

Proposed Residential and Mixed Use Development of Land at Falkland Way, Barton-Upon-Humber

Environmental Statement: Non-Technical Summary

1. Introduction

- 1.1 An Environment Statement (ES) has been prepared to accompany an outline planning application with all matters reserved for future decision except for the immediate site access arrangements off Falkland Way Barton Upon Humber. The outline planning application has been submitted to North Lincolnshire County Council by the applicants Wren Living. The application site relates to an area of 25.2 hectares of land situated to the east of the settlement of Barton-Upon-Humber, to the east of Falkland Way and north of Barrow Road, within Barton ward. The land comprises a mixture of currently developed land (car park and access roads) and grassland plus landscaped mounds which formed part of the former Kimberley Clark factory complex. The site is within an industrial development curtilage and has a general planning permission for employment uses.
- 1.2 As an outline application details of matters of design, siting and landscaping are 'reserved' for later consideration by the Council through a reserved matters submission. A master plan has been submitted with the application showing the proposed general arrangement of the development and associated open space and landscaping. This master plan has been 'fixed' for the purposes of the Environmental Impact Assessment. This is also included at the end of this document It is anticipated that, subject to approval, works will commence on site preparation in late 2015 with house building commencing in early 2016. The following is a schedule of the anticipated completion rates subject to general market conditions at the time.

2016	20 dwgs
2017	40 dwgs
2018	40 dwgs
2019	45 dwgs
2020	45 dwgs
2021	45 dwgs

2022	45 dwgs
2023	20 dwgs

- 1.3 The development proposals are for a residential led mixed use scheme comprising 300 dwellings with a mixture of house types and tenures. Although the proposals are in outline, the indicative mix of housing for the EIA is set out below:-

A total of 50 units will be held by the owner of Wren Living as a property rental portfolio for rent to employees of the company and will comprise 10x 1 bed units, 20x 2 bed and 20x 3bed. A significant number of these will be occupied by key workers. The remaining 250 properties will be open market sales made up of 40x 2 bed, 80x 3 bed and 130x 4bed. It is envisaged that a number of these open market dwellings will be purchased by Wren employees.

- 1.4 The small commercial development is sited immediately off the Falkland Way access and to the north of the main access road. This comprises:

- 50 bed hotel
- Day Nursery (50 places)
- A 232 sqm (2,500 square foot) Convenience Store
- 16 fishing lodges.

2. The Proposed Development

- 2.1 The proposed development is submitted in outline and is described as follows:

“Residential development of up to 300 dwellings and a small commercial scheme including a 50 bed hotel, day nursery, small supermarket and 16 fishing lodges set within 11.4 hectares of public open space”

- 2.2 Matters in respect of the appearance, layout and scale of the development are reserved for later consideration by the Council. Approval is sought at outline stage for the immediate means of access to the development. Vehicular access to the site is proposed via the existing access to the factory complex off Falkland Way to serve both the proposed residential

development and mixed commercial development. The proposals are informed by a Transport Assessment and assessed from a highways perspective within the ES.

3. The Environment Impact Assessment

- 3.1 The submitted ES sets out the results of the Environmental Impact Assessment (EIA) of the development proposals and its potential effects in respect of a wide range of environmental issues. The assessment was undertaken by a number of technical consultants with expertise within their respective fields. The findings and conclusions of the assessment, under the relevant topic headings, are summarised below.

4. Planning Policy Context

- 4.1 In undertaking the EIA full regard has been had to Government policy as expressed within the National Planning Policy Framework 2012, statutory practice (in the NPPG), planning policy as set out in the adopted development plan and other technical guidance relevant to the topic areas.
- 4.2 The adopted development plan for the area comprises the North Lincolnshire Local Plan 2003 (saved policies). The Core strategy was adopted in June 2011 replacing a number of the adopted policies from the previous Local Plan (2003). A newly emerging local plan known as the Housing and Employment Allocations Development Plan Document has reached the stage where it will be considered at an Examination in Public commencing on the 13th January 2015.
- 4.3 The National Planning Policy Framework ("The Framework") indicates that local planning authorities should identify and update annually a supply of deliverable sites sufficient to provide five years of housing in line with their housing requirements in order to ensure choice and competition in the market for land. The aim is *"to boost significantly the supply of housing."* Most recent data released by North Lincolnshire County Council indicates a shortfall in housing land supply. In such instances the Framework states that relevant policies for the supply of housing should not be considered up-to-date and that where this is the case permission should be granted unless:

"Any adverse impacts of doing so would significantly and demonstrably

outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or

Specific policies in this Framework indicate that development should be restricted”

- 4.4 The policies set out within the Framework address a number of thematic areas and the technical reports submitted with the planning application demonstrate that the proposed development can be undertaken without significant adverse impact. As such the proposals are consistent with the presumption in favour of sustainable development established by the Framework.

