

## Land east of West Horndon

an opportunity for an enhanced landscape-led urban extension

Appendix 1: landscape and design report

2nd October 2013



Rummey design

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'landscape-led' masterplanning for sustainable growth...

... to create an integrated community

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# introduction

## purpose of the document

The purpose of this document is to introduce the benefits of the land east of West Horndon as an opportunity area for the growth of the village. It forms an appendix to representations made by Andrew Martin Associates on behalf of Countryside Properites.

Throughout its content the document will present:

1. a sound evidence baseline for 'responsible' development
2. a landscape-led approach to development – settlement rooted in context
3. aspiration for an environmentally sustainable urban extension
4. favourable ground conditions for development
5. a low impact development
6. opportunities for biodiversity enhancement and re-structuring

This document will argue that the site has significant development potential.

## summary of the content

The document sets out a summary of the following analyses on the site, its context and regional position:

- site history
- topography and geology
- site visibility
- hydrological overview
- landscape character
- site characteristics
- site designations and technical features
- local settlement character

The analysis chapter concludes with a summary of the analyses and explains the justification for development from a landscape, visual and character position.

The document proposes a masterplan concept building on the analyses. The concept will also be presented in the form of a wider settlement approach to create a sustainable and balanced extension to West Horndon.





view north east across the site from the park with All Saints Church in the background - a perfect location to extend the ancient woodland and provide wetlands to improve ecological biodiversity in the area







# approach and methodology

## our approach

“‘Settlement’ is where people gather; attracted by a resource, a particular habitat, climate, geology or aspect. Patterns and the form, or morphology of settlement can be directly traced to the underlying geology and the way that it has interacted with the changing climate.”

Elizabeth Staveley, Director Rummey Design

Rummey Design has been commissioned to undertake an environment based evidence assessment, considering the geographical factors that have shaped the landscape (including cultural factors) around West Horndon. A team of environmental and urban designers have undertaken a field and desk based assessment of the cultural and physical factors that make up the Essex Fenlands. From this objective and analytical process, conclusions can be drawn to consider:

1. whether a particular site has the CAPACITY for change
2. what FORM might that change take ie. size and nature of change or development

This layered analytical process draws out the essence of a place. This robust technique of assessment has shaped our National Landscape Character Area designations which is an invaluable tool for forward planning and change management. We have applied this approach at a more detailed level to distill local distinctiveness as well as practical considerations for development. These strong analytical foundations allow us to create sustainable developments, rooted in their environmental, rather than political context.

## the changing ‘landscape’

Historically people were drawn to where water and food is available and plentiful, the building materials are readily attainable, where there is fuel for heat and where access is good for the trading of skills, stories and goods. As climate, technology and market forces have changed; these attractions have lost and gained power and settlements have shrunk or grown in response.

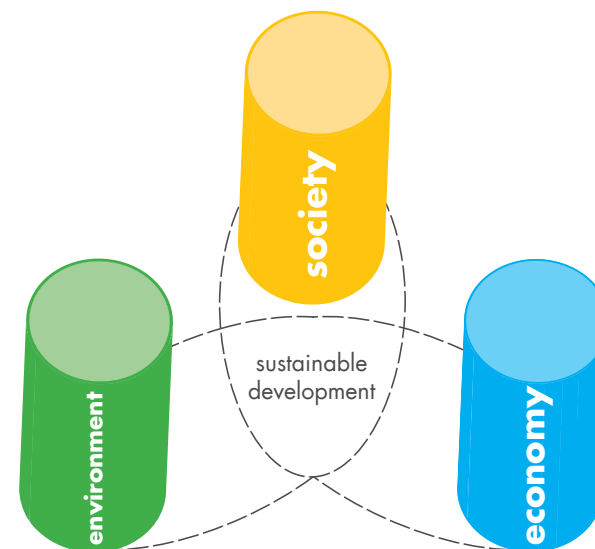
Over time, these settlements have been shaped by changes in social and economic behaviour. Places, settlements and landscape have become distinctive where the physical and human geography intertwine, creating unique identities that continue to attract investment and create the ‘brand’ of a place.

Settlements that strike a balance between the natural environment and between the social and economic factors become truly sustainable.

A process of careful analysis of these influencing factors and the melding of the appropriate and balanced skill set to bring together these three elements in this urban extension creating a community founded in the three pillars of Bruntland’s sustainable development; environment, economy, society...

