

**Report to** Planning applications committee  
**Date** 14 March 2013  
**Report of** Head of planning services  
**Subject** 12/00703/O Three Score site land south of Clover Hill  
Road Norwich

**Item**  
**5(1)**

## SUMMARY

<b>Description:</b>	Redevelopment of site with up to 1000 homes, including affordable housing, care home, a new village centre including at least 1 local shop, public open space and associated roads and infrastructure.
<b>Reason for consideration at Committee:</b>	Objection
<b>Recommendation:</b>	Approve subject to S106 agreement and conditions
<b>Ward:</b>	Bowthorpe
<b>Contact Officer:</b>	Mark Brown Planning Team Leader 01603 212505
<b>Valid Date:</b>	29th May 2012
<b>Applicant:</b>	Norwich City Council
<b>Agent:</b>	Norwich City Council

## INTRODUCTION

### The Site

#### Location and Context

1. This application relates to the remaining undeveloped land at Three Score, Bowthorpe, to the south of Earlham Green Lane and Clover Hill Road and to the north of the River Yare. The site of approximately 33.5 hectares and adjoins Bowthorpe Hall historic parkland to the northwest which forms part of the Bowthorpe conservation area. A very small part of the site runs through the northern boundary of the conservation area where a new access is provided. Existing residential development is located to the north beyond Earlham Green Lane and Clover Hill Road, to the southwest along Dodderman Way and Bishy Barnebee Way and along St Mildreds Road to the east. The site is approximately 300m from the Bowthorpe District Centre to the west.
2. The overall site slopes gently from north to south dropping circa 28m and currently consists mainly of uncultivated grassland, but with a tree belt from the northern to the eastern boundary where it joins Bunkers Hill Wood (County Wildlife Site) to the northeast corner of the site. There is a small wooded hollow in the north west part of the site, and hedgerows are an important feature along Earlham Green Lane and along the eastern boundary of the site with St Mildreds Road. To the southwest is a historic double hedgerow known locally as grass lane. Other than the hedgerows and tree belt described above the site has few stand alone trees within its boundaries however scrub has encroached into the site along the northern and eastern boundaries. There is also a line of scrub along the southern boundary

adjacent to the existing informal footpath.

3. Bowthorpe and Earlham Marshes (County Wildlife Site and Local Nature Reserve) are located to the south of the site adjacent to the River Yare. This connects the site hydrologically to a number of other County Wildlife Sites downstream. The marshes are covered by river valley policy, are a site of nature conservation interest, publically accessible recreational open space and urban green space. The majority of the application site is outside of flood zones 2 and 3 however a small area within the site adjacent to the southern boundary is within flood zone 2. The application site extends into part of the river valley to the southwest corner adjacent to Dodderman Way.
4. A number of overground electricity lines cross the site, high voltage cables are located to the southwest corner with low voltage cables across the centre and east of the site. Foul water sewers serving existing areas of Bowthorpe also run across the site and join the Yare Valley Sewer to the south. The south eastern half of the site is covered by ground water source protection zone 1.

### **Planning History**

5. The development of Bowthorpe dates back to the granting of planning permission by the Secretary of State in 1972 following a Public Inquiry, and with the Bowthorpe Master Plan being produced in 1974. The Three Score site was allocated for residential development in the City of Norwich Local Plan (1995) and carried forward into an allocation for 1000 dwellings in the Replacement Local Plan (2004), and a Planning Brief for Three Score was adopted by the Council in September 2002, following extensive public consultation
6. In addition, the Replacement Local Plan included an allocation for a school site on the west side of the proposed development, however the City Council recognised in the 2006 Annual Monitoring Report that the allocation of a school site was no longer required, since the County Council no longer intend to build a new school, with the proposed development being served through the existing schools in Bowthorpe.
7. In 2005 an application (no. 05/01131/O) was submitted and proposed to develop the land with up to 1,200 dwellings, including affordable housing, community facilities, a care home, local shop, together with a new village centre, public open space and associated roads and other infrastructure. The application was in outline, with all matters reserved for subsequent approval. A resolution to approve the application was given by planning committee in June 2007 and the terms of the S106 agreement were subsequently varied by a resolution in May 2008. However, the S106 agreement was never completed and the decision was not issued. The application was withdrawn on submission of the current application in 2012 which, given the time that had elapsed sought to revise the proposal and environmental statement to bring it in line with current development plan policy and environmental considerations.

### **The Proposal**

8. The application seeks outline approval for the redevelopment of the site with up to 1000 homes, including affordable housing, care home, a new village centre including at least 1 local shop, public open space and associated roads and infrastructure. Approval for the matter of access is sought in full as is approval of the base course

spine road with all other matters being reserved. The parameters of the proposal have been amended during the course of the application in order to seek to respond to comments from consultees and a number of representations received. The amended parameters of the proposal are detailed below:

- .8.1. Up to 1000 dwellings with an indicative mix of 1 Bed Flats (5%), 2 Bed Flats (20%), 2 Bed Houses (25%), 3 Bed Houses (30%) and 4+ Bed Houses (20%);
  - .8.2. A care facility within block 5 to the northeast corner of the site;
  - .8.3. Up to 500m<sup>2</sup> of commercial floor space;
  - .8.4. A layout comprising of 20 blocks arranged around a hierarchy of road networks comprising the three main spine roads or avenues (detailed further below), neighbourhood streets and home zones;
  - .8.5. 10.2 hectares of formal and informal open space;
  - .8.6. Two surface water attenuation ponds to the southwest of the site;
9. Three access points are proposed into the site, two general accesses are proposed one from Clover Hill Road to the north of the site and the other from the roundabout at Dodderman Way/Bishy Barnebee Way to the southwest corner. A bus only access is proposed to the northwest corner onto Earlham Green Lane which is to be controlled via an electronic bus gate. From the proposed accesses three avenues form the main vehicular routes through the site and join in the centre of the site to the south of the tree belt. At this stage full details of the base 6m wide vehicular carriageway are submitted for approval with indicative details showing the full extent of the avenues at 15m wide with footpaths, cycle lanes, on street parking and landscape strips. The avenue from Clover Hill Road into the site results in a new opening in the tree belt and at this point the avenue is proposed to reduce to 11m in width in order to reduce the impact on the tree belt.
10. The application has been submitted with an Environmental Statement and as such the proposal is EIA development. The environmental statement deals with landscape and visual impacts, cultural heritage, ecology (including trees), flood risk and sustainable drainage, health impact, noise, air quality and transportation. During the course of the application a number of addendums to the Environmental Statement have been received as well as other additional information to respond to representations and comments of consultees.