5 Socio-Economic Impact

- 5.1 The socio-economic assessment considers the economic impacts of the proposed development in terms of employment and revenue benefits. It also considers potential impact upon accessibility to services, education, health and other facilities.

- 5.2 The socio-economic impacts can be beneficial or adverse. The following summarises the key impact conclusions:-

1. Planning policy at the national and local level is growth orientated and emphasis is placed on economic development and the importance of new housing in providing the necessary social infrastructure needed to support this growth. The proposals make a major beneficial contribution to these growth requirements.
2. The demographic profile of North Lincolnshire and Barton show past and future population growth above the national average. The proposals will help to provide much needed additional accommodation.
3. The creation of new jobs directly on site.
4. Parts of Barton Town fall within an area of relative deprivation particularly with regard to income, employment and education indicators. The development proposals are assessed as having a

medium beneficial impact on income, employment and skills levels.

5. During the 7 year construction phase it is estimated that direct on site construction jobs will average 67/annum with 137 additional offsite jobs created in a range of service and supply companies. A further 40 jobs will be provided on completion. This is a medium beneficial impact.
6. The proposed development will house a population of approximately 600 residents when completed in 2023. This will generate a total additional retail expenditure in Barton Town Centre of at least £2 million. This together with support for local community activities will add to the vitality and viability of the town centre.
7. There will be further financial contributions from the development in the form of Council taxes, an estimated £475,000 / annum on completion, and a New Homes Bonus payable to the Council amounting to £2.75 million.
8. Discussions are on-going with Health and Education authorities regarding the capacity of service in Barton. Both GP surgeries in Barton have spare capacities at the present time however the Central Surgery is at 92% capacity and further capacity provision will be required as this and other housing development is progressed. The Education authority will advise as to whether any financial contributions are necessary to create extra places at the three primary schools in Barton or at Baysgarth Secondary School.

6 Transport

- 6.1 Promoting Sustainable Transport is a core principle of the National Planning Policy Framework (NPPF) and is a fundamental consideration in achieving sustainable development. Section 4 of NPPF sets out how sustainable transport can be achieved at paragraphs 29-39. This includes facilitating a Travel Plan for larger scale proposals to identify and mitigate provision of sustainable transport for new development where necessary.

- 6.2 'A Network for 2030' White Paper 2004 sets out the Government's long term transport strategy for next 25-30 years in dealing with increased travel demands that do not compromise environmental, economic and social impacts.
- 6.3 The North Lincolnshire Core Strategy was adopted June 2011 and is a material consideration together with saved policies from the North Lincolnshire Local Plan (May 2003).
- 6.4 Sanderson Associates have produced a Transport Assessment and Travel Plan in support of the application, these are appendices to the full ES, based on estimated traffic generations using the TRICS database over a five year period. It is anticipated the Travel Plan to be conditioned subject to approval of the application.
- 6.5 Based on data held on similar operational developments in the Country this development could be expected to generate approximately 29% travel by walking, cycling and public transport modes in the AM peak hour and 22% in the PM peak hour. Over a weekday period 25% of travel could be by sustainable modes. The actual level of pedestrian and cycling activity could be expected to be greater than that predicted by national data due to the interaction between the residential and mixed uses and the Wren Headquarters. These pedestrian and cyclist trips will be using links provided within the site.
- 6.6 It is important that residents are made aware of the sustainable transport alternatives that are available and of aspects of the site's infrastructure that have been designed to assist and encourage their use in order that positive benefit can be taken from these and so that the number of trips made by public transport, cycle or walking are increased.
- 6.7 The Travel Plan aims to reduce the proportion of singly occupied car trips by 5% and increase the overall proportion of sustainable modes of travel by 5% split over a 5 year period from occupation of the 90th residential property.
- 6.8 A Travel Plan Co-ordinator is to be appointed three months prior to occupation of the first dwelling with details forwarded to North Lincolnshire Transport Planning. A Travel Information Pack is to be produced and provided with the sale of each plot which includes incentives for use of sustainable transport. The Travel Plan measures and initiatives will be implemented from first occupation.