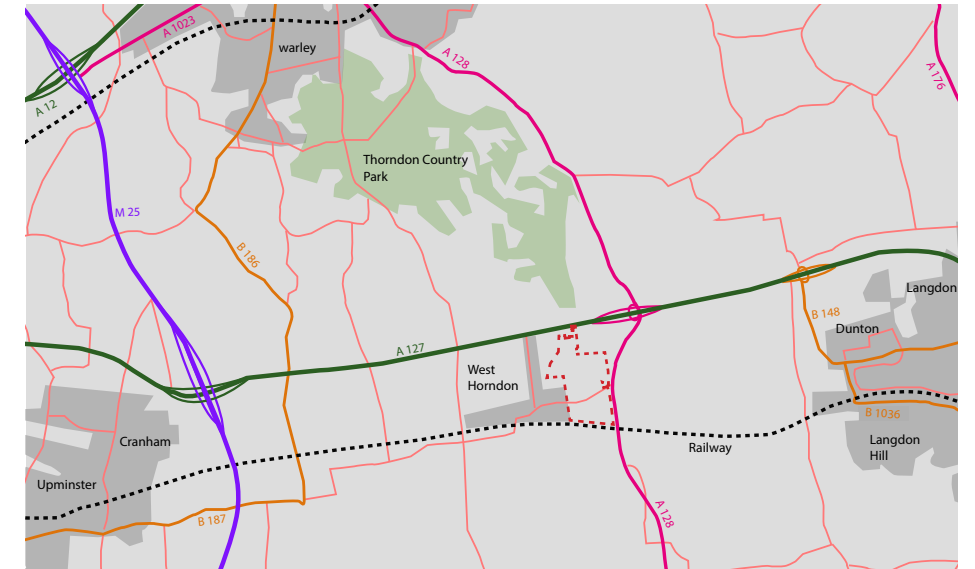
Rummey Design has been practising this approach for 20 years. The design team covers a spectrum of environmental analysis and design skills, combined with an appreciation for high quality and distinctive designs, creating visions and plans for successful place-making for the future, worldwide.

This approach to settlement planning is now being recognised as a valuable and intrinsic process in creating and strengthening communities and it underpins the approach for considering the land east of West Horndon as a viable option for the sustainable urban expansion of the village.



Bruntland's pillars of sustainable development

## site location and information



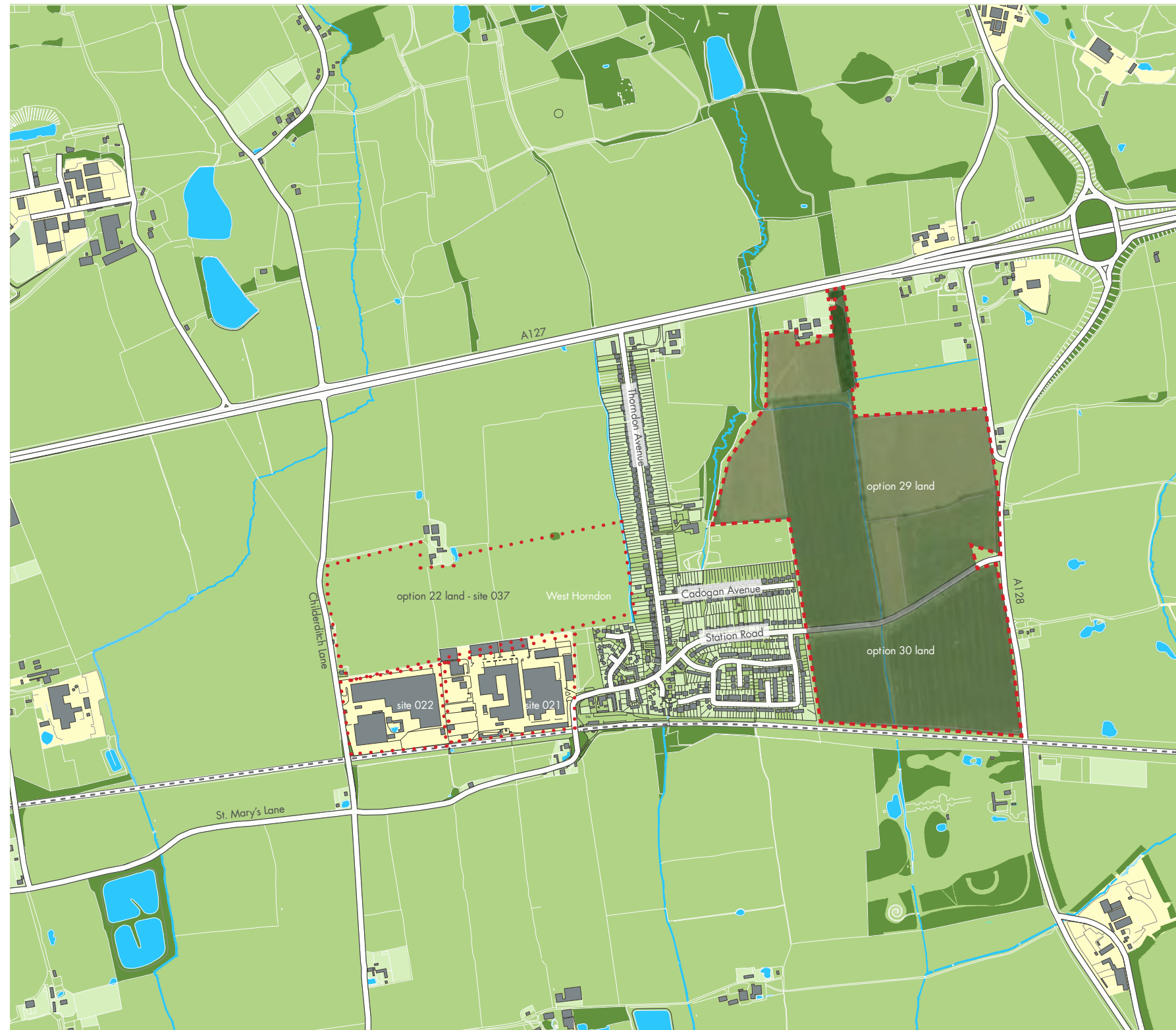
site location plan (NTS)  
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- site boundary (option 29 and 30 land from the SAR)
- ..... option 22 land from the SAR (partly promoted by E&A Strategic Land and including sites 037, 021 and 022 from Policy DM23)

