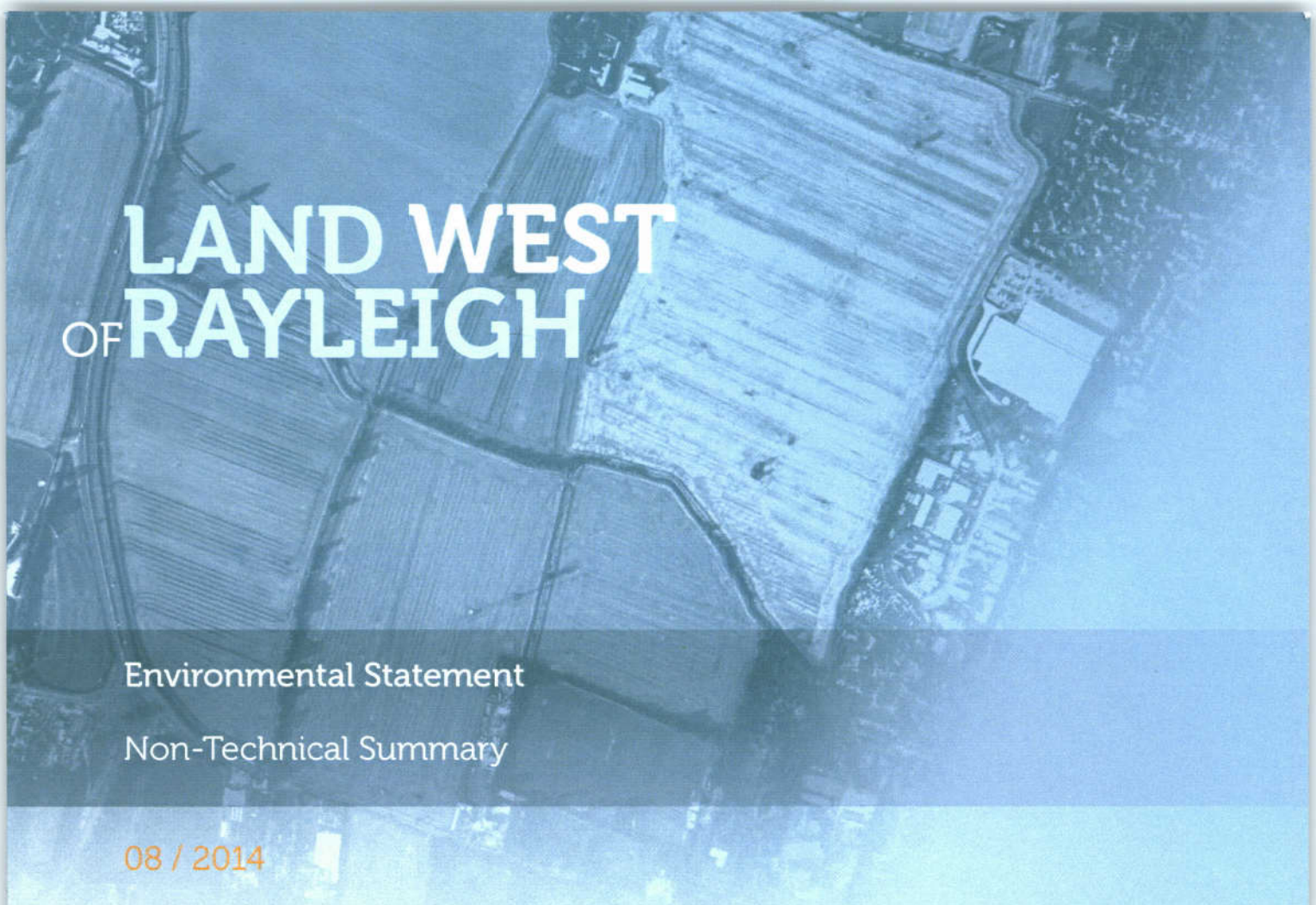

LAND WEST OF RAYLEIGH

Environmental Statement

Non-Technical Summary

08 / 2014

Terence O'Rourke
Planning | Design | Environment

COUNTRYSIDE
.Places People Love

Non-technical summary

Introduction

NTS.1 Countryside Properties (UK) Limited is applying to Rochford District Council (RDC) for planning permission for primarily residential development on land to the west of Rayleigh. This application seeks the approval:

a) In outline for residential development, non-residential development (including possibly: retail, restaurant, public house, residential care, medical use, crèche / day nursery / day centre), reservation of land for a primary school, open space, landscaping, a link road from Rawreth Lane to London Road, parking, servicing, utilities, footpath and cycle links, drainage and infrastructure works

b) In detail for access arrangements at the junctions of the proposed link road with Rawreth Lane and London Road, and the proposed access arrangement from the Rawreth Lane Industrial Estate access road into the Application Site

NTS.2 Figure NTS1 attached to this document shows the location of the Application Site in relation to Rayleigh and the application boundary.

