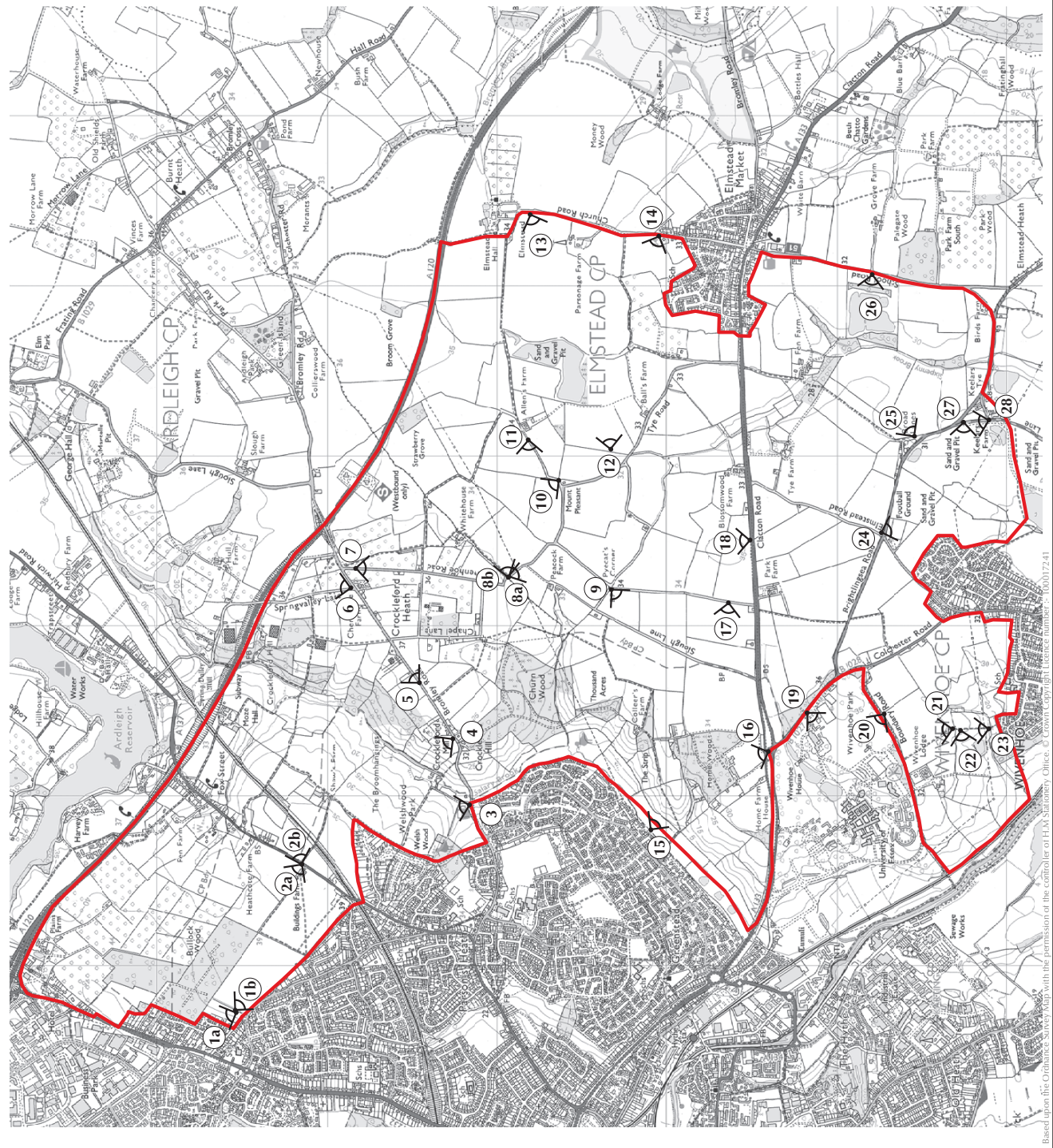


KEY

- Site Boundary
- Viewpoint



**EAST COLCHESTER GROWTH AREA OPTION
ENVIRONMENTAL AUDIT
COLCHESTER BOROUGH COUNCIL**

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VP 1a



VP 1b



VP 2a



VP 2b



VP 3



VP 4



VP 5



VP 6



VP 7



VP 8a



VP 8b



VP 9



VP 10



VP 11



VP 12



VP 13



VP 14



VP 15



VP 16



VP 17



VP 18



VP19



VP 20



VP 21



VP 22



VP 23



VP 24



VP 25



VP 26



VP 27



VP 28

Viewpoint 15

- 3.3.41 Viewpoint 15 shows a view south east into the site from Sherbourne Road (residential) and adjacent cycle route, which runs along the edge of the town. The view shows the partial screening of views by the trees, hedgerows and woodland, as well as the rising topography which also limits the range of views.

Viewpoint 16

- 3.3.42 Viewpoint 16 shows a view north across the junction between the B1027 and A133. The view shows the trees and high hedgerows that typically provide screening across the site, giving only occasional glimpsed views into the fields beyond.

Viewpoint 19

- 3.3.43 Viewpoint 19 shows a view west into Wivenhoe Park from the B1027. The view is very short in range due to the presence of trees and buildings, which provide dense screening along this stretch of the site boundary.