### the site location

The site is located directly to the east of West Horndon. It is within easy access of the A127 and A128 and connects in to the existing village and its key community facilities of the primary school and local park. It comprises low-grade agricultural land which is contained and parcelled by a strong and intact structure of hedgerows. The site also lies to either side of the main access into West Horndon, Station Road.

The population of the village from the 2011 census was 1537 in an urban area of 0.643km<sup>2</sup>.



existing site plan (NTS)  
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0 100m

# summary of analysis



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The following analyses have been summarised into the key information that will inform the decision making authorities with the evidence base as to the merits of this site for the purposes of a deliverable housing led mixed use new community. The analyses do not always indicate positive development conditions but also identify if this is the case, what mitigation can be made to at least neutralise the issue.

site history

topography and geology

site visibility

hydrological overview

landscape character

site characteristics

site designations and technical features

local settlement character

## site history

The local area has largely been shaped by the natural geography; the Thames, Mar Dyke and Hole Craven Creek to the south and the Langdon/Horndon Hills to the north.

The district is gridded with roads, settlement, hedges and ditches as the lower fenland has been artificially drained, occupied and farmed. Important east – west routes, either rail or road, run perpendicular to north - south drainage, settlement and hedgerow lines that mirror linear parish boundaries.

West Horndon is one of a group of three rectilinear parishes in the north of the district, on the junction between the wooded ridges and the Thames plain.

The area has always been sparsely populated and the character of settlement has its roots in scattered farmsteads and notable country estates. Royalty and gentry have shaped the landscape which has been radically changed in the last century. The Essex sporting gentry frequented the area for hunting and steeplechasing (ca. 1860).

It is likely that there was no road running over the fenland until the early 18th Century. Roads were confined to the hills and many of these are now marked by public rights of way and narrow lanes.

The Three Farms of Nuttys, Tillingham and Blankets occupy ancient sites around West Horndon, which were bisected by the London to Southend Railway extension in 1886. The development of a station at West Horndon stimulated the growth of an 'industrial township' and linear low density residential settlement followed in the 20th Century.

In 1937, The Essex Brick Company began operations on the land to the north of West Horndon, which was taken over by Costain

Concrete Co. in 1946. In 1938 an agricultural machine company opened a factory adjacent to West Horndon Railway Station which has now closed. The current industrial activity located to the west of the station began in 1940 and is still in operation today.

The land around West Horndon has changed with the impact of road and rail development, as well as changes in farming practice. The once grazed lands of the fens have been developed to accommodate modern arable farming practice, resulting in the opening up of the fields and the loss of farm boundaries, which is more noticeable to the west side of the village where the land is exposed and open and the impacts of its industrial setting are significant.

The history of the village of West Horndon is relatively recent and following the building of the railway in 1886 (and known as East Horndon at the time). Prior to this the land was agricultural, broken down in a strong north/south orientation with lanes leading to the Thames Estuary to the south. St. Mary's Lane/Station Road is an old east/west route on which West Horndon station was located, one of few east/west routes in the vicinity.

The landscape structure also contained this strong north/south orientation with linear woodlands and denser hedgerows following drainage channels, also leading to the Thames. These linear routes and landscape have since been broken by east/west road and rail corridors which still presents a clear grid structure to the landscape up to present day.