NTS.3 An environmental impact assessment (EIA) has been undertaken, in accordance with schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011, to consider the potential for likely significant environmental effects to occur at the Application Site as a result of the proposed development. An environmental statement (ES) has been prepared to report the findings and its key elements are summarised in this non-technical summary.

The proposed development site

NTS.4 The Application Site extends to 46.7 hectares, lying to the west of Rayleigh, between London Road and Rawreth Lane. The centre of the Application Site lies around 2 km north west of Rayleigh town centre.

NTS.5 With the exception of a small area of vacant land to the north east corner of the Application Site, adjacent to the entrance to the Rawreth Industrial Estate, the entirety of the Application Site is currently in agricultural use with hedgerows bordering the western sides of the Application Site.

NTS.6 To the east, the Application Site adjoins the existing built-up area of Rayleigh, which on the immediate boundary of the Application Site comprises a mix of residential uses, a Makro store, and the Rawreth Industrial Estate. The adjoining Sweyne Park neighbourhood also includes Sweyne Park Secondary School, St Nicholas' Church of England Voluntary Controlled Primary School, an Asda supermarket, Rayleigh Leisure Centre, and Sweyne Park itself.

NTS.7 To the north, the Application Site abuts Rawreth Lane, beyond which the land is predominantly open farmland. Farmland adjoins the Application Site to the west as well. To the south, the Application Site has a frontage to London Road, but also adjoins the Rayleigh Town Sports and Social Club site, which provides a range of outdoor playing pitches.

NTS.8 The Rawreth Brook crosses the Application Site, flowing from east to west, and forms a shallow valley in the centre of the Application Site. There is a general fall from east to west, with the existing urban area being generally higher than the adjoining Application Site. There is also a general fall from north to south, with Rawreth Lane lying on higher ground than London Road. Another feature of the Application Site is the high voltage cables that cross it in a north-south direction.

NTS.9 The River Crouch is located approximately 2 km to the north of the Application Site and forms part of the Crouch and Roach Estuaries Special Area of Conservation (SAC), Ramsar site and Site of Special Scientific Interest (SSSI) and the Essex Estuaries Special Protection Area (SPA). The nearest listed building to the Application Site is a grade II listed barn, approximately 80 m to the west. Figure NTS2 shows the location of sensitive receptors in relation to the Application Site.

The proposed development

NTS.10 Figure NTS3 illustrates the proposed distribution of land uses across the Application Site. The main land use will be residential development (15.11 ha) and this will accommodate residential dwellings of a range of sizes, types and tenures, including 35% affordable housing. 1.12 ha of land towards the north east of the Application Site is reserved for a one-form entry primary school with associated playing fields, playground and staff car park. A 0.38 ha area in the north east corner of the Application Site is proposed for non-residential development (including possibly: retail, restaurant, public house, residential care, medical use, crèche / day nursery / day centre). A 0.15 ha area, situated between the non-residential development area and the land reserved for the primary school, is also reserved for health care provision.

NTS.11 A 1.61 ha area for outdoor sports facilities is proposed towards the south of the Application Site, where its location could enable its incorporation into the existing sports club to the immediate south of the boundary. A range of public open spaces will also be provided across the Application Site, including play space and land for allotments (Figure NTS3).

NTS.12 Structural planting proposed on the western side of the Application Site will be incorporated into the proposed development, creating green corridors and buffers between the proposed development and the wider countryside. There is a belt of protected Tree Preservation Order (TPO) trees along the eastern boundary of the Application Site, immediately adjacent to the Rawreth Industrial Estate. The proposed development will retain all the TPO trees and as many of the other existing trees as possible.

NTS.13 While the building heights parameter plan (Figure NTS4) allows for buildings to be up to three storeys high in parts of the site, most of the residential development will be up to two and a half storeys high. The proposed dwellings will be developed at a range of densities (Figure NTS5), from 25 to 29 dwellings per hectare in the western part of the Application Site and north of Rawreth Brook to 34 to 38 dwellings per hectare in the eastern part of the Application Site.

NTS.14 Figure NTS6 shows the new link road proposed through the Application Site, connecting Rawreth Lane to London Road. The two access points from the

link road onto London Road and Rawreth Lane will be in the form of priority junctions, with priority given to London Road at the southern access and Rawreth Lane at the northern access.

NTS.15 The Application Site and link road have been designed so that a bus can run through the Application Site, encouraging new residents to use the bus service. Figure NTS6 shows the route of the proposed bus link. The bus route will connect to the existing Rawreth Lane Industrial Estate access road to the east of the Application Site.

NTS.16 Access from the link road into the proposed residential development will be provided via a network of smaller roads. These will link the various residential parcels to each other as well as to the public open spaces, play space, outdoor sports facilities and the non-residential uses, including the land reserved for the school and health provision. Most of the residential properties will be accessed via side streets or minor roads, which will be designed for speeds of 20 mph.

