Nature of existing features – landscapes where detracting features, major infrastructure or industry is present and has a noticeable influence on landscape character.
LOW	Scale of enclosure – landscapes with a high capacity to accommodate the type of development being proposed owing to the interactions of topography, vegetation cover, built form, etc. Nature of land use – landscapes with extensive existing reference or context to the type of development being proposed. Nature of existing features – landscapes where detracting features or major infrastructure is present and has a dominating influence on the landscape.

2.5 Various factors in relation to the value and susceptibility of landscape elements are assessed and cross referenced to determine the overall sensitivity as shown in Table 1.

Magnitude of Change on Landscape Elements

2.6 Professional judgement has been used to determine the magnitude of change on individual landscape elements within the site as shown in Table 4:

Table 4, Criteria for assessing magnitude of change for landscape elements	
HIGH	Total loss/gain of a landscape element.
MEDIUM	Partial loss/gain or alteration to part of a landscape element.
LOW	Minor loss/gain or alteration to part of a landscape element.
NEGLIGIBLE	No loss/gain or very limited alteration to part of a landscape element.

3. EFFECTS ON LANDSCAPE CHARACTER

3.1 Landscape character is defined as the "*distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.*"⁷

⁷ Glossary, Page 157, GLVIA, 3rd Edition

- 3.2 The assessment of effects on landscape character considers how the introduction of new landscape elements physically alters the landform, landcover, landscape pattern and perceptual attributes of the site or how visibility of the proposals changes the way in which the landscape character is perceived.

Sensitivity of Landscape Character

- 3.3 Sensitivity is determined by a combination of the value that is attached to a landscape and the susceptibility of the landscape to changes that would arise as a result of the proposals – see pages 88-90 of GLVIA3. Both value and susceptibility are assessed on a scale of high, medium or low.
- 3.4 The criteria for assessing the value of landscape character is shown in Table 2.
- 3.5 The criteria for assessing the susceptibility of landscape character is shown in Table 3.
- 3.6 The overall sensitivity is determined through cross referencing the value and susceptibility of landscape character as shown in Table 1.

Magnitude of Change on Landscape Character

- 3.7 Professional judgement has been used to determine the magnitude of change on landscape character as shown in Table 5:

Table 5, Criteria for assessing magnitude of change on landscape character	
HIGH	Introduction of major new elements into the landscape or some major change to the scale, landform, landcover or pattern of the landscape.
MEDIUM	Introduction of some notable new elements into the landscape or some notable change to the scale, landform, landcover or pattern of the landscape.
LOW	Introduction of minor new elements into the landscape or some minor change to the scale, landform, landcover or pattern of the landscape.
NEGLIGIBLE	No notable or appreciable introduction of new elements into the landscape or change to the scale, landform, landcover or pattern of the landscape.

4. EFFECTS ON VISUAL AMENITY

4.1 Visual amenity is defined within GLVIA3 as the *"overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area."*⁸

4.2 The effects on visual amenity considers the changes in views arising from the proposals in relation to visual receptors including settlements, residential properties, transport routes, recreational facilities and attractions; and representative viewpoints or specific locations within the study area as agreed with the Local Planning Authority.

Sensitivity of Visual Receptors

4.3 Sensitivity is determined by a combination of the value that is attached to a view and the susceptibility of the visual receptor to changes in that view that would arise as a result of the proposals – see pages 113-114 of GLVIA3. Both value and susceptibility are assessed on a scale of high, medium or low.

4.4 The criteria for assessing the value of views is shown in Table 6:

Table 6, Criteria for assessing the value of views	
HIGH	Views with high scenic value within designated landscapes including but not limited to World Heritage Sites, National Parks, Areas of Outstanding Natural Beauty, etc. Likely to include key viewpoints on OS maps or reference within guidebooks, provision of facilities, presence of interpretation boards, etc.
MEDIUM	Views with moderate scenic value within undesignated landscape including urban fringe and rural countryside.
LOW	Views with unremarkable scenic value within undesignated landscape with partly degraded visual quality and detractors.

⁸ Page 158, Glossary, GLVIA3

4.5 The criteria for assessing the susceptibility of views is shown in Table 7:

Table 7, Criteria for assessing visual susceptibility	
HIGH	Includes occupiers of residential properties and people engaged in recreational activities in the countryside using public rights of way (PROW).
MEDIUM	Includes people engaged in outdoor sporting activities and people travelling through the landscape on minor roads and trains.
LOW	Includes people at places of work e.g. industrial and commercial premises and people travelling through the landscape on major roads and motorways.

Magnitude of Change on Visual Receptors

4.6 Professional judgement has been used to determine the magnitude change on visual receptors as shown in Table 8:

Table 8, Criteria for assessing magnitude of change for visual receptors	
HIGH	Major change in the view that has a defining influence on the overall view with many visual receptors affected.
MEDIUM	Some change in the view that is clearly visible and forms an important but not defining element in the view.
LOW	Some change in the view that is appreciable with few visual receptors affected.
NEGLIGIBLE	No notable change in the view.

5. DEGREE OF LANDSCAPE AND VISUAL EFFECTS

- 5.1 The degree of effects are professional judgements based upon all the factors in terms of landscape and visual sensitivity and the magnitude of change arising from the proposals. The cross referencing of landscape and visual sensitivity and the magnitude of change determines the overall degree of effects as shown in Table 9:

Table 9, Degree of landscape and visual effects				
		Sensitivity		
		HIGH	MEDIUM	LOW
Magnitude of Change	HIGH	Major	Major	Moderate
	MEDIUM	Major	Moderate	Minor
	LOW	Moderate	Minor	Minor
	NEGLIGIBLE	Negligible	Negligible	Negligible

6. TYPICAL DESCRIPTORS OF LANDSCAPE EFFECTS

6.1 The typical descriptors of the landscape effects are detailed within Table 10:

Table 10, Typical Descriptors of Landscape Effects	
MAJOR BENEFICIAL	The landscape resource has a high sensitivity with the proposals representing a high beneficial magnitude of change and/or the proposed changes would: - enhance the character (including value) of the landscape; - enhance the restoration of characteristic features and elements lost as a result of changes from inappropriate management or development; - enable a sense of place to be enhanced.
MODERATE BENEFICIAL	The landscape resource has a medium sensitivity with the proposals representing a medium beneficial magnitude of change and/or the proposed changes would: - enhance the character (including value) 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; - enable a sense of place to be restored.
MINOR BENEFICIAL	The landscape resource has a low sensitivity with the proposals representing a low beneficial magnitude of change and/or the proposed changes would: - complement the character (including value) of the landscape; - maintain or enhance characteristic features or elements; - enable some sense of place to be restored.
NEGLIGIBLE	The proposed changes would (on balance) maintain the character (including value) of the landscape and would: - be in keeping with landscape character and blend in with characteristic features and elements; - Enable a sense of place to be maintained.
NO CHANGE / NEUTRAL	The proposed changes would not be visible and there would be no discernible change to landscape character.
MINOR ADVERSE	The landscape resource has a low sensitivity with the proposal representing a low adverse magnitude of change and/or the proposed changes would: - not quite fit the character (including value) of the landscape; - be a variance with characteristic features and elements; - detract from sense of place.
MODERATE ADVERSE	The landscape resource has a medium sensitivity with the proposals representing a medium adverse magnitude of change and/or the proposed changes would: - conflict with the character (including value) of the landscape; - have an adverse effect on characteristic features or elements;

	- diminish a sense of place.
MAJOR ADVERSE	The landscape resource has a high sensitivity with the proposals representing a high adverse magnitude of change and/or the proposed changes would: - be at variance with the character (including value) of the landscape; - degrade or diminish the integrity of a range of characteristic features and elements or cause them to be lost; - change a sense of place.

7. TYPICAL DESCRIPTORS OF VISUAL EFFECTS

7.1 The typical descriptors of the visual effects are detailed within Table 11:

Table 11, Typical Descriptors of Visual Effects	
MAJOR BENEFICIAL	The visual receptor is of high sensitivity with the proposals representing a high magnitude of change and/or the proposals would result in a major improvement in the view.
MODERATE BENEFICIAL	The visual receptor is of medium sensitivity with the proposals representing a medium magnitude of change and/or the proposals would result in a clear improvement in the view.
MINOR BENEFICIAL	The visual receptor is of low sensitivity with the proposals representing a low magnitude of change and/or the proposals would result in a slight improvement in the view.
NEGLIGIBLE	The proposed changes would be in keeping with, and would maintain, the existing view or where (on balance) the proposed changes would maintain the quality of the view (which may include adverse effects which are offset by beneficial effects for the same receptor) or due to distance from the receptor, the proposed change would be barely perceptible to the naked eye.
NO CHANGE/ NEUTRAL	The proposed changes would not be visible and there would be no change to the view.
MINOR ADVERSE	The visual receptor is of low sensitivity with the proposals representing a low magnitude of change and/or the proposals would result in a slight deterioration in the view.
MODERATE ADVERSE	The visual receptor is of medium sensitivity with the proposals representing a medium magnitude of change and/or the proposals would result in a clear deterioration in the view.
MAJOR ADVERSE	The visual receptor is of high sensitivity with the proposals representing a high magnitude of change and/or the proposals would result in a major deterioration in the view.