The area has always been sparsely populated and the three manors that comprised the Parish recorded 21 inhabitants in 1066, rising to 184 in 1931.

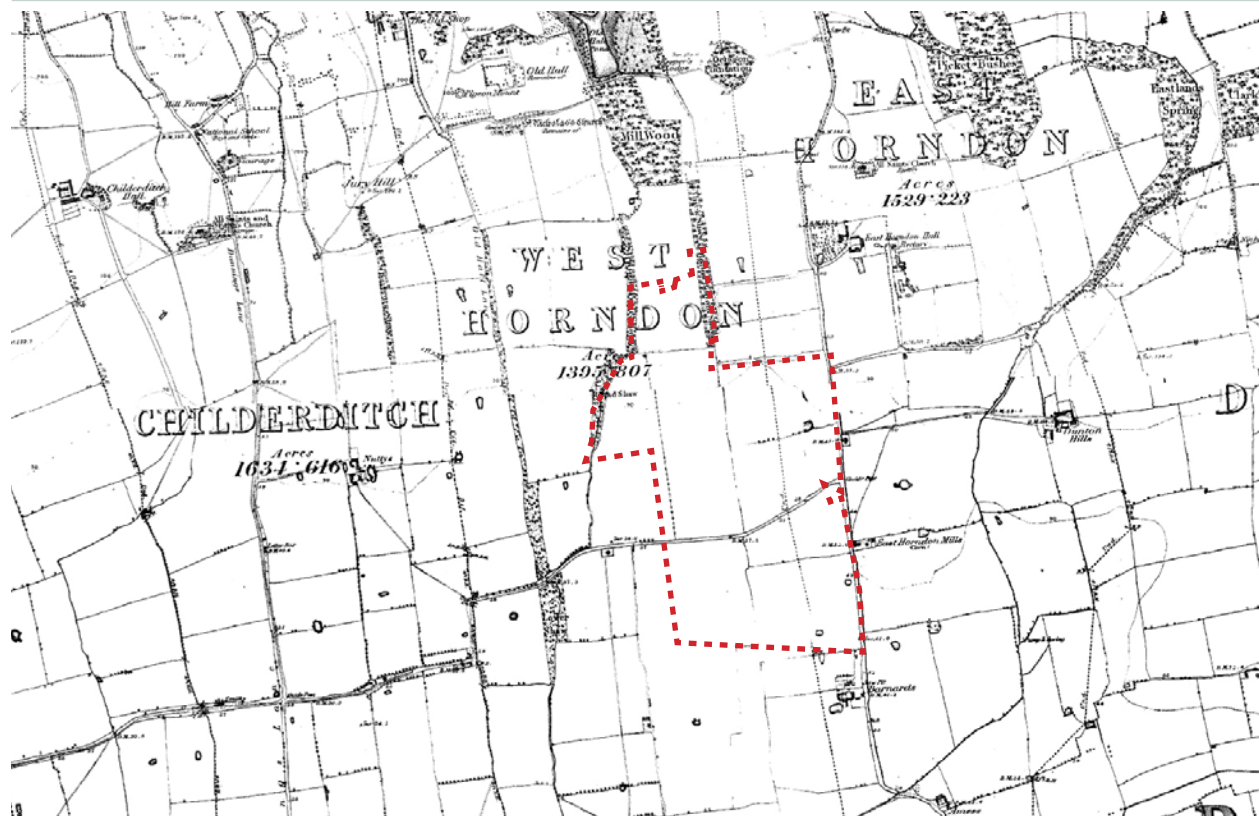
## conclusions for the site justification

- The site still contains drainage channels and strong north/south alignment

## drivers for the masterplan

- geometric and gridded green infrastructure to be enhanced
- opportunity to mitigate industrial and cultural patterns through significant buffer planting
- interpret local linear pattern within development
- encourage incorporation of farmstead focus to development hamlets