NTS.17 A network of footpaths and cycleways will be provided within the Application Site (Figure NTS6) to ensure good linkages between the proposed residential areas and adjoining open spaces and non-residential uses. The routes proposed have generally been located within green corridors. Footway links to the east of the Application Site, onto Rawreth Lane Industrial Estate access road, will provide a direct means of access to surrounding residential areas.

NTS.18 The proposed surface water drainage strategy will be designed to mimic the natural drainage of the Application Site and will incorporate a range of sustainable drainage system (SuDS) techniques including permeable paving, under-drained or traditional swales (lower lying areas/ditches) and ponds. Surface water runoff from the proposed development will drain into three basins towards the centre, west and south of the Application Site before discharging into the Rawreth Brook at controlled rates.

NTS.19 No residential development is proposed within the flood zones of the Rawreth Brook. The flood zones within the red line boundary will be maintained as open space running alongside the brook and linking to other open space to the west of the Application Site.

NTS.20 Figure NTS7 indicates how the proposed development could be constructed. It is currently envisaged that Application Site preparation / infrastructure work will start in Spring 2015 and house building construction work will start in late Autumn 2015, with all work completed by 2019. It is estimated that over the whole development period an average of 150 homes will be delivered each year, with a maximum of around 165 in any one year.

NTS.21 It is expected that the construction of the link road will commence initially from the north, off Rawreth Lane, then soon afterwards from the south, off London Road, with the central section of the road and bridge crossing then completing the link. It is proposed that the open space will be delivered in stages with the development areas. It is not known at this stage when Essex County Council would construct the primary school (or deliver off-site capacity increases if that is preferred), but as the Education Authority, Essex County Council has responsibility for ensuring sufficient school places exist. Development of the non-residential built elements of the proposed development will be guided by market forces.

Alternatives

NTS.22 The Application Site lies within a location identified in RDC's Core Strategy for the construction of a minimum of 550 new homes by 2021. The Application Site forms part of the land subsequently identified as site SER1 in the council's adopted Site Allocations Plan, which similarly proposes the construction of new homes at the Application Site. No consideration was therefore given to alternative sites.

NTS.23 The master plan for the Application Site has evolved over time and has been subject to a number of changes following consultation and the findings of baseline environmental studies. The main aspects of the master plan where alternatives were considered were:

- The number of dwellings that can be accommodated within the Application Site – detailed master planning work allowed the number of dwellings on the Application Site to be refined and the parameters on which the EIA was based were revised to consider a scheme of 500 dwellings plus 20 for robustness (520 dwellings in total)
- The alignment of the link road – as a key structuring element of the design, the link road alignment was tested in various locations with reference to the flood zones, topography, pylons and potential visibility of the road
- The position of the playing pitches – considering the topography and the relationship between the proposed and existing adjacent sports fields
- The location of the central green – ensuring the space was entirely on the higher point of the Application Site.
- The northern green corridor – the initial options showed a very linear corridor, with later iterations more fragmented to help break up the space and restrict views of the larger industrial units adjacent to the eastern boundary of the Application Site
- Health provision – the need to locate it on the bus route and allow traffic to access the health facility without passing residential dwellings were key considerations
- Primary school – early discussions with Essex County Council's education department indicated that school provision would not be necessary within the Application Site. However, the Council subsequently revised its position, deeming a primary school would be necessary. The position of the school site was established to be in close proximity to new and existing residents, bounding the north east of the Application Site, on the proposed bus route and on flatter ground to ensure suitability for the provision of school playing pitches, and at a location that could be serviced relatively early in the construction programme
- The location of on-site drainage ponds was determined by the proposed built layout, existing ground levels and the need to site the ponds outside the floodplain

NTS.24 Further details of the evolution of the master plan and design rationale can be found in the Design and Access Statement submitted in support of the planning application.

Assessment methodology

NTS.25 The initial stage of the EIA was the production of a scoping report that identified the potential environmental effects to be addressed during the process. This was issued to a range of consultees for comment and a number of additional issues were identified.

NTS.26 The various specialist assessments, discussed in more detail below, followed generally similar methodologies. All methodologies were undertaken in accordance with current guidance and best practice. Desk and / or field studies were undertaken to establish the existing situation (the baseline) at and surrounding the Application Site. The effects of the proposed development were established using a method that compares the sensitivity and importance of receptors[1] with the likely size of the predicted change to establish the degree of the effects. If the combination of the above factors result in a degree of effect that is moderate or above then the effect is considered to be significant. Significant effects can be either beneficial or adverse. Slight or negligible effects are not considered to be significant.

NTS.27 The degree of an effect determines the resources that should be put in place to avoid or reduce (mitigate) an adverse significant effect and identifies the actual value of a beneficial significant effect.

Cumulative effects

NTS.28 For the purposes of assessing any likely significant effects of the proposed development on other schemes that are operational, constructed, consented, for which planning permissions are currently being sought, or that are identified in RDC's adopted Site Allocation Plan, the following were identified during the scoping process for inclusion within the ES:

- The total developable amount within the Council's Core Strategy allocation and Site Allocation Plan SER1, including the Application Site (550 dwellings, plus a 10% increase for robustness, giving a total of 605 dwellings)
- The Hullbridge development (500 dwellings)
- The Rawreth Industrial Estate development (220 dwellings)

Environmental effects

Air quality

NTS.29 The air quality assessment focused on development generated traffic-related pollutants (nitrogen dioxide and fine particulate matter), although construction dust was also addressed. A number of representative sensitive residential receptors were identified in the surrounding area and the existing sources of emissions (such as those associated with the adjacent industrial estate) were considered.

NTS.30 Background levels of nitrogen dioxide and particulate matter were obtained from RDC's monitoring programme and DEFRA's modelling data[2]. This information was then used to model air quality at sensitive receptors in the

[1] A receptor is a part of the natural or man made environment, such as a river, a woodland, a person or a building, that is affected by an impact

[2] The Department of the Environment, Food and Rural Affairs, UK Air website

vicinity of the Application Site. This indicated that levels of nitrogen dioxide and fine particulate matter at all receptors considered are well below the national air quality objectives for these pollutants, meaning that air quality in the area is good.

NTS.31 During the construction process, there is the potential for increased dust generation from activities such as site preparation, earthworks and transportation and storage of materials. A range of best practice mitigation measures will be put in place to ensure there will be no significant effects on local sensitive receptors from increased dust generation. These measures will include road sweeping, covering stockpiles, and using water to minimise dust.

NTS.32 The modelling undertaken to predict post-construction emissions (based on the traffic data provided within the traffic assessment) showed that there will be no significant increase in the concentrations of nitrogen dioxide or particulate matter as a result of the proposed development.

NTS.33 The other schemes being considered cumulatively will be required to put in place similar best practice construction measures to restrict dust generation. No cumulative dust effects are predicted. The traffic modelling did not predict any significant cumulative effects on air quality post-construction.

Community, social and economic effects

NTS.34 The provision of new dwellings, open space, land for a primary school, and other non-residential uses has the potential to have effects on the existing local community, current conditions in the Downhall and Rawreth ward, Rayleigh town centre and Rochford district as a whole through the increase in population, provision of new housing, generation of employment and increased demand for and provision of community facilities and services.

NTS.35 Downhall and Rawreth ward's demography shows that there is a slightly higher percentage of children under 16 and residents of working age, with a correspondingly lower percentage of residents over the age of 65 years, compared with the district, regional and national averages. The ward also has a higher proportion of households consisting of couples (both with and without children) and a lower proportion of single people and pensioners compared with the average.

NTS.36 RDC has a supply of deliverable housing sites to cover the next five years, but has failed to meet its housing targets in the past, and there is an existing shortage of affordable housing in the district. Unemployment in the area (both ward and district level) is lower that the regional and national averages. Rayleigh town centre has a range of convenience and comparison-shopping, and there are relatively few vacant shops. Rayleigh is considered to be well provided for in terms of open space and leisure facilities.

NTS.37 Whilst there is limited spare capacity in the two primary schools closest to the Application Site, other schools in the district are nearing or over capacity. Both secondary schools in Rayleigh are over capacity. There are several doctors surgeries within Rayleigh and the NHS has advised that all practices in the area should be considered to be at capacity. None of the three NHS dental practices in Rayleigh are accepting new patients.

NTS.38 It is estimated that the construction of the proposed development will generate approximately 225 construction jobs and 450 supply chain jobs, which, whilst representing a slight beneficial effect, is not considered to be significant. The existing footpath adjacent to the north east of the Application Site will be retained and safeguarded during construction.

NTS.39 There will be a long term increase in population when the development is occupied, which, although of moderate significance to ward level demography, will not be significant at a district level. The proposals will lead to an increase in housing provision in the area, which will be of moderate significance at ward level and will give rise to a slight, beneficial effect at the district level that will not be significant. The proposals will lead to a very substantial, beneficial effect to the availability of affordable dwellings in the district. Once complete, the mixed-use and the primary school elements of the proposals will generate employment, but this slight, beneficial effect will not be significant.

NTS.40 Financial contributions will be made through legal agreements to provide for the increase in demand for secondary school places. Should Essex County Council decide not to provide a primary school on the land reserved for this purpose, and there is no commercial interest in a doctors surgery on the Application Site, a similar arrangement will be made for contributions to primary education and GP services. A slight to moderate, significant adverse effect on demand for NHS dental provision in Rayleigh is predicted as a result of the increase in the town's population.

NTS.41 Cumulatively, with the other schemes as set out above, there will be a large increase in affordable housing provision in the district, which will be a very substantial, significant, beneficial effect. The cumulative population increase (which is slight and therefore not significant) will give rise to an increase in demand for businesses in Rayleigh. Overall, this is likely to be a change of medium magnitude, leading to a moderate, significant beneficial cumulative effect. There will also be an associated increase in pressure on schools, health services, community facilities and open spaces. However, the other schemes will also be subject to financial contributions through legal agreements, so no significant cumulative effects on these issues are predicted.

Cultural heritage

NTS.42 The Application Site has been the subject of numerous assessments in order to appreciate the likely impact the proposed development could have on the cultural heritage resource, both on the Application Site and in the immediate vicinity. There are no scheduled monuments, listed buildings, or registered parks and gardens within the Application Site. The nearest listed building, an 18th/19th century grade II listed barn, is 80 m to the west of the Application Site. Another 40 m to the west is Rawreth Hall, a locally listed building.

NTS.43 A range of archaeological survey work was undertaken in consultation with the historic environment advisor of Essex County Council, which focussed on areas proposed for built development across the Application Site. The results have shown that a Late Iron Age/Romano-British farmstead survives in the southern portion of the Application Site. While archaeology was uncovered, none has been deemed of such significance to be preserved in place.

NTS.44 A mitigation strategy to preserve this suspected Late Iron Age/Romano-British farmstead by record, i.e. full excavation, is proposed and delivers a beneficial effect in terms of understanding this former, previously unknown settlement. Appropriate levels of dissemination of the results will ensure the findings are known by as wide an audience as possible.

NTS.45 The proposed development will change the character of the urban edge of Rayleigh closest to Rawreth Hall and visible in longer distance views of the listed barn. A new landscaped western approach to Rayleigh will be created, leading to a slight to negligible change to the setting of these buildings, which will not be significant.

NTS.46 No information is available about potential archaeological resources at the three cumulative sites, so it is not possible to evaluate accurately the potential for cumulative effects on archaeology with the proposed development. No significant cumulative effects are predicted on listed buildings.

Ground conditions

NTS.47 A desk study and site investigations were undertaken to establish the potential for existing contamination at the Application Site. The earliest Ordnance Survey map (from 1873) shows the Application Site as arable farmland, divided by Rawreth Brook flowing east to west. Two lines of pylons were constructed in the 1960's and replaced in the 1970's by the existing two parallel lines of pylons running approximately south to north across the Application Site. There are several ponds shown with the Application Site on the historic maps, of which two are no longer present, having presumably been infilled. There is the potential for contaminants to be present in the made ground. In the surrounding area, former and current petrol stations have been identified close to the south western and southern boundaries of the Application Site.

NTS.48 Soil samples from across the Application Site have been tested for a range of commonly occurring contaminants. These concluded no or negligible levels for all contaminants. Ground gas is considered to present a low risk to end users and gas precautions are not considered necessary. However, there is the potential for ground gas to be generated in soils in the vicinity of the brook, and within the existing and infilled ponds. Further targeted investigations will be undertaken in these areas once the detailed development layout is finalised.

NTS.49 A range of best practice construction techniques (including control of dust, inspection/testing of any suspect material, and remediation/removal if necessary) will be employed to ensure that there will be no significant adverse effects on human health or the water environment as a result of undiscovered contamination hotspots. Should any of contamination be discovered during construction, an appropriate strategy will be developed to remediate any existing contamination within the Application Site.

NTS.50 The soil testing confirms that post-construction there is a negligible risk to the vegetation of the open space and private gardens, and to end-users.

NTS.51 There are no potential links between the Application Site and other local development proposals, so no cumulative effects are anticipated.

Landscape and visual effects

NTS.52 Desk and field studies were carried out to evaluate the landscape in around the Application Site, and to identify potential sensitive views. Several were selected to provide representative viewpoints from various locations.

NTS.53 The Application Site lies within the Crouch and Roach Farmland landscape character area. It is not subject to any landscape designations, although there are two areas recognised for landscape reasons within the local planning policy: the Upper Roach Valley to the east and the Coastal Protection Belt to the north.

NTS.54 The potential impacts on the landscape and visual resources were a significant consideration in terms of the design of the proposed development. In particular, building heights, the location of open space, retaining existing woodland and trees where possible, creation of the noise bund along the northern and eastern boundaries and proposed new structural planting, were key landscape and visual measures incorporated into the design.

NTS.55 The proposed development will lead to a permanent change to the landscape character of the Application Site, but no significant effects to surrounding landscape character areas. Seven representative views were assessed, of which only three (views from Rawreth Lane, from the footpath adjacent to Rawreth Lane, and from the public right of way adjacent to Rayleigh Golf Driving Range) are considered to have significant effects post-construction. However, taking in to account the proposed planting that forms part of the design, after 15 years of vegetation growth the visual effects for all three viewpoints will reduce to slight and will not be significant.

NTS.56 There will be no significant cumulative visual effects with the other schemes under consideration. The development of Rayleigh Industrial Estate may result in a beneficial effect on the character of the industrial estate and, given the separation distance between the Application Site and the Hullbridge development, no significant adverse cumulative effects are envisaged.

Natural heritage

NTS.57 A desk study and field surveys were undertaken to establish the baseline ecological conditions in order to appreciate the likely impact the proposed development could have on the Application Site's natural heritage resource and on designated sites in the vicinity.

NTS.58 The Application Site mainly comprises arable fields with improved grassland along the field boundaries and a small area of semi-improved grassland alongside Westfield Close, wet and dry ditches and a series of native hedgerows, along with small areas of scrub. It lies close to a number of statutorily protected sites: the Crouch and Roach Estuaries SAC, SSSI and Ramsar site, and the Essex Estuaries SPA.

NTS.59 The Application Site was identified as being used by low numbers of bats for foraging and commuting, but no bat roosts were identified. The Application Site also provides suitable foraging and nesting habitat for a number of species of birds.

NTS.60 The pond within the Application Site does not contain breeding great crested newts, although ponds with close proximity to the Application Site are identified as supporting small and medium populations. Evidence of a single water vole was discovered in the section of wet ditch immediately adjacent to the Application Site. A badger sett is located in woodland bordering the Application Site.

NTS.61 A programme of mitigation measures will be put in place during and post-construction to minimise effects on protected species and habitats. This includes the use of best practice measures during construction and complying with national wildlife legislation, such as undertaking vegetation removal outside the bird breeding season where possible, clearance of great crested newts from each phase of the development ahead of construction, restricting works around the badger sett and checks for presence of water voles prior to construction works in the area around the wet ditch.

NTS.62 Post-construction, the proposal will include three basins that will form part of the site wide drainage strategy. These and other measures set out in the drainage strategy will ensure that there will be no impact on the quality of water entering the Essex Estuaries SPA and the Crouch and Roach Estuaries SAC, SSSI and Ramsar site.

NTS.63 The development will include features such as bird and bat boxes post-construction, along with appropriately designed lighting (to avoid light spill in sensitive areas). Four hibernation sites will be established for great crested newts and, along with strategically placed drop kerbstones to enable newts to cross the development roads and disperse across the Application Site, will ensure there will be no significant adverse effects on this species. A 5 m corridor managed to create a scrub/native wildflower grassland will be maintained along the length of the wet ditch in the Application Site. This will be of slight benefit to water voles, but the effect is not considered to be significant.

NTS.64 The proposed development may result in an increase in cats in the local area, which could lead to an increase in predation on small mammals and birds. This is unlikely to result in a significant effect on bird or bat populations, but will result in a potentially moderate adverse (significant) effect on the existing small water vole population.

NTS.65 Although the botanical interest of the Application Site is limited, the development will lead to the loss of arable land, improved and semi-improved grassland and scrub. Additional planting proposed in the master plan will strengthen existing vegetation and create new hedgerows, and the open space will be planted with native wildflower grassland and shrubs to create new semi-improved grassland and scrub areas. With the exception of arable land (where a significant adverse effect remains), this will mitigate the loss of habitats, and in the case of the semi-natural grassland and native shrubs will result in a moderate beneficial effect.

NTS.66 Cumulatively, the development at Rawreth Industrial Estate will not lead to any further loss of arable land but would result in an increase in local cat population, which could in turn impact on local water vole populations. However, this increase is considered to be negligible given the territorial nature of the domestic cat and the territories that will be established within the

Application Site, which would limit the range of any cats within the Rawreth Industrial Estate development.

NTS.67 The Hullbridge development will result in the loss of further arable land and potentially give rise to cumulative effects on local breeding skylark populations. However, given the scale of arable land in Essex, this in not considered to be significant. The separation distance between the two sites (1 km) is greater than the typical cat predation distance (400 m of their home), so no cumulative effects are predicted from cat predation.

Noise and vibration

NTS.68 The noise assessment considered the noise environment in the vicinity of the Application Site and the potential significant effects of the proposed development during and post-construction, including road and industrial noise. Eight representative sensitive residential receptors were identified, four of which are existing receptors and four are future residential receptors that are part of the proposed development. The dominant noise sources recorded during monitoring were road traffic noise and the adjacent Rawreth Industrial Estate.

NTS.69 Sources of noise during the construction phase are related to construction plant (including site preparation, earthworks and building activities) and traffic movements. By employing appropriate site management practices, the potential for adverse noise impacts from construction vehicles and plant during the works will be minimised. This will be done by employing measures such as the prefabrication of materials where possible, locating noise generating activities away from sensitive receptors, good public relations, controlling site traffic away from sensitive receptors, and use of quiet working methods.

NTS.70 The noise modelling indicates that increased post-construction road traffic noise at existing receptors will result in a slight adverse effect that will not be significant. Employing a range of mitigation measures (e.g. orientation of buildings, putting bedrooms facing away from noise sources, improving glazing specifications and using acoustic barriers) at the detailed design stage will ensure that the proposed residential properties will not be adversely affected by the proposed road traffic noise.

NTS.71 Specific uses of the non-residential area have yet to be determined. There remains the potential for certain uses to give rise to noise effects (such as from ventilation systems), but this will be assessed at the detailed application stage to ensure that no significant effects will arise. The assessment also considered the potential impact of the Rawerth Industrial Estate on the proposed uses on of the Application Site. The assessment showed that, while some noise from the estate is clearly audible, it is not likely to give rise to complaints.

NTS.72 The modelling showed that there will be no significant cumulative noise effects.

Traffic and transport

NTS.73 The traffic and transport assessment deals with the effect of the increased traffic associated with the proposals on existing traffic flows on the surrounding road network, and on people living alongside and using these roads. There are currently high levels of traffic along London Road, with queuing and slow moving traffic. The nearest existing bus stops are on

London Road, which are served by several bus services. Rayleigh railway station is approximately 2 km from the Application Site.

NTS.74 It is estimated that, during the four-year construction period, there will be on average 11 heavy good vehicle (HGV) movements and 41 staff vehicle movements per day. The peak HGV movements have been estimated as not exceeding 60 vehicles, with 80 staff vehicles during this period.

NTS.75 A range of mitigation measures have been proposed to minimise congestion caused by vehicles, including off-site highway improvement works, either provided directly by the applicant or through financial contributions to the highway authority (the agreed arrangements will be set out in a legal agreement), diverting existing bus services to the development and providing new residents with one year of free bus travel.

NTS.76 The proposed development includes a number of improvements for cyclists and pedestrians. In addition to the new cycle routes set out in Figure NTS6, other measures to encourage cycling are proposed, such as an on-site cycle training scheme, provision of cycle maps and residents' cycle storage.

NTS.77 Residents of the proposed development will receive a 'travel pack' containing information on non-car travel. Other means of promoting sustainable transport choices will also be used. A bespoke residential travel plan for the proposed development will be developed from the draft travel plan submitted in support of the planning application.

NTS.78 Implementing the measures set out above will mean that the proposed development will not give rise to any significant residual traffic and transport effects.

NTS.79 Potential cumulative construction issues relating to the proposed development along with the additional adjacent dwellings and those proposed at Rawreth Industrial Estate have been identified should the construction periods overlap. However, these issues could be fully mitigated by the implementation of construction traffic controls, such as access routes, delivery times and traffic restrictions. Post-construction, the mitigation measures set out above for the Application Site will mean that significant cumulative effects are unlikely to arise.

Water environment

NTS.80 The water environment assessment considered the likely significant environmental effects of the proposed development on the Rawreth Brook, which crosses the Application Site, the River Crouch 2 km to the north west, other local watercourses, drainage ditches and groundwater. It also considered water infrastructure, including local water supply and the sewer network.

NTS.81 The majority of the Application Site is considered to be at low risk from flooding, but there are areas classed as being of medium or high risk of flooding around Rawreth Brook. Land that is at medium to high risk of flooding will be used for less sensitive uses, such as open space, with the proposed residential properties only located on areas of low flood risk.

NTS.82 Essex and Suffolk Water (ESW) are the public water supply company for the area. The area is considered to have high demand for water, which puts stress on the water supply, such that the county is reliant on water from other areas to meet the demand. However, ESW has implemented a number of strategies to improve this situation. Wastewater treatment and sewers are managed Anglian Water Services, which has confirmed that the local sewage treatment works has the capacity to deal with the wastewater that would be generated from the proposed development.

NTS.83 A range of mitigation measures will be put in place during construction to ensure there will be no significant effects on surface water or groundwater quality, in accordance with the Environment Agency's Pollution Prevention Guidelines. These include the sealing of the Application Site with raised earth embankments to contain surface water, use of silt traps, appropriate storage of materials and temporary settlement ponds to store water during construction.

NTS.84 The proposed drainage strategy has been designed to ensure that surface water runoff will be controlled within the Application Site, so there will be no increase in the risk of flooding off site. It also incorporates measures to ensure any pollution from the development (such as fuel spills or fertiliser use) does not have adverse effects on water quality. Following the implementation of these mitigation measures, no significant effects are predicted on water resources during or post-construction.

NTS.85 Should ESW's proposed solutions to providing drinking water be delayed, there is the potential for there to be a slight adverse cumulative effect in respect to water supply. Whilst there is capacity at the local sewage treatment work for the proposed scheme, cumulative development pressure may result in a slight adverse effect until appropriate upgrades are made. Neither of these cumulative effects are considered to be significant.

Conclusion

NTS.86 This non-technical summary has outlined the findings of the EIA of the proposed residential-led development at land west of Rayleigh, contained within the ES that accompanies the planning application. The proposed development will result in a number of changes to the local environment, but a range of measures will be put in place to minimise potential significant adverse effects and enhance beneficial effects.

NTS.87 Copies of the full ES and its technical appendices have been distributed to RDC and the statutory consultees. The full documents are available for public inspection during the consultation period at RDC's offices at the address below:

Rochford District Council
South Street
Rochford
Essex
SS4 1BW

NTS.88 All the planning application documents should also be accessible from the Council's website: www.rochford.gov.uk.

NTS.89 Copies of the ES on CD can be purchased from Terence O'Rourke Ltd at a price that reflects the time and production costs. Paper copies may also be available (at printing cost) from Terence O'Rourke Ltd at the following address:

Terence O'Rourke Ltd
Everdene House
Deansleigh Road
Bournemouth
BH7 7DU

Tel: 020 3664 6755
Email: maildesk@torltd.co.uk

COUNTRYSIDE
Places People Love

Site boundary

Based upon the 2013 Ordnance Survey 1:10,000,1:250,000 colour raster map with the permission of the Ordnance Survey on behalf of Her Majesty's Stationery Office, © Crown copyright. Terence O'Rourke Ltd. Licence No. 100019980.

Terence O'Rourke
Planning | Design | Environment

0 240 m

Figure NTS1 Site location and application boundary

COUNTRYSIDE
Places People Love

- TPO
- TPO area
- Pond locations
- PROW
- Rawreth Brook (wet ditch)
- Listed buildings
- Archaeology HER
- Built HER
- Archaeology events
- Moats
- Scheduled monuments
- Conservation areas
- Built up area of Rayleigh
- Flood area
- Application site boundary

- Existing education provision

1.St Nicholas Pimary School
2.Down Hall Primary School
3. Our Lady of Ransom Catholic Primary School
4. The Swayne Park School
5. Glebe Junior School

- Existing retail

1. Asda and local centre
2. London Road parade
3. Rayleigh town centre

- Existing recreation facilities

1. Rayleigh Town Sports and Social Clul
2. Rayleigh Grange Community Centre
3. Wheatley Woods
4. Sweyne Park

Terence O'Rourke
Planning | Design | Environment

0 250m

Figure NTS2 Sensitive receptors in relation to the site

COUNTRYSIDE
Places People Love

- Red line
- Residential: 15.11ha (area excludes strategic green infrastructure within residential development areas)
- Primary school: 1.12ha
- Health provision: 0.15ha
- Outdoor sports facilities: 1.61ha
- Natural/semi-natural greenspace (includes native hedgerow and scrub planting and a range of sizes of trees from transplants to standards): 22.38ha
- Attenuation basins: 1.11ha
- Amenity greenspace (central green): 0.62ha
- Link road corridor (width:15m - 22.25m): 2.93ha
- Non residential use: 0.38ha (see development schedule for uses)
- Public transport connection corridor (width: 15m): 0.39ha
- Proposed location of play space (precise location to be determined at reserved matters stage, minimum size 0.07ha)
- Proposed location of allotments (precise location to be determined at reserved matters stage, minimum size 0.30ha)
- Proposed location of acoustic bunds (precise location to be determined at reserved matters stage)

Strategic Green Infrastructure within residential development areas:

- 1: Proposed lobby green (precise location and size to be determined at reserved matters stage, minimum total area of 0.10ha)
- 2: Proposed green lung (precise location and size to be determined at reserved matters stage, minimum total area of 0.25ha)
- 3: Proposed green link (precise location and size to be determined at reserved matters stage, minimum total area of 0.05ha)
- Proposed local greens (precise location to be determined at reserved matters stage, minimum total area of 0.15ha, in addition to the green lung, green link and lobby green, within blocks identified residential development blocks)

Do not scale from this drawing

Terence O'Rourke
Planning | Design | Environment

0 100m

Figure NTS3 Land use and landscape parameter plan

COUNTRYSIDE
Places People Love

Red line

Site area: 46.7Ha / 115.4ac

Up to 3 storey (12.5m)

Up to 2.5 storey (11m)

Primary school and health facility building zone up to 3 storeys (12.5m)

Potential non-residential use up to 3 storey (12.5m)

Do not scale from this drawing

Base mapping from Mastermap licence 100022432. 2014

Terence O'Rourke
Planning | Design | Environment

0 100m

Figure NTS4 Building heights parameter plan

COUNTRYSIDE
Places People Love

Red line

Site area: 46.7Ha / 115.4ac

Highest density: 34-38 dph

Medium density: 29-34 dph

Lowest density: 25-29 dph

Do not scale from this drawing

Terence O'Rourke
Planning | Design | Environment

0 100m

Figure NTS5 Density parameter plan

COUNTRYSIDE
Places People Love

- Red line
- Residential
- Health provision
- Primary movement corridor
- Proposed bus link
- Proposed bus connection and secondary vehicle access
- Proposed secondary access point
  (Precise locations to be determined at the reserved matters stage)
- Proposed strategic footpath
  (Precise locations to be determined at the reserved matters stage)
- Proposed strategic cycleway
  (Precise locations to be determined at the reserved matters stage - route could run either side of the primary street carriageway)

Do not scale from this drawing

Terence O'Rourke
Planning | Design | Environment

0 100m

LAND WEST RAYLEIGH

Figure NTS6 Access and movement parameter plan

COUNTRYSIDE
Places People Love

- Red line
- Phase 1a
- Phase 1b
- Phase 2 and 3
- Link road corridor
- Primary school: 1.12ha
- Health provision: 0.15ha
- Non residential use: 0.38ha
  (see development schedule for uses)

Do not scale from this drawing

Base mapping from Mastermap licence 100022432. 2014

Terence O'Rourke
Planning | Design | Environment

0 100m

Figure NTS7 Implementation framework