## **Equality and Diversity**

11. The application seeks outline approval for the principle of the development parameters proposed and detailed approval for access to the site. On the basis of the outline submission there are not considered to be any equality or diversity issues which would require detailed assessment at this stage, however a lifetime homes condition is suggested, this requirement goes beyond the requirements of building regulations and is discussed under the health impact assessment section below.

## **Representations Received**

12. The full content of representations is available on the Council's website by entering the app. no. at the following link: <http://planning.norwich.gov.uk/online-applications/>
13. Advertised on site and in the press. Those who formally made representation to the 2005 application were also written to. 24 letters of objection have been received citing the issues as summarised in the table below.

<b>Issues Raised</b>	<b>Response</b>
Loss of open space for recreational purposes.	See paragraphs 104-111.
The provision of housing without employment provision, services and recreational space is out of tune with best practice for sustainable communities.	See paragraphs 37-43.
Impact on Wildlife	See paragraphs 47-56 and 65-71.
Impact on trees.	See paragraphs 57-64.
The ecology sections of the Environmental Statement are out of date, do not set a clear ecological baseline and do not refer to UKBAP species list.	See paragraphs 47-56 and also the response from Natural England.
The development and others in the area are resulting in an accumulation of impacts and overall a detrimental effect on wildlife.	See paragraphs 47-56, 65-71 and 141.
Assessment of invertebrates at the site are out of date and did not make use of more recent records which indicate the presence of nationally important assemblage of invertebrates. Suitable grassland habitat or compensatory habitat should be provided as part of the proposals.	See paragraphs 47-56 and 65-71.
Further mitigation measures are necessary including bird boxes, retention of a greater amount of scrub and greater protection for the L shaped hedgerow.	See paragraphs 47-56 and 65-71.
Greater protection is needed for the L shaped hedgerow in the site which also needs a full survey and scheme of ongoing management and enhancement.	See paragraphs 50 and 57-71. It is also understood that there is a public right of way application for the route between the double hedgerow with the County Council and which has been sitting undetermined for some considerable time. The proposals do not affect this other than to provide for the better management and enhancement of the hedge and the route between the double hedgerow.
Concern over the development being close to overhead power lines.	See paragraph 40.
Parts of the site are a flood plain and the development will increase surface water runoff and therefore worsen flooding.	See paragraphs 125-126.
The site provides a vehicular access route to the Bowthorpe Centre.	See paragraphs 89 and 94-96.
The proposal will worsen congestion in the area and add pressure to the road network, this will impact on public transport.	See paragraphs 89-93.
The transport assessment is reliant on	See paragraphs 89-93.

use of non-car modes of transport which is unrealistic.	
The transport assessment does not take into account impact on junctions of fiveways roundabout, Watton Road/Wilberforce Road/University Drive.	See paragraph 93.
The transport assessment does not take into account existing traffic congestion or the impacts of other housing developments along Dereham Road. This will also have an impact on emergency response times.	See paragraph 92.
The development lacks provision of cycle routes, a single cycle lane on the avenues is not sufficient and why are there no segregated cycle lanes on the neighbourhood streets and home zones. Shared cycle surfaces are not appropriate and segregated provision should be provided.	See paragraphs 97-98.
Increase in noise.	See paragraphs 121-123.
Overlooking as a result of the proposed bus route to the rear of properties at Swaffield Street and Beloe Avenue.	See paragraph 114.
No need for a bus route through the site.	See paragraph 94.
The bus route would conflict with pedestrians and cyclists using Earlham Green Lane.	See paragraph 95.
Impact of light pollution.	See paragraph 135.
Concern over possible increases in crime and anti-social behaviour issues in the area by linking Bowthorpe and West Earlham.	It is not considered that there would necessarily be any correlation between the development and the potential for increased crime. The two residential areas are already linked by the site which currently lacks surveillance.

14. County Councillor for Bowthorpe Paul Wells – Raises certain concerns over the application which should be addressed as follows (full content of the letter is online available at the link above):

- .14.1. Concerned over the bus lane to the rear of Beloe Avenue and Swaffield Street which would overshadow the properties resulting in a loss of privacy and tranquillity. This would also conflict with existing users of the Lane and damage the peaceful haven.
- .14.2. Proposed parking is not sufficient.
- .14.3. The infrastructure such as the shop which is welcomed should be built alongside the properties and not afterwards.