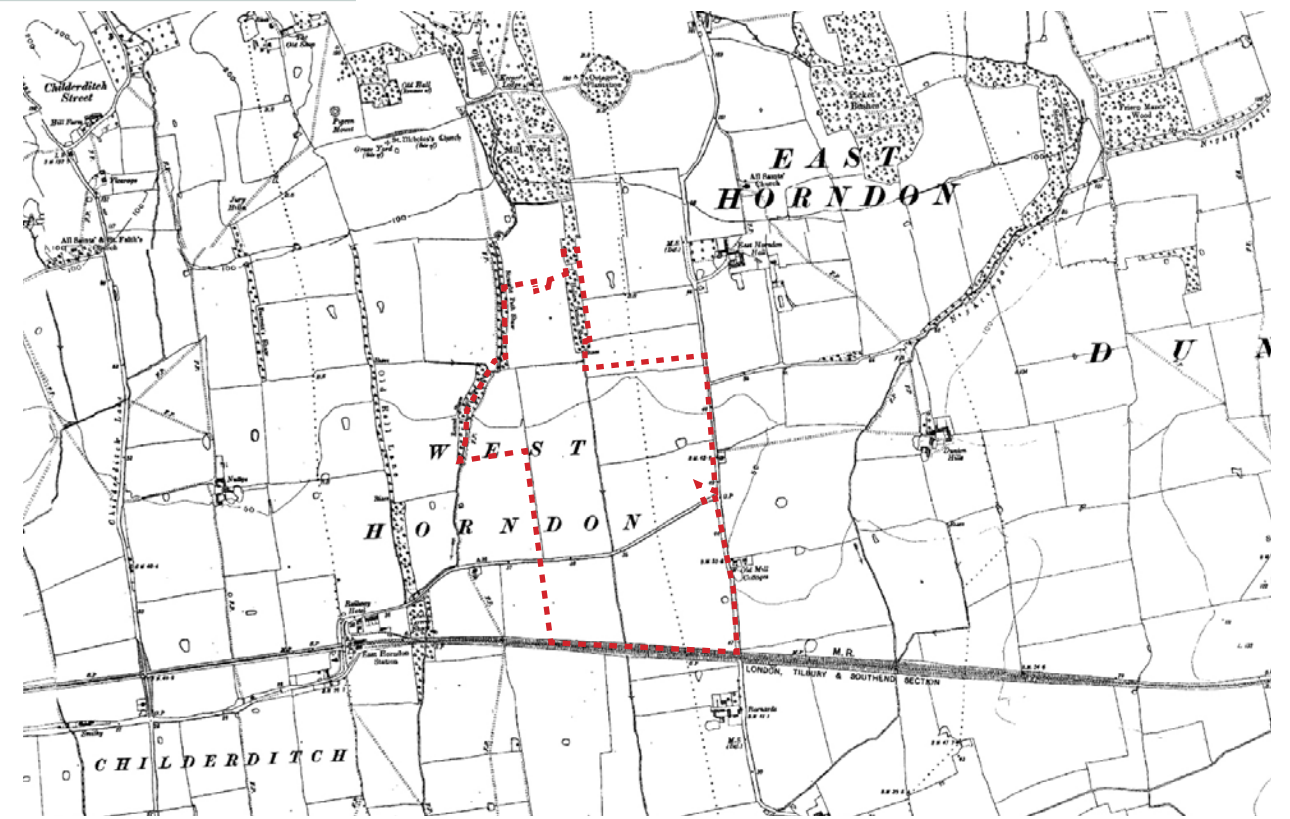




----- site boundary

Historic mapping of circa 1872-1881

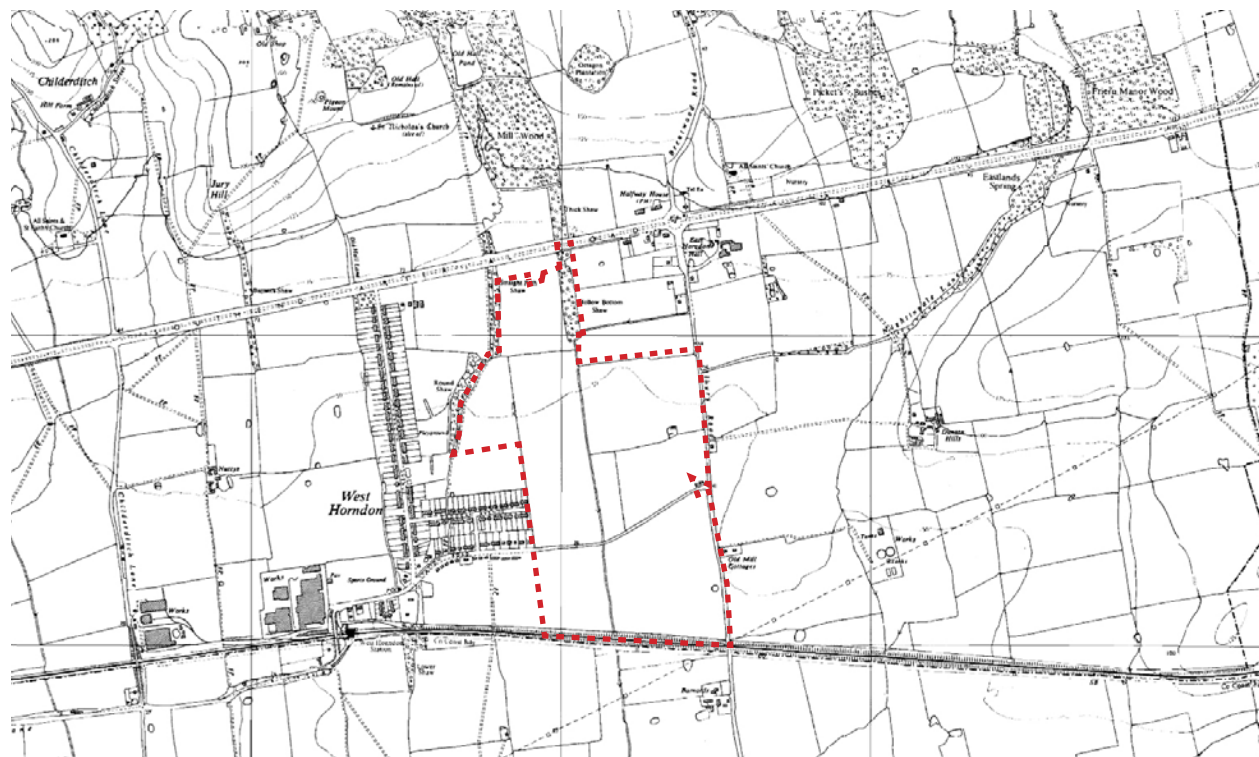
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----- site boundary