8. NATURE OF EFFECTS

- 8.1 GLVIA3 includes an entry that states "*effects can be described as positive or negative (or in some cases neutral) in their consequences for views and visual amenity.*"⁹ GLVIA3 does not, however, state how negative or positive effects should be assessed, and this therefore becomes a matter of professional judgement supported by site specific justification. Due to inconsistencies with the assessment of negative or positive effects a precautionary approach is applied to this LVIA which assumes that all landscape and visual effects are considered to be negative or adverse unless otherwise stated.

⁹ Para 6.29, Page 113, GLVIA 3rd Edition

APPENDIX 2: HAVANT BOROUGH, SOUTH MOOR AND BROADMARSH COASTAL PARK (LANDSCAPE CHARACTER AREA 41) EXTRACTS



Scale 1:50,000

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LCA41

South Moor and Broadmarsh Coastal Park



Looking west across South Moor towards Portsmouth



Motorway and coast



Mouth of the Hermitage Stream from
Harts Farm Way



Artificial edge

LCA41 South Moor and Broadmarsh Coastal Park

Introduction

The area contains one landscape character type: Open Lower Harbour Plain LCT H. A full description of the characteristics common to this type is set out in Section 4. The area is composed of ten historic landscape character types; Small Regular Fields with Straight Boundaries (Parliamentary Type) (1.9); Medium Regular Fields with Straight Boundaries (Parliamentary Type) (1.10); Reclaimed land (8.4); Shingle and Dunes (8.6); Mudflats (8.7); Navigation Channel (8.9); Late 20th Century Residential (9.6.7); Small Farmsteads (9.13); Railway (13.5.1); and Road (13.6) (Figure 1).

Location

LCA41 covers the open area of land to the west and south of Brockhampton industrial estate. Langstone lies to the east, with Langstone Harbour to the south and Brockhampton to the north. The LCA includes the junction of the A3 (M) with the A27 (T).

Relationship to adjacent character areas

LCA12 Portsdown Hill: Open views across and up to Portsdown Hill. Contrasting fertile agricultural plain within LCA41 with the downland grassland of LCA12. No connecting landscape features.

LCA13 Historic Bedhampton: Screened views from this area to LCA41 due to the intervening roadside vegetation and the road embankment of the A27 (T). Thin agricultural hedgerows enclosing regular field shapes contrast with the wide woodland belts and rounded areas of grassland found within the coastal park of LCA41.

LCA27 Langstone: Views from the western edge of Langstone, to the adjacent open arable landscape, although an intervening hedgerow then screens views to South Moor and beyond. Views from LCA27 across into the open landscape of LCA41. The open undeveloped harbour plain landscape adjacent LCA27 provides an important setting and contrast to the tight knit harbour development of Langstone.

LCA28 Brockhampton industrial area: The large scale buildings at Brockhampton industrial estate visually intrude on the eastern side of South Moor and the Coastal Park. Contrasting landscapes with few connecting elements.

LCA32 Langstone Harbour: An artificial shoreline has been created along the Harbour edge. There are a number of car parks where there are views of the harbour from this manmade shoreline. Contrasting landscapes.

Beyond the Borough boundary: Harbour plain continues and connects to the west into Farlington Marshes, outside the Borough. The open fertile agricultural plain changes to small enclosed hedged fields to the west adjacent the urban area of Farlington.

Historic development

The area of Broadmarsh, to the west of the Brockhampton stream, appears to have been, during the prehistoric period, an area of raised shingle beaches, where Bronze Age pottery has been recovered. A number of small hearths and finds dating to the Iron Age suggest that this was a salt production site during that period. The existing landform is therefore reclaimed.

Historically an area of marsh and farmland, the South Moor area was crossed by a number of small watercourses, and was also used for growing watercress in the 19th century. Towards the western end of the LCA, a small quay known as Chalk Dock, immediately to the south of Forty Acre Farm, was used for the export of chalk and lime from the small quarries on Camp Down to the north.

The area has become a transport corridor, with the railway and the improved A27 (T) running just to the north of the coast.

Key characteristics of South Moor and Broadmarsh Coastal Park

Physical: landform, soils and land cover

- o Part of a flat coastal plain, although there are artificial areas of elevated land south of Harts Farm Way and around Southmoor Hill which have been created from imported fill
- o The junction of the A3 (M) and A27 (T) creates a large artificial form on the flat harbour plain, although roadside tree planting has partly reduced its visual dominance
- o Artificial harbour shoreline to the south of the Coastal Park and artificial bunding adjacent to Budds Farm produces a reminder of its history as part manmade landform
- o An underlying geology of Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Formation and Portsdown Chalk Formation, with overlying geology of river terrace deposits, alluvium and raised beach deposits
- o The land to the west is Grade 1 Agricultural land and is under intensive market gardening production. Other areas of Grade 1 Agricultural land are found to the east adjacent to Langstone and are presently under arable production.
- o Surface drainage includes the tidal section of the Hermitage Stream which forks into a narrow inlet and a drainage channel west of Langstone. These are both fed by a number of adjacent streams and man made ditches
- o From the east a harbour side sequence of fields includes an area of arable land, rough pasture, amenity grassland with pockets of arable land which forms the Broadmarsh Coastal Park and an area used for market gardening to the north of the A27 (T)
- o Intermittent thick hedgerows separate the fields to the east, while the areas of amenity grassland are surrounded by tree belts.

Biodiversity

- o The southern border of this landscape character area is covered by the Langstone Harbour SSSI; it is also designated as a SPA, SAC and Ramsar site
- o This landscape character area consists of a series of habitat mosaics separated from each other by roads and urban areas
- o The habitat mosaic in the west of the area to the north of the road consists of a strip of coastal grazing marsh abutted to the west by a small patch of broadleaved woodland and to the north west by an area of arable land and an area of horticulture and nurseries towards the north east; these two arable areas are of a similar size

- o To the south of this mosaic is a patch of scattered scrub which is also isolated from other habitats by roads
- o On the north east border of the area there is a small habitat mosaic associated with LCA 12, this consists of arable land, improved grassland and a thin strip of dense scrub
- o There is a further mosaic in the south of the area, consisting of semi-improved neutral grassland, scattered scrub, improved grassland and dense scrub. This mosaic is surrounded on the southern edge by an engineered coastal feature which separates it in the east from a strip of intertidal mud and sand including algal beds
- o In the south eastern corner of the landscape character area there is a mosaic consisting of a large patch of improved grassland which runs between this character area and LCA 28
- o To the east of this grassland there is a site which used to be a quarry or landfill site and is now restored
- o A strip of semi-improved neutral grassland runs around the south and east of the improved grassland and is adjoined in the east by a large patch of coastal grazing marsh, there is a pond in the south east of the grazing marsh and above it is a smaller patch of improved grassland
- o Above the improved grassland is an equal sized patch of marshy grassland which adjoins broadleaved woodland and amenity grassland that exist in the landscape character area to the north.

Historic and built environment

- o The western half of the LCA is historically characterised by medium regular sized fields with straight boundaries. This area has been subdivided into separate land parcels with little evidence of the survival of the defined historic landscape character
- o There is an isolated group of farm buildings at Forty Acre Farm
- o The large junction of the A3 (M) and A27 (T) covers an extensive area adjacent to Langstone Harbour edge
- o The railway line aligns to the north of this traffic artery
- o Semi detached two storey dwellings at Farlington
- o A small area of semi-detached two storey dwellings at the extreme west end of the LCA are a continuation of the suburban area of Farlington
- o The open marshland of South Moor is seriously compromised by the large industrial sheds to its north, and the electricity pylons which cross it, also affecting the setting of the historic Langstone mill house.

Experiential: tranquillity, visual perceptions and access

- o The visual impact of the highway degrades the northern end of Langstone Harbour
- o The Brockhampton industrial estate is visually intrusive
- o Constant traffic noise from the A27 (T) and the A3 (M) and to the east from the A3023
- o Good pedestrian access to the harbour edge with the Solent Way and Wayfarers Walk, both leading and providing access back into Havant.

Additionally there are two car parks adjacent to the waters edge; both lead off from Harts Farm Way

- o Poor access to South Moor, where the car park at Budds Wall is presently closed.

Visual: openness/enclosure, prominence and visibility

- o Areas of enclosure especially within the wooded Coastal Park contrasts with a strong sense of openness adjacent to the harbour side
- o Artificial bunding to harbour edge is prominent
- o From the A27 (T), views across Langstone Harbour are extensive
- o From the Coastal Park there are long open views from the harbour edge out across Langstone harbour
- o Views of parts of Brockhampton industrial estate are seen protruding above the intervening tree line.