## Consultation Responses

15. The full content of consultation responses is available on Norwich City Councils Planning Public Access website by entering the application number at the following

link: <http://planning.norwich.gov.uk/online-applications/>

16. **Anglia Water** – No objection subject to conditions.
17. **Colney Parish Council** – No Response
18. **Campaign to Protect Rural England** – No Response
19. **Design Council** – referred the application to the East Affiliated Design Review Panel.
20. **English Heritage** – Recommend the application be determined in line with national and local policy and a robust set of conditions to secure appropriate treatment of the west and south boundaries including a consistent design theme across phases which may be achieved by one or more design codes.
21. **Environment Agency** – On the basis of the revised flood risk assessment, remove their surface water drainage objection to the proposals subject to conditions. With regard to foul water drainage they raise concerns over the capacity of the sewer network and Whitlingham Sewage Treatment Plant and advise that this needs further consideration by the Local Planning Authority in coming to its decision and if upgrades can be agreed a suitable worded condition should be imposed to agree the upgrades prior to commencement and secure implementation prior to occupation. The comments also make recommendations on the details of any ground source heat pumps used on site, energy efficiency, the treatment of waste from the site, the level of water efficiency proposed encouraging higher levels and comments relating to green and blue infrastructure. Conditions are also recommended relating to contamination.
22. **Local Highway Authority** – No objections subject to planning obligations, provision of a residential travel plan and conditions.
23. **Ministry of Defence** – No objections.
24. **Natural England** – Providing that all mitigation, enhancement and green infrastructure is improved in accordance with the further information submitted we have no further concerns to raise regarding this site.

A further response was subsequently received following further submissions and a request for clarification on a number of matters. This detailed that the approach to the survey of the southern lagoon area was acceptable and that there can be flexibility on the age of the protected species surveys given the scale of the development, the need for reserved matters and further surveys as the development progresses. The response advises that further detail of mitigation and enhancement measures would be necessary via condition. In relation to invertebrates more up to date information identifies the presence of rare invertebrate species on the site and the response suggests that if the EIA did not consider rare invertebrates that a further survey and mitigation strategy should be undertaken.

25. **NHS Norfolk** – No Response
26. **Norfolk Constabulary** – Make comments on the detailed design and landscaping of the scheme to design out crime. The bus only lane will require an effective physical control system. They also comment that the Marlpit may be misused if it is not

overlooked.

Under a separate letter the constabulary have requested financial contributions from the development towards police services and have placed a holding objection on the application whilst they gather evidence on the impact of the development.

27. **Norfolk County Council Minerals and Waste** – No objection as the proposal will not sterilise safeguarded mineral resources.
28. **Norfolk County Council Planning Obligations** – Seek commuted payments towards education and library provision as well as a monitoring charge and the provision of fire hydrants.
29. **Norfolk Historic Environment Service** – No objection subject to condition.
30. **Norfolk Wildlife Trust** – (response to initial proposals prior to amendment) Although there are no known ecological issues which cannot be mitigated for, we are not persuaded that the current proposals will provide sufficient mitigation and measures to enhance biodiversity are limited. The scrub to the south of the site should be retained and further measures to manage the floodplain on a long term basis should be part of the planning agreement. The proposals offer an excellent opportunity to engage with the GNDP biodiversity offsetting pilot. It is disappointing that there is only a narrow buffer strip to Twenty Acre Wood and connecting the wood to the floodplain, a wider corridor should be provided. A management and maintenance plan is welcomed and should include provision for on site mitigation along with the design brief for the housing.
31. **Norwich Society** – It is a shame to build on a ‘greenfield’ site like this, although we realise this is the last part of the complete Bowthorpe development. We hope there will be some attempt to retain ecological features.
32. **Open Spaces Society** – No Response
33. **South Norfolk Council** – No Response
34. **Sport England** – (response to initial proposals prior to amendment) Object to the proposals. The development will create significant demand for sporting facilities which would need to be met by existing facilities. There appears to be a lack of formal outdoor and indoor sports provision. There is a need to meet demand for sports facilities through on-site provision or through financial contributions towards new or enhanced offsite facilities.
35. **UK Power Networks** – There has been considerable liaison with the applicants and we will decline to comment further on the application at this stage.
36. **Yare Valley Society** – (response to initial proposals prior to amendment) Consider that the relationship between the development and the river needs to be reconsidered and that a wider southern boundary is needed which follows the curved course of the river, this would allow for more imaginative landscaping and make public access more in keeping with the river and Yare Valley Walk.

# **ASSESSMENT OF PLANNING CONSIDERATIONS**

## **Relevant Planning Policies**

### **National Planning Policy Framework:**

- Presumption in Favour of Sustainable Development
- Ensuring the Vitality of Town Centres
- Promoting Sustainable Transport
- Delivering a Wide Choice of Quality Homes
- Requiring Good Design
- Promoting Healthy Communities
- Meeting the Challenge of Climate Change, Flooding and Coastal Change
- Conserving and Enhancing the Natural Environment
- Conserving and Enhancing the Historic Environment
- Facilitating the Sustainable Use of Minerals

### **Relevant policies of the adopted Joint Core Strategy for Broadland, Norwich and South Norfolk 2011**

- Policy 1: Addressing climate change and protecting environmental assets
- Policy 2: Promoting good design
- Policy 3: Energy and water
- Policy 4: Housing delivery
- Policy 6: Access and transportation
- Policy 7: Supporting communities
- Policy 9: Strategy for growth in the Norwich Policy Area
- Policy 12: The remainder of the Norwich urban area, including the fringe parishes
- Policy 19: The hierarchy of centres
- Policy 20: Implementation

### **Relevant policies of the adopted Norfolk Minerals and Waste Core Strategy and Minerals and Waste Development Management Policies Development Plan Document 2011**

- CS16 - Safeguarding mineral and waste sites and mineral resources

### **Relevant saved policies of the adopted City of Norwich Replacement Local Plan 2004**

- NE1 Protection of environmental assets from inappropriate development
- NE2 Woodland protection
- NE4 Street trees to be provided by developers
- NE7 Protection of locally designated sites of nature conservation interest
- NE8 Management of features of wildlife importance and biodiversity
- NE9 Comprehensive landscaping scheme and tree planting
- HBE4 Other locations of archaeological interest
- HBE8 Development in Conservation Areas
- HBE9 Listed Buildings and development affecting them
- HBE12 High quality of design, with special attention to height, scale, massing and form of development
- EP1 Contaminated land and former landfill sites – evaluation and treatment prior to permission
- EP5 Air pollution emissions and sensitive uses



