



Lodge Hill

Outline Planning Application on behalf of Defence Infrastructure Organisation

Environmental Statement

Volume 0: Non-Technical Summary

Prepared by Hyder Consulting

October 2011

This document forms part of a suite of documents which comprise the Lodge Hill Outline Planning Application.

Hyder Consulting (UK) Limited

2212959
29 Bressenden Place
London SW1E 5DZ
United Kingdom
Tel: +44 (0)20 3014 9000
Fax: +44 (0)20
www.hyderconsulting.com






Lodge Hill

Outline Planning Application on behalf of Defence Infrastructure Organisation

Environmental Statement

Volume 0: Non-Technical Summary

Author	Various - Compiled by Caroline Soubry-Smith and Lourdes Cooper	
Checker	Tim Carter	
Approver	David Mythen	
Report No	5089-UA003269-LN-R-02	
Date	October 2011	

This report has been prepared for Land Securities in accordance with the terms and conditions of appointment for Lodge Hill. Hyder Consulting (UK) Limited (2212959) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

CONTENTS

1	Introduction.....	1
2	Environmental Impact Assessment.....	4
3	Summary of Environmental Effects.....	5
3.2	Cultural Heritage.....	5
3.3	Air Quality.....	6
3.4	Noise and Vibration.....	6
3.5	Water Quality, Drainage and Flood Risk.....	7
3.6	Geology and Contaminated Land.....	8
3.7	Transport and Access.....	8
3.8	Landscape and Visual Impact.....	9
3.9	Community and Socioeconomics.....	10
3.10	Waste Management.....	10

1 INTRODUCTION

Lodge Hill is a sustainable mixed-use new settlement. The site comprises approximately 325 hectares of land which was previously used for military training, but is now surplus to the Ministry of Defence's (MoD) requirements. The Defence Infrastructure Organisation, who manages the military estate on behalf of the MoD, is submitting an Outline Planning Application for the redevelopment of the site, the location of which is shown in Figure 1-1.

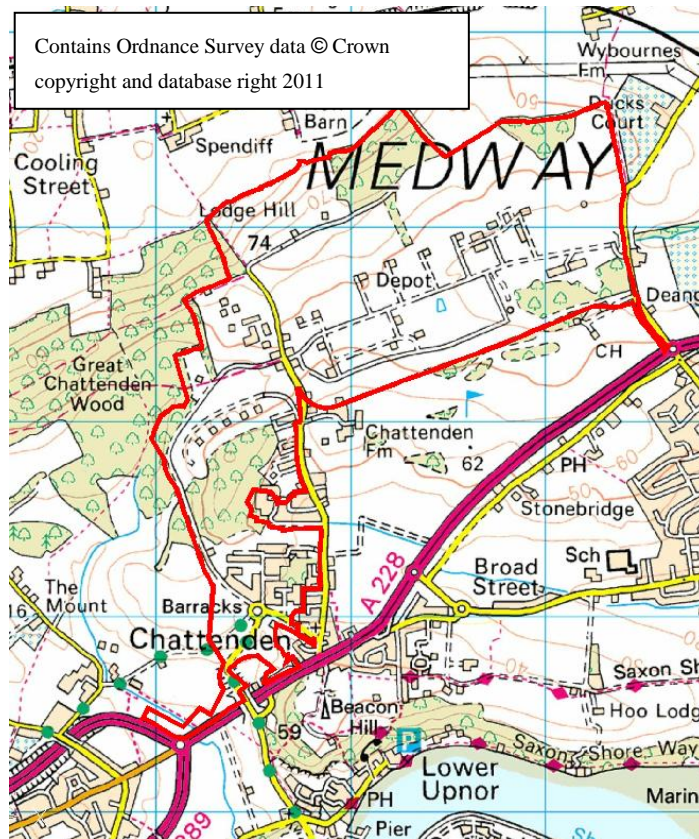


Figure 1-1 Site Location

This document is the Non-Technical Summary of the Environmental Statement for Lodge Hill. The purpose of this Non-Technical Summary is to summarise the principal findings of the Environmental Statement in non-technical language, to make it readily understandable by members of the public. The Non-Technical Summary forms Volume 0 of the Environmental Statement.

The Non-Technical Summary is published in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2011. The full findings of the Environmental Impact Assessment are presented in the Environmental Statement (ES), consisting of Volume 1 – Main Text, Volume 2 – Appendices and Volume 3 - Drawings).

The description of the proposed development in the Lodge Hill Outline Planning Application is as follows:

“Demolition of buildings and development for the delivery of a mixed-use new settlement comprising up to 5,000 residential units, up to 36,750 sq m GEA B1 business floorspace, up to 7,350 sq m GEA B2 business floorspace, up to 3,251 sq m GEA convenience (Class A1) floorspace, up to 2,070 sq m GEA comparison (Classes A1, A2, A3, A4, A5) floorspace, secondary school, three primary schools, community centre, healthcare centre, assisted living

facility, nursing home, garden centre, two hotels, water bodies and works associated with the development including roads, landscaping, informal and formal open space, pedestrian, cyclist and public transport infrastructure, utilities infrastructure, car and cycle parking”

The Land Use Plan for the Lodge Hill is shown in Figure 1-2. Further details about the proposed development can be found in the Environmental Statement and the other documents which together comprise the Outline Planning Application.

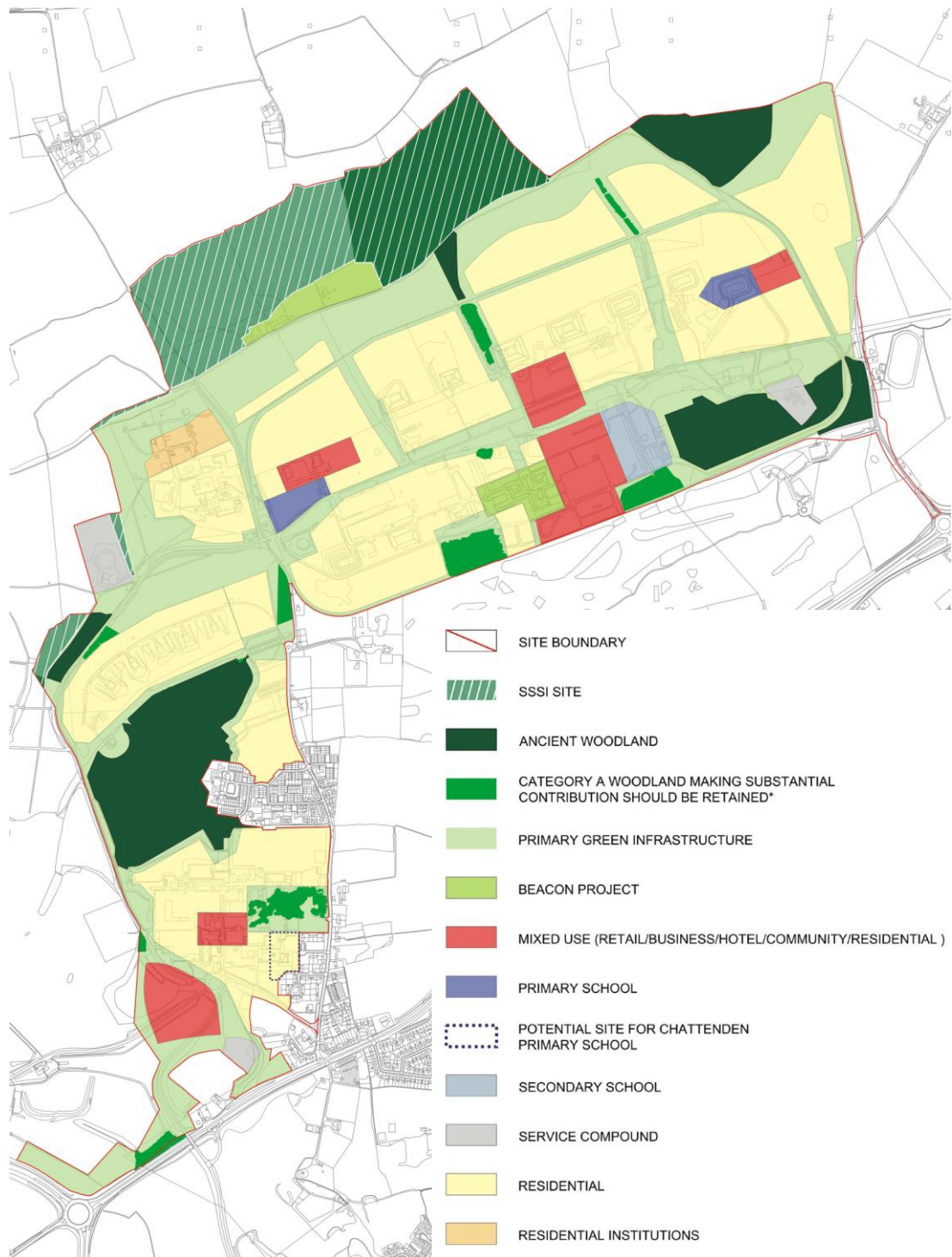


Figure 1-2 Indicative Land Use Plan

*Does not include individual trees.

Lodge Hill would be delivered by a Lead Developer, who would be responsible for preparing the site for redevelopment and would oversee the activities of other developers and facility providers. All parties involved in the creation of Lodge Hill would be required to adhere to the mitigation measures and commitments set out in the Environmental Statement. The construction of Lodge Hill is anticipated to begin in 2012 and be completed in 2031, although the dates and programme will be confirmed at a later stage.

2

ENVIRONMENTAL IMPACT ASSESSMENT

An Environmental Impact Assessment is an assessment of the possible positive or negative impacts that a proposed project may have on its environment, be that the natural environment or social and economic aspects. Environmental Impact Assessments have been required for major developments since 1988 when the European Council Directive on Environmental Assessment (EC Directive 85/337/EEC) was implemented in the UK. The requirements for Environmental Impact Assessments were subsequently amended by Directive 97/11/EC, which is given effect in the UK for this project by the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.

The findings of the Environmental Impact Assessment are reported in the Environmental Statement for Lodge Hill. The Environmental Statement describes the proposals, analyses the baseline environment and identifies any significant environmental effects and how they should be mitigated. This helps to create a fuller picture, enabling the Local Planning Authority (in this case Medway Council) to make an informed decision on the Outline Planning Application.

The Environmental Statement aims:

- To provide a description of the proposals
- To give detailed information regarding the possible environmental effects of the proposals having taken into account the measures proposed to avoid, reduce and, where possible, remedy any possible significant adverse effects on the environment
- To enable the proposals to have a beneficial impact on the environment, where possible
- To provide a forum for the public and consultees to express an opinion before Medway Council makes a decision on whether or not to proceed with the proposals
- To provide an outline of the main alternatives considered by the developer and an indication of the main reasons for the choice, taking into account the environmental effects

3 SUMMARY OF ENVIRONMENTAL EFFECTS

3.1 Ecology

A suite of ecological surveys have been undertaken to find out what habitats and species may be effected by development at Lodge Hill and to determine how these habitats and species will be protected. Extensive consultation has taken place with Natural England to inform this understanding.

The proposed development area is located adjacent to Great Chattenden Woods SSSI. The potential developable area also contains sections of ancient woodland, which have been protected and will not be developed on. Protected species and species of conservation concern found to be on the site include terrestrial invertebrates, amphibians, reptiles, breeding birds, badgers and bats.

By considering ecology within the scheme at the outset and retaining the most sensitive existing habitats, many potential impacts on habitats and species have been avoided or reduced. A series of Protected Species Masterplans detail how ecology at Lodge Hill will be retained and enhanced, and new habitats created, to benefit biodiversity and preserve conservation status. Habitat compensation measures are proposed both on- and off-site, including an area of off-site habitat compensation at the MoD training area to the west of Lochat Road.

Increased recreational use can place additional pressure on sensitive sites, such as Great Chattenden Woods SSSI. An Access Management Strategy has been created to tackle this and reduce any potential detrimental effects. Breeding birds will be protected during construction and development of Lodge Hill via various measures – the implementation of which will be supervised by an appropriate specialist, where required. Impacts on badgers will be minimised during development operations via the use of traffic calming measures and a badger tunnel. In order to avoid injury to foxes and rabbits, fox earths and rabbit holes will be sensitively removed prior to construction commencing.

As a result of these measures, outlined in brief, any negative impacts on ecology are considered to be manageable.

3.2 Cultural Heritage

Archaeology (pre-1875)

An archaeological desk-based assessment and site walkover have been undertaken for Lodge Hill, followed by further field studies. The site has been assessed as having a limited archaeological potential, although a small number of locations contain archaeological remains of local importance.

While further archaeological mitigation measures are likely to be required in advance of the proposed development commencing, it is suggested that these can be secured by appropriately worded planning conditions assigned to the Outline Planning Permission. Overall the archaeological effect of Lodge Hill can be characterised as 'negligible'.

Built Heritage (post-1975)

The baseline assessment has identified 65 built heritage assets within Lodge Hill, primarily related to former military buildings that remain on the site. Of these, 24 are of high sensitivity, six of medium sensitivity and the remaining 35 are of low sensitivity. It is intended to retain examples of some of the undesignated heritage assets on the site, but it has not been possible

to definitively indicate which of these would be retained at this stage. The impact assessment is therefore based on a highly unlikely 'worst case' scenario, whereby all heritage assets of medium or low sensitivity are demolished, giving a moderate or slight negative impact. However, as the detailed design is progressed, measures would be developed to minimise this negative impact.

Worst case scenario assumptions have also been made with regards to the impact on the settings of retained high sensitivity heritage assets, although the provision of interpretation panels and a maintenance regime for these have been assumed. Development within the settings of these heritage assets would be subject to the normal planning controls, which would give Medway Council the opportunity to ensure that any development potentially affecting these assets is designed in a sensitive and appropriate way.

Four built heritage assets which could potentially be impacted by changes to their settings have been identified beyond the Lodge Hill site boundary (these are all of high sensitivity).

3.3 Air Quality

An assessment has been undertaken to consider the potential impacts on air quality arising from the construction and operation of Lodge Hill. Dust and emissions from construction vehicles during the construction phase, along with operational emissions from traffic movements and on-site energy production associated with Lodge Hill, all have the potential to impact on local air quality. The two key pollutants considered in the assessment were Nitrogen Dioxide and particulate matter.

Air quality monitoring showed that existing pollutant concentrations in the vicinity of the site exceed or are close to the annual mean Nitrogen Dioxide Air Quality Limit Value, defined by air quality standards. Therefore, detailed assessment of the air quality impacts has been undertaken in the vicinity of the site - which is where the largest increases in traffic movements are projected. Effects further afield, where monitoring indicated lower pollutant concentrations, were assessed using a simple screening method.

The development proposals include a number of measures to minimise the impact from construction dust following current Best Practice Guidance, such as dust suppression. The impacts during the construction stage are only likely to occur in the immediate vicinity of the site, and these range from 'temporary moderate adverse' to 'negligible'.

Measures to minimise traffic generation will also help to reduce significant permanent impacts on air quality. The impacts in the immediate vicinity of the site range from 'slight adverse' to 'negligible' during the operational phases for the traffic and energy centres. Beyond the immediate vicinity of the site, impacts are generally negligible.

3.4 Noise and Vibration

A baseline noise assessment has been carried out to identify the current background noise profile of the site and surrounding areas. The baseline noise survey indicates that noise should be taken into account when determining the planning application and, where appropriate, conditions should be imposed to ensure an adequate level of protection against noise.

Permanent noise impacts are likely to arise from an increase in road traffic on site and on the local road network. Daytime noise contours have been produced to understand potential road traffic noise impacts associated with Lodge Hill in 2026, and these indicate that there would be no significant impacts on neighbouring receptor areas. In one area of the site, noise generated by traffic accessing the site would mean that acoustic mitigation will need to be incorporated into

the new homes within Lodge Hill, to ensure that noise levels within these new houses are acceptable.

Permanent noise impacts are also likely to arise from the Energy Centres and other installations that will be required to service the site. Noise limits for the Energy Centres and other plant would be agreed with Environmental Health at Medway Council, and design measures would be incorporated into the detailed designs in order to achieve these levels. These measures would include the selection of quieter items of plant, acoustic treatment of the building envelope to increase the sound reduction afforded by the building, and fitting the stack with attenuators.

Construction noise impacts are temporary in nature, lasting for the duration of construction works. Mitigation measures will be incorporated into the Construction Code of Practice to ensure that these impacts are kept to a minimum.

3.5 Water Quality, Drainage and Flood Risk

The potential effects of the proposed development on water quality and flood risk have been considered.

The River Medway is 0.6 km away from the southern end of Lodge Hill and 3.0 km away from the northern end. Within the site, surface water features comprise unnamed drainage ditches and several ponds. Surface water flow is mostly from run-off, since groundwater base flow is limited as the ground is predominately clay. During site visits, ditches within the site were found to be mostly without flowing water.

In accordance with the Flood Maps provided by the Environment Agency, Lodge Hill lies almost wholly within Flood Zone 1, the lowest flood risk classification. The south western corner of the site lies in Flood Zone 3, however this accounts for less than 0.5% of the total site area. The developable areas at Lodge Hill are neither at risk of flooding from tidal or fluvial sources, nor at known risk of surface water flooding from on-site surface water bodies (although heavy rainfall has been observed as the cause of local surface flooding).

A series of surveys found that the water quality of surface water features on-site is affected by contamination by hydrocarbons, a metal (manganese) and organic matter (as identified by increased concentrations relative to water quality standards).

During the construction phase, there is a risk of reduced water quality in surface water features due to increased suspended solids and mobilisation of potential soils and stream bed contamination. There may also be a change in surface water runoff rates. However, best practice construction practices would minimise these risks, and the overall effect on water quality and flood risk during the construction phase is considered to be 'temporary neutral' or 'slight adverse'.

The Lodge Hill proposals include the construction of suitable surface water drainage infrastructure. Discharge from the site is limited to the greenfield runoff rate and there will be adequate attenuation storage on site to manage storm events. Therefore effects on flood risk are considered to be of 'slight beneficial'.

Soil remediation and a Sustainable Urban Drainage System will improve the current quality of water discharging to surface water features, and hence, the quality of the water held within. Therefore effects on surface water quality are considered to be permanent 'slight beneficial'.

3.6 Geology and Contaminated Land

An assessment has been undertaken of the likely significant effects of Lodge Hill in terms of land contamination.

The baseline conditions for the site were established through a number of phases of investigation, with subsequent interpretation and risk assessment. Quantitative risk assessment has identified contaminants of concern in some areas, that may pose a risk to human health and/or controlled waters for which further investigation and/or remediation will be required.

The remediation strategy for Lodge Hill will ensure that across the site, soil to a depth of 600mm is suitable for its proposed use. Underlying hotspots of contamination will be removed and treated in accordance with accepted criteria, to protect human health in the operational phase of the development. Where necessary, ponds in low-lying areas will be designed to prevent contamination from potentially contaminated soil leachate and / or from perched groundwater seepage, for example by the incorporation of a lining.

The potential impacts to construction workers from contaminants in soils and groundwater will be mitigated through the adoption of appropriate Health and Safety practices, which will be outlined in the Construction Code of Practice. Good practice construction measures would also be put in place to mitigate the impacts to the environment and off-site human health associated with the remedial works and construction works, e.g. impacts from dust / air pollution, noise and odour. The residual impact during the construction phase is assessed to be 'temporary slight adverse – neutral'.

The health of future residents and occupiers during the operational phase will be protected by the measures put in place during the construction phase. The health of future building occupiers will also be protected by the incorporation of appropriate ground gas protection measures (where necessary). Concrete in building foundations and buried services will also be protected through appropriate design and ongoing investigation. As a result of existing contamination being addressed, the residual permanent impacts for future users of the site are assessed to be 'permanent moderate' to 'large beneficial'.

3.7 Transport and Access

The potential impacts of traffic and transport associated with the development proposals and the predicted associated effects on sensitive locations in the area have been considered. The assessment methodology has followed that set out in the document entitled, "Guidelines for the Environmental Assessment of Road Traffic" published by the Institute of Environmental Assessment in 1994.

Traffic modelling for the study area has demonstrated that by 2026 the existing highway network will not be able to accommodate the forecasted increases in traffic flows which will occur even without any development at Lodge Hill. This means that without any development taking place at Lodge Hill, there will be significant delays for drivers on the road network by 2026.

However, as Lodge Hill will be developed in phases of circa 300 homes a year, there is the flexibility to respond to changing transport situations. A number of changes to the road network are proposed, which are described in more detail in the non-technical summary of the Lodge Hill Transport Assessment. These changes enable capacity to be created in the road network before it is needed.

An interim road improvement scheme focusing on Four Elms Roundabout and Dux Court Road would therefore be implemented at the start of the first phase of development. A more extensive package of highway improvements will then be implemented by 2022.

Off-site pedestrian, cycle and bus infrastructure is planned to encourage non-car travel. There will be a user hierarchy within Lodge Hill with pedestrians having the highest priority. An Interim Travel Plan has been prepared to demonstrate how non-car use will be promoted.

There will be a slight adverse impact on pedestrians in some areas as a consequence of traffic generated by Lodge Hill affecting ease of road crossing. However, there are clear benefits arising from Lodge Hill with respect to reduced pedestrian delay, and reduced fear and intimidation experienced by pedestrians as a result of traffic. Additional footbridges over busy roads are also proposed.

A dedicated construction route is to be provided directly from Four Elms Hill into the site to minimise the impact on sensitive areas and to ensure construction and operational movements are separated for safety reasons.

3.8 Landscape and Visual Impact

The potential landscape and visual impacts associated with the proposed development at Lodge Hill have been considered.

Lodge Hill has been designed to minimise adverse landscape and visual impacts from the surrounding area. Generally, new development has not been located near the site boundary, the sensitive areas of higher ground, nor near to the designated SSSI and ancient woodland.

The proposed residential density and scale of Lodge Hill takes its cue from the existing topography of the site; the taller buildings and higher densities are generally located on the lower ground within the visually discrete areas. In the visible areas of higher ground, the buildings are generally limited to between one and two storeys. Woodland planting will be provided around the majority of the site's perimeter, providing a visual buffer and integrating Lodge Hill with the surrounding landscape.

The majority of the development would be sited within a shallow valley between two ridgelines and therefore is largely hidden from view. Lodge Hill is most visible from the south, with views towards the southern slopes of Chattenden Ridge on the higher ground. There would be 'minor' to 'negligible' visual impact from the east of Lodge Hill within the settlement of High Halstow, where the topography and proposed woodland planting along the perimeter of the site would screen the majority of views of Lodge Hill. Lodge Hill Ridge provides a visual buffer, blocking views from the north towards the proposed development. The character of the ridgeline has been respected with the development pulled away from the ridge. The west of Lodge Hill is an important landscape buffer between the rural Peninsula and the Medway towns.

There will generally be permanent changes to the landscape character from the existing military training uses to the new townscape at Lodge Hill. The increased scale and density of the proposed development will significantly change the internal character of the site. The structure of the proposed development has been designed to incorporate a strong landscape framework creating a positive environment. The existing sensitive landscapes have been retained and incorporated into the landscape framework. It is considered that there will be an overall positive impact on landscape character as a result of the regeneration of Lodge Hill.

Any adverse impacts associated with the proposed development are generally limited to temporary impacts during the construction phase. Once the proposed development is completed, the negative impacts will change to beneficial. The proposed development has been

design in accordance with landscape planning policy and the regeneration policies for Lodge Hill, as outlined within Medway's Core Strategy. This delivers many positive benefits.

3.9 Community and Socioeconomics

The likely community and socio-economic impacts of the proposed development at Lodge Hill can be broadly split into two categories – the impacts of the new population and new community provision on the area (community impacts) and the impacts of the employment opportunities and additional expenditure on the wider area (economic impacts)

In relation to community impacts the provision of up to 5,000 new homes, of which 23% would be affordable, would be a major beneficial impact to the area, making a significant contribution to the achievement of Medway's housing targets.

It is anticipated that Lodge Hill would be occupied by around 11,640 people, with a high proportion of children and young people in the early years of the development. Community provision has been planned to meet the needs of the new residential population and, where possible, to address current deficiencies in the area.

The development proposals therefore include new schools (and a possible extension or relocation of the existing Chattenden Primary School), a health centre, new sports and recreation provision, and a range of other community provision. By providing these facilities within the development, the new population would have a 'negligible' impact on services in the wider area. New facilities would also provide a major beneficial effect locally in their own right.

The main direct economic impact of the scheme would be through the provision of jobs and employment would be generated at Lodge Hill in a number of different ways. Lodge Hill has capacity for at least 3,970 Full Time Equivalent Jobs, cementing the importance of the Hoo Peninsula as an economic destination for the South East. In addition it is anticipated that up to 750 people might work from home. Together, this delivers a major beneficial effect at the Local and District level. The scheme would also make a significant contribution to the delivery of new, high-quality business floorspace in Medway, providing appropriate space for a range of business types and sizes.

Lodge Hill would have further "knock on" impacts through expenditure by workers, residents and visitors and through the supply chain. This could support an additional 600 jobs in the wider economy. It would also support significant long-term employment in the construction phase.

Lodge Hill would be phased over a twenty year period, with the delivery of community facilities phased in line with the growth of population and governed by triggers set out in a legal (Section 106) agreement. The phasing of employment opportunities is anticipated to be broadly in line with housing development, although both would be ultimately based on market conditions.

3.10 Waste Management

Construction Waste

The amount of construction waste arising from buildings and infrastructure works has been forecast using waste benchmarking data from BRE and WRAP's conversion factors. The estimated floor area of the proposals and the cost of infrastructure have also fed into this calculation.

Construction and infrastructure waste will reach an estimated 153,250 tonnes in total. Inert waste and concrete will make up the greatest component, 61,885 and 34,237 tonnes respectively, with mixed materials around 19,700 tonnes.

A strategy of 'Designing Out Waste' will be implemented once the Outline Planning Application has been approved and more detail is prepared through the Reserved Matters planning applications. This will support the use of materials in a more efficient manner and consider how reuse, recycling and recovery of materials can be incorporated into the design, ultimately reducing waste to landfill.

In addition, a Site Waste Management Plan has been prepared for the development, which will be used to identify the type and quantity of waste that will be produced. This will set out how waste will be managed so that it is reused, recycled, or disposed of appropriately. Overall, it is anticipated that waste generated from construction will have a 'minor' impact, while waste generated from excavation and demolition will have a 'negligible' impact on waste generation in relation to the proposed development.

Operational Waste

The additional waste generated at Lodge Hill will be municipal waste from the new homes. The total quantity of waste expected to be generated is in the region of 6,418 tonnes per year. This represents some 4.87% of the total waste for Medway and 8.5% of Medway's waste to landfill target (75,000 tonnes per year of landfill waste by 2020). However, it is not anticipated that the additional waste generated by the redevelopment of the site will have a significant impact on local waste provisions (the impact is considered to be 'slight' or 'moderate adverse').

The proposed business units are anticipated to generate an additional 9.7 tonnes of municipal waste per annum and the proposed retail units are anticipated to generate an additional 27.63 tonnes of municipal waste per annum.

Some additional hazardous waste will be generated by the proposed medical facilities (clinical waste). It is not anticipated that the additional clinical waste generated will have a significant impact on local waste provisions.

The detailed proposals for waste management within the site will be developed to ensure operational wastes are managed according to the principles of the waste hierarchy, within relevant policy and legislative requirements, with emphasis on waste minimisation and recycling. Based on the information currently available, it is envisaged that there would be a 'slight adverse' environmental impact arising from the redevelopment of the Lodge Hill site in terms of operational waste.