Specific local key issues

- o The site is viewed by itinerant travellers as an attractive location for caravans and camping, this has led to a number of physical deterrents which degrade the area
- o The approach through Brockhampton degrades the experience at the harbour edge
- o Poor pedestrian access to South Moor, especially from the eastern part of Langstone
- o Visual impact of A3 (M) and A27 (T) junction as well as constant traffic noise
- o Visual impact of the adjacent Brockhampton Industrial Estate
- o Further extension of the industrial estate would further degrade the setting of Langstone Mill house
- o Climate change may lead to sea level rises which could impact upon the coastal habitats
- o Changes in agricultural subsidies could impact on the management of agricultural land; this could have a wider impact on habitats in an associated mosaic.

Designations

Chichester and Langstone Harbours RAMSAR site

Chichester and Langstone Harbours SPA

Solent Maritime SAC

Chichester Harbour SSSI

Farlington Marshes Grassland (NE) SINC

Broadmarshes Playing Field SINC

Forty Acres Farm B SINC

Southmoor Reserve SINC

Southmoor Big Field SINC

Landscape and built form strategy and guidelines

The landscape strategy is to *restore* the local character. The following guidelines apply:

Land management

- o Although the planting within the Coastal Park is good, substantial planting could be extended to further to reduce the adjacent visual impact of the A3 (M) and A27 (T) junction on this area
- o Ensure compliance with the Broadmarsh Landscape Strategy February 2002, which provides a landscape strategy to create an attractive environment, linking business development (as located within LCA28), recreational open space and wildlife habitat into one cohesive whole
- o Manage scrub to prevent encroachment
- o Encourage the use of field margins for the benefit of biodiversity
- o Maintain and enhance broadleaved woodland.

Built form and development

- o Development adjacent to the harbour edge should be restricted to maintain as far as possible the natural development free harbour edge character of Langstone Harbour
- o Flood defences adjacent to the harbour edge should also be designed to be sympathetic with the natural environment of Langstone Harbour. Where poor quality sea defences have been constructed these should be restored as far as possible to create a natural harbour shoreline.

APPENDIX 3: ARBORICULTURAL SURVEY



ARBORICULTURAL IMPACT ASSESSMENT

Harts Farm Way,
Brockhampton West,
Havant

February 2021



Barton Hyett Associates
Arboricultural Consultants

Summary table		
Site Name:	Harts Farm Way, Brockhampton West, Havant	
Project reference:	C.3972	
Site Address:	Bedhampton, Havant, Hampshire	
Nearest Postcode:	PO9 3LW	
Central Grid reference:	SU 70162 05711	
Local Planning Authority:	Havant Borough Council	
Relevant planning policies:	Local Plan (Core Strategy) adopted March 2011: Local Plan (Core Strategy) adopted March 2011: CS11 - Protecting and enhancing the special environment and heritage of Havant Borough; CS13 - Green infrastructure; CS16 - High quality design.	
Statutory Controls:	Tree Preservation Order	Conservation Area
	None	No
Soil Type: (Source: BGS online soils map © NERC 2021)	Superficial/Drift	Bedrock
	Deep sand to sandy loam over Head - Clay, silt, sand and gravel	Lambeth Group - Clay, silt and sand
Topographical Survey:	No Ref/05.12.2019	
Notes:	None.	
Report author:	Andrew Cunningham <i>FdSc (Arb) Tech.Cert P</i>	
Checked by:	Ian Monger <i>BSc (Hons), MArborA</i>	
Revision:	N/a	
Date of issue:	19/02/2021 (Revision A - TPP amendments)	

REPORT CONTENTS:

SECTION 1:	SUMMARY, SITE DETAILS & SURVEY FINDINGS
SECTION 2:	TREE SURVEY & CONSTRAINTS PLAN
SECTION 3:	COMBINED TREE RETENTION/REMOVAL & PROTECTION PLAN
SECTION 4:	TREE SURVEY SCHEDULE & SITE IMAGES
SECTION 5:	METHODOLOGY
SECTION 6:	DESIGN GUIDANCE AND GENERIC ADVICE
SECTION 7:	PRINCIPLES FOR TREE PROTECTION ON DEVELOPMENT SITES

1. INSTRUCTION

- 1.1. Barton Hyett Associates Ltd have been instructed by Pegasus Environmental on behalf of Clowes Developments UK to survey trees located adjacent to Harts Farm Way, Havant ('the site') in accordance with the recommendations of British Standard 5837:2012 '*Trees in relation to design, demolition and construction - recommendations*'.
- 1.2. The scope of the instruction was to inspect trees relevant to a planning application at the site and provide written advice on how they inform feasibility and design options for the site. The instruction also required an assessment of the potential impact (the arboricultural impact assessment) of the proposed development on the site's arboricultural resource to be undertaken.

2. SITE DESCRIPTION

- 2.1. The site is a large piece of disused land which lies directly to the west of the town of Havant, Hampshire.
- 2.2. The site has a mix of planted trees and natural regeneration which is mostly situated on or close to the periphery of the site, and range from early-mature to mature in age.
- 2.3. There is a former car park (now disused) within the central section of the site which would have previously been accessed from Harts Farm Way in the south.
- 2.4. The boundaries are defined by the main A27 Havant Bypass trunk road to the north, with its slip road and Harts Farm Way to the west and south. The tidal mouth of the Hermitage Stream defines the eastern boundary of the site.
- 2.5. The local character can be described as industrial, with a large industrial estate directly to the east of the site.
- 2.6. The site is reasonably level but has local variation as it slopes to the down to Harts Farm Way in the south and to the river in the east.
- 2.7. There are currently a number of access points from Harts Farm Way on the southern boundary. These are currently barricaded.

3. TREE SURVEY FINDINGS

- 3.1. A total of 21 trees and groups of trees were surveyed. These are summarised in terms of their quality in accordance with the recommendations of BS5837 below, and shown in more detail on the tree survey and constraints plan (section 2) and within the tree survey schedule (section 3).

	Total	A - High quality trees whose retention is most desirable.	B - Moderate quality trees whose retention is desirable.	C - Low quality trees which could be retained but should not significantly constrain the proposal.	U - Very poor quality trees that should be removed unless they have high conservation value.
Trees	3	-	3	-	-
Groups	18	-	5	13	-
Total	21	-	8	13	-

Table 1: Summary of arboricultural features of each BS5837 quality category

4. KEY ARBORICULTURAL FEATURES

- 4.1. The most substantial arboricultural features within the site are the tree groups on the northern and eastern boundaries. Most trees within these areas are early mature to mature in age and have better collective form within the local as well as the wider landscape.
- 4.2. The wooded groups G15 and G16 on the eastern boundary contain trees which are of similar size, species and planting density. No trees of particular individual value or importance were identified within the groups.

5. DEVELOPMENT PROPOSAL

- 5.1. The development proposal is an outline application to develop the site for new employment units with flexible use across use classes E (light industrial), B2 and B8 with ancillary offices, of up to 29,000 sqm / 312,153 sqft. The proposed site layout is shown on the combined Tree Retention/Removal and Protection Plan in section 3.

6. IMPACT ASSESSMENT

- 6.1. Three moderate-quality individual trees, oaks T1, T2 and T3, are proposed to be removed. Two moderate -quality groups, 9 low-quality groups and 4 sections of moderate and low-quality groups are also proposed for removal. These removals are summarised by quality category in the table below., and shown on the combined Tree Retention/Removal and Protection Plan in section 3.

	Total	A - High quality trees whose retention is most desirable.	B - Moderate quality trees whose retention is desirable.	C - Low quality trees which could be retained but should not significantly constrain the proposal.	U - Very poor quality trees that should be removed unless they have high conservation value.
Trees	3	-	3	-	-
Groups	15	-	2 x whole groups, 3 x sections of groups	9 x whole groups, 1 section of a group	-

Table 2: Summary of proposed removals of each BS5837 quality category

- 6.2. The removals are required to provide developable space within the site and include planted groups, buffers and thickets which have better collective form than individual value. Screening for the site will be retained wherever possible, and proposed woodland planting will provide 7,615 sqm of new screening, canopy cover and habitat.
- 6.3. Installation of a large diameter drainage pipe through groups G15 (B2) and G16 (C2) will require a strip of each group to be felled because the excavation needed will enter the Root Protection Areas (RPAs) of individual trees to a significant degree, and roots will be severed. However, the groups appear to have been mostly planted, and felling to achieve working space needed for installation will have a negligible impact on

public visual amenity. Some damage to the root systems of retained trees will be inevitable, but the trees are of a relatively young age and are likely to recover from any severance. Depending on the future maintenance/access needs for the installation, if allowed to do so new trees and shrubs will soon begin to naturally regenerate within the felled strip and will eventually replace the lost canopy cover.

- 6.4. Once the required installation space and working methods for the installation of the drainage pipe are known, a felling/clearance specification, protective measures for retained trees and the arboricultural working methods would be detailed within an arboricultural method statement (AMS).
- 6.5. The proposal is feasible from an arboricultural perspective, and if carefully implemented according to an approved arboricultural method statement there would be no or only a low potential negative impact on the retained trees. A draft combined tree retention and removal and tree protection plan is included in section 3.

7. HEADS OF TERMS FOR AN ARBORICULTURAL METHOD STATEMENT (AMS)

- 7.1. BS5837:2012 (Figure 1) recommends that detailed/technical design of tree protection and arboricultural methodologies should be resolved and finalised following on from the approval of the feasibility of a scheme by the Local Planning Authority.
- 7.2. Annex B and Table B.1 of BS5837:2012, an informative, advises that arboricultural method statement heads of terms are a sufficient level of information in order to deliver tree-related information into the planning system. The table also advises that a detailed arboricultural method statement might reasonably be required as a 'reserved matter' or planning condition.
- 7.3. In relation to the site, it is anticipated that arboricultural working methods are likely to be quite straightforward. A brief summary of the principles of tree protection on development sites is included in section 7. A draft, 'heads of terms' for an arboricultural method statement is set out below:
 - Project arboriculturist – schedule of monitoring and supervision
 - Pre commencement site meeting
 - Tree removals and facilitation pruning
 - Erection of tree protection barriers
 - Main construction phase
 - Removal of tree protection barriers
 - Final landscaping including tree planting.

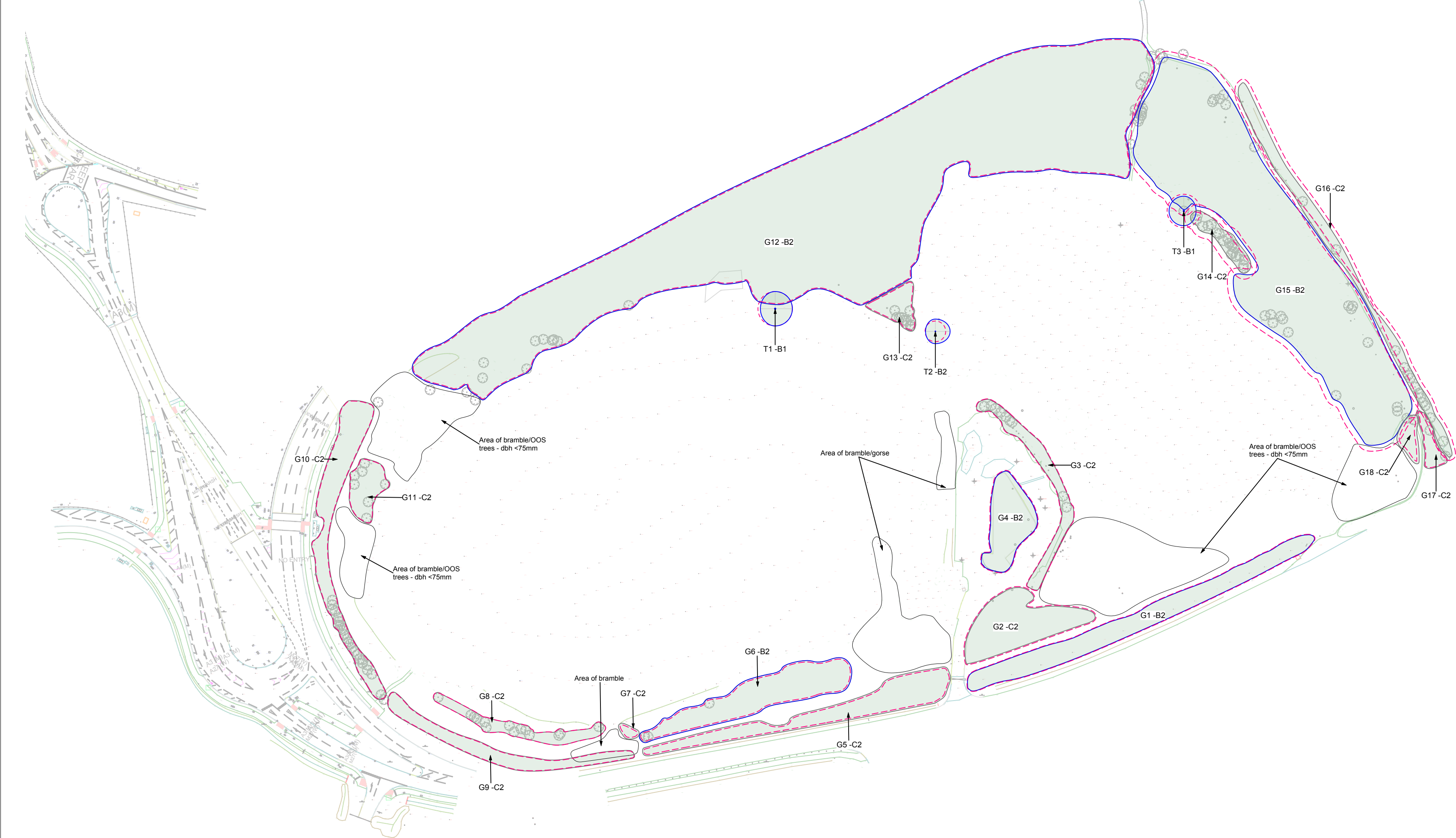
8. RECOMMENDATION AND SUMMARY

- 8.1. Subject to the implementation of the advice contained within this report the proposed development is acceptable from an arboricultural perspective. The loss of trees can be readily mitigated and the retained trees can be adequately protected during construction activities to sustain their health and longevity.
- 8.2. An arboricultural method statement and finalised tree protection plan will need to be produced. Where the feasibility of a scheme has been agreed by the Local Planning Authority, this detail can be agreed upon and submitted at a later as part of a reserved matters application or pre-commencement planning condition (by agreement with the applicant).



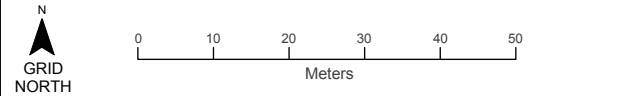
Ian Monger *BSc (Hons.), MArborA*,
Senior Arboriculturist

Ref	Species	Height (m)	Life Stage	RPA Radius (m)	RPA (m2)
T1	Oak (Turkey)	14	EM	7	152
T2	Oak (English)	9	EM	4.2	55
T3	Oak (English)	12	EM	6.8	147
G1	Ash, Poplar, Dogwood, Field maple, Damson, Elder, Hawthorn	2-15	EM	4.2	55
G2	Poplar, Ash, Hawthorn , Willow	2-15	EM	5.4	92
G3	Poplar, Willow, Hawthorn	4-15	EM	4.2	55
G4	Alder, Ash, Elder, Field maple, Willow, Poplar, Hawthorn, Dogwood, Rose	2-12	EM	3.3	34
G5	Blackthorn, Willow, Field maple, Poplar	1-7	SM	2.4	18
G6	Poplar, Blackthorn, Field maple, Hawthorn	2-8	EM	2.4	18
G7	Willow	4-5	EM	1.8	10
G8	Willow	5	EM	3	28
G9	Blackthorn, Ash, Field maple, Hawthorn, Rose	1-4	SM	1.3	5
G10	Blackthorn, Ash, Field maple, Hawthorn, Rose, Oak	1-4	SM	1.3	5
G11	Hawthorn, Blackthorn, Willow	2-5	EM	1.8	10
G12	Poplar Ash, Hawthorn, Field maple, Willow, Dogwood	2-16	EM	3.6	41
G13	Ash, Poplar, Field maple	3-14	EM	3.6	41
G14	Ash, Poplar,	2-18	EM	5.4	92
G15	Ash, Poplar, Privet, Pine, Dogwood, Field maple, Hawthorn, Oak, Blackthorn,	2-18	EM	6	113
G16	Hazel, ash, Blackthorn , Elder, Spindle, Field maple, Blackthorn	2-9	EM	2.4	18
G17	Damson/Blackthorn	2-8	M	3.6	41
G18	Willow, Elder, Damson	2-6	M	3	28



- KEY**
- Category A Tree - High quality (Retention highly desirable)
 - Category A - Hedgerow, Group, Woodland - High quality (Retention highly desirable)
 - Category B Tree - Moderate quality (Retention desirable)
 - Category B - Hedgerow, Group, Woodland - Moderate quality (Retention desirable)
 - Category C Tree - Low quality (May be retained but should not constrain development)
 - Category C - Hedgerow, Group, Woodland - Low quality (May be retained but should not constrain development)
 - Category U Tree - Very low quality (Mostly unsuitable for retention)
 - Category U - Hedgerow, Group, Woodland - Very low quality (Mostly unsuitable for retention)
 - Root Protection Area (RPA) - Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and soil volume to maintain the tree's viability
 - Shrub mass/offsite tree/out of scope (OOS)

Note: The original of this drawing was produced in colour – a monochrome copy should not be relied upon. This drawing should be interpreted with reference to the accompanying tree schedule and written advice