- 6.9 A questionnaire will be undertaken and completed by residents within 2 weeks of occupation, the results of which will inform production of an annual Action Plan detailing measures to be undertaken for each 12 month period over the life span of the Travel Plan. The measures should be designed to meet with the Travel Plan targets considering the results of the resident travel surveys. In the event that all targets are met no annual action plan will be required. After the first 5 year period of formal monitoring the Travel Plan will be revised to incorporate the latest site conditions and establish on-going targets in consultation with the Local Planning Authority notwithstanding it being reviewed and updated annually.
- 6.10 It is considered the measures detailed within the Travel Plan will assist in reducing the reliance on private car journeys, particularly single-person trips in the peak hours. In turn the numbers of trips by other sustainable modes of transport should increase and thereby contribute to an improvement in both the operation of the local highway network and in the general environment.
- 6.11 The Travel Plan will be further developed in conjunction with North Lincolnshire Council once the development is operational and specific travel needs are identified.

7 Noise and Vibration

- 7.1 The Noise Policy Statement for England (2010) and guidance contained within the NPPF and NPPG provide a basis for effective management of noise pollution and ensuring impacts of new developments are mitigated.
- 7.2 The assessment considers noise and vibration impacts during the construction and operational phases of the proposed development. It sets out the results of a baseline noise and vibration monitoring survey and predictions of future noise levels. It considers the suitability of the existing noise environment for the proposed development, the effect of construction activity and effects once the development has been completed and occupied.
- 7.3 In terms of the existing situation the measured ambient noise levels are generally governed by road traffic noise from Barrow Road and Falkland Way including additional contributions from within the vicinity of the Humber Bridge Industrial Estate located north of the site.

- 7.4 The most notable noise impact would occur during construction. Whilst such occurrences would be temporary in nature, an adherence to 'Best Practice' during construction would ensure minimal impacts on local amenity. Accounting however for a worst case scenario associated with deliveries and car parking toward the north western part of the site conclude no significant impacts arising from the development.
- 7.5 A large landscaped bund is provided down the eastern boundary of the site where it abuts the industrial buildings. This together with distance separation from the nearest houses will provide the required mitigation in order to ensure noise levels do not exceed national thresholds for residential development.

8 Landscape and Visual Impact Assessment (LVIA)

- 8.1 This assessment considers the likely effect of the development proposals on the character and appearance of the site and surrounding landscape within the study area in order to identify the impacts that are likely to arise from the proposed development on the local landscape resource and visual receptors. The significance of any such impacts are then evaluated and appropriate measures set out to avoid, remedy or compensate any effects that are considered to be significant.
- 8.2 This LVIA identifies the key landscape constraints and opportunities associated with the site that have been used to inform a landscape strategy for development seeking to mitigate any likely significant adverse effects. This landscape strategy has been informed by the findings of the assessment of Biodiversity (Chapter 10), and Heritage (Chapter 13)

Baseline Conditions

- 8.3 The site is set within the eastern settlement fringe of Barton upon Humber, substantially contained within the defined Development Boundary of the site and the town development limits. The site comprises a mixture of previously developed land and a modified landscape setting that is the product of the creation of the Kimberley Clark factory complex.

- 8.4 The site is set within a framework of existing development and associated settlement infrastructure. To the north the site is defined by a mixture of commercial development, landscaping, and the wider setting of arable farmland; to the east the site is substantially contained by the Wren factory site; to the south the site is defined by Barrow Road and associated ribbon development, beyond which is open rising arable farmland; and to the west the site is contained by the setting of settlement and highways that includes emerging development and associated committed development sites.
- 8.5 The landscape resources of the site that takes into consideration land use, vegetation, landform, and water features confirmed it is considered to be of medium to low sensitivity to change. The assessment has confirmed that the landscape features of the site are not rare or of particular sensitivity to change.
- 8.6 In terms of landscape character, published assessments confirm that the site is located within a landscape type with a recommended strategy of enhancement. The baseline assessment has confirmed that the site is not located in a landscape setting that is designated in reflection of its quality or particular sensitivity to change. The assessment has confirmed that the features of the site are not particularly notable or of significant value.
- 8.7 This assessment has confirmed that the site is set within the settlement fringe and its development will not extend built development further into the wider setting of countryside than currently exists. The character of the site and its local setting is considered to be of medium to low sensitivity to change, increasing to medium sensitivity to the east in association with the wider countryside setting; predominantly defined by open arable farmland.
- 8.8 The site is not part of any landscape designation that would suggest an increased sensitivity to change, and is not covered by any statutory or non-statutory designation that would restrict the development of the site. A part of the site to the north-west is designated as a landscape enhancement area under Policy LC15 of the Local Plan. In summary this designation appears to suggest a broad area for landscape enhancement that has not been secured but can be delivered through the development of this site.
- 8.9 In relation to the baseline for visual receptors, views of the site from the north, south and west are restricted to its immediate boundaries due to the containment provided

by the surrounding settlement fringe, landform, and absence of visual receptors in the wider landscape setting. Views are restricted to the footpaths, highways and properties surrounding the site. In the wider countryside setting to the east there are combinations of medium and long distance views from public footpaths from which the site is generally screened by the intervening Wren Factory. In the wider landscape setting to the north there are more distant views of the site from the public footpath and sailing club at the southern bank of the Humber Estuary. From this location the site is viewed as a small part of a much wider panoramic view, in the direct context of the Wren factory.

Landscape Strategy

- 8.10 The landscape strategy for the site has fully considered its constraints and opportunities to secure a development within which primary mitigation measures are an integral component.

The strategy for development secures the following objectives:

- The creation of a green space network to contain the proposed development and provide a suitable transition with the adjoining factory site;
- The retention and enhancement of the key landscape features of the site that comprise its existing tree and hedgerow cover, and areas of structural planting;
- To direct appropriate forms of development to the least constrained parts of the site;
- To provide meaningful areas of strategic green space with associated leisure and recreation facilities;
- To increase connectivity and permeability within this part of the settlement, and secure meaningful connections between existing public access routes to the benefit of the wider community;

- To make better use of the landscape infrastructure of the site that is currently in private ownership, rather than focus attention on less valued parts of the site in terms of landscape enhancement;
- To provide new leisure and recreation hubs throughout the site that are linked through the green space network, and connected to the wider network of public access making them major community assets;
- To effectively use the existing landscape infrastructure to mitigate the adverse effect of development, in combination with new planting measures; and
- To secure the long-term management of the green space network as a major landscape and wildlife asset.

8.11 The development secures approximately 45% of the site as a dedicated network of publicly accessible green space that comprises:

- 11.42 hectares of public open space;
- 3 Locally Equipped Areas for Play;
- Leisure routes extending to approximately 2295 linear metres that include dedicated footpaths and cycleways;
- A trim trail combined with the leisure routes comprising 8 fitness stations;
- A levelled kick-about space;
- A woodland walk extending to approximately 158 linear metres;
- Approximately 5.36 hectares of retained vegetation; and
- Approximately 1.88 hectares of proposed structural landscaping (this is in addition to landscaping associated with the development cells).

- 8.12 The proposed landscape framework is both considered and robust, set out in accordance with Local Plan policies relevant to the creation of green space in association with development, an capable of achieving the principal of landscape enhancement in accordance with Policy LC15 of the Local Plan, and the green infrastructure principals of Policy CS16 of the Core Strategy

Summary of Effects

- 8.13 The predicted effects of development to the character and appearance of the site and local landscape setting have been categorised as permanent and temporary effects associated with the construction phase of development, and permanent effect at the completion of the development.
- 8.14 In terms of landscape effects, this assessment has confirmed that the development is unlikely to result in any adverse effects considered to be significant to the landscape resource of the site. In terms of landscape character it is accepted that the development will materially change the site through the transfer of grassland and associated car parking and infrastructure to a mixed use development with associate areas of public open space. In terms of wider land character issues this assessment confirms that the development is likely to result in an adverse effect of moderate to minor significance to the character of the immediate settlement fringe, reducing to an adverse effect of minor significance to the wider setting of the arable farmland and wetland fringes to the north, south and east. These effects are not considered to be significant.
- 8.15 The assessment also confirms that the development proposal is likely to secure beneficial effects to the vegetation resource, access and water features of minor, moderate and major significance.
- 8.16 In terms of visual effects, this assessment has confirmed that any likely adverse effects considered to be significant are limited to short-term effects at the immediate boundaries of the site, including section of footpaths, highways and properties

immediately adjoining the site. Over distance the short-term visual effects of development become more limited and are not considered to be significant.

- 8.17 In the long-term effective landscape mitigation measures that are integral to the proposal will mature to limit adverse visual effects to a combination of moderate and minor significance to the immediate boundaries of the site; and moderate, minor and minimal in the wider landscape setting to the north and east.

Mitigation Measures

- 8.18 Mitigation measures are integral to the development strategy that incorporates high levels of primary landscape mitigation in response to the constraints of the site and shaped the scale and form of the built-development. The key mitigation measures can be summarised as:

- The retention and enhancement of the landscape features associated within the site;
- The delivery of a major new green space that contains the development and secures an appropriate landscape transition with its surroundings;
- The creation of a permeable and connected network of green space; and
- The provision of key leisure and recreation facilities of significance to not just the occupants of the site but also the wider community;

- 8.19 The landscape led approach to development has secured a scale and form of development that has responded to the constraints of the site with primary landscape mitigation measures being an integral component. The development proposal is contained within a site comprising a modified landscape setting and previously developed land, set within a framework of settlement and commercial development, settlement fringe infrastructure, and major industrial development. The development proposal will not result in the extension of built-development into the wider countryside any further than it currently exists.

- 8.20 This in combination with a robust mitigation strategy has secured a scale and form of development that limits any likely adverse effect of significance to short-term visual effects at the immediate boundary of the site. This level of effect is neither unexpected nor uncommon. This assessment has also confirmed that these effects will be mitigated in the long-term resulting in a development that is unlikely to result in any significant adverse effects to the landscape and visual resource over time.

9 Hydrology and Hydrogeology

- 9.1 The assessment is of the local hydrology, with particular attention being focused on surface water and flood risk, water quality, water resources and groundwater.
- 9.2 The assessment of hydrology and flood risk issues has been undertaken with due consideration to the relevant National, Regional and Local Planning Policies.
- 9.3 The assessment has been informed through consultation with relevant statutory and non statutory bodies and stake holders.
- 9.4 The assessment of water quality and resources used the professional judgement of the assessor and is based on information available at the time.
- 9.5 The identification of significance has been determined through reference to the importance or sensitivity of an attribute and the magnitude of the effect.
- 9.6 The assessment site is located in an area where the risk posed from external fluvial or tidal sources is considered to be negligible.
- 9.7 The enhancement and mitigation measures proposed for the construction phase of the development includes a Construction Environmental Management Plan. This provides measures and practices aimed at removing potential impacts.
- 9.8 The operational facility will include mitigation measures to lessen or remove potential impacts to local hydrology. This includes the incorporation of an appropriately designed surface water drainage strategy that includes water quality protection

measures. The surface water drainage strategy will be backed up by a committed long term management plan.

- 9.9 This chapter indicates that without appropriate mitigation measures there would be the potential for long term effects of moderate significance to occur as a result of the development. In response to potential impacts the chapter describes the mitigation and enhancement measures that will be employed throughout the lifetime of the development. The mitigation and enhancement measures identified are specific to the construction and operational phases of the development. The assessed residual impacts of the development are judged to be minor and/or negligible throughout the construction and operational phases.

10 Ecology

- 10.1 The ecology section of the ES provides a summary of the field survey work undertaken to date and these results are included within the technical appendices to the document.
- 10.2 Some of the surveys are still ongoing or scheduled within the appropriate upcoming season. The purpose of the chapter is to describe the existing ecological status of the site and its surroundings, to assess the potential ecological impacts of the development on the habitats and species present and the nearby designated sites to the north along the southern banks of the Humber Estuary and to propose appropriate mitigation, enhancement and monitoring measures which may be required.
- 10.3 The ES must address whether the development would have a likely significant effect (LSE) on the Humber Estuary SPA and Ramsar site under the Habitat Regulations.

The following surveys and reports were requested: Extended Phase 1 Survey, Great Crested Newt Survey, Other Amphibian Survey, Reptile Survey, Bat Survey, Badger Survey, Water Vole Survey, Otter Survey, Breeding Birds Survey and Wintering Birds Survey.

- 10.4 The Ecological Impact assessment takes into account all relevant legislation, policy and best practice advice, including European and national environmental legislation, national nature conservation policy and national and local biodiversity guidance.

Conclusions and Recommendations

- 10.5 The site assessment did not discover any European Protected Species on the site and the habitats present were of predominantly low ecological value. The ponds will require further evaluation if they fall within the construction zone.
- 10.6 Any plan to alter the hedges beyond the security fence boundary should only be undertaken after a survey has been conducted to investigate if Dormice are present on the site.
- 10.6 Any work to the trees or hedges must take place outside of the bird breeding season (March to August). If work is required during this period it must be preceded by a nesting bird survey immediately prior to the work commencing.
- 10.7 Any work on or near the larger of the two ponds must be preceded by a survey for amphibians. If this pond is to remain unchanged and development works are planned within 25 metres of the water, it is recommended that a barrier fence be erected around the pond which will inhibit any debris or contaminants getting into the water.

Species survey conclusions and recommendations

- 10.8 The site security makes access by badgers fundamentally not possible unless through an open pedestrian entrance.
- 10.9 No evidence of Riparian Mammals was identified during the site assessment. A study of the local maps identified that the water features on the site have no direct connections to other watercourses and therefore have a limited scope to be populated. The result of the site assessment and other factors result in a highly unlikely probability for the site to be of potential use by riparian mammals given its past and present industrial use.
- 10.10 Further surveys will be published and provided to the Local Planning Authority and Nature Conservation Consultees. An addendum to this Environmental Statement may be required as a result of these further surveys. The following species are to be monitored over the next 6 to 7 month period

Great Crested Newts

The Great Crested Newt report will be published in June 2015

Other Amphibians

The Amphibian report will be published in May 2015

Reptiles

The Reptile report will be published in June/July 2015

Bats

The Bat report will be published in June 2015

Breeding Birds

The Breeding Bird report will be published in June 2015

Wintering Birds

The Wintering Bird report will be published in March 2015

Significant Potential Impacts

- 10.11 The proposals have been planned around the existing features of the site in such a way that there are minimal changes planned for the ecologically valuable habitats found on the site. Plans show a minimum of 90% retention of the broadleaf plantations and total retention of the two ponds although some management of these features is to be expected.
- 10.12 From the bird species already identified on site they are species that nest in trees and hedges or aquatic species which nest near water on the ground. These are the species most at risk from disturbance from site preparation activities such as site clearing. It is important that the protection of any nesting bird is maintained and that disturbance does not impact upon the breeding cycle of the birds present on site.

Mitigation of effects

- 10.13 The timing of works is most important to minimise the impacts of the development on the yearly lifecycle of the species present. Of the habitat types present the Amenity Grassland and Tall Ruderal vegetation are unlikely to support any protected species. The Broadleaf Plantations, Standing Water and Running Water do require certain measures to be taken in order to avoid adverse and even illegal impacts upon the

species found within them.

- 10.14 To best defend the Standing Water and Running Water for adverse impact any management of the land within 25m vicinity of these habitats should be undertaken by hand either at the very start of development or at the very end once the site has been cleared of machinery and potential contaminants. During development these habitats should be kept as a construction exclusion zone with a protective fence installed at a 25m perimeter. This fence should be 2m tall and be covered in an impermeable membrane which is in contact with the ground. This will prevent potential contaminants being spread within the fence line. The condition of the impermeable membrane should be inspected every 2 weeks to ensure its effectiveness.
- 10.15 Any works to manage the Broadleaf Plantations should be undertaken between the months of August and February. Activity outside of this period will impact upon any nesting birds which might be present. If such work must take place during the nesting season it must be preceded by a Breeding Bird Survey and the works can only proceed if the survey results confirm the absence of nesting birds.
- 10.16 The Broadleaf Plantation will require its own protective fencing for arboricultural reasons enclosing what is known as the Root Protection Zone. This fencing will also provide screening and cover for any nesting birds which are not displaced by the disturbance created by construction.