Viewpoint 20

- 3.3.44 Viewpoint 20 shows a view north west from the access road to the University of Essex site at Wivenhoe Park. The view shows the tall parkland trees and hedgerows across the campus that provide screening, giving only intermittent views to the large university buildings. (NB. There will be views from the upper floors of the university buildings into parts of the site)

Viewpoint 21

- 3.3.45 Viewpoint 21 shows a view north (looking towards Wivenhoe Park) from the public footpath between Jack Hatch Way, Wivenhoe and the University of Essex site at Wivenhoe. The view shows the high hedgerows and trees that make up field boundaries and provide screening, obscuring long distance views.

Viewpoint 22

- 3.3.46 Viewpoint 22 shows a view west from the public footpath between Jack Hatch Way, Wivenhoe and the University of Essex site at Wivenhoe Park. The view shows longer distance visibility towards Hythe Marshes and the eastern edge of Colchester, as the topography falls away to the

site boundary and beyond; but the landscape is frequently interspersed with high hedgerows, trees and woodland blocks that provide effective screening, and limit the extent of visibility.

Viewpoint 23

- 3.3.47 Viewpoint 23 shows a view north from the public footpath between Jack Hatch Way, Wivenhoe and the University of Essex site at Wivenhoe Park. The view shows the rising topography towards the north, obscuring views from the residential areas in Wivenhoe (to the south) into the site, and the hedgerows and trees that make up field boundaries and provide screening, obscuring long distance views within the site.

Viewpoints 2, 4, 6, 8b, 9, 10, 11, 12, 13, 14, 17, 18, 25, 26, 27

- 3.3.48 These viewpoints all show views which are typical of much of the Study Area. These are views of varying length across fields, either arable or pasture, which are truncated by the presence of trees and hedgerows. All these views are limited due to the screening effect of the vegetation.

Viewpoints 5, 7, 8a, 24, 28

- 3.3.49 These also all show views which are typical of those from the public roads across much of the study area. The views are limited by high hedges, with only glimpses of the fields beyond, views which are truncated by the presence of trees and hedgerows.

3.4 Constraints and Opportunities

Landscape/Townscape Character

- 3.4.1 The existing character of the small scale, regular shaped, intensive, arable farmland with mature and dense field boundaries along the eastern edge of Colchester, around Wivenhoe and around small settlements; of the medium scale, regular shaped, intensive, arable farmland with mature and dense field boundaries in the rest of Site; woodland/ancient woodland scattered within the Site; and river valleys east of Colchester and south of Wivenhoe, is typical of the wider landscape identified by the national, county and borough landscape assessments discussed in Section 3.3.4 to 3.3.31. However a further detailed study would need to be undertaken to ensure that the landscape character has not changed since 2005.
- 3.4.2 The principal effect of the development of the Site would be a change from a rural arable character to a residential character. The degree of this change would be related to the siting, design and size of the Site and how many of the mature hedgerows and trees would form part of the landscaping for the proposed development.

- 3.4.3 The Site is partially screened from the surrounding urban areas. Therefore development of the Site would be unlikely to have a significant effect on the overall townscape character within the Study Area. The residential properties adjacent to the Site are of mixed age. However the majority have been built post 1960 and therefore depending on the design of the Site, development would potentially be complementary to the surrounding townscape. However a detailed study of the townscape character would need to be undertaken to ensure that the townscape has not changed since 2006 with the constant development that has been observed in the area.

Landscape Designations

- 3.4.4 Development on the Site is unlikely to be constrained by the settings of the Severalls Hospital Grade II Historic Park and Garden or Colchester Castle Grade II Historic Park and Garden, as there is no inter-visibility between these landscape designations and the Site due to the distance involved, the topography of the area and the presence of intervening vegetation and buildings. The High Woods Country Park would also be unaffected by development on the Site for similar reasons. There is, however, likely to be a need to consider protecting the setting of Wivenhoe Grade II Historic Park and Garden, as this designated landscape is adjacent to the south eastern boundary of the Site.

Visual Amenity

- 3.4.5 The flat plateau of the Site is only raised slightly in the northern part of the Site. The Ardleigh River Valley cuts a low lying corridor in north to south direction through the Site. Long distance views within and to the surrounding to the Site are rare due to intervening woodland and mature and dense vegetated field boundaries. There are no inter-visibilitys between Colchester town centre and the Site.
- 3.4.6 Views into the Site are short distance from the immediately adjacent houses of the urban edge of East Colchester, the northern edge of Wivenhoe and around the smaller settlements within the Site. The immediately adjacent houses act as a screen creating only intermittent glimpsed views for other houses further from the Site. In addition, the majority of views are partially screened by the hedgerows and trees at the end of gardens and along field boundaries and adjacent woodland.
- 3.4.7 To the north of the Site, views from and towards the A12 are very limited due to the presence of mature trees and shrubs along the trunk road. There are also some influences from the train

lines which run through the site. But again, views from and towards them are very limited due to the presence of mature trees and shrubs.

3.4.8 Listed Buildings which is located within the Site would potentially be directly affected by development. However the magnitude of this effect would be related to the final siting and design of the development and whether the tall mature vegetation surrounding the residential property would be retained.

3.4.9 In addition, within the Site is a comprehensive network of Public Rights of Way and recreation grounds which provide public access to a large part of the area. The visual amenity of these areas would potentially be affected. However the magnitude of this effect would be related to the final siting and design of the development and whether the tall mature vegetation surrounding the footpaths and recreation ground would be retained.

Landscape Capacity

3.4.10 The Study into the Landscape Capacity of Settlement Fringes in Colchester Borough (Chris Blandford Associates, 2005) assessed the land in the western part of the Site adjacent to the eastern edge of Colchester as generally moderate or high landscape sensitivity. As a result, the capacity of the landscape within this part of the Site is assessed as mostly limited, with some potential capacity to the east of Wivenhoe. The Study concluded that this area has limited ability to be able to accommodate development without degradation of landscape characteristics that are of local value. The Study noted that mitigation and enhancement measures would be required in cases where some limited change is possible.

Green Gaps

3.4.11 The Assessment of Open Countryside between Settlements in the Borough of Colchester (Chris Blandford Associates, 2009) identifies the contribution provided by open countryside in maintaining the physical and visual separation (referred to informally as 'green gaps') between Colchester and adjacent settlements, including Wivenhoe within the Study Area. The overall findings of the Study confirmed that:

The open countryside between settlements generally provides a high contribution to the separation of settlements. The limitations on inter-visibility (i.e. visibility between settlements) and intra-visibility (i.e. the ability to see the edges of two or more settlements from a single point in the intervening landscape) resulting from visual enclosure by landform and vegetation in the open countryside, and the strength of rural character provide a significant contribution to the actual and perceived separation of settlements in many instances. On the basis of the work carried out for this study, areas that provide a high contribution to the separation of settlements are considered to be essential in helping retain the character and identity of the Borough's key settlements,

and should be safeguarded from inappropriate development. Any new built development on this land is likely to seriously undermine the sense of settlement separation and the strong rural character of the land.'

- 3.4.12 With regards to the assessment of the open countryside between Colchester and Wivenhoe specifically, the Study concluded that:

'Any new built development, as defined, on the land identified as providing a high contribution to the separation of settlements is likely to seriously undermine both the sense of settlement separation, and the strong rural character of land outside the university campus. In spite of the visual enclosure provided by field boundary hedgerows, woodland and campus trees, new development would result in a diminished sense of leaving one settlement and entering another for people travelling along the roads and public footpaths between the settlements. Any new development south of the campus is likely to result in visual coalescence with existing campus buildings. There is potential for some new built development to be accommodated within the university campus, provided that the new buildings are not visually obtrusive. Any new development on the eastern side slopes of the Rover Colne Valley would be visually prominent and is likely to be perceived as an extension of Colchester in views from the railway, from western parts of the valley and from viewpoints further to the west.

There is one parcel of land on the northern edge of Wivenhoe, identified as providing a medium contribution to the separation of settlements, which has some potential to accommodate new built development without significantly diminishing the sense of separation between the settlements or the rurality of the remaining undeveloped land. This land parcel has existing built development on its western, eastern and southern edges, is not visually prominent from the wider landscape, and has some visual enclosure provided by peripheral hedgerows.

The narrow stream valley on the southern edge of Colchester, identified as providing a low contribution to the separation of settlements, has the most potential in relative terms to accommodate new built development, as the land is under a strong urban influence and is visually enclosed from most parts of the plateau to the south. Any new built development in this valley would not diminish the sense of separation between the settlements or the rurality of the remaining undeveloped land. However, this assessment does not take account of other issues such as potential flooding and recreational value.'

- 3.4.13 On the basis of this Study, the majority of land within the south-eastern corner of the Site (broadly delineated by Brightlingsea Road, Slough Lane and Churn Wood) is considered to provide a high contribution to the separation of Colchester and Wivenhoe, which is essential in helping retain the character and identity of these settlements. It is therefore considered desirable to safeguard this part of the Site from inappropriate development.

Further Work Recommendations

3.4.14 The following further studies/surveys are recommended to inform the masterplanning, environmental assessment and mitigation for development on the Site:

- A detailed visual impact assessment should be carried out from key locations during winter and summer to assess impact of development proposals on sensitive receptors in and around the Site as appropriate.
- A detailed landscape character assessment of the Study Area should be undertaken to inform assessment of potential landscape impacts and detailed mitigation measures.
- A detailed age and condition tree survey is required to inform the masterplanning process, by setting out the required distance between retained trees and development as defined by British Standard BS 5837:2012.

3.5 Summary

3.5.1 The Environmental Audit has demonstrated that development would change the character of the Site from a rural arable landscape to a residential dominated landscape, and change the nature of views within the Site. The degree of this change would depend on the scale of development and the extent to which mature hedgerows and trees are retained as part of the structural landscape framework for the Site.

3.5.2 The majority of land within the south-eastern corner of the Site (broadly delineated by Brightlingsea Road, Slough Lane and Churn Wood) provides a high contribution to the separation of Colchester and Wivenhoe, which is essential in helping retain the character and identity of these settlements. It is also important to maintain a sense of separation between any new development and the settlement at Elmstead Market, to mitigate the potential for coalescence of these settlements, which will help to retain the character and identity of the village in particular. It is therefore considered desirable to safeguard these parts of the Site from inappropriate development.

3.5.3 In recognition of the Site's high to moderate landscape value and sensitivity in most areas, care is needed through site masterplanning and design to mitigate potential adverse impacts on the adjacent townscape or wider landscape. In particular, care should be taken to avoid loss of the woodlands and hedgerows/field boundaries that form screening elements in views from the edge of Colchester and Wivenhoe. The existing landscape structure across the site should be retained and strengthened.

4.0 WATER QUALITY AND FLOOD RISK

4.1 General

4.1.1 This section identifies the constraints and opportunities for development of the Site in relation to ground/surface water quality and flood risk.

4.2 Audit Methodology

4.2.1 The methodology comprises a review of the baseline conditions of surface and groundwater through a desktop study of available data. The potential issues for development of the Site with regards to the water environment are then considered.

4.2.2 The Study Area for the audit extends 1km around the Site.

4.3 Existing Conditions

Groundwater

4.3.1 The Site is located on Thames Group bedrock (previously known as London Clay) – this is silty clay/mudstone, sandy silts and sandy clayey silts of marine origin. Much of the bedrock within the Site is overlain by glacial till. The clay, silt, sand and gravel has led to the presence of a secondary aquifer beneath the majority of the Site.

4.3.2 Due to the nature of this Environmental Audit and the lack of borehole information at this stage, the extent and how deep underground the secondary aquifer is located is not known. However due to the variable permeability of the geology, groundwater would tend to be perched in the more permeable bands and lenses and may be encountered close to the surface.

4.3.3 The nearest groundwater protection zones are in the centre of Colchester, north of Abberton (south of the site), and around Great Bentley (east of the site). These groundwater protection zones are delineated by the Environment Agency to protect groundwater sources of public water supply.

Surface Water

4.3.4 As shown on **Figure 3.2**, a number of watercourses run through or close to the Site. Salary Brook runs from Ardleigh reservoir to the north of the A120, and crosses the northern part of

the Site, to the eastern edge of Colchester, where it follows the valley along the edge of Colchester/site boundary until it joins the River Colne beyond the south-western edge of the site, adjacent to Wivenhoe Park. The River Colne is the main river flowing through the centre of Colchester. Other water bodies include Sixpenny Brook, in the south-eastern quarter of the site, and restored sand and gravel pits.

Water Quality

4.3.5 The Site lies within the Anglian River Basin District, and the Combined Essex Catchment. Since 2009 the implementation of the Water Framework Directive has led to the provision of detailed classification information about the ecological and chemical status of UK rivers. Under the directive, the UK will have to ensure that there is no deterioration in the quality of our water bodies, and that all water bodies improve to reach ‘good ecological status’ as soon as possible. The current chemical and ecological status (most recent data available from 2014), and comparable status from 2009, where available, is set out in **Table 5.1**.

Table 5.1: Summary of Water Quality Monitoring Data¹³

River	Property	Date	Grade ¹⁴
Colne	Chemical (overall)	2013 (Cycle 2)	Good
	Chemical (overall)	2014 (Cycle 1)	Good
	Ecological (overall)	2013 (Cycle 2)	Moderate
	Ecological (overall)	2014 (Cycle 2)	Moderate
Salary Brook	Chemical (overall)	2009	N/A
	Chemical (overall)	2014 (Cycle 1)	N/A
	Chemical (overall)	2014 (Cycle 2)	Good
	Ecological (overall)	2009	Moderate
	Ecological (overall)	2014 (Cycle 1)	Moderate
	Ecological (overall)	2014 (Cycle 2)	Moderate
Sixpenny Brook	Chemical (overall)	2009	N/A
	Chemical (overall)	2014 (Cycle 1)	N/A
	Chemical (overall)	2014 (Cycle 2)	Good
	Ecological (overall)	2009	Poor
	Ecological (overall)	2014 (Cycle 1)	Bad
	Ecological (overall)	2014 (Cycle 2)	Bad

4.3.6 The results in **Table 5.1** show that the ecological quality of the River Colne is yet to reach the required ‘Good’ standard, due to only a ‘Moderate’ score for presence of invertebrates, the cause of which is noted to be ‘unknown’. The river also has only a ‘Moderate’ score for quantities of dissolved inorganic nitrogen, preventing an overall score of ‘Good’. It does however have ‘Good’ chemical status.

¹³ Based on available water quality monitoring data from the Environment Agency between 2009 and 2014

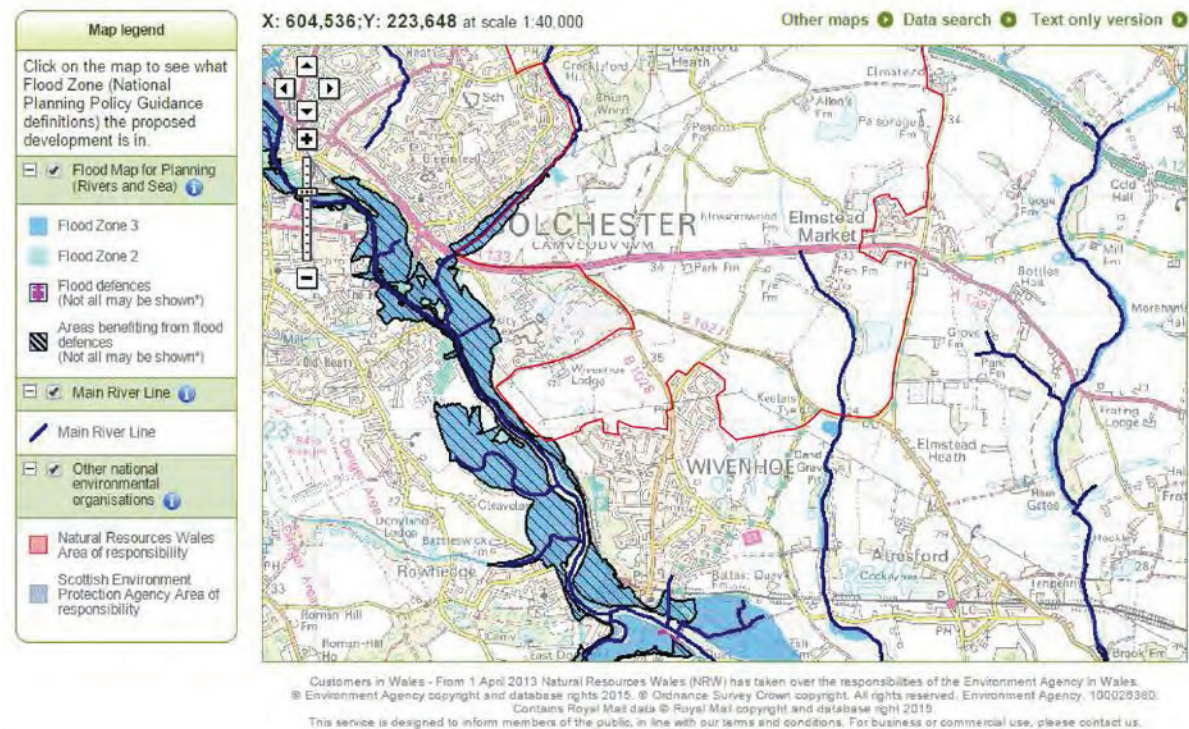
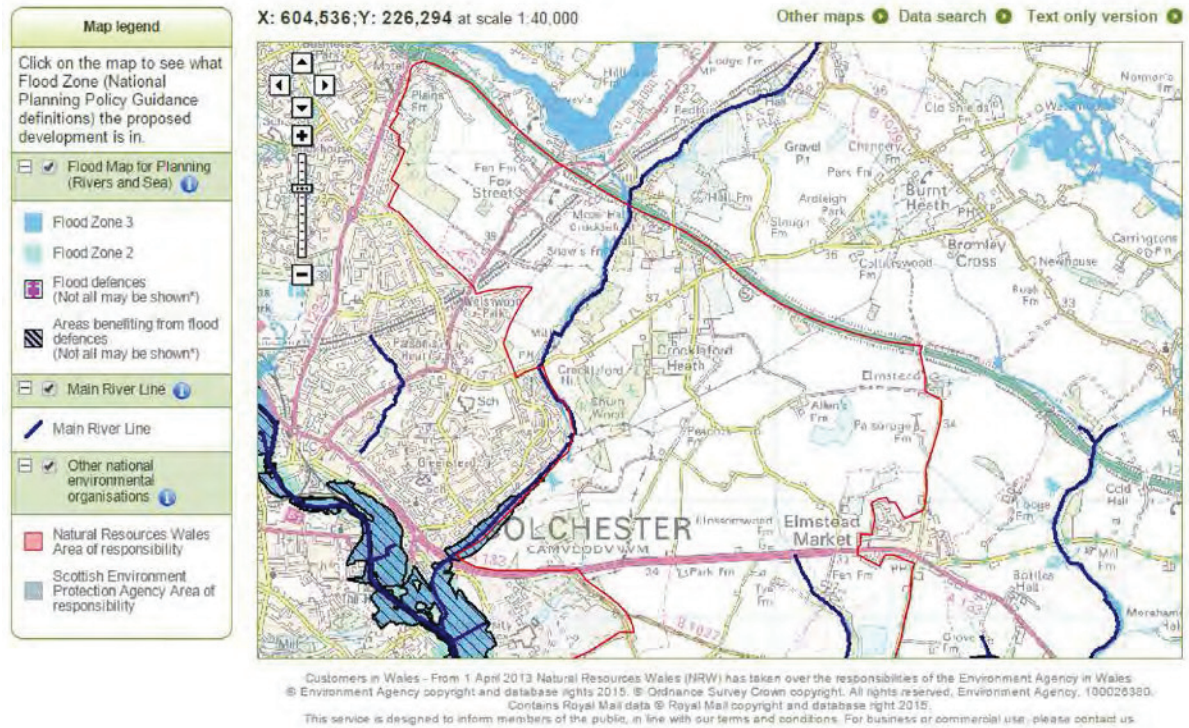
¹⁴ Chemical status: is recorded as good or fail. A status of good means that concentrations of priority substances and priority hazardous substances do not exceed the environmental quality standards in the EQS Directive. Ecological Status: There are five classes of ecological status (high, good, moderate, poor or bad). Ecological status applies to surface water bodies and is based on the following quality elements: biological quality, general chemical and physico-chemical quality, water quality with respect to specific pollutants (synthetic and non-synthetic), and hydromorphological quality.

- 4.3.7 Salary Brook has not yet reached the required 'Good' ecological standard, due to 'Poor' fish and invertebrate ratings alongside 'Good' ratings for macrophytes and phytobenthos during 2014. It is noted that the 'Poor' fish rating and also a moderate score for phosphates are suspected to be due to the nature of the agricultural and rural land management practices in the area. It does however have 'Good' chemical status.
- 4.3.8 Sixpenny Brook has not yet reached the required 'Good' ecological standard, due to a 'Bad' fish rating, and 'Moderate' ratings for both invertebrates and macrophytes and phytobenthos during 2014. It does however have 'Good' chemical status.

Flood Zones

- 4.3.9 As shown on **Figure 4.1**, the Environment Agency's Flood Zone mapping within the Study Area includes the River Colne and its tributaries (Salary Brook and Sixpenny Brook).
- 4.3.10 Flood Zone 3 shows the area that could be affected by flooding, if there were no flood defences. This area could be flooded: from the sea by a flood that has a 0.5 per cent (1 in 200) or greater chance of happening each year; or from a river by a flood that has a 1 per cent (1 in 100) or greater chance of happening each year.
- 4.3.11 Flood Zone 2 shows the additional extent of an extreme flood. The combination of Zones 2 and 3 show the extent of the natural floodplain if there were no flood defences.
- 4.3.12 Within the Site, small areas of Flood Zones 2 and 3 are associated with both Salary Brook and Sixpenny Brook. The floodplains of these brooks are located along the western boundary of the Site (Salary Brook) and along much of the extent of Salary Brook as it cuts across the northern part of the Site. Sixpenny Brook has small pockets of floodplain along its length where it flows across the Site in the south.

Figure 4.1 - Environment Agency Flood Zones



 Indicative Site Boundary

4.4 Constraints and Opportunities

Pollution Effects on Groundwater Quality

- 4.4.1 The presence of an underlying secondary aquifer beneath the Site provides the potential for contamination of groundwater through leaching of water through the ground during construction and operational activities.
- 4.4.2 During construction, certain activities such as piling could create a pathway for pollutants at the surface to reach groundwater. This could be an issue where and if ground containing elevated concentrations of contaminants were to be encountered. There would also be a risk during piling of spillage or leakage of oil or fuel or other liquid chemicals, which could reach the hole into which the pile is being sunk with a resultant risk to groundwater.
- 4.4.3 Once any future development is completed, assuming there are no proposed discharges to groundwater from the development, the risk to groundwater would be low. Where piped drainage systems are proposed there would be minimal risk of infiltration of drainage water into the ground. Where filter drains or open channels are used to convey drainage water there would be a risk of infiltration into the ground with a potential low risk of contamination to groundwater.
- 4.4.4 The groundwater protection zones are too far from the Site to be potentially significantly affected by development.

Pollution Effects on Surface Water Quality

- 4.4.5 During the construction and operation of any proposed development there would be potential for debris and liquid pollutants to fall into the ditches that cross the Site that would drain into Salary Brook, Sixpenny Brook and subsequently into the River Colne. There would also be a risk of release of dust into the atmosphere, some of which could be deposited in the nearby water bodies. This risk could be minimised through effective pollution control measures including the use of Sustainable Urban Drainage Systems (SUDS).

Flood Risk

- 4.4.6 The overwhelming majority of the Site is located outside Flood Zones 2 and 3. The only areas within Flood Zones 2 and 3 are located immediately adjacent to the brooks which flow across the Site, which present a constraint to development. Through the use of SUDS and balancing

ponds, the rate of discharge to the surrounding watercourses could be controlled minimising the risk of flooding downstream of the Site.

Further Work Recommendations

- 4.4.7 It is recommended that the masterplanning, environmental assessment and mitigation for development of the Site is informed by the findings of the Water Cycle Study and Strategic Flood Risk Assessment recently commissioned by Colchester Borough Council.

4.5 Summary

- 4.5.1 With implementation of effective mitigation measures, no significant constraints to development of the Site are anticipated in relation to protection of ground or surface water from pollution. The floodplain of Salary Brook or Sixpenny Brook presents a constraint to development in these areas.

5.0 RECOMMENDED MITIGATION MEASURES

5.1 General

5.1.1 The Environmental Audit provides information on the potential constraints and opportunities for development within the Site with regards to ecological, landscape/visual and water quality/flood risk considerations. This section identifies recommended mitigation measures and principles that should be considered for future masterplanning of the Site in relation to these environmental topics.

5.1.2 There are considerable opportunities to minimise potential adverse effects of development and provide green infrastructure benefits through the Site masterplanning process. The mitigation measures outlined below would support the objectives of the Colchester Borough Green Infrastructure Strategy for conserving and enhancing areas of existing wildlife habitat; responding to landscape character; and the conservation and enhancement of landscape assets. Strengthening the Public Rights of Way corridors through the retention and enhancement of adjacent hedgerows and vegetation belts across the Site would help provide screening for development land parcels, as well as providing habitat corridors to aid the dispersal for protected species.

5.1.3 It should be noted that the mitigation measures outlined below are not exhaustive; they are intended to provide broad guidance on the type of measures that are likely to be necessary in order to achieve a sustainable development on the Site.

5.2 Ecological Mitigation

5.2.1 It is recommended that masterplanning of the Site should seek to:

- Retain and safeguard important habitats and areas, including those identified in Section 2.3 above.
- Buffer sensitive habitats, such as Ancient Woodland and wetland, from any proposed development using strips of undeveloped land between the relevant habitats and proposed development sites or areas.
- Retain wide green corridors, for example building upon the existing hedgerow network, especially where this includes mature trees, within and through developed areas, and linking other retained (and created) areas of habitat, both within and outside any development.
- Retain mature trees within any proposed development, preferably within wider areas of semi-natural habitat or green corridors.

- Enhance retained habitats by appropriate positive management, such as coppicing, grazing etc.
- Create new areas of habitat, such as woodland, scrub, grassland and wetland, including ponds, targeted especially adjacent to or between retained existing areas of habitat in order to expand and link them, thus making them more resilient.
- Retain and enhance (through habitat creation and management) habitat links to the wider landscape, for example to the Colne Valley.

5.2.2 During the design of the development it would be advisable to include the retention of habitats and protected species wherever possible. The habitats of greatest nature conservation importance within the Site are the:

- woodlands, especially Ancient Woodland;
- hedgerow network, especially where this is in relatively good condition, well connected and where it includes mature trees;
- more species-rich grassland, such as that in the Salary Brook Valley (e.g. TN21 and 22); and
- wetland habitats, including the Salary and Sixpenny Brooks and associated swamp habitat and waterbodies.

5.2.3 Other habitats, such as the species-poor grassland, ruderal and arable are of less importance, although locally they may have significance for some species, such reptiles and skylark.

5.2.4 Based on the distribution of habitats within the Site the most important areas are considered to be;

- Bullock Wood;
- The Salary Brook Valley and immediately adjoining areas, including woodland, hedges, grassland and wetland; and
- The Sixpenny Brook corridor, including adjoining waterbodies.

5.2.5 Also of importance is the mosaic of habitats, including woodland, scrub, grassland, ruderal and ponds to the east of Wivenhoe, and including Wivenhoe Cross Pit LWS and Wivenhoe Gravel Pit SSSI.

5.3 Landscape and Visual Mitigation

5.3.1 Consideration should be given to retaining key landscape features within the Site through the masterplanning process. These would include the field hedgerows, mature trees and the woodland copses. Ancient woodland should also be protected wherever possible. In addition

to providing benefits for ecology and nature conservation, the retention of these landscape features would help screen development from the existing residential properties in settlements surrounding the edge of the Site, as well as maintaining the existing views. Where there are gaps in hedgerows, new planting with native species would help enhance the existing hedgerows and strengthen screening.

- 5.3.2 Where access and other infrastructure is required to cross an existing hedgerow, consideration should be given to using existing gaps and weaknesses in the hedgerows wherever possible. Mature hedgerows and hedgerow trees are not easy to recreate and their removal should be avoided as far as possible. There is also the opportunity to screen key views from the existing public rights of way that cross the Site by enhancing hedgerows along footpaths.
- 5.3.3 In addition, careful consideration should be given to the design and siting of street lighting to reduce the night-time visual impact of development on the surrounding countryside.

5.4 Water Quality and Flood Risk Mitigation

- 5.4.1 There is the opportunity to provide protection for the water quality of surrounding water bodies and the secondary aquifer located beneath the Site through incorporation of Sustainable Urban Drainage Systems (SUDS) into the Site layout, and also through the use of pollution prevention systems to control the risk of contamination to groundwater and surface water.
- 5.4.2 Development should avoid being located within the floodplains of Salary Brook and Sixpenny Brook (Flood Zones 2 and 3). If development is required to be located in the floodplains, flood storage compensation measures would be required to minimise changes to the capacity of the floodplain and therefore minimise the risk of downstream flooding.

6.0 SUMMARY AND CONCLUSIONS

6.1 General

6.1.1 The key findings and conclusions of the Environmental Audit are summarised in this section, and the key areas of constraint are set out in **Figure 6.1**.

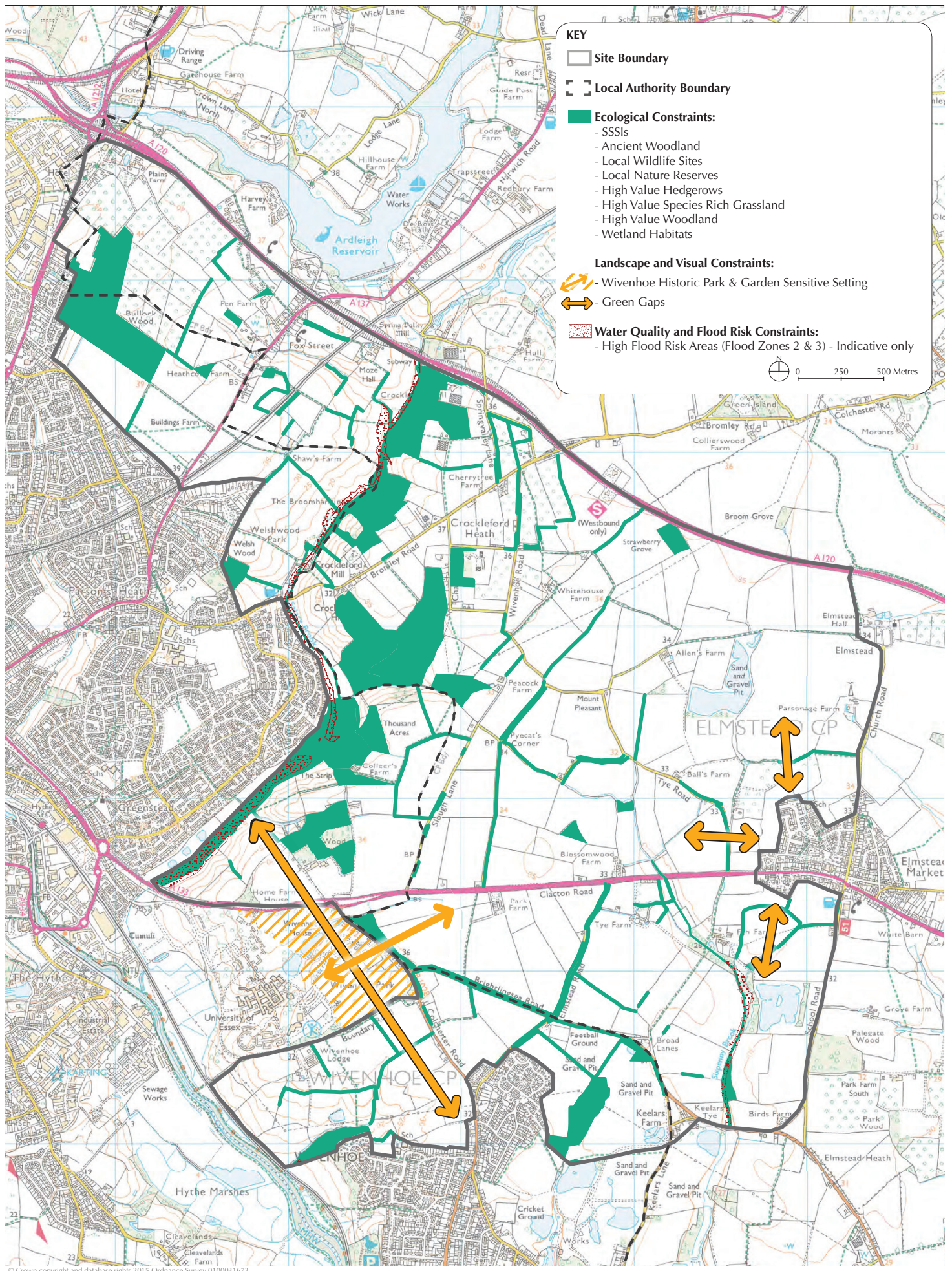
6.2 Ecology and Nature Conservation

6.2.1 Much of the Site consists of arable fields set within a more or less intact hedgerow network, which includes mature and veteran trees. There are also significant areas of woodland, including Ancient Woodland, some relatively species-rich grassland and wetland habitats, including streams, ponds and swamp. Apart from the Nationally Important Bullock Wood in the north west of the Site these habitats are concentrated along the valleys or corridors of the Salary Brook and Sixpenny Brook, and it is recommended that habitats in these areas in particular are retained and enhanced in relation to any potential or proposed development within the Site. The Site also has the potential to support a number of protected species and other species of conservation importance and more detailed surveys will be required for these, as appropriate, in relation to any proposed development.

6.3 Landscape and Visual Amenity

6.3.1 The Environmental Audit has demonstrated that development would change the character of the Site from a rural arable landscape to a residential dominated landscape, and change the nature of views within the Site. The degree of this change would depend on the scale of development and the extent to which mature hedgerows and trees are retained as part of the structural landscape framework for the Site.

6.3.2 The majority of land within the south-eastern corner of the Site (broadly delineated by Brightlingsea Road, Slough Lane and Churn Wood) provides a high contribution to the separation of Colchester and Wivenhoe, which is essential in helping retain the character and identity of these settlements. It is also important to maintain a sense of separation between any new development and the settlement at Elmstead Market, to mitigate the potential for coalescence of these settlements, which will help to retain the character and identity of the village in particular. It is therefore considered desirable to safeguard these parts of the Site from inappropriate development.



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6.3.3 In recognition of the Site's high to moderate landscape value and sensitivity in most areas, care is needed through site masterplanning and design to mitigate potential adverse impacts on the adjacent townscape or wider landscape. In particular, care should be taken to avoid loss of the woodlands and hedgerows/field boundaries that form screening elements in views from the edge of Colchester and Wivenhoe. The existing landscape structure across the site should be retained and strengthened.

6.4 Water Quality and Flood Risk

6.4.1 With implementation of effective mitigation measures, no significant constraints to development of the Site are anticipated in relation to protection of ground or surface water from pollution. The floodplain of Salary Brook or Sixpenny Brook presents a constraint to development in these areas.

6.5 Overall Conclusions

6.5.1 In accordance with the Council's requirements, this Environmental Audit has provided a preliminary appraisal of the constraints and opportunities for development of the Site in respect of the following environmental considerations:

- Ecology and Nature Conservation.
- Landscape/Townscape Character and Visual Amenity.
- Water Quality and Flood Risk.

6.5.2 Within the scope of this Environmental Audit, no constraints have been identified that would at this stage preclude further consideration of the Site as a potential growth area (assuming that the recommended mitigation measures are implemented and the further surveys/studies undertaken).

6.5.3 Other environmental considerations may present constraints to development on the Site, such as cultural heritage and agricultural land use. These have not been considered in the scope of this Environmental Audit, and may need to be taken into account in determining the suitability of the Site for development.



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