PROJECT TITLE
Harts Farm Way, Brockhampton West, Havant

DRAWING TITLE
Tree Survey & Constraints Plan

SCALE 1:1000 @ A2		DRAWING NUMBER BHA_1066_01		
DRAWN BY DV	APPROVED BY AC	REVISION -	SHEET -	DATE 28/01/2021

LAYOUT USED WITHIN DRAWING **xxxxxxxxxx**

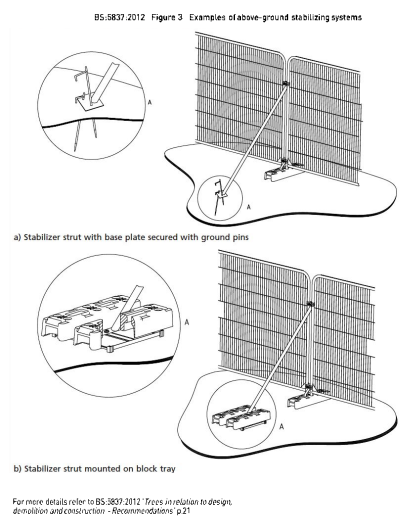
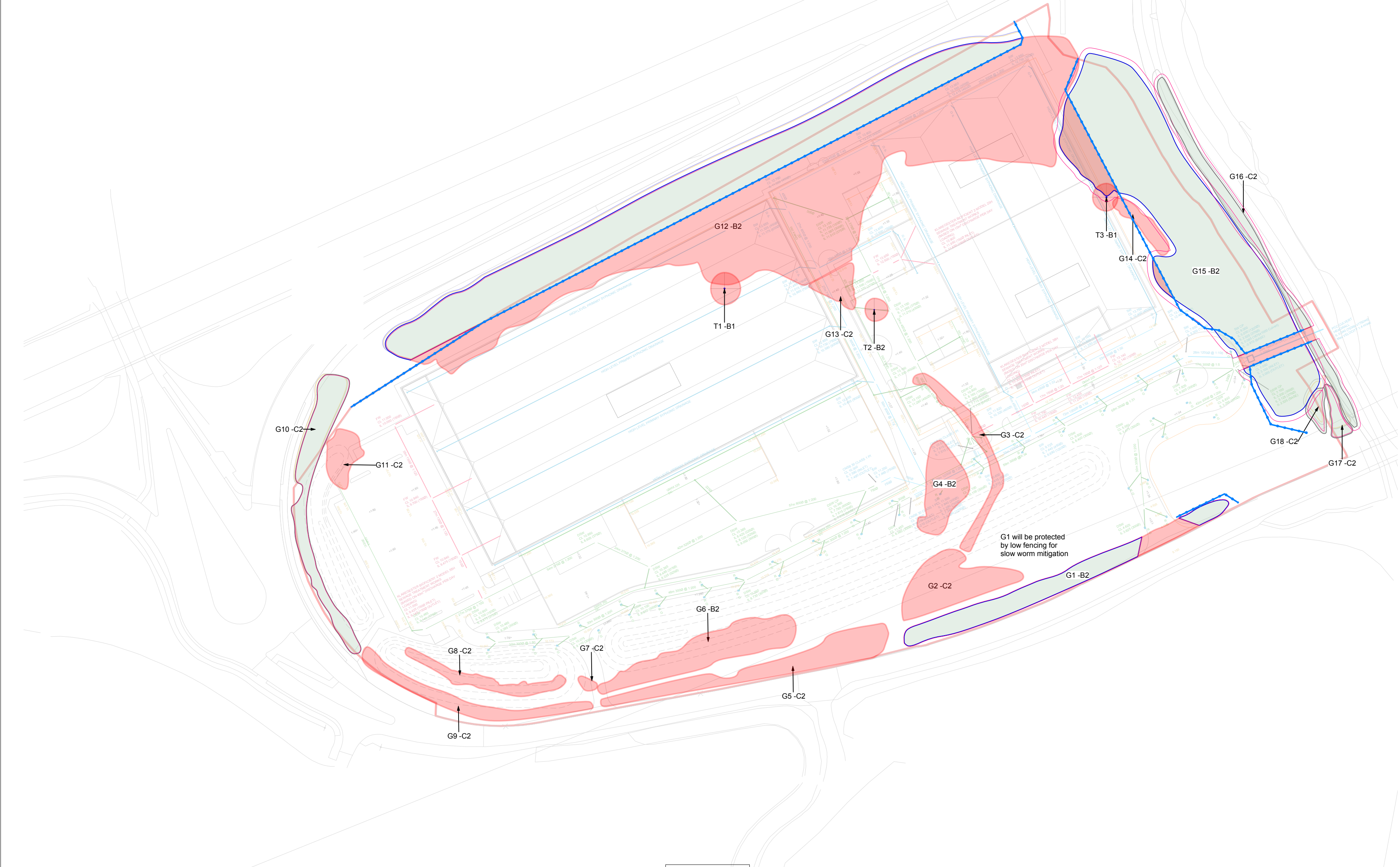
CLIENT **Clowes Developments UK Ltd**

COORDINATE SYSTEM / DATUM **British National Grid / Newlyn Datum (AOD)**

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Ref	Species	Height (m)	Life Stage	RPA Radius (m)	RPA (m2)
T1	Oak (Turkey)	14	EM	7	152
T2	Oak (English)	9	EM	4.2	55
T3	Oak (English)	12	EM	6.8	147
G1	Ash, Poplar, Dogwood, Field maple, Damson, Elder, Hawthorn	2-15	EM	4.2	55
G2	Poplar, Ash, Hawthorn, Willow	2-15	EM	5.4	92
G3	Poplar, Willow, Hawthorn	4-15	EM	4.2	55
G4	Alder, Ash, Elder, Field maple, Willow, Poplar, Hawthorn, Dogwood, Rose	2-12	EM	3.3	34
G5	Blackthorn, Willow, Field maple, Poplar	1-7	SM	2.4	18
G6	Poplar, Blackthorn, Field maple, Hawthorn	2-8	EM	2.4	18
G7	Willow	4-5	EM	1.8	10
G8	Willow	5	EM	3	28
G9	Blackthorn, Ash, Field maple, Hawthorn, Rose	1-4	SM	1.3	5
G10	Blackthorn, Ash, Field maple, Hawthorn, Rose, Oak	1-4	SM	1.3	5
G11	Hawthorn, Blackthorn, Willow	2-5	EM	1.8	10
G12	Poplar Ash, Hawthorn, Field maple, Willow, Dogwood	2-16	EM	3.6	41
G13	Ash, Poplar, Field maple	3-14	EM	3.6	41
G14	Ash, Poplar	2-18	EM	5.4	92
G15	Ash, Poplar, Privet, Pine, Dogwood, Field maple, Hawthorn, Oak, Blackthorn	2-18	EM	6	113
G16	Hazel, ash, Blackthorn, Elder, Spindle, Field maple, Blackthorn	2-9	EM	2.4	18
G17	Damson/Blackthorn	2-8	M	3.6	41
G18	Willow, Elder, Damson	2-6	M	3	28



KEY

- Category A Tree - High quality (Retention highly desirable)
- Category A - Hedgerow, Group, Woodland - High quality (Retention highly desirable)
- Category B Tree - Moderate quality (Retention desirable)
- Category B - Hedgerow, Group, Woodland - Moderate quality (Retention desirable)
- Category C Tree - Low quality (May be retained but should not constrain development)
- Category C - Hedgerow, Group, Woodland - Low quality (May be retained but should not constrain development)
- Category U Tree - Very low quality (Mostly unsuitable for retention)
- Category U - Hedgerow, Group, Woodland - Very low quality (Mostly unsuitable for retention)
- Root Protection Area (RPA) - Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and soil volume to maintain the tree's viability
- Shrub mass/offsite tree/out of scope (OOS)
- Tree / Hedgerow / Group to be removed

Protection Measures

- Tree Protection Barrier

Note: The original of this drawing was produced in colour – a monochrome copy should not be relied upon. This drawing should be interpreted with reference to the accompanying tree schedule and written advice



PROJECT TITLE Harts Farm Way, Brockhampton West, Havant				
DRAWING TITLE Tree Retention/Removal & Protection Plan				
SCALE 1:1000 @ A2		DRAWING NUMBER BHA_1066_02		
DRAWN BY DV	APPROVED BY IM	REVISION A	SHEET -	DATE 19/02/2021
LAYOUT USED WITHIN DRAWING P20-1528_13_16 Landscape Masterplan				
CLIENT Clowes Developments UK Ltd				
COORDINATE SYSTEM / DATUM British National Grid / Newlyn Datum (AOD)				
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SURVEY DATE: 25.01.2021

INDIVIDUAL TREES

Ref	Species	On/off site	Top Height (m)	No. of Stems	Est diam?	Calc. / Actual Stem Dia. (mm)	Crown radii (m) N-E-S-W	Avg. low crown height (m)	1st branch ht (m)	1st branch dir.	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)	RPA m²
T1	Oak (Turkey)	On	14.0	2	-	580	7-7-7-6	2.0	2	W	EM	None	Twin-stemmed tree on edge of larger wooded group. Good form	Good	Fair	40+	B1	7.0	152
T2	Oak (English)	On	9.0	1	-	350	5-6-5-4	1.0	1.5	SW	EM	None	Open grown tree, self set. Good form.	Good	Good	40+	B2	4.2	55
T3	Oak (English)	On	12.0	1	-	570	6-5-6-6	1.0	1	W	EM	None	Obvious individual tree on larger wooded group edge. Good form.	Good	Good	40+	B1	6.8	147

GROUPS OF TREES

Ref	Species	On/off site	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. low crown height (m)	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)
G1	Ash, Poplar, Dogwood, Field maple, Damson, Elder, Hawthorn	On	2-15	100	-	350.0	4	2.0	EM	None	Linear group adjacent to highway, good collective form. Pruned away from overhead power lines, trees suppressed and drawn up in form.	Good	Fair	20+	B2	4.2
G2	Poplar, Ash, Hawthorn , Willow	On	2-15	30	-	450.0	5	4.0	EM	None	Linear group of trees located within the site adjacent to overhead power lines. Some trees subsiding, suppressed in form.	Good	Fair	10+	C2	5.4
G3	Poplar, Willow, Hawthorn	On	4-15	30	-	350.0	4	2.0	EM	None	Linear group adjacent car park area, similar sized trees dominated by Poplar and Willow. Some trees felled within group. Better collectively.	Good	Fair	10+	C2	4.2
G4	Alder, Ash, Elder, Field maple, Willow, Poplar, Hawthorn, Dogwood, Rose	On	2-12	50	-	275.0	3	1.0	EM	None	Small group located on central car park island. Unmanaged form. Better collectively	Good	Good	20+	B2	3.3
G5	Blackthorn, Willow, Field maple, Poplar	On	1-7	100	-	200	3	1.0	SM	None	Planted buffer. Inaccessible. Good collectively and good screen.	Good	Good	20+	C2	2.4
G6	Poplar, Blackthorn, Field maple, Hawthorn	On	2-8	100	-	200	3	1.0	EM	None	Thicket-like linear group adjacent to overhead power lines. Good screen. Limited access to stems.	Good	Good	20+	B2	2.4
G7	Willow	On	4-5	3	-	150	2.5	1.0	EM	None	Group of three trees on edge of larger group. Low value.	Good	Good	10+	C2	1.8

Ref	Species	On/off site	Height range (m)	No. of trees	Est diam?	Max stem diam (mm)	Av. Crown radius (m)	Avg. low crown height (m)	Life Stage	Special importance	General Observations	Health & vitality	Structural condition	Estimated Remaining Contribution (Years)	BS5837 Category	RPA Radius (m)
G8	Willow	On	5	20	-	250	3	1.0	EM	None	Linear group of similar sized trees. Better collectively.	Good	Good	20+	C2	3.0
G9	Blackthorn, Ash, Field maple, Hawthorn, Rose	On	1-4	50	-	100	1.5	1.0	SM	None	Planted buffer. No access. Mostly continuous form.	Good	Good	20+	C2	1.3
G10	Blackthorn, Ash, Field maple, Hawthorn, Rose, Oak	On	1-4	50	-	100	1.5	1.0	SM	None	Planted buffer. No access. Mostly continuous form.	Good	Good	20+	C2	1.3
G11	Hawthorn, Blackthorn, Willow	On	2-5	20	#	150	2	1.0	EM	None	Planted tree group. Overrun with bramble in places.	Good	Good	20+	C2	1.8
G12	Poplar Ash, Hawthorn, Field maple, Willow, Dogwood	On	2-16	100	-	300	4	1.0	EM	None	Linear group located adjacent to slip road. Good collective form. Dominated by Poplar. Thicket-like around periphery.	Good	Fair	20+	B2	3.6
G13	Ash, Poplar, Field maple	On	3-14	15	-	300	4	1.0	EM	None	Obvious group on edge of larger group. Suppressed and drawn up in form. Better collectively.	Good	Fair	10+	C2	3.6
G14	Ash, Poplar,	On	2-18	40	-	450	3	1.0	EM	None	Obvious linear group on edge of larger group. Dominated by poplar species. Dieback to some poplars.	Fair	Fair	10+	C2	5.4
G15	Ash, Poplar, Privet, Pine, Dogwood, Field maple, Hawthorn, Oak, Blackthorn, Norway maple, Sycamore	On	2-18	200	-	500	4	1.0	EM	None	Large group on eastern boundary. Land drops away to east. All trees suppressed and drawn up. Some trees subsiding/hung up on neighbouring trees. Dense and consistent.	Good	Fair	20+	B2	6.0
G16	Hazel, ash, Blackthorn, Elder, Spindle, Field maple, Blackthorn	Off	2-9	20	#	200	3	1.0	EM	None	Linear group of trees located adjacent cycle track and on river bank. Dense in places. One tree fallen/resting on river bank. Limited useful life expectancy due to location.	Good	Fair	10+	C2	2.4
G17	Damson/Blackthorn	On	2-8	10	-	300	4	2.0	M	None	Two tree group located on back. Recently pruned away from overhead powerlines.	Fair	Good	10+	C2	3.6
G18	Willow, Elder, Damson	On	2-6	10	-	250	4	2.0	M	None	Small group of trees on site boundary, some trees pollarded away from overhead powerlines.	Fair	Good	10+	C2	3.0



IMAGE 1: Looking north towards low-quality tree group G3 located around the existing central carpark.



IMAGE 2: Looking north-east along northern boundary moderate quality tree group G12.



Looking north towards moderate quality tree T3 located on the edge of eastern boundary wooded tree group G15.



IMAGE 4: Looking east along Harts Farm way on the southern boundary towards low-quality tree group G5.



IMAGE 5: Looking north-west along cycle track adjacent to river on eastern boundary. Note density of trees within tree group G15.



IMAGE 6: Looking North from southern boundary towards moderate-quality tree group G15. This group is reasonably prominent within the local landscape.

- The tree survey was carried out with reference to the methodology set out in BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- Trees were surveyed individually or as groups where it was considered that they had grown together to form cohesive arboricultural features either aerodynamically (trees that provide companion shelter), visually (e.g. avenues or screens) or culturally (including for biodiversity). However, where it was considered that there was an arboricultural need to differentiate between attributes trees within groups and / or woodlands were also surveyed as individuals.
- The full tree survey findings are recorded in the following tree survey schedule.
- Within the tree survey schedule, each surveyed TREE (T), GROUP (G), HEDGEROW (H), WOODLAND (W) or SHRUB MASS on or adjacent to the site is given a reference number which refers to its position on the tree survey and constraints plan.
- TREE SPECIES are listed by common name.

The **DIMENSIONS** taken are:

- STEM-No. Indicates the number of main stems (i.e. whether the trunk divides at or below 1.5m; (Used in the calculation of RPA.) "m-s" = Multi-stemmed.
- STEM DIAMETER (measured in millimetres), obtained from the girth measured at approx. 1.5m. For trees with 2 to 5 sub-stems a notional figure is derived from the sum of their cross-sectional areas. For multi-stemmed trees, the notional diameter may be estimated on the basis of the average stem size x the number of stems. (A notional diameter may be estimated where measurement is not possible.)
- HEIGHT (measured in metres), recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- The CROWN SPREAD, taken at the four cardinal points to derive an accurate representation of the tree crown, recorded up to the nearest half metre for dimensions up to 10m and to up the nearest whole metre for dimensions over 10m.
- CROWN CLEARANCES are expressed both as existing height above ground level of first significant branch along with its direction of growth (e.g. 2.5m-N), and also in terms of the overall crown e.g. the average height of the crown above ground level. Measurements are recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- ESTIMATES. Where any measurement has had to be estimated, due to inaccessibility for example, this is indicated by a "#" suffix to the measurement as shown in the tree survey schedule.

LIFE STAGE is defined as follows:

- Y Young: Normally stake dependent, establishing trees. Should be growing fast, usually primarily increasing in height more than spread but as yet making limited impact upon the landscape.
- SM Semi-mature: Established young trees, normally of good vigour and still increasing in height but beginning to spread laterally. Beginning to make an impact upon the local landscape and environment. Semi-Mature (still capable of being transplanted without preparation, up to 30cm girth and not yet sexually mature).

- EM Early-mature: Not yet having reached 75% of expected mature size. Established young trees, normally of good vigour and still increasing in height but beginning to spread laterally. Beginning to make an impact upon the local landscape and environment.
- M Mature: Well-established trees, still growing with some vigour but tending to fill out and increase spread. Bark may be beginning to crack and fissure. In the middle half of their safe, useful life expectancies.
- LM Late-Mature: In full maturity but possibly beyond mature and in a state of natural decline). Still retaining some vigour but any growth is slowing.
- A Ancient: A tree that has passed beyond maturity and is old/aged compared with other trees of the same species. Typically having a very wide trunk and a small canopy.

PHYSIOLOGICAL CONDITION (HEALTH & VITALITY):

Essentially a snapshot of the general health of the tree based upon its general appearance, it's apparent vigour and the presence or absence of symptoms associated with poor health, physiological stress etc. (Fungal infections may be recorded here but decay giving rise to structural weakness would be recorded under 'Structural Condition' – see next parameter):

- Good: No significant health issues.
- Fair: Indications of slight stress or minor disease (e.g. the presence of minor dieback/deadwood or of epicormic shoot growth).
- Poor: Significant stress or disease noted; larger areas of dieback than above.
- Dead: (or Moribund).

STRUCTURAL CONDITION:

Defects affecting the structural stability of the tree including decay, significant dead wood, root-plate instability or significant damage to structural roots, weak forks (e.g. those where bark is included between the members) etc. Classified as:

- Good: No obvious structural defects: basically sound.
- Fair: Minor, potential or incipient defects.
- Poor: Significant defect(s) likely to lead to actual failure in the medium to long-term.
- Dead: (or Moribund).

ESTIMATED REMAINING CONTRIBUTION:

An estimate of the length of time in years that a tree might be expected to continue to make a useful contribution to the locality at an acceptable level of risk (based on an assumption of continued routine maintenance):

- Less than 10 years
- 10+ years
- 20+ years
- 40+ years

SPECIAL IMPORTANCE:

Trees that are particularly notable as high value trees such as ancient trees/woodland or veteran trees. Such trees may be regarded as the principal arboricultural features of a site and pose a significant constraint to potential development.

An *ancient* tree is one that has passed beyond maturity and is very old compared with other trees of the same species. Very few trees reach the ancient life-stage.

Veteran trees are often very old but not necessarily so; they may be regarded as ‘survivors’ that have developed some of the characteristic features of an ancient tree but have not necessarily lived as long. All ancient trees are veterans but not all veteran trees are ancient.

An ancient woodland is an area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland (ASNW), plantations on ancient woodland sites (PAWS) and ancient replanted woodland (ARW)

QUALITY CATEGORY:

Trees are classed as category U, A, B or C, based on criteria given in BS5837:2012; summary definitions as follows (see BS5837 for further details). Categories A, B and C are further characterised by the use of sub-categories, which attempt to identify what aspect of the tree is the main source of its perceived value, These are:

- (1) arboricultural qualities
- (2) landscape qualities, and
- (3) cultural, historic or ecological/conservation qualities.

Examples of these qualities for each of the three categories are given below, although these are indicative only.

Note: This is NOT a health and safety classification; the classification does not take into account any requirement for remedial tree care or ongoing maintenance apart from that which may affect the trees’ general suitability for retention.

CATEGORY A: HIGH QUALITY:

Trees or groups whose retention should be given a particularly high priority within the design process. Normally with an expected useful life expectancy of at least 40 years.

- A1: Notably fine specimens; rare or unusual specimens; essential component trees within groups, semi-formal or formal plantings (e.g. dominant trees within an avenue etc.).
- A2: Trees, groups or woodlands of particular visual importance as landscape features.
- A3: Trees, groups or woodlands of particular significance by virtue of their conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture.)

CATEGORY B: MODERATE QUALITY:

Trees or groups of some importance with a likely useful life expectancy in excess of 20 years. Their retention would be desirable; selective removal of certain individuals may be acceptable but only after full consideration of all alternative courses of action.

- B1: Fair quality but not exceptional; good specimens showing some impairment (e.g. remediable defects, minor storm damage or poor past management.)
- B2: Acceptable trees situated such as to have little visual impact within the wider locality. Also numbers of trees, perhaps in groups or woodlands, whose value as landscape features is greater collectively than would warrant as individuals (such that the selective removal of an individual would not impact greatly upon the trees’ overall, collective value).
- B3: Trees, groups or woodlands with clearly identifiable conservation or other cultural benefits.

CATEGORY C: LOW QUALITY:

Trees or groups of rather low quality, although potentially capable of retention for at least approx. 10 years. Also small trees with stems below 15cm diameter.

Potentially retainable, but not of sufficient value to be regarded as a significant planning constraint.

- C1: Unremarkable trees of very limited merit or of significantly impaired condition.
- C2: Trees offering only low or short-term landscape benefits; also secondary specimens within groups or woodlands whose loss would not significantly diminish their landscape value.
- C3: Trees with extremely limited conservation or other cultural benefit.

CATEGORY U:

Trees likely to prove to be unsuitable for retention for longer than 10 years should any significant increase in site usage arise as a result of development.

E.g. dead or moribund trees; those at risk of collapse or in terminal decline; trees that will be left unstable by other essential works such as the removal of nearby category U trees; trees infected by pathogens that could materially affect other trees; low quality trees that are suppressing better specimens.

(Category U trees may have conservation values that it might be desirable to preserve. This category may also include trees that should be removed irrespective of any development proposals.)

ROOT PROTECTION AREA (RPA):

These are normally represented as a circle centred on the base of each tree stem with a radius of 12 times stem diameter, measured at 1.5m above ground level. The shape of the RPA may be altered where site conditions dictate that there are sound reasons to do so.

VETERAN OR ANCIENT TREE BUFFER (VTB/ATB)

In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone (in metres) around an ancient or veteran tree that should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree’s canopy if that area is larger than 15 times the tree’s stem diameter.

ANCIENT WOODLAND BUFFER (FOR ASNW, PAWS OR ARW)

In line with the Standing Advice produced by the Forestry Commission and Natural England this is a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone may be required.

THE IMPORTANCE OF TREES

Wider benefits:

There is a growing body of evidence that trees bring a wide range of benefits to the places people live.

Some *Economic* benefits of trees include:

- Trees can increase property values
- As trees grow larger, the lift they give to property values grows proportionately
- They can improve the environmental performance of buildings by reducing heating and cooling costs, thereby cutting bills
- Mature landscapes with trees can be worth more as development sites
- Trees create a positive perception of a place for potential property buyers
- Urban trees improve the health of local populations, reducing healthcare costs

Some *Social* benefits of trees include:

- Trees help create a sense of place and local identity
- They benefit communities by increasing pride in the local area
- They can create focal points and landmarks
- They have a positive impact on people's physical and mental health
- They can have a positive impact on crime reduction

Some *Environmental* benefits of trees include:

- Urban trees reduce the 'urban heat island effect' of localised temperature extremes
- They provide shade, making streets and buildings cooler in summer
- They help remove dust and particulates from the air
- They help to reduce traffic noise by absorbing and deflecting sound
- They help to reduce wind speeds
- By providing food and shelter for wildlife they help increase biodiversity
- They can reduce the effects of flash flooding by slowing the rate at which rainfall reaches the ground
- They can help remediate contaminated soil

On new development sites:

Trees bring many benefits to new development. Where retained successfully they can form important and sustainable elements of green infrastructure, contribute to urban cooling and reduce energy demands in buildings. Their importance is acknowledged in relation to adaptation to the effects of climate change. Other benefits brought by trees include:

- increasing property values;
- visual amenity
- softening, complementing and adding maturity to built form
- displaying seasonal change
- increasing wildlife opportunities in built-up areas
- contributing to screening and shade
- reducing wind speed and turbulence

NATIONAL PLANNING POLICY

The National Planning Policy Framework 2019 (NPPF paragraph 175) states that:

'development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused unless there are wholly exceptional reasons, and a suitable compensation strategy exists'.

In this respect the following definitions apply:

'Ancient woodland: An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS)', and

'Ancient or veteran tree: A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.'

Note: Further information from the National Planning Policy Guidance Suite and Standing Advice is provided in the design guidance section.

STATUTORY CONTROLS

Statutory tree protection

Works to trees which are covered by Tree Preservation Orders (TPOs) or are within a Conservation Area (CA) require permission or consent from the Local Planning Authority. Where information is available on any Statutory designations such as this they are identified within the summary table in Section 1 and on the Tree Survey and Constraints Plan at Section 2.

Notwithstanding specific exceptions and in general terms, a TPO prevents the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of protected trees or woodlands without the prior written consent of the LPA.

Penalties for contravention of a TPO tend to reflect the extent of damage caused but can, in the event of a tree being destroyed, result in a fine of up to £20,000 if convicted in a Magistrates' Court, or an unlimited fine if the matter is determined by the Crown Court.

Similarly, and again notwithstanding specific exceptions, it is an offence to carry out any works to a tree in a Conservation Area with a trunk diameter greater than 75mm diameter at 1.5 height without having first provided the LPA with 6 weeks written notification of intent to carry out the works.

On many non-residential sites (excluding specific exemptions) there is also a statutory restriction relating to tree felling that relates to quantities of timber that can be removed within set time periods. In basic terms, it is an offence to remove more than 5 cubic metres of timber in any one calendar quarter without having first obtained a felling licence from the Forestry Commission.

Any proposed tree works that are planned to be carried out on site must be carried out in accordance with the statutory controls outlined.

Statutory Wildlife Protection

Although preliminary visual checks from ground level of likely wildlife habitats are made at the time of surveying, detailed ecological assessments of wildlife habitats are not made by the arboriculturist and fall outside of the scope for this report.

Trees which contain holes, splits, cracks and cavities could potentially provide a habitat for protected species such as bats in addition to birds and small mammals. It is advised that in some instances specialist ecological advice may be required. This may result in tree works being carried out following a detailed climbing inspection to the tree to ensure that protected species or their nests/roosts are not disturbed. If any are found, the site manager, site owner or consulting arboriculturist should be informed and appropriate action taken as recommended by the appointed Ecologist or Natural England.

It is advised that tree/hedgerow works are carried out with the understanding that birds will generally nest in trees, hedges and shrubs between March and August. This time period only provides an indication of likely nesting times and as such diligence is required when undertaking tree works at all times.

Irrespective of the time of year and other than any actions approved under General Licence, it is an offence to intentionally kill, injure or take any wild bird or to intentionally take, damage or destroy the nest or eggs of any wild bird. Ideally, tree operations should be avoided during the likely bird nesting period. However, any tree works should always only be carried out following a preliminary visual check of the vegetation.

For information, the Wildlife and Countryside Act 1981 (as amended), The Countryside and Rights of Way Act 2000 (as amended) and the Conservation of Habitat and Species Regulations 2010, form the basis of the statutory legislation for flora and fauna in England and Wales. A different legislative framework applies in Scotland and Northern Ireland.

Any proposed tree works that are planned to be carried out on site must be carried out in accordance with any relevant statutory controls, outlined above.

DESIGN GUIDANCE

Approach

The approach adopts the guidelines set out in the British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. The process is broken down to coordinate with the key elements within both the RIBA Plan of Work (2013) and British Standard 5837:2012 as set out in the table below:

Information Stage	RIBA Stage	BS5837:2012
Stage A – Tree Survey	2: Concept	4: Feasibility
Stage B – Arboricultural Impact Assessment	3: Developed design	5: Proposals
Stage C – Arboricultural Method Statement	4: Technical design	6: Technical Design
Stage D – Arboricultural Site Supervision	5: Construction	7: Demolition and construction

A hierarchical approach is adopted in order to achieve optimum use of the site and location of built structures. This is set out below:

Avoid

The starting point of Site layout design should be to avoid the RPA of retained trees and provide suitable clearance from above ground constraints [tree canopies]. Where possible building lines should be at least 2m outside the RPA to provide working space for construction. However, protection measures can be taken if such clearance is not achievable.

Mitigate

Where intrusion within the RPA is unavoidable then its impact on the tree can be mitigated by specialist measures:

Foundations that avoid trenching e.g. screw piles, suspended floor slabs or casting at ground level for lightweight structures such as bin and cycle stores.

Limited use may be made for parking, drives or hard surfaces within the root protection areas, subject to advice from a qualified arboriculturist. Cellular confinement systems that enable hard surfaces to be built above existing soil levels are acceptable methods subject to site-specific soil conditions.

Service runs that cannot be routed outside the RPA(s) can be installed by, for example, thrust boring, directional drilling, air excavation or hand digging. These operations often require supervision by the project arboriculturist.

Compensate

Replacement planting can ensure the continuity of tree cover where tree removal is unavoidable or desirable. Off-site provision may be considered in some circumstances but this will require negotiation with the local planning authority.

Considerations:

For proposed residential developments, consideration must be given to numerous factors future tree growth and orientation.

Tree constraints

Root Protection Areas:

With reference to BS5837:2012, a root protection area (RPA) is defined as “a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure should be treated as a priority”. **“The default position [when considering design layout in relation to RPAs] should be that structures are located outside the RPAs of trees to be retained”.**

BS5837:2012 states (4.6.2) that, “where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced.” The BS goes on to state that, “modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution,” and that any deviation from the original circular plot should take into account:

- Morphology and disposition of roots;
- topography and drainage;

- soil type and structure;
- the likely tolerance of the tree to root damage/disturbance.

Additional buffer zones beyond the RPA:

The following text is taken from the Standing Advice produced by the Forestry Commission and Natural England as included in the National Planning Policy Guidance:

‘A buffer zone’s purpose is to protect ancient woodland and individual ancient or veteran trees. The size and type of buffer zone should vary depending on the scale, type and impact of the development’.

Ancient woodland buffer:

‘For ancient woodlands, you should have a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, you’re likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic’.

Ancient and veteran tree buffer:

‘A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree’s canopy if that area is larger than 15 times the tree’s diameter’.

Above ground:

Above ground constraints posed by trees describe the capacity for trees to have an overbearing or dominating effect on new developments; usually post occupancy. Typical above ground constraints include a number or combination of inconveniences including shading, branch spread, movement of trees during strong winds and so on. If not adequately considered, above ground constraints can lead to repeated requests to fell or heavily prune retained and protected trees.

Shade:

Adverse shading and blocked views from windows raise concerns for incoming residents, which may lead to pressure to fell or remove trees in the future. Wherever possible it is advisable to arrange fenestration away from tree canopies to lessen the conflict, or increase window size to accommodate ambient light. Conversely, appropriate designed development can use existing or new trees to create necessary and welcome shade and screening.

As part of the adopted approach the above considerations and constraints are assessed cumulatively in order to provide clear and site-specific advice on the areas of a site most suitable for the location of development.

Dependent on the site and nature of the proposed development, the Tree Survey and Constraints Plans may show the following:

Recommended Developable area - an advisory area defined in order to minimise arboricultural impacts using standard approaches to construction. Restricting proposed development to this area will limit the risk of harm to retained trees and of the Local Planning Authority objecting to the proposed development. It may be possible to propose development outside of this area but specific ‘low impact’ construction techniques may be needed recommended.

Recommended Buffer to development - similar to the Recommended Developable Area but defined as a line marking a suitable buffer to retained trees. More commonly used on large sites or sites where the presence of trees is localised.

Tree Opportunities

Depending on the scale of developments existing trees can often provide opportunities to enhance the existing arboricultural resource of a site by bringing it into good management or by putting in place remedial measures e.g. soil amelioration.

Appropriately designed new tree planting is extremely important in maintaining healthy and sustainable tree populations. For the reasons highlighted, new trees can bring many benefits to new developments. It is critical to the establishment of new tree planting that the locations, species and specification of new trees is appropriate. Subsequently the sourcing of high-quality stock, suitable planting and the provision of post planting maintenance are essential to allow new trees to establish and to allow them to mature.

HOW TREE DAMAGE CAN OCCUR

Above the ground

Damage can occur as a result of knocks and scuffs, breakages of branches and/or tree trunks. This is often but not always associated with machine operations, groundworks excavations, tele handlers, high sided vehicles and crane use. Other forms of above ground damage include fixings to trunk and unauthorised cutting back of branches. Wounds will harm a tree's health and shorten its life by letting in disease-causing organisms.

Below the ground

It is often not appreciated that the majority of most tree roots are generally located within the top 600mm of the ground. On this basis it needs to be understood that damage to roots can occur in three ways:

- Root severance can occur as a result of, for example, soil stripping during site clearance or excavations.
- Root dieback and death can result from compaction of the soil. Compaction can occur as a result of vehicle weight, weight of stored materials or increased pedestrian access. Compaction crushes out soil pore space and prevents tree respiration from occurring (respiration requires gas exchange between the ground and the atmosphere). Compacted soil is denser and therefore inhibits/prevents any further new root growth.
- Pollution of the soil with chemicals such as oil or cement washings can destroy the soil environment, making it inhospitable for the tree cause causing it stress.

The effects of these impacts can be disfiguring to a tree's appearance and also weaken a tree making it more liable to attack by pest and diseases. In addition, root damage or death results in corresponding decline above the ground with dieback occurring within the tree crown.

The effects of damage to trees generally take some time to become fully apparent. In many cases, damaged trees decline slowly after the completion of a new development, until they eventually need to be removed due to ill health.

Tree protection barriers and load distributing 'no-dig' paths are specified in order to prevent soil compaction from taking place.

GENERAL SITE RULES FOR TREE PROTECTION

Do not independently carry out any activity that is at odds with the site scheme of tree protection. This is contained within an approved Arboricultural Method Statement (AMS) and accompanying Tree Protection Plan.

In simple terms: do not carry out any work within any Construction Exclusion Zone (CEZ) without prior liaison with the Project Arboriculturist and written authorisation from the Local Planning Authority.

Within the CEZ:

- No mixing of cement
- No soil/turf stripping, raising/lowering of ground levels (unless advised), deposit or excavation of soil or rubble
- No excavations for services or installation of services
- No storage of materials, machinery fuel, chemicals or other materials of any other description
- No parking/use of tracked or wheeled machinery
- No siting of temporary structures including hard standing areas, portaloos, site huts
- No lighting of fires or disposal of liquids
- Fires on site should be avoided if possible. Where they are unavoidable, they must not be lit in a position where heat could damage foliage or branches. Fires must be a minimum of 20m from the trunk of any retained tree or the centre line of any hedgerow to be retained
- No signs, cables, fixtures or fittings of any other description shall be attached to any part of a retained tree