Historic mapping of circa 1921

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----- site boundary

Historic mapping of circa 1960

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----- site boundary

Historic mapping of circa 1977-1991

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# geology and topography

## geology

### Bedrock geology

The flooding of the area by the sea in the Eocene period laid down the 'London Clay Formation' in the London Basin. This comprises clays, silts and sands which reach depths of 150m in area local to the site.

To the north of the site, remnants of the superficial geology known as the 'Bagshot Beds' create the localised upland that encloses and shelters the site. These sandy ridges have been heavily eroded by water action creating an undulating topography across the slopes.

### Superficial geology

Head geologies of clays silts and sand overlay this London clay, comprising gravel, sand and clay depending on upslope source and distance from source. Poorly sorted and poorly stratified deposits are formed mostly by solifluction and/or hillwash and soil creep. Essentially the area's superficial geology comprises sand and gravel, with lenses of silt, clay or peat and organic material.

Alluvial lines meander through this clay geology in a north - south orientation at regular intervals, marking historic drainage courses.

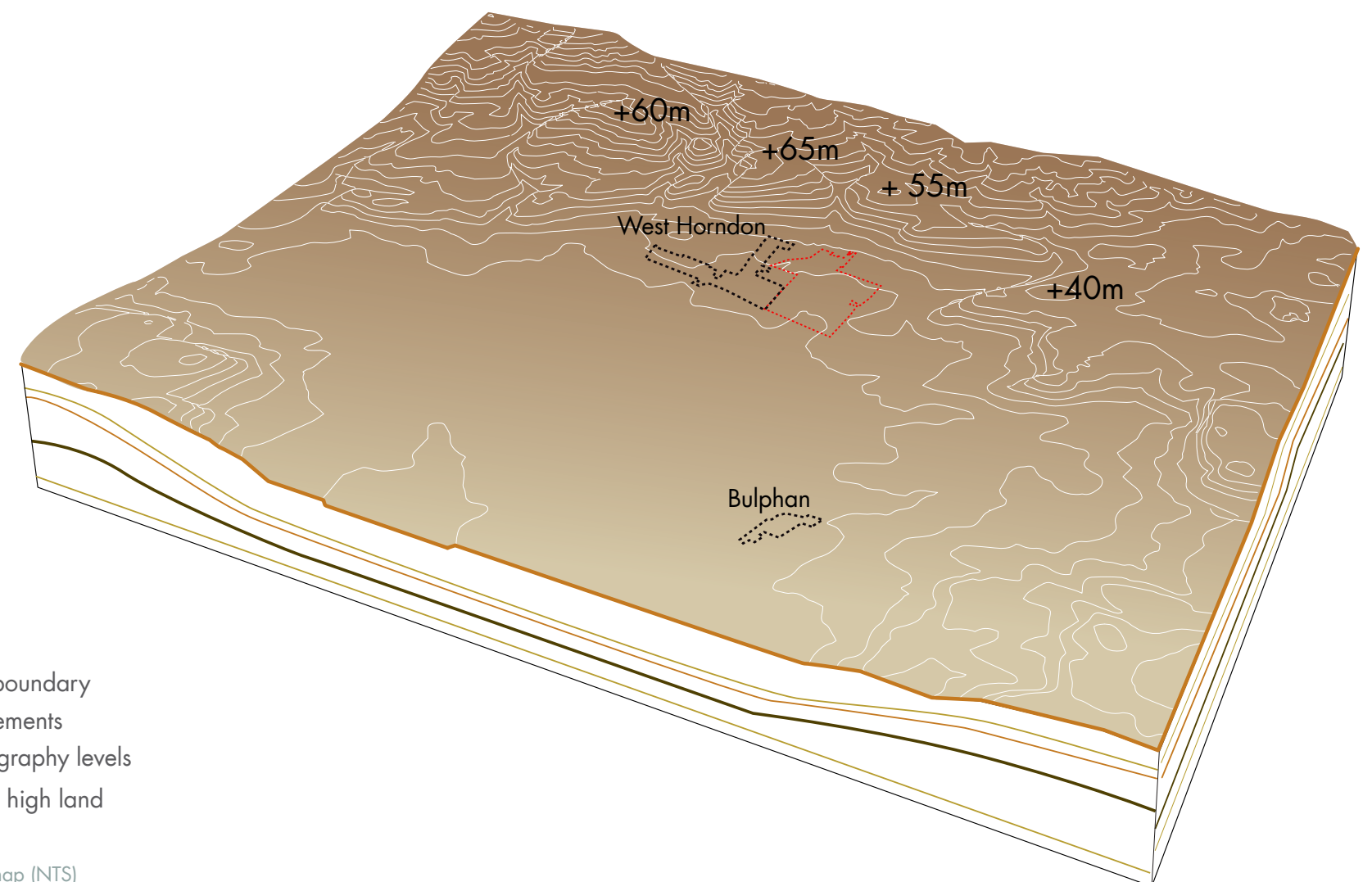
(Sources: British Geological Society and GeoEssex)