Restoration and Habitat Creation

- 10.17 The development will provide the opportunity to enhance the species diversity of the site as well as expanding on the habitat choices for the species already present.
- 10.18 When considering the retained features and habitats it is important to maintain the ecological balance which already exists. Management of these areas should be sympathetic and the introduction of new species should be avoided.
- 10.19 Street lighting should be bat friendly with downward facing hood and of a single wavelength with low UV emission.
- 10.20 The choice of species for the landscaping design should keep to native species with non-native species only chosen if they have a high ecological value such as Californian Lilac.

- 10.21 Any debris from works to trees can be retained and utilised around the two ponds providing additional habitat for invertebrates which will then promote other species in the food chain.
- 10.22 The grassland areas either unaffected by the development or restored post development should include a number of wildflower species and native spring bulbs to enhance the species richness of the site.

11 Ground Conditions

- 11.1 The Yorkshire and Humber Pollution Advisory Council document 'Development on Land Affected by Contamination' has been adopted by North Lincolnshire Council as appropriate guidance.
- 11.2 A Geo-Environmental Desk Study has been conducted to determine the historic site usage, general ground conditions within the site and current operations within the vicinity which may give rise to potential for hazardous substances to exist within the vicinity of the site.
- 11.3 The site remained undeveloped agricultural land until sometime before 1970 when a series of drains were installed across the land followed by development of the existing factory in 1992. The surrounding land has been generally been used as agriculture, with the adjacent factory potentially a contaminative industrial facility and 14 No. potentially contaminative industrial operations within the surrounding area.
- 11.4 The baseline data identified no specific areas of potential soil contamination. An assessment of potential effects found the likelihood of any potential ground contamination from hazardous sources to be negligible. In addition, whilst the desk study highlighted historic landfills within the site vicinity, it is considered that these are a sufficient distance from the application site so as not to pose any significant risk.
- 11.5 Samples are to be removed from across the development site to assess the impact from soil contamination for geotechnical testing. Mitigation of any potential impacts will depend upon the results and any contaminants found. Should any impacts therefore be proved to exist by the site investigation,

remedial action will be incorporated within the scheme design and this will ensure there are no significant residual effects.

12 Archaeology and Cultural Heritage

- 12.1 The assessment of archaeology and cultural heritage considers potential effects upon the historic environment within the site and within a zone of potential influence from the development of the site. It sets out the results of a review of baseline data, including that held by the North Lincolnshire Historic Environment Record, site survey and archaeology assessment study. It identifies known designated (listed buildings, scheduled monuments, conservation areas) and non-designated heritage assets on the site and within a 1km radius of it.
- 12.2 The Kimberley Clark factory construction created significant disturbance to the former agricultural land use. Archaeological surveys prior to the construction and other recorded surveys provide evidence of buried heritage assets on site from the Neolithic – Roman periods, which has yet to be fully identified or quantified. A mitigation strategy has been developed in consultation with the North Lincolnshire Council for a stage programme of archaeological evaluation. Following the implementation of these mitigation measures, the residual likely significant effect on buried heritage would be Permanent Minor Adverse significance.
- 12.3 There are no above ground heritage assets within or immediately adjacent to the site. To the west of the site but generally more than 1km distance there are individual listed buildings in the town centre. Existing and ongoing built development, distance and topographical separation prevent any adverse impact on the setting of these heritage assets.

13 Conclusions

- 13.1 The Environmental Statement has considered the likelihood of significant adverse effects arising from the proposed residential led development of land to the east of Falkland Way, Barton. The environmental issues assessed have been informed by technical work undertaken by the consultant team attached to the project.

13.2 The assessment identifies a number of positive impacts in respect of the development, most notably in terms of housing delivery, delivery of a mixed use development scheme which will add complementary facilities and services to the development site and economic benefit to the locality. Principal negative impacts are identified in terms of the change in land use and landscape. Impacts associated with additional traffic generated by development will be mitigated by the considerable opportunities created to use sustainable modes of travel and by specific off-site improvements to the local traffic network in Barton. Mitigation is set out where adverse or negative effects are identified and these reduce the majority of residual impacts to minor or low orders of significance. Overall the effects of the proposed development are considered capable of being brought within acceptable levels of impact.