

EIA Environmental Statement

# HMS Ganges, Shotley Gate, Suffolk

Non-Technical Summary

On Behalf of Haylink

August 2007



**Haylink**

**HMS Ganges**

**Shotley Gate, Suffolk**

**Environmental Statement**

**Non-Technical Summary**

**August 2007**

In accordance with:

Town and Country Planning Act 1990 (as amended)

Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (as amended)

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Environmental Statement  
Non Technical Summary

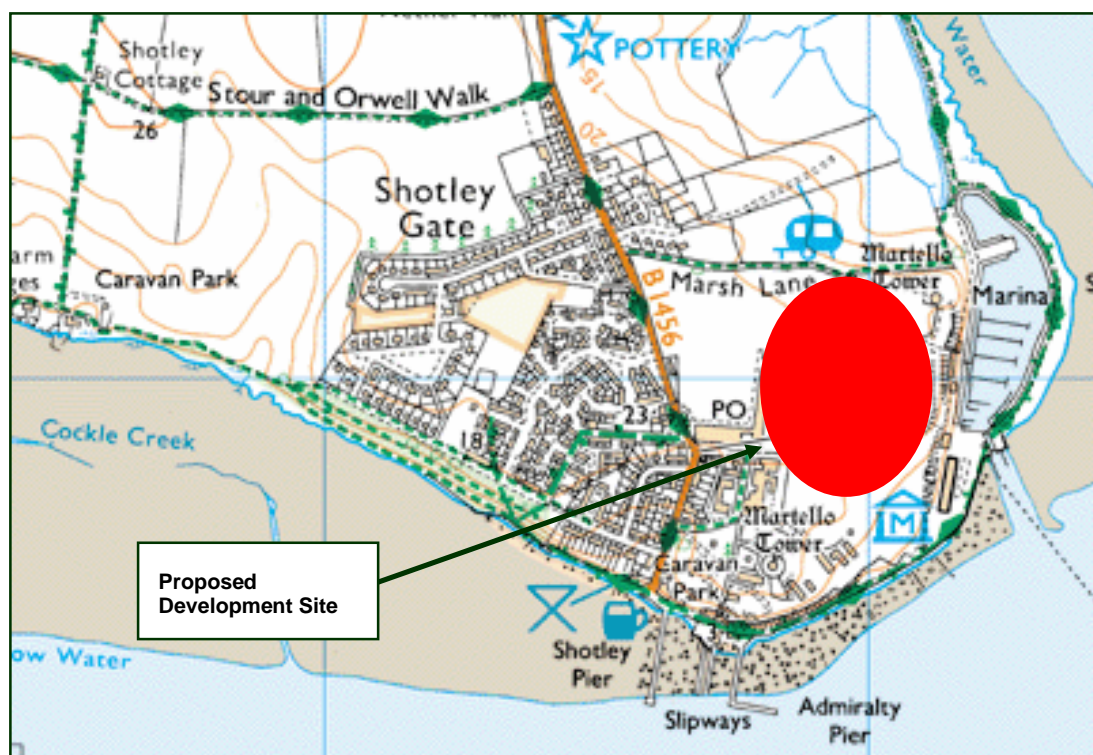


## 1. Introduction

Haylink has commissioned Savills incorporating Hephher Dixon to co-ordinate a formal Environmental Impact Assessment (EIA) including the preparation of an Environmental Statement (ES) and Non-Technical Summary (NTS). This document comprises the main report of the ES.

Haylink proposes the redevelopment of HMS Ganges, Shotley Gate, Suffolk (Figure 1.1), to provide up to 404 retirement homes, a 330m<sup>2</sup> Clubhouse and a 60 bedroom care facility including nine units of staff accommodation. Further details are given in Chapter 4.

Figure 1.1: Location of the Proposed Development Site



Source: [www.ordnancesurvey.co.uk](http://www.ordnancesurvey.co.uk)

Note: Indicative location of the proposed development site may not exactly correspond with the planning application red line.

## 2. Background

The ES has been produced as part of a package of information to amend the details submitted on 30th August 2000 in respect of all reserved matters pursuant to an outline planning permission on the HMS Ganges site (ref: B/88/1560). The outline planning permission relates to the erection of a retirement community development (404 dwellings), a nursing home and associated facilities, which was granted outline planning permission on 8th September 1997.

## 3. The Site

The proposed development site is located in the village of Shotley Gate at the southeast tip of the Shotley Peninsula, Suffolk. It is bounded to the north by the Orwell Estuary and to the south by the Stour Estuary. The proposed development site extends to approximately 16.5ha with the entire masterplan area covering 24ha.

Shotley Gate lies within Shotley Parish, which is centred on the village of Shotley approximately 1,800m to the northwest of the proposed development site. Shotley Gate is made up of about approximately 600 dwellings, a garage, a post office and shop and two pubs. Shotley itself has approximately 300 dwellings, a post office/general store, primary school, garage including petrol filling station, village hall, doctor's surgery, fish and chip shop, football pitches, children's playground and a pub.

The main road to the proposed development site is the B1456, known as Bristol Hill in Shotley Gate and just as the Street in Shotley. The road continues northwest through various small towns and villages, including Chelmondiston, before passing under the A14 close to the Orwell Bridge and joining with the A137 on the outskirts of Ipswich.

The proposed development site forms part of a wider masterplan area. The site itself forms the northern boundary of the masterplan area. It is relatively flat, gently sloping from the northwest corner to the southern boundary. The masterplan area however varies to a greater degree with the site largely sloping southeastwards towards King Edward VII Drive. Beyond this road are mudflats of the Stour Estuary with various piers, slipways and jetties.

The masterplan area covers the former HMS Ganges naval training station, which closed in 1976. The area is still occupied by a number of institutional buildings and infrastructure, including playing fields, tennis courts and a large indoor swimming pool, that remain following the closure of the training facility, although other parts have been demolished. The proposed development site itself is located on an area that has been previously used as playing fields.