- EP16 Water conservation and sustainable drainage systems
- EP17 Protection of watercourses from pollution from stored materials, roads and car parks
- EP18 High standard of energy efficiency for new development
- EP20 Sustainable use of materials
- EP22 High standard of amenity for residential occupiers
- SHO3 Locational conditions for new retail development – sequential test
- HOU5 Accessibility for wheelchair users
- HOU6 Contribution to community needs and facilities by housing developers
- HOU8 Committed housing development sites
- SR1 Minimum standards for provision of open space
- SR2 Provision within each sector of the City
- SR4 Provision of open space to serve new development
- SR5 Allocation of specific areas for open space
- SR7 Provision of children's equipped playspace to serve development
- SR10 Bowthorpe Southern Park and Bawburgh/Colney Lakes areas
- SR11 Riverside Walks – agreement with developers to provide/maintain
- SR12 Green Links network, including provision by developers
- TRA3 Modal shift measures in support of NATS
- TRA5 Approach to design for vehicle movement and special needs
- TRA6 Parking standards – maxima
- TRA7 Cycle parking standard
- TRA8 Servicing provision
- TRA10 Contribution by developers to works required for access to the site
- TRA11 Contributions for transport improvements in wider area
- TRA12 Travel Plans
- TRA14 Enhancement of the pedestrian environment and safe pedestrian routes
- TRA15 Cycle network and facilities
- TRA16 Public transport measures to increase efficiency and attractiveness

### **Supplementary Planning Documents and Guidance**

- Energy Efficiency and Renewable Energy SPD Adopted 2006
- Green Links and Riverside Walks SPD Adopted 2006
- Open Space and Play Provision SPD Adopted 2006
- Trees and Development SPD Adopted 2007
- Transport Contributions SPD Draft for Consultation 2006
- Accessible and Special Needs Housing SPD Adopted 2006

### **Other Material Considerations**

- The Localism Act 2011 – S143 Local Finance Considerations
- Site Allocations and Site Specific Policies Development Plan Document Regulation 19 Pre-Submission Draft – August 2012 – Site R41

## **Principle of Development**

### **Housing & Care Home**

37. The development of Bowthorpe, including the land at Three Score was first envisaged in the early 1970's, with the masterplan being approved in 1974. The Three Score site was allocated for residential development in the adopted 1995 Local Plan and carried forward under the current saved policy HOU8 of the adopted

City of Norwich Replacement Local Plan 2004. Policy HOU8 allocates the site for at least 1000 dwellings. This is likely to be carried forward into the site allocations development plan document which is currently at pre-submission stage.

38. Part of the site to the west of the development adjacent to the Marlpit was previously covered by Local Plan policy AEC6 and allocated for a school. This policy has now been deleted as there is no longer a need for a new school at the site and education provision for the proposed development can adequately be met by existing schools in the area.
39. The application site is larger than the allocated site by virtue of the area previously identified for school provision which is no longer required and an area to the south of the site which has been identified for a surface water attenuation lagoon. As a result the proposed densities are lower than those anticipated under HOU8, nevertheless the application which seeks to provide a maximum of 1000 dwellings on the site is considered to be acceptable in principle and in line with HOU8 given the sites biodiversity, surface water and infrastructure constraints. The overall densities will range between 37-50 dwellings which is considered to be acceptable. The proposed mix of housing is as detailed at 8.1 above and is considered to be consistent with Joint Core Strategy (JCS) policy 4.
40. The National Planning Policy Framework is strongly pro-development, and creates a presumption in favour of sustainable development which for decision making means that Local Planning Authorities should approve development proposals that accord with the development plan without delay unless material considerations indicate otherwise.
41. The NPPF requires local planning authorities to identify sites for housing to significantly boost the supply of housing. JCS policy 9 identifies the need for a minimum of 3000 new dwellings within the boundaries of Norwich City Council (in addition to the 5,592 dwellings which could have been built from housing commitments existing at 31st March 2008). The pre-submission draft of the Site Allocations Development Plan Document seeks to allocate sites which can deliver at least the 3000 dwellings identified in JCS policy 9. The Strategic Housing Land Availability Assessment (SHLAA) demonstrates that there are sufficient deliverable and developable sites available to meet Joint Core Strategy housing requirements in the Norwich Policy Area. The draft site allocations document currently identifies new allocations sufficient to accommodate 3,373 new homes. This includes an allocation at the application site (draft policy R41) for 1,200 dwellings with associated community facilities, recreational and informal open space, green infrastructure and an integrated network of vehicular, pedestrian and cycle routes through the site.
42. The current proposals are for up to 1000 dwellings below the 1200 identified in the draft policy, however as detailed at paragraph 39 this level of housing provision is considered acceptable given the constraints of the site. The proposals also include provision for a care home on the site which at this stage is likely to involve a mixture of housing with care comprising separate apartments with some communal facilities and care on-site along with a dementia care facility comprising en-suite rooms with communal facilities. Whilst the site is not identified for care provision there is an identified housing need for such facilities and the provision is consistent with JCS policy 4. The care home may count towards housing targets depending on its final design.

43. The Three Score site is the largest and only significant Greenfield site identified within the draft Site Allocations document. The delivery of the site is vitally important and fundamental to achieving the housing targets set out within policy 9 of the JCS. The housing proposals are considered to be acceptable in principle and in line with development plan policy.