## topography

The site lies at between 10m and 20m ASL, falling north to south. It is at the same level as the village on the flattening lower slopes of the hillsides to Thorndon Country Park.

The land rises up to the Country Park north of the A127 to a level of up to 65m ASL. These local hills wrap to the north west, overlooking the western side of the village and around to the east at slightly lower levels.

- the site is relatively flat but what slope there is has an ideal southerly aspect with easy access
- the site is enclosed and sheltered by upland to the north and east



topography map (NTS)





key

- - - site boundary
- - - settlement
- alluvium - clay, sand and gravel
- head clay, sand and gravel
- glaciolacustrine deposits, mid pleistocene - clay, silt and sand
- head - clay, sand and gravel
- glaciofluvial deposits, mid pleistocene - sand and gravel
- lowestoft formation - diamicton
- + local high points

# site visibility

## overview

An initial visual analysis of the site and its environs identified the enclosure and visual qualities of the site and its relationship with neighbouring settlements and the landscape context. In summary:

The land east of West Horndon (east site) comprises eight fields lying within a low lying, level landscape, sloping imperceptibly to the north from 10-20m AOD. There is a large belt of trees associated with its north-western flank, close to the village of West Horndon. The east site's fields are rectilinear in shape, lined by hedgerows and watercourses which follow a broadly north-south and east-west orientation. The east site is split by Station Road which runs broadly in a east-west direction. The early field pattern system appears broadly intact. The east site backs onto a number of houses within West Horndon. The east site is bound on its northern and eastern flanks by large roads; the A127 and A128 respectively. These two roads are bounded by strong belts of vegetation which enclose the site.

The land to the west of West Horndon (the west site) comprises a mix of brownfield industrial land to the south with an area of greenbelt arable farmland to the north. The three arable fields have a relatively weak hedgerow pattern. Its northern edge is open and marked by a low ridgeline. Its eastern boundary is marked by housing at West Horndon whilst its western edge is marked by Dunning Lane which is lined by hedgerows. The A127 lies north of the site beyond the ridgeline, the road is lined by a dense hedgerow and trees. The site lacks an obvious northern edge to it.

## conclusions for the site justification

- The combination of a well established network of hedgerows and hedgerow trees in combination with the low level topography of the land combines to significantly limit visibility of the east site from the surrounding land to the south, east and west. The west site is more visible due to a less well established network of hedgerows and no defined northern edge.
- Open views of both sites are possible from the footpaths and public access land associated with the Thorndon County Park South. These views are sensitive and frequented by many visitors. Nonetheless the expansive views experienced from Thorndon Country Park South are defined by a mix of both rural and urban elements. Industrial elements such as chimneys and factories and infrastructure elements such as bridges and large roads define the character of the views from the park.
- Existing vegetation within the east site and the Thorndon Country Park South limits the visibility of the east site from western sections of the Country Park. In contrast, the west site is very open, lacking a strong vegetation network and is highly visible when viewed from western sections of the park; notably from views 8 and 9.
- A strong network of landscape structure planting would integrate the development of the east site into the wider landscape in time. The existing hedgerow network should be retained and bolstered with new tree planting. New hedgerows and tree planting as proposed on figure 5 will help to integrate the development into the landscape and reduce its visibility from the Thorndon Country Park South. It is assessed that any visual harm resulting from the development of the east site could be limited through mitigation planting. The west site would be harder to assimilate into the landscape. It is highly exposed in

views from the western sections of the Thorndon Country Park South and lacks a clear northern boundary.

- It is therefore concluded that a landscape led approach to the development of the east site will not give rise to any significant landscape and visual effects and will enhance landscape character and restore lost landscape features typical of the area. The lack of an established network of vegetation associated with the west site and the lack of an obvious northern edge to the site means it will be harder to assimilate new housing at the west site into the development.

## drivers for the masterplan

- strengthen the existing network of landscape structure to mitigate development on the site
- selectively add additional hedgerows to further assist in mitigating development impact





+ Viewpoints

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## site visibility continued



Viewpoint 1: View westwards from Childerditch Lane south of the A127, distance from west site approx 500m; distance from east site approx 1100m; 20m AOD.

Views to the east site are blocked by the vegetation associated with properties in West Horndon. The roofs of houses within west site would be visible. The change in the view would be relatively minor.



Viewpoint 2: View westwards from the Church of All Saints, north of the junction of the A127 and A128, distance from east site approx 600m; distance from west site approx 1400m; 45m AOD.

New houses within the east site would appear within the existing, dense network of vegetation which partially screens portions of both the east site and west site. The houses would appear within the mid ground of the view. A small number of houses within the west site would be visible. The changes in view would be relatively minor. The essential character of the view would not change.





Viewpoint 3: View westwards from Station Road west of the junction with the A128, distance from east site approx 0m; distance from west site approx 1000m; 12m AOD.

The view looking westwards along Station Road is dominated by the road and a low clipped hedge. New housing would appear above the existing hedgerows on either side of the road. This would represent a moderate change in view. A strong landscape structure of additional woodland planting would maintain a rural approach to West Horndon and reduce the visual impact of the housing.



Viewpoint 4: View eastwards from Station Road east of West Horndon with the A128, distance from East Site approx 0m; distance from west site approx 600m; 10m AOD.

The view looking eastwards along Station Road would undergo major change. New housing would appear above the existing hedgerows and block views to the Langdon Hills. A strong landscape structure of additional woodland planting would maintain a rural approach to West Horndon. Field 2 would benefit from being divided by a new hedgerow.





Viewpoint 5: View east from the edge of West Horndon Park, distance from east site 0m; distance from west site approx 1500m; 15m AOD.

XXXXX



Viewpoint 6: View south from Octagon Plantation Country Park, distance from east site approx 700m; distance from west site approx 1500m; 50m AOD.

The east site can be seen in the mid-ground of the view. However the site forms only a small proportion of the overall view and is visually broken up by existing vegetation within the site. New houses would be visible however they would appear as a natural extension to West Horndon. In order to reduce the visual impact of the development, existing hedgerows should be maintained and planted with trees. Field 3 should be bisected by a new hedgerow and trees. Housing within the west site would be largely screened from view. The changes in the view would be minor.





Viewpoint 7: View southwards from public footpath within Thorndon Country Park South, distance from east site approx 600m; distance from west site approx 1100m; 40m AOD.

This 90 degree open, panoramic view takes in the hills of Kent and the towers of London. However roadside planting on the A127 screens a large proportion of both sites. The roofs of houses at both sites would be visible in the mid-ground of the view however the change in view would be minor.



Viewpoint 8: View southwards from public footpath within Thorndon Country Park South, distance from East Site approx 800m; distance from west site approx 900m; 55m AOD.

Views of new housing at the east site would be possible. However the homes would represent a relatively minor and insignificant change in the view. Housing at the west site would be highly visible due to the lack of intervening vegetation between the site and the viewer. This would represent a moderate change in the view.





Viewpoint 9: View southwards from public footpath at Jury Hill within Thorndon Country Park South, distance from east site approx 900m; distance from west site approx 900m; 55m AOD.

Views of new housing at the east site would be blocked by existing vegetation on the hill slope south of the Thorndon Country Park South. Housing at the west site would be clearly visible and appear as a large block of housing in the centre of the view. It would be difficult to screen the new housing at the west site effectively.



Viewpoint 10: View westwards from the junction of the entrance of Nuttys Farm and Childerditch Lane, distance from west site approx 0m; distance from east site approx 1100m; 15m AOD.

No housing at the east site would be visible. The addition of new housing at the west site would significantly change this view.