Shotley Gate and the masterplan area are not located with the Suffolk Coast Heaths Area of Outstanding Beauty (AONB); which includes the rest of the Orwell and Stour estuaries. Both estuaries

are also designated as Sites of Special Scientific Interest (SSSI), a Ramsar Site and a Special Protection Area (SPA). Their importance largely relates to over-wintering wildfowl and waders. The boundaries of these extensive areas fall just short of the masterplan area. The masterplan area is not located within the Environment Agency's indicative floodplain for the Stour or Orwell. However, areas immediately to the east of the earth ramparts of the former coastal fort are at risk of flooding during a 1 in 100 year event.

Along the northern boundary of the proposed development site and masterplan area is an area of trees protected by a 1991 Tree Preservation Order (TPO). In addition, the former playing fields on the site have been designated as an Area of Visual or Recreational Amenity in the Local Plan. An additional TPO covering the whole site was made in 2006. The masterplan area also includes three Schedules Ancient Monuments – Martello Tower 'M', Mertello Tower 'L' and a coastal battery.

#### **4. The Proposed Development**

The proposed development is for a retirement village comprising 404 retirement homes, a clubhouse, a 60 bedroom care facility and leisure facilities. It is also proposed to undertake associated highways and landscaping works on the site.

##### Retirement Homes

It is proposed to provide a range of housing types and sizes to accommodate for the needs of different groups of elderly. The 404 homes proposed will be split to provide 360 one to five bedroom homes, 53 assisted living apartments and 1 managers home. The majority of the houses will be built in the southern part of the site north of King Edward VII Drive.

The 60 bedroom care facility will be accommodated within a redbrick and render building. The red brickwork will be complemented by matching plinths and cast stone cills to the windows. Natural timber boarding, plain tiles and slate are also proposed for the care facility elevations.

In order to safeguard the views from the marina onto the peninsula, the marina facing buildings will use timber to improve their aesthetic appearance. Furthermore, high quality landscaping and boundary treatments are proposed for the site including the planting of native plants and trees.

##### Leisure Facilities

The leisure facilities will be located central to the site, and will include a clubhouse, a bowling green, swimming pool and pavilion. These will be in close proximity to the 60 bedroom care facility which is proposed to be located immediately north of the leisure facilities. Leading north from the care facility along the eastern and northern site boundary more homes are proposed aligning the access routes.

The outline planning permission has already established the principle of a new roundabout to the north west boundary of the site and an access road through the site which will link the B1456 to Shotley Marina. The amended information includes further details on these proposals.

### Landscaping

The landscape layout incorporates a small range of boundary types and conditions. Contrasting paving such as a row of stone setts are employed in areas of shared surface paving to visually delineate footways from vehicular routes. Raised kerbing is employed on the main routes to clearly separate the vehicular carriageway from the pedestrian pavements. Grass strips and verges are also proposed to create a further visual separation of routes from other areas.

Low brick walls (750mm in height) are proposed as a traditional boundary to front gardens and provide screening. Estate railings (1m in height) are proposed as fencing on semi public areas and adjacent to footpaths.

### Construction

Implementation of the proposed development will be carried out in accordance with a Construction and Environmental Management Plan or a Code of Construction Practice to be agreed with the Local Authority. The developer will also join a local 'Considerate Contractors Scheme'.

It is anticipated that hours of working would be 8.00am to 6.00pm (Monday to Friday) and 8.00am to 1.00pm on Saturday. No working would be undertaken on Sunday or bank holidays.

### On Site Traffic and Dust Management

To reduce dust and particulate matter emission from the site a number of measures would be implemented including the watering of site access routes as necessary; vehicle wheel washing facilities; regular inspection of local highways and site boundaries and cleaning if necessary; observations of wind speed and direction; windbreak nettings etc... Further measures will be undertaken on the construction machinery to manage construction practices. It will be ensured that site clearance materials, which may contain contamination due to previous uses of the site, are safely removed from the site.

### Implementation and Phasing

The redevelopment will be undertaken in an 11 phase programme with works starting in Spring 2008. Construction will begin in Phase 1 with 50 units being constructed and on site demolition of the existing buildings will begin in Phase 1a in Summer 2008. Landscaping will be undertaken throughout

all of the stages. The final stage of the development is due to commence in Spring 2013 and will involve the improvements to the setting of Shotley Fort.

## **5. Alternative Considered**

Alternatives are normally considered primarily in terms of location. However, in this case the proposed development site already benefits from an outline planning consent. Therefore it is not appropriate in this instance to consider the selection of an alternative site. There are two realistic types of alternative, 'do-nothing' with the existing land use retained or an alternative layout of development to that proposed. Each of these will be considered in the ES.

The alternative type of layout for the proposed development site is at a masterplan stage and at the time of this report entering the public consultation exercise. The development proposals include the development of the whole HMS Ganges, which could potentially include approximately 200 market homes and 30 affordable homes. The alternative masterplan development will integrate the reserved matters application, by incorporating the retirement village (although reduced in size from the 404 homes), along with some commercial, employment and leisure floorspace.

## **6. Scope of the EIA**

The process of identifying the issues to consider within an Environment Statement is known as scoping. The formal Scoping Opinion of Babergh District Council was sought and discussions were held with the Council and Statutory Consultees on the information the EIA should include.

Information considered in formulating the scope includes the Scoping Reports from previous development proposals on the site and a resulting Environmental Statement. The assessment topics that have been identified are:

- Air Quality
- Archaeology and Cultural Heritage
- Drainage and Flood Risk
- Ecology
- Ground Conditions
- Landscape and Visual Assessment
- Noise and Vibration

- Micro-Climate
- Socio-Economics
- Transportation

## 7. Air Quality

An assessment of the potential impact on local air quality has been conducted as part of the planning process. The aims of the assessment were to examine and discuss:

- Baseline air quality pollutant concentrations in relations to air quality criteria;
- The potential nuisances caused by dust during construction of the site; and
- The potential impacts on local air quality of the introduction of additional vehicles onto the surrounding network.

The site and the Shotley area in general are rural and coastal in character, located away from major conurbations and associated industry. The roads are not heavily trafficked and the area benefits from on- and off-shore coastal breezes. As a result the site does not fall within a designated Air Quality Management Area.

The assessment concludes that as there will generally not be a breach in air quality obligations arising from the proposed development, and therefore no specific mitigation measures for air quality are necessary.

## 8. Archaeology and Cultural Heritage

This section considers the impact of the proposed development on archaeological remains and built heritage resources within the site and the immediate surrounding area. In particular, the chapter considers the impact of the proposed development at both the demolition and construction phase and at the completed development phase.

Relevant legislation, policy and guidance is set out within this section including Central Government guidance in the form off the Ancient Monuments and Archaeological Areas Act (1979); Planning (Listed Buildings and Conservation Areas) Act (1990); Planning Policy Guidance Note 15: Planning

and the Historic Environment - and 16: Archaeology and Planning; as well as statutory development plan policy including regional, structure and local plans.

A preliminary archaeological and heritage desk based assessment of the site was completed in July 2007. The nature of known archaeological remains and built heritage resources, as well as the potential for further as yet undiscovered sub-surface archaeological features and deposits has been confirmed and a professional judgement has been made regarding their importance.

No archaeological remains of definite prehistoric and medieval date are recorded within the site boundary on the Suffolk SMR. However prehistoric and medieval remains have been identified in the sites surrounds. The earliest recorded remains within the study area relate to the findspot of a Bronze Age barbed and tanged arrowhead at Kirton Close, approximately 500 metres west of the site.

The proposed development site contains two recorded post-medieval archaeological sites within its boundary, both of which relate the establishment and development of coastal fortifications on Shotley Point from the early 19<sup>th</sup> century onwards.

Martello Tower L is located in the south west corner of the proposed development site and was built between 1810 and 1812. It is designated as Schedules Ancient Monument and a Grade II listed building. Shotley Fort is located north east of the Tower and was built between 1862 and 1863. It was designated as a Scheduled Ancient Monument in June 2004. A third recorded post-medieval archaeological site – Martello Tower L – is located adjacent to the northern site boundary. It is also a Grade II Listed building. Two further Grade II listed buildings are located within the site.

For the most part, recorded archaeological remains of modern date, within the site boundary, relate to the construction, operation and subsequent closure of the Royal Navy Training Establishment at Shotley Point, which was otherwise known as HMS Ganges. HMS Ganges took its name from a ship, which was launched in 1821. It subsequently became a training ship for boys and was moored in Orwell Haven, just to the east of the site, from 1899 to 1906. However, from 1905, the training facilities that it provided were moved ashore to sit alongside the Royal Navy Hospital that had been established at Shotley Point. Further sites of modern interest include barrage ballon tethering points, pillboxes, anti-aircraft battery and air raid shelters.

The proposed development site is not located within a conservation area and does not include any part of one within its boundary. Chelmondiston (Pin Mill) Conservation Area is the nearest conservation area located approximately four miles to the north west of the site. The proposed development of the site will have no impact upon its setting. A second conservation area, located approximately 5.5 miles from the site, straddles the B1456, which is the primary means of vehicular access to the site.

During construction, the proposed development may have negligible or a minor adverse impact on the scheduled ancient monuments, listed buildings and conservation area. During operation however, in the absence of appropriate mitigation measures, the proposed development would potentially have a permanent moderate adverse impact on Martello Tower L at the completed development stage through the erection of units within its setting. In addition, the destruction of archaeological remains associated with the scheduled fort, which is of national importance, would represent a permanent major adverse impact. There would be a minor beneficial impact on the remains of the ancillary battery to Martello Tower L..

The assessment finds that the resulting residual impact from the proposed development will be negligible or minor/moderately beneficial once the mitigation measures outlined in the section are undertaken. However a minor adverse long term residual effect would remain on the Woolverstone Conservation Area given that mitigation measures can not reduce the number of vehicular numbers but can only manage the flow of vehicles.

The cumulative effects of developments within the area in particular at Marina Frontage will result in a permanent moderate adverse impact on the setting of Shotley Fort. The majority of proposed dwellings at Shotley Marina however, will not impact on the settings of the designated archaeological and built heritage resources within it.

## **9. Drainage and Flood Risk**

An assessment of the potential impacts of the proposed development in relation to surface run off and flood risk was undertaken. The flood risk assessment considered whether the existing/proposed site is situated within a 1 in 100 year flood plain, as recorded by the Environment Agency. The probability of flooding occurring on site from other sources will also be considered. In addition, consideration has been given as to whether the proposed works would have any significant impact to the flood risk elsewhere, including flood flows and flood storage capacity.

The site is not within the defined floodplain. The floodplain of the Stour/Orwell estuaries is contained within the low lying land along the south and east boundaries and is therefore outside the proposed development area. There are no overt signs of any groundwater issues affecting the site. No springs are recorded in the vicinity and there are no nearby watercourses and features other than those noted above. There are no evident sources of local flooding caused by run-off from adjacent land. The land to the west and north west is at similar levels to the site and is generally grassland or wooded areas. The land to the north, south and east of the site is well below the proposed site and there are marsh areas with ponds.

The assessment goes on to consider how residual effects resulting from the proposed development may be mitigated or compensated. The measures include the use of Soakaway Design to deal with

run-off from roads and buildings, the use of permeable paving; ponds/wetlands; swales; French drains; and onsite water storage. The assessment recommends that in the detailed design of the drainage scheme, consideration should be given to the method of drainage of the remaining sections of the site out with the scope of this application. The outfall route for this site would also be the obvious route for drainage from the adjacent areas and appropriate design would obviate the need to duplicate or replace the site drainage in the future.

## **10. Ecology**

The technical scope of the assessment covers impacts on statutory and non-statutory designated sites; habitats and rare or protected species. Reference is made to the planning and legislative context of ecological protection, in particular to PPS9: Biodiversity and Geological Conservation and various legislations including the Wildlife and Countryside Act (1981 as amended), Countryside and Rights of Way Act (2000) and the UK Biodiversity Action Plan (BAP).

Much of the site is a developed brownfield site supporting abandoned disturbed habitats. The interior of the site supports generally artificial habitats with more established semi-natural habitats around the periphery of the site, particularly along the eastern edge by the estuary shoreline. Artificial habitats within the site include: buildings, roads, lawns, ornamental plantings, playing fields and ruderal short and tall herb vegetation with buddleja scrub growing on rubble spoil. The semi-natural habitats around the periphery include semi-natural scrub/grassland mosaic with patches of semi-improved neutral/acid grassland. Mature trees are also present within the mosaic habitat, around the periphery and scattered across the site.

Both the mature tree components and semi-natural scrub/grassland mosaic form the most important ecological habitats within the site. A semi-natural boundary to the proposed development area is formed by the mosaic of scrub, mature trees and semi-improved neutral/acid grassland lies on the eastern and southern fringes of the site. There are also areas of acid grassland habitat supporting sheeps fescue, common bent grass, sheeps sorrel, sweet vernal grass and common bird's foot trefoil. Acid grassland is a declining habitat of conservation concern and although no scarce plants were recorded within the habitat, the grassland within this area supports a good range of relatively common species typical of this type of habitat.

There are a number of mature trees established throughout the site. The majority are planted specimens, and are arranged as plantation, groups, or single trees. In plantations, they form a distinct environment that influences the ecological character of that location, and the associated plant and animal species. As groups, they provide a significant structural dimension to their environs that is exploited by associated faunal elements, such as birds, bats and many invertebrates.

Within the previously developed area (artificial habitat) are areas of more improved (nutrient rich) amenity grassland within the extensive playing field to the north and west and within the former lawns around the buildings. Since the site has not been occupied or intensively managed for considerable time, patches of more semi-natural rough grassland are developing.

An artificial pond was also recorded in the rough grassland to the west of the Martello Tower L. This forms an important area of standing water providing an important habitat for invertebrates, amphibians, reptiles and bats. The pond is therefore of local neighbourhood value.

### Reptiles

The long and varied history of the naval site has produced a range of habitats, many of which are favourable for reptiles. The habitats within the proposed development site provide structurally diverse ground vegetation capable of providing a range of thermal microhabitats favourable to reptiles for basking, and for breeding and hibernation. The habitats are also capable of supporting a range of invertebrates (prey items for lizards and slow worms) and also amphibians and small mammals (prey items for grass snakes). Surveys undertaken have recorded the presence of common lizard, slow worm, and grass snakes within the site.

### Badgers

No badger setts were recorded within the survey area although a badger latrine was recorded on the north side of the site by the north Martello Tower M in both 2006 and 2007. Badgers are therefore crossing the northern section of HMS Ganges though outside the proposed development boundary.

### Bats

The buildings within the proposed development site provide potential roosting habitat for bats. Many of the buildings provide potentially favourable roosting features such as pitched roof voids, suitable ridge roosting sites, potential crevices between roof tiles and sarking boards and gaps under the soffits. The bat surveys undertaken in 2002, 2006/2007 found the buildings within the HMS Ganges site being used by common pipistrelle bat, brown long-eared bat, Natterer's bat and Daubenton's bat.

Most of the trees on the site have little potential to provide roosting habitat; their main value being the sheltered foraging and commuting habitat they provide for bats. Two trees however were identified as having a high probability of providing roosting habitat for bats at the northeast end of the site and should be treated as bat roosting trees. Important semi-natural habitats for bats include: the boundary hedgerows and mature tree lines, the scrub/woodland habitat adjacent to the Shotley Fort, the ruderal/scrub habitat around the north Martello Tower, the artificial pond and tree lines by the south

Martello Tower, and the trees and scrub habitat along the south and east estuarine escarpment that provides shelter from the southeast prevailing winds.

### Invertebrates

The proposed development site, particularly along the south and east fringes, includes a large area of habitat favourable to invertebrates that can be divided into bare ground, grassland, tall herb communities, scrub and wooded habitats with a small area of standing water. The significance of these habitats in terms of overall invertebrate communities supported on the site are directly related to the interaction and physical continuity of these habitat types to create a mosaic capable of maintaining predator prey relationships essential for invertebrate diversity.

During the investigation of Shotley Fort, cave spiders were recorded behind the door and in the shafts of the chamber on the south side of the fort. Greater stag beetle was identified along the hedgerow by the Marsh Lane track to the north of the survey area.

### Birds

A barn owl was recorded using the far west end of the Vincent building during a survey in June 2007. Barn owl pellets were found inside the top storey of the building and liming was observed below where the owl had been perching. The owl gained access to the building through a broken window on the north side of the building.

A total of thirty bird species were recorded during the surveys including long-tailed tit, mallard, wood pigeon, robin, chaffinch, jay, black-headed gull, blue tit, tree sparrow, magpie, hedge accentor, woodcock, wren, song thrush and barn owl.. The grassland/scrub mosaic along the east and south side of the site are considered to be the most valuable habitats for the birds within the site and also entering the site from the neighbouring estuary Special Protection Area.

### Sites of Nature Conservation Interest

There are two national statutory sites for nature conservation situated approximately 100 metre distance from the proposed development site. The King Edward VII Drive, marina, piers and jetties separate the proposed development site from the statutory protected areas.

To the west is the Stour Estuary Site of Special Scientific Interest (SSSI). This site includes all of the inter-tidal areas of the River Stour down to Shotley, plus a number of freshwater marshes along the flanks of the estuary. The Stour Estuary SSSI includes Ewarton Bay to the west of Shotley Gate village. The Shotley Pier, 100m west of the development forms the eastern boundary of the SSSI. To the east is the Orwell Estuary Site of Special Scientific Interest (SSSI). This site covers 1204 hectares

of inter-tidal mud and saltmarsh. In addition to the national designations, the two SSSIs have also been designated as sites of International importance.

The Stour and Orwell estuaries have also been designated as Special Protection Area (SPA). The SPA site has been designated as a wetland of international importance under the Ramsar Convention. The Ramsar site has the same boundaries as the combined Stour and Orwell SSSIs. At no point does the development site directly abut the estuary SSSI. Due to the geographical separation between the proposed development site and the SPA (Orwell Estuary SSSI and Stour Estuary SSSI), it is highly unlikely that there will be any direct effect on the sites of international nature conservation importance during the construction phase of the proposed development.

The quality of the inter-tidal habitat in the near vicinity of the development site is relatively poor. The inter-tidal habitat along the south margin is a mixture of shingle with silt and is of low productivity for invertebrates. It has limited interest for feeding birds. In addition, neither area has freshwater creeks flowing across them.

If no mitigation is undertaken the construction phase of the proposed development could result in destruction, disturbance or damage to habitats, with the resultant disturbance or destruction of animals. During the occupation of the proposed residential development, impacts will primarily be associated with human disturbance of habitats and/or species, but other impacts such as the disturbance/ predation of protected animal species by domestic pets and altered lighting levels on the site associated with human occupation.

The most obvious potential impacts are the loss of habitat through areas being built over. The majority of the development is on artificial habitat (comprising former buildings, areas of hardstanding and amenity grassland) of low/no ecological value. The habitats of most importance (of district value) will generally be retained and unaffected by development. Large areas of semi-natural scrub/grassland mosaic habitat along the eastern side of the site and a smaller area within the south will be retained helping to minimise impact on the ecosystems within the local. A large proportion (80%) of the most valuable semi-natural mosaic habitat, with acid grassland components, will be retained and unaffected by development.

72% of the brownfield spoil vegetation and brownfield open lawn/ scrub habitats will also be retained. The retention of these more artificial habitats will ensure that the flora and invertebrate interests of these areas are also protected and maintained.

The construction phase of the proposed development is likely to cause permanent destruction of reptile habitat and possibly reptiles themselves. The increased fragmentation of reptile habitat resource caused by the construction of buildings and access roads may result in isolation of

populations and increase their vulnerability to extinction. The construction works are also likely to result in the loss of invertebrate habitat through the clearance of habitats.

Some of the buildings with bats roosts or high roost potential will be retained on the site, but the development will require demolition of confirmed bat roost sites. Buildings with high roost potential will also be affected. The demolition of the buildings within the site has the potential to have a high impact on bats. Demolition will result in the disturbance to pipistrelle bats and brown long-eared bats and the loss of their roosting sites.

Structural improvement works to the existing buildings (i.e. Martello Tower L), which are bat hibernation sites, may damage hibernating crevices and result in the loss of bat hibernation sites for three species of bats. Similarly works in close proximity to the tower and Shotley Fort has the potential to cause disturbance to hibernating bats. Disturbance is also likely from the increase in people across the site.

All breeding birds within the proposed development are at risk from disturbance, damage or destruction during the development construction phase. Post development there is a risk to birds on the site by predation by domestic cats. There may also be greater disturbance of bird habitats through use by the increased human population of the site and free ranging dogs. Altered night time lighting levels may impact on nocturnal species using the site such as barn owls.

It is proposed to include mitigation and compensation measures as part of the development proposals including management plans and education material for the post development stage, and induction sessions for construction workers and temporary fencing of sensitive areas during construction phases. In addition, monitoring of wildlife corridors is proposed across the site or reptile dispersal. With regards to the mitigation of impacts on bats, building works will be appropriately times, and public access will be prevented to the retained buildings with bats. Enhancement of the hibernation site areas is also proposed.

The following table summarises the residual impacts on other species/habitats and sets out the mitigation and compensation measures proposed.

<b>Ecological Receptor</b>	<b>Impact significance no mitigation/compensation</b>	<b>Impacts</b>	<b>Mitigation/compensation</b>	<b>Residual impact after mitigation/compensation.</b>
Invertebrates	Moderate negative	Disturbance, damage or destruction of invertebrates and/or habitats.	Protection of important invertebrate sites. Retention of scrub and dead wood on site. Appropriate management of tree/ scrub/ grassland/	Minor adverse.

			bare ground habitat for invertebrates.	
Bats	Major negative	Disturbance, damage and/or destruction of birds and/or their habitat during construction	Execute works outside of bird breeding season. Undertake checks for nesting birds. Public access prevented to retained building with barn owl. Provision of barn owl boxes.	Minor adverse
Birds	Major negative	Disturbance, damage and/or destruction of birds post development (people & pets)	Use of paths to guide walkers; signage, dogs on leads during breeding season. Distribution of educational material. Appropriate management of tree/scrub/ grassland habitats for birds	Minor adverse
SPA	Major negative	Disturbance, damage and/or destruction of habitat during construction	No vehicles to enter the SPA. Access points to St Edwards Drive cordoned off. All waste water (storm and foul water) will be discharged to the main sewerage system. Measures taken to ensure no leakage of fuel or chemical onto the site. Materials available for emergency clean up of spills.	No impact
	Moderate negative	Increased recreational pressure	Distribution of educational material. Signage.	No impact

The ecological assessment concludes that if ecological mitigation and compensation is carefully undertaken, the benefits of the proposal outweigh the ecological drawbacks of the proposed scheme. The long-term management plan for the site, in particular will ensure that the ecological resources of the site and surrounds are maintained sustainable.

## 11. Ground Conditions

This section addresses the potential effects that the proposed development may have on the land contamination of the site and surrounding area. Consideration is given to the impacts associated with potentially contaminated land and groundwater during ground preparation, construction and the operational phases of the development.

A review of published geological maps indicates that the site is underlain by superficial Glacial Sand and Gravel (Kesgrave Sand and Gravel) overlying London Clay. The desk study and supplementary intrusive investigations have confirmed the presence of elevated concentrations of contaminants within the Made Ground, and near surface natural soils, at the site.

The section outlines mitigation measures which should be incorporated into the development scheme to reduce the potential for negative impacts to occur and to promote long-term beneficial impacts. Measures include the re-use of excavated soil, removal of the above ground storage tanks, disposal of surplus soils, isolation of residual contamination, and protection of services and buried concrete. The assessment concludes that once the mitigation measures are implemented, there should be no significant, adverse residual impacts from contamination.

Prior to the works, a Remediation Method Statement will be prepared which will detail the mitigation measures to be carried out. A Validation Plan will also be prepared, which will detail the type and frequency of inspection visits, the information to be provided and the testing to be undertaken.

## **12. Landscape and Visual Assessment**

The landscape and visual assessment considered the effect of the proposed development on the built form and landscape character of the area with particular attention on the conservation areas and listed buildings. The assessment takes into consideration the cumulative effects arising from the reuse or potential redevelopment of the buildings and land within this wider area.

This section reviews relevant planning policy related to landscape and heritage issues, and undertakes desktop and photographic surveys to analyse the landscape and visual effects arising from the development and informed professional judgements about the significance of those effects based on the magnitude of change and the sensitivity of the receiving environment.

The proposed development site lies adjacent to the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB). Although the site does not lie in a Conservation Area, there are understood to be three Grade II listed buildings within the vicinity of the application site. Two of these are also Scheduled Ancient Monument's, with a third Schedules Ancient Monument located in the central/north-eastern part of the site. The ceremonial mast originating from HMS Cordelia lies approximately at the centre of the site. Erected in 1907, this 43m mast is visible from areas to the north and south of the Stour and Orwell estuary although is rarely visible from the Shotley peninsula itself due to intervening topography and vegetation. It is, however, clearly visible from School Road at the existing entrance to the HMS Ganges site. Martello Tower L originates from the Napoleonic War and was built between 1810 and 1812. The building lies in the southern part of the application site. The structure has been heavily modified from its original form with the addition of a water tower, signal cabins and a

signal mast. The physical extent and immediate setting of this structure is uncertain due to the level of land forming which has occurred in the intervening years. It is understood that the structure was originally encircled by a moat and outer glacis. Martello Tower M lies approximately 50m outside of the north-eastern edge of the application site. Built at the same time as Martello Tower L, the structure has also been greatly modified with a water tower placed on top. It should however be noted that this Martello Tower (M) is outside the application boundary.

Shotley Fort is located in the central area of the application site. It is understood that the fort was built to defend Harwich Haven and originally comprised a seven-sided wall and outer ditch. As with Martello Tower L, the physical extent and immediate setting of the fort is unknown although the extent of the Scheduled Ancient Monument is believed to have been configured to the line of the outer ditch.

The Landscape Assessment is comprised of a study of two separate but inter-linked issues:

- **Landscape character** is the physical makeup and condition of the urban environment. It arises from a distinct, recognisable and consistent pattern of physical and social elements, aesthetic factors and perceptual aspects.
- **Visual amenity** is the way in which the site is seen; views to and from the site, their direction, character and sensitivity to change.

The application site lies within the former naval training facility of HMS Ganges and is contiguous with that area. The site has very limited intervisibility with immediately adjoining areas and is considered to be capable of accommodating significant change through redevelopment. As such, the site offers considerable opportunity to improve the fabric of the landscape through the removal of incongruous features, the introduction of a long term land use and the provision of a landscape setting for the benefit of users and the public. There are also opportunities for greater public access and increased permeability for local residents and visitors alike through the provision of new public open space and in providing connectivity between the Marina and Shotley Gate.

The visual study of the site identifies that the majority of the 20<sup>th</sup> Century buildings and infrastructure associated with the former HMS Ganges site is of little landscape value.

Open areas currently contain a number of mature trees, scrub and over-mature grassland over building debris and foundations. The proposed combination of amenity grassland and rough grassland, with appropriate structures provided for reptiles, will provide long term landscape solutions to the mutual benefit of biodiversity, new residents and visitors to the site.

The retention, replacement and reinforcement of tree belts across the site should be given further attention in the consideration of the scheme as these features serve an important function in screening existing and proposed built form, and in preserving the sparse wooded character of Shotley Peninsula in views across Harwich Harbour. The proposed development will retain the majority of trees on the application site and will not affect vegetation on the southern and eastern sides of the HMS Ganges site which significantly screen the development area and characterise the wooded nature of the Peninsula.

Public access to open areas offers a substantial benefit pursuant to the implementation of the proposed development. The application site is currently not generally experienced by visitors or residents and so the perceived landscape harm is limited to those accessing the site for maintenance purposes (and occasional training exercises). However, there are key features on site, principally the Martello Tower and Shotley Fort, which have the potential to offer residents and visitors a valuable resource through a greater understanding of the historical military significance of the Peninsula whilst enjoying the views associated with their strategic positioning across Harwich Harbour. The significant expanse of open space potentially available within the application site and wider HMS Ganges site offers the further potential for a significant landscape/ parkland resource.

The Scheduled Ancient Monument of Shotley Fort is to be retained and enhanced within the site layout. the restoration of the Fort is considered to be a significant benefit of the proposed development. The proposals will transform the Fort from a publicly unknown, physically damaged and deteriorating structure into a visitor attraction and local resource capable of offering public enjoyment for the long term, alongside the conservation and better understanding of a historical feature. Martello Tower 'L' is also to be retained and enhanced through the redevelopment proposals.

The original Martello Tower forms only the base of the current structure. It has been recommended that the water tower and associated brick structure be removed to restore the 18<sup>th</sup> Century Tower to its original proportions. This proposal will result in the loss of not only the water tower (serving as a local landmark), but also the signal cabins and mast on the southern side which once guided boats into the estuary. Whilst the loss of these features could be seen as undesirable, it is considered that the substantial benefit of restoring the Tower outweighs the loss and ensures its longer term integrity.

The assessment identifies significant long term benefits to the fabric of the landscape within and adjoining the application site which will follow the implementation of the proposed scheme. Whilst these benefits are tangible, the absence of an equivalent solution for the entirety of the HMS Ganges site suggests that these benefits could be further enhanced through the development of a masterplan for the whole site.

In general terms, visual amenity effects resulting from the construction stages are considered to be consistently adverse as there are few, if any, aspects of the construction process which could be considered positive. These effects will be temporary. Post construction, the scheme has been weighed against the existing context in the determination of the nature of effects. Generally, the buildings and their landscape setting is considered to be beneficial.

Despite the size and aspect of the application site, it is particularly well concealed by topography, vegetation and built form – no significant effects (either positive or negative) have been identified as a result of the proposed development. Where moderate and minor adverse effects are likely, these are not pronounced and are capable of conciliation with sensitive landscape design and retention of mature trees.

Whilst the redevelopment of the entirety of the site would increase the visibility of redevelopment activities from Shotley Gate, it is considered that the potential advantages of redeveloping the wide site are overwhelming in delivering a long term solution for the former naval training base.

The scale and location of the proposed development will be prominent around, and in views of, the Marina. It will also form a strong visual marker on the western termination of the Orwell Estuary and will be prominent in views from the AONB (Stour and Orwell Walk). The uncompromisingly modern architecture will stand in contrast to the residential scale and traditional materials of Shotley Gate. It is not considered that there will be any direct landscape or visual conflict between the development proposals, the character of each befitting the context; the Marina development will strongly connected (both physically and in character) to the yachting and boating activities with the proposed development forming a extensive residential scale settlement pattern contiguous with Shotley Gate).

The design builds on previous design development for the site. Landscape and visual issues have been extensively analysed and tested against planning policy in devising a scheme which addresses a number significant environmental issues. A significant degree of mitigation of effects has therefore been considered in the evolution of the scheme, however the assessment still recommends that a construction management plan be agreed with the planning authority in order to secure a range of primary mitigation measures for the construction period.

### **13. Noise and Vibration**

The proposed development will involve some limited demolition, construction and enhancements to existing buildings on the site. The potential effects of the proposed development on noise in the area surrounding the proposed development area are addressed in this chapter. The assessment is based on previous work undertaken in April 2003, and it has been updated to take account of the changes in the quantum of development and updated transport assessment. The assessment considers the

effect of the proposed development on the existing environment, as well as the effect of existing noise climate on the future occupants of the proposed development.

It is anticipated that the noise impacts on the site will be incurred from construction noise, operational mechanical plant noise, operational delivery vehicles and operational road traffic noise. The effect of construction noise on the nearest residential properties to the site boundary is likely to be significantly negative, but temporary. During construction and upon completion the proposed development will generate road traffic.

The existing noise climate on the site is controlled either by road traffic noise or with the background influenced by noise from the dockyards at Felixstow and Harwich. Noise levels are also affected by Parkstone Quay and the sound of waves onto the shore.

The proposed development includes various facilities that will require deliveries. However, for the most part, these will use smaller flat bed trucks rather than heavy goods vehicles. This is due to the necessary regularity of the deliveries and the road links to the site. As such delivery vehicles are unlikely to make a discernible additional noise to that assessed as part of the general road traffic noise.

The potential effect on noise resulting from operational road traffic has been calculated using the traffic flow data generated by the transport consultants. Given that the B1456 will provide the main route to and from the site to the town centre of Ipswich or the A14 trunk road and beyond, the traffic flow has been predicted for a number of junctions along the B1456.

Houses along the route are located at various distances from the kerb of the road. There are very few immediately adjacent to the road and a number approximately 4m from the kerb with the vast majority further than this from the noise source. At no location are the noise levels or the change in noise level such as to meet the requirements of the Noise Insulation Regulations for the award of grants.

There would be no significant source of vibration during the construction period, assuming conventional construction practices. The result of the vibration survey and predicted traffic flows indicates that vibration due to road traffic would not affect the amenity of future residents or their properties, or any commercial properties. Operational Noise impact on the proposed properties on the southern part of the proposed development will be mitigated through the appropriate design of the dwellings to ensure internal noise levels.

#### **14. Micro-Climate**

An assessment of the likely pedestrian comfort and safety within the proposed development site was conducted. It is expected that the pedestrian level wind conditions will generally be dictated by exposure of the various zones because there is an absence of dominant structures on the existing site.

Wind conditions within the residential zones and long the tree lined avenues are expected to be comfortable and safe for pedestrians, although the northern zone is exposed to north-easterly winds, which are common in early spring.

The assessment concludes that the introduction of the buildings and hard and soft landscaping is expected to have a minor beneficial impact on wind conditions due to the increased shelter provided. With the introduction of recreational activities, pedestrians are however expected to be more sensitive to the local wind conditions although this perception may be slightly attenuated by expectation of the wind conditions associated with coastal areas. In order to ensure that the proposed development has no significant impact on the pedestrian level wind environment soft and hard landscaping proposals will be designed in order to provide an appropriate level of shelter.

The proposed development is not expected to significantly impact on wind conditions within the surrounding area.

#### **15. Socio-Economics**

The socio-economic effects the proposed development may have on the area around the proposed development have been assessed. Due to the nature of the proposed development, the assessment focuses on the need for the proposed development and the potential for significant effects on social infrastructure (namely healthcare and education) associated with it.

The total population generated by the proposed development is likely to be less than that of a standard open market scheme. This is because the demographic of the proposed development is focussed on those aged 55 and over, the likelihood of children occupants is very limited. Also, there is a greater possibility of single person occupation.

The assessment concludes that the Retirement Village is highly unlikely to generate a population that would create an additional demand on school places, therefore no mitigation is proposed. Additionally an assessment on the demand on GP practices concluded that, given the number of GP Practices within the local area and the facilities provided with the proposed development it is not thought that there will be a significant impact on the health care system.

## 16. Transportation

This section discusses the transportation conditions prevailing around the proposed development site and changes to those conditions that can be expected to arise as a result of the proposed development.

Throughout extensive pre-application discussions with SCC, the principal concern has been the potential impact of additional traffic on length of the B1456 corridor, from Shotley Gate to the its terminus at the A137 / B1456 roundabout junction at Wherstead, with specific reference peak hourly periods. Traffic count surveys have been carried out at seven junctions along the B1456 route.

Given the nature of the proposed development which comprises retirement homes, including assisted living apartments, and a care facility; it is expected that a much lower proportion of residents will be economically active and therefore the impact on trip generation characteristics are likely to be lower in terms of during the morning 'rush hour'. In addition, on-site facilities, such as the leisure facilities and club house are for retirement village residents only and as will only generate internal trips. These on-site facilities will help reduce the travel demands of the proposed development.

The existing vehicular access / egress to / from the site is via a gated point, located at the eastern end of Caledonia Road and the northern end of School Road. Caledonia Road is designated public highway; School Road is a private road. The site is currently not publicly accessible; it is fenced and gated. The western end of Caledonia Road, which currently gives vehicular access to the proposed development site, connects with the B1456 Bristol Hill, forming a priority junction (or T-junction) with vehicular priority given to traffic on the B-road. The B1456 Bristol Hill runs broadly north / south through Shotley Gate village, terminating to the south at the village's southern extremity, outside the Bristol Arms Public House and Shotley Pier.

The southern end of the B1456 Bristol Hill gives access to Queen Victoria Drive to the east, which in turn gives access to King Edward VII Drive. Queen Victoria Drive / King Edward VII Drive provides vehicular access / egress to the existing Shotley Marina; the carriageway design is low standard and, to all intents and purposes, forms a single track road with no segregated footway. For sections of Queen Victoria Drive / King Edward VII Drive, there is a vertical drop from the sea wall on the southern/eastern side, with no parapet fencing or safety barrier in place.

The B1456 is the principal vehicular route across the Shotley Peninsula, which gives access to a network of local unclassified roads on the peninsula. The B1456 is designated a District Distributor Road and comprises a single carriageway. The B1456 is a single carriageway road which runs from Shotley Gate village broadly north-westwards along the length of the Shotley Peninsula. The B1456

passes through the linear villages of (from south-east to north-west) Shotley Street, Chelmondiston and Woolverstone.

It is anticipated that the majority of construction traffic would access / egress the site via the B1456, given its District Distributor designation. The proposed development's temporary demolition and construction phase is likely to generate a significant number of heavy goods vehicle (HGV) movements, as well as the movement of other specialist equipment. Although temporary, this could have a potential adverse impact on the operation and safety of the B1456 if this phase is not managed properly

Shotley is currently characterised by a low level of public transport accessibility. The nearest mainline rail station is located in Ipswich, approximately 17kms away to the north-west of the site. It is noted that mainline rail stations are located at both Harwich (Harwich Town Station & Harwich International) and Felixstowe, but from the site these are situated across the waters of Harwich Harbour.

Shotley is served by a local scheduled bus routes, Number 97b operates between Ipswich, Chelmondiston and Shotley Gate and Number 98 operates between Ipswich, Erwarton and Shotley Gate, both giving access to Ipswich Station. An existing bus stop facility is conveniently located within a minute's walk of the site. In addition, bus access in Shotley and the wider Shotley Peninsula has been significantly enhanced by the *Buzabout* initiative. The main purpose of the *Buzabout* network is to provide everyone with the opportunity to travel both within the peninsula and beyond. In addition, the Harwich Harbour Foot Ferry (hereon in referred to as the 'foot ferry') currently links Shotley, Harwich and Felixstowe. The foot ferry currently operates between Shotley Gate village, Harwich and Felixstowe connecting Suffolk and Essex. .

Walking is a potentially attractive mode of travel in the Babergh District, particularly given its relatively flat terrain. The site is positioned within a rural and coastal environment and there is significant potential for leisure-based walking trips or walk trips to nearby amenities, given the high quality local environment. Existing pedestrian links include a pedestrian footway along the B1456 route. Other designated walking routes around Shotley Gate, include bridleways along Lower Harlings and School Road just off the B1456 Bristol Hill and; the National Trail / Long Distance route which runs down the B1456 Bristol Hill towards Shotley Pier and then heads along King Edward VII Drive up to the Shotley Marina and heads up towards Chelmondiston and Woolverstone..

Currently there are limited cycle facilities in Shotley. The carriageway width of the B1456 generally precludes the introduction of cycle lanes (advisory or mandatory) along this route. There is however The Suffolk South Route B, which runs through Shotley Gate village, in close proximity to the site. The proposed development will have a positive impact on pedestrian, cyclist and public transport access in Shotley Gate village.

The site is currently fenced, gated and not publicly accessible. The proposed development includes pedestrian footways and a shared pedestrian footway / cycle way along the length of the proposed access road through the site, which will increase general accessibility, including access to local bus and ferry services operating within Shotley Gate. The proposed development also includes pedestrian / cycle links to / from Caledonia Road, which is also a proposed emergency access.

The results show a maximum RFC value of 1.023 (102%) and 0.962 (96%) in the AM and PM Peak hours respectively for the 2012 Do Something scenario with the existing highway configuration. This junction would therefore be over capacity in both the AM and PM Peak hours with the existing highway configuration and is considered to have a significant adverse impact even without the proposed development.

A Travel Plan is a process for managing change in travel behaviour and seeks to encourage and enable sustainable transport behaviour of the residents of the proposed development. It is anticipated that a Travel Plan condition will be imposed to require further details on the preparation, implementation and monitoring of a Travel Plan for the site to be submitted and full compliance with these details.

Furthermore, a Construction Management Plan for the proposed development will ensure that potential adverse traffic and transport impacts during the temporary construction phase are mitigated and monitored.

## **17. Conclusions**

The assessment undertaken has identified a number of significant effects of the proposed development both adverse and beneficial. Where adverse effects are identified measures to address them are proposed which can be controlled through conditions on a planning permission or by legal agreement to overcome or reduce the effects. A number of beneficial effects are identified principally relating to the cultural heritage and visual amenity.

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Comments, queries or requests for information concerning the Environmental Statement should be addressed to:

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Copies of the Environmental Statement are available from Hepher Dixon at a cost of £100 per copy.  
Copies of this Non-Technical Summary are available free of charge.