### **Local Shop**

44. The proposals include provision for up to 500m<sup>2</sup> of commercial floor space to provide a local shop and possible other small scale local facilities. The site is outside of any defined centre and the nearest centre is the Bowthorpe District Centre. The proposals are of a very small scale and below a level which would be considered a local centre. Given the small scale it is considered that they would only serve the development proposed and as such a sequential and impact assessment is not considered necessary. It is however considered appropriate to restrict the use of the floor space to A1 shops, A3 café/restaurants or A5 hot food takeaways only and for at least one unit to be in A1 retail use.

### **Other Principle Policy Matters**

45. The site includes land which is safeguarded as a sand and gravel resource under Minerals and Waste Core Strategy Policy CS16. The County Council have confirmed that there is no objection as the proposal will not sterilise safeguarded mineral resources on the basis that these areas are heavily constrained by existing residential areas and the conservation area and therefore after buffer zones and bunding the areas would be too small for any economically viable extraction to take place.

### **Alternatives**

46. Alternatives in this case are considered to be limited. The alternative of no development would result in a significant deficit of housing in Norwich and a failure to meeting housing targets within the JCS. Within Norwich there are no other sites or even a collection of identified sites which could provide for similar housing numbers and which are not already allocated.

## **Biodiversity**

### **Ecological Baseline & Impact**

47. The environmental statement includes ecological assessments which have been updated via addendums to the ES. The assessments are largely based on the findings of ecological surveys carried out for the purposes of the former application 05/01131/O with subsequent updates in 2010 and 2012 including updating the information to cover the most recent Section 41 list of species.

48. The site is mostly semi-improved uncultivated grassland with areas of basic grassland where chalky soils dictate. A belt of mixed plantation woodland runs across the site from the northern to the eastern boundary where it joins Bunkers Hill Wood a mature broadleaved woodland (and County Wildlife Site) to the northeast corner of the site. There is a small wooded hollow in the northwest part of the site, and hedgerows are an important feature along Earlham Green Lane and along the eastern boundary of the site with St Mildreds Road. To the southwest is a historic double hedgerow known locally as grass lane. Other than the hedgerows and tree belt described above the site has few stand alone trees within its boundaries however scrub has encroached into the site along the northern and eastern

boundaries. There is also a line of scrub along the southern boundary adjacent to the existing informal footpath.

49. Bowthorpe and Earlham Marshes (County Wildlife Site and Local Nature Reserve) are located to the south of the site adjacent to the River Yare. This connects the site hydrologically to a number of other County Wildlife Sites downstream.
50. Vegetation on the site is generally of lower value with the hedgerows being of medium value and more recently it has been identified that the ground flora within the plantation tree belt is of significance with some notable species. The proposals will lead to the loss of semi-improved grassland and scrub as well as having implications for tree belts and hedges by the introduction of breaks in hedgerows to the north of the site, a new opening in the plantation tree belt and possible pathways through the eastern boundary. These changes will reduce the integrity of the hedgerows and tree belt in question (no breaks through the L shaped hedgerow are now proposed). In terms of impact and without mitigation the proposals would have a significant negative impact.
51. Low populations of lizard and grass snake have been identified and these could be relocated prior to any development. There would be an impact in terms of the loss of the grassland habitat and likely more significant impact during the construction phase when such species will be vulnerable to high mortality. Without mitigation the ecological reports conclude that the proposals would have a minor negative impact.
52. Numerous species of bird use the site and the proposals will lead to the loss of habitat for a number of bird species including the complete loss of habitat on site for some Section 41 species which currently utilise the site. Without mitigation the ecological reports conclude that the proposals would have a minor negative impact.
53. The site has been identified as of lower-medium value for bats. The linear hedgerows and tree belts provide for bat migration and foraging, in addition five trees have been identified as providing potential for bat roosts, these trees are in locations where they can be retained as part of the development. Substantial habitat change and breaks through the linear foraging routes will impact on bat foraging and without mitigation would likely result in a significant negative impact.
54. The site also provides habitat for moderate communities of invertebrates which would be lost as a result of the proposals, including invertebrates identified under Section 41. The nearby marshes are identified as providing higher value in terms of invertebrates.
55. As a result of the need to revise the surface water drainage strategy the site has been enlarged during the course of the application to include an area to the southwest of the site directly adjacent to and to the east of Dodderman Way for the purposes of a surface water attenuation pond. This part of the site was not surveyed as part of the original suite of surveys conducted on the site and full detailed protected species surveys have not been carried out given the time of year that the application has been amended. This is less than ideal and inconsistent with current case law. However a desk top study and walkover of the area has been conducted along with supporting information to suggest that the studies from the rest of the site are of relevance as these always go beyond the site boundaries to consider the zone of influence. The area in question is long and thin and runs along the eastern side of Dodderman Way sitting at a lower level but above the height of the adjacent marsh.

There are a number of maintained footpaths through the site and the majority of the site is covered by scrub and hedging with some more significant trees along the boundaries. The area has also been subject to fly tipping. To the east beyond a line of fencing is the Bowthorpe Marsh.

56. Reassurance has also been provided that there is flexibility in the final detailed design of an attenuation pond in this location so that it can respond to the biodiversity constraints of this part of the site. Based on the information submitted there is no evidence to suggest that this part of the site is of any particularly high conservation significance and much like the rest of the site would be of lower to medium value.

### **Trees**

57. Trees and hedgerows on the site are generally located along the boundaries, and within the plantation tree belt running across the site. There are few stand alone trees. Site surveys identify the location of trees on the site and the parameters of the proposal have been designed in order to retain significant hedgerows and trees on the site. The main implications at this stage result from the main vehicular accesses into the site. An arboricultural implications assessment has been submitted for the accesses to the site and the route through the tree belt.
58. The bus link onto Bowthorpe Hall Road will navigate between two significant Oak trees on the site, these will be retained however will require pre-emptive root pruning. Further highway widening along Bowthorpe Hall Road will require removal of four poor quality Ash trees. Their removal is considered to be acceptable subject to replacement. The proposals will also involve the cutting back of the existing bank on Earlham Green lane adjacent to numbers 131 Beloe Avenue and 33 Swaffield Street. This is to allow a pavement and for buses to swing around the corner onto the lane. The cutting back would all take place within the confines of the lane and in this location the hedging is extremely thin, to the western side this would result in the removal of a small section of hedging. Details for the landscaping and replanting at all access points to the site should be conditioned.
59. The access to the north of the site necessitates a cut through the existing blackthorn hedgerow and works within the root protection area of an Oak on Clover Hill Road which would be retained as part of the proposals. The new opening would be kept to a minimum and is considered to be acceptable in principle.
60. Access onto Dodderman Way is established with limited tree constraints a single willow is likely to be affected and would likely require removal to establish the access.
61. The route through the tree belt would ultimately (allowing for an 11m route) result in the loss of 14 B category (of moderate quality and amenity value) trees along with a larger number of C category (of low quality and amenity value) trees. The route has been kept to the minimum required to provide the carriageway through the site and is considered to be acceptable in principle.
62. An existing gap in the trees further to the east which is maintained at 15m for the purposes of overhead power lines would be replanted as part of the proposals and there is significant scope for replacement tree planting across the rest of the site to provide a much greater level of replacement than removal. Further detailed arboricultural implications assessments will be required with reserved matters

applications and so far as the main road through the site is concerned further more detailed arboricultural method statements will be required via condition along with revised tree protection plans to demonstrate in detail how the accesses will be achieved without detriment to the trees which have been identified to be retained.

63. A further pedestrian and cycle route is suggested through the tree belt to the west of the spine road, this seeks to establish a desire line and is considered desirable to achieve rather than a number of informal routes which could in the long term have a greater impact on biodiversity. This route would need to be designed in detail at reserved matters stage taking into consideration arboricultural implications.
64. Further detailed arboricultural method statements will be required for the formation of the accesses and spine road through the site and further arboricultural implications assessments will be required with reserved matters applications.

### **Adjacent Sites**

65. The site is adjacent to a number of County Wildlife Sites these being the Earlham and Bowthorpe Marshes as well as Bunkers Hill Wood. The sites have been identified as providing habitat for a number of protected and section 41 species. The increase in population directly adjacent to these areas and the loss of the application site for recreational use of the existing population is likely to lead to increased recreational pressure which is likely to have negative ecological impacts on the adjacent areas.
66. The site is also hydrologically linked to the marshes. Surface water drainage and pollution controls will be necessary to avoid hydrological affects on the adjacent County Wildlife Sites within the Yare Valley. This is discussed further in the sections below.

### **Mitigation and Enhancement**

67. The outline proposal details a number of mitigation and enhancement measures to seek to alleviate the ecological impacts described in the sections above. These can be separated into on-site and off-site measures. It should be noted that following records of rare invertebrate species using the site the applicant has included a number of outline proposals for invertebrate mitigation.
68. On site the mitigation and enhancement measures can be summarised as follows:
- .68.1. Limited access and improved management of the marl pit, along with the provision of bat and bird boxes;
  - .68.2. Development of a series of green links as part of the development to provide green corridors between the key areas of green infrastructure within and adjacent to the site. This includes a link between the historic parkland, the marl pit to the plantation tree belt and on to Bunkers Hill Wood
  - .68.3. Planting and improved management of the plantation tree belt, with more formal recreational routes to assist the succession of other areas. A buffer zone be provided to the plantation tree belt along with areas of scraped earth on the southern edge to encourage invertebrates;
  - .68.4. Retention and improved management of planting along Earlham Green Lane;
  - .68.5. Provision of a buffer zone along the eastern boundary as an area for scrub retention and to provide a green link between Bunkers Hill Wood and the marshes;

- .68.6. Provision of a swale feature visually and physically linking the site to the valley and providing habitat for invertebrates;
- .68.7. Provision of a central community green space for recreational purposes with a buffer to the tree belt provided by wildflower planting and shrub planting;
- .68.8. Provision of a village green as an informal green space with new planting;
- .68.9. Provision of a community garden;
- .68.10. Improved footpaths to the south of the site to reduce recreational pressure on the surrounding area along with retention and management of the scrub to the south of the site and just beyond the southern boundary;
- .68.11. Design and planting of the lower attenuation lagoon to encourage new habitat;
- .68.12. Retention management and buffer zones to the double hedgerow to the southwest corner of the site and provision of an attenuation lagoon within this area designed to encourage habitat for birds, invertebrates and amphibians;
- .68.13. Careful design of lighting particularly near significant tree belts and hedgerows.
- .68.14. Protection of trees and hedgerows during the construction stage;
- .68.15. Avoid unnecessary lighting during the construction stage;
- .68.16. Site clearance outside bird breeding season;
- .68.17. Trapping and relocation of reptiles prior to development;
- .68.18. Provision of bat and bird boxes throughout the site.

69. Off site the mitigation and enhancement measures can be summarised as follows:

- .69.1. Bowthorpe Hall Historic parkland restoration including improved management of the park and new planting to create habitat and foraging opportunities for bats and birds to the south of the site;
- .69.2. Yare Valley Walk extension to the west of Chapel Bread Road and Earlham and Bowthorpe Marsh Path improvements. This will provide an established recreational route and help to limit informal disturbance of adjacent marsh;
- .69.3. A detailed management and planting plan for Bunkers Hill Wood including footpath improvements.

70. Other off site works to Bowthorpe Marsh have been suggested, however the areas are already managed by the Norwich Fringe Project and it is considered that further intervention in this area to seek to mitigate the development may be counterproductive. There is some potential for invertebrate mitigation within the scrub/grassland buffer strip to the south of the site between the development and the marsh, this can be secured via condition.

71. The conservation value of the site is low to medium, the more significant medium value areas have in general been retained as part of the development. Post implementation of the mitigation and enhancement measures it is considered that the overall impact on the site would be minor negative. The main impact of the development in terms of biodiversity is considered to be the loss of large areas of low diversity grassland and scrub vegetation within the site which supports reptile, bird and invertebrate populations including loss of breeding areas for UKBAP species. At this stage limited specific details of the proposed mitigation and enhancement measures have been provided, however subject to details it is considered that they would provide satisfactory mitigation for the development to proceed. Given the relatively low value of those areas affected and the need to

provide housing on the site, on balance the proposals are considered acceptable subject to conditions requiring specific details of all mitigation and enhancement measures. In addition the reserved matters applications will also be subject to the EIA process and further ecological surveys will be required as part of the detailed applications. Given the projected timescales for development the reserved matters applications will serve an important purpose in ensuring the biodiversity impact of the development is limited.

## **Layout & Design**

### **Layout**

72. The layout of the proposals has been amended during the course of the application primarily to respond better to the areas surrounding the site, site constraints and opportunities as well as to provide a feasible surface drainage strategy.
73. The site layout now seeks to respond to views to and from Bowthorpe Hall and the River Valley, desire lines across the site and seeks to establish green links throughout the site as detailed within the preceding parts of this report. This has led to a broad layout which establishes 20 blocks.
74. Blocks are arranged around three hierarchies of street, the avenues which provide for the main vehicular routes through the site and link the proposed access points to the site. The avenues are wide routes providing for private frontage to properties, pedestrian movement, street trees, on street parking, uphill cycle lanes along with a main carriageway sufficient to provide for bus movement around the site. Neighbourhood streets are lesser in scale but provide the main carriageway, footpaths and street trees. The majority of streets are proposed as home zones which are far narrower and where the needs of car drivers are secondary to the needs of users of the street as a whole. It is a space designed to be shared by pedestrians, cyclists and low-speed or parked motor vehicles, this would be achieved by the effective landscaping of the street.
75. Reserved matters would need to broadly comply with this indicative layout. The spine road is the only aspect which is approved in full and fixed at this stage and this is limited to the 6m wide base carriageway.
76. The block layout and street hierarchy is considered to respond well to the opportunities of the site and is considered to be of an appropriate scale to enable a feasible and well designed development to come forward at the reserved matters stage.
77. In terms of secure by design and the polices comments, many of these will require more detailed assessment at reserved matters stage. It is not considered at this stage that there are any fundamental secure by design issues with the masterplan.

### **Buffers**

78. Additional information has been submitted during the course of the application on how the development relates to the surrounding areas and key pieces of green infrastructure. These relationships have been demonstrated via a series of indicative sections demonstrating how the frontage of blocks would relate to the public realm beyond. These have demonstrated that there can be sufficient buffer zones to the key areas of existing green infrastructure, with appropriate definition of



the street frontage with defined private frontages overlooking public space.

### **Height and Character**

79. A height parameters plan has been submitted as part of the proposals and is broadly considered to be acceptable. It suggests a mixture of two and three storey frontages and the height has been justified and illustrated via a number of sections through the site. However these sections all hint at a more traditional approach to design of buildings with double pitched roofs. At this stage it is not considered appropriate to restrict any particular design approach, a more contemporary monopitch three storey property may for example be no higher than a two storey double pitched building. The use of number of storeys as opposed to building height in meters is less desirable. As a result the applicant has now revised the parameters to refer to height in meters as opposed to storeys.

80. It will also be appropriate for the site to have a number of landmark buildings at key nodes to aid legibility through the site. The location of these has been indicated on the height parameters plan. These buildings would need to be distinctive by design which may or may not involve increased height.

### **Landscape and Visual Impact**

81. In terms of landscape impact the greatest and most adverse impact will be the loss of the landscape on the site itself. The environmental statement identifies this as of ordinary quality nevertheless the development will clearly have major adverse long lasting impacts on the sites landscape. In addition the proposals would have an adverse impact on the setting of the Yare Valley Marshes, this is discussed further below.

82. The more sensitive areas of the site in terms of visual impact are the frontage to the valley and the frontage to the conservation area. Along the valley a three storey (13m on the amended parameters) approach has been suggested which given the slope of the site is considered to be appropriate. This will provide a clear and defined frontage to the development and given the slope of the site will to some extent limit the extent of roofscape when viewed across the valley.

83. Detailed design along the river frontage will be vitally important given the long views across the valley, it will also be important that the design approach is consistent across the whole of the southern frontage and for this reason it is recommended that a design code be provided for this southern boundary.

84. Visual impact will be greater during construction and the early years of the developments life whilst new landscaping is established and the visual impact can be mitigated to an extent by good quality landscaping and tree planting to soften the appearance of the development. The retention of existing green infrastructure on the site including the landscape buffer and scrub to the southern boundary will also soften the appearance of the development across the valley.

85. The frontage to the conservation area is proposed at two storeys (10m on the amended parameters) again this is considered acceptable in principle and will not be overbearing on the adjacent conservation area or the setting of Bowthorpe Hall. The proposals will change the setting of the conservation area and Bowthorpe Hall from a setting of parkland and river valley to limit its historic context to the parkland within the conservation area. Cumulatively when considering the development alongside the development of the rest of Bowthorpe the impact on the Hall has been and will

be major. To a large extent the significant harm has already been done and the development of the site itself will have limited further impact, although the development does sit within the vista to the Hall's frontage. The proposals have been carefully designed to take the vistas to and from the Hall into account and given the need for housing and the sites allocation it is considered that subject to appropriate detailed design the proposals can be considered acceptable. As with the valley this north western frontage should be subject to a design code to ensure consistent design treatment.

86. The proposals for a bus link to the north of the site will result in a small encroachment on Bowthorpe Hall estate park of approximately 1m to the northern boundary, subject to the conditioning of arboricultural method statements detailed earlier in this report and the re-landscaping and provision of new boundary treatment to the north it is not considered that this would have a significant detrimental impact on the appearance of the park or the conservation area.
87. The remaining conservation area including the ruins of St Michael's Church a Scheduled Ancient Monument have no direct visual link to the site.

### **Building for Life**

88. Given the proposals are at outline stage it is not considered that there is sufficient information to undertake a preliminary building for life assessment. However as detailed above the overall layout proposed is considered to respond well to the opportunities of the site and it is considered that this would allow for an acceptable design at reserved matters stage which should be capable of scoring highly in terms of building for life.

## **Transport and Access**

### **Transport Assessment**

89. Access to the site for cars is via Clover Hill Road to the North and Dodderman Way to the South with Bus only access to the northwest onto Bowthorpe Hall Road. The transport assessment predicts 75% of car movements to be via the southern access to the site and 25% via the northern access.
90. The development will inevitably result in increased traffic levels at the junctions that immediately access the site, however the impact on the strategic road network is considered to be negligible. The movement figures represent those calculated on the current behaviour of Bowthorpe residents, and therefore represent the best proxy for calculating future transport choices. The implementation of sustainable transport initiatives should reduce the amount of car-based travel from the development, so the actual impact will be lower than suggested. It should also be noted that the transport assessment is based on 1200, rather the now proposed maximum of 1000 dwellings so the impact will be proportionately reduced.
91. The junctions at Wendene and the B1108 are predicted to operate over capacity by 2016 this would happen irrespective of the current development. At Wendene the issue could be resolved by retiming of traffic lights which is likely to take place irrespective of the current development. At the B1108 the junction was designed and implemented to facilitate the complete development of Bowthorpe inclusive of the application site. There has been and is likely to be far greater impact from other developments in the area specifically Norwich Research Park where future

developments are likely to lead to the redesign of this junction.

92. The transport assessment is based on the Norwich Area Transport Strategy model and therefore the impact of other developments in the area is factored into the figures in the assessment. In any case the update to the transport assessment in 2011 showed no increase in traffic at the key junctions of Wendene and the B1108 compared to the original 2005 transport assessment despite the developments that have taken place elsewhere. This is consistent with the city wide picture as the implementation of the Norwich Area Transport Strategy over the past 15 years has stabilised traffic levels across the urban area, despite the growth that has taken place.
93. Some concerns have been raised by objectors relating to other junctions further afield such as the Earlham Fiveways Roundabout which were not included within the scope of the transport assessment. In the case of the Dereham Road roundabout the impact was likely to be minimal, and certainly at a level where there would be no demonstrative impact, or changes that could reasonably be made consequent on the development. In the case of the Earlham Fiveways junction, this is somewhat remote from the site, and it would not be practicable to accurately forecast the impact here. In any event there is realistically nothing that can be done at Earlham Fiveways. Furthermore, the impact of the development at both Wendene and the B1108 is minimal, and there is therefore, no justification for considering junctions further afield.

### **Public Transport**

94. The proposals include provision for bus services to run through the site, this is supported by the current bus operator in the area First. Buses which currently operate to the district centre and then turn back up to the Wendene junction would be able to run through the development via a bus gate from Bowthorpe Hall Road into the site and exit onto Dodderman Way. Currently First operate three services to the Bowthorpe Area on the 'orange line' the 21, 21A and 22. Exact details of the re-routing of services would be for determination of the bus operator in conjunction with the County Council, however this would provide a service to the new development and also increase the residential catchment for existing services. The current routing of services around Chapel Break Road limits the catchment and accessibility of bus services. The provision of the spine road and bus gate at the start of the development is considered to be an essential pre-requisite of development on the site and should therefore be conditioned to be provided prior to commencement.
95. Concern has been raised by some residents over the safety of buses using Bowthorpe Hall Road and Earlham Green Lane. Bowthorpe Hall Road is currently a vehicular carriageway whereas Earlham Green Lane is currently pedestrian and cycle only. Buses would navigate an approximately 100m length of Earlham Green Lane and a shared pedestrian and cycle path would be provided adjacent to the route. The local highways authority does not consider that there are any safety concerns over this approach.
96. Bus stops for the new routes have been proposed within the centre of the site it is considered appropriate to secure the provision of bus shelters as part of the development via condition to enhance facilities for public transport users.

## **Cycle Routes and Pedestrian Links**

97. The proposals include numerous cycle and pedestrian only accesses to the site from the surrounding area, these broadly follow existing desire lines across the site and should enable the area to be easily navigated on foot or cycle. The avenue provides for an up-hill cycle route alongside the main carriageway. Segregated cycle lanes are not considered necessary on the neighbourhood streets and home zone. The neighbourhood streets would have extremely limited traffic movements and the home zones are intended to give pedestrian and cycle priority.
98. The proposals do included new segregated pedestrian and cycle routes along the southern, south-western and eastern boundaries of the site where no car access is proposed. The proposals provide for a permeable layout with good routes for all modes of transport linking to the surrounding areas.

## **Car Parking**

99. The application proposes 1.5 parking spaces per dwelling. This is higher than ownership levels for Bowthorpe and also consistent with maximum parking standards of policy TRA6.
100. Exact details of provision are to be determined at reserved matters stage however it is suggested all street hierarchies would involve on street parking and other parking would be provided off road in driveways or rear parking courts. It is suggested that 1 space per dwelling could be allocated with 0.5 spaces per dwelling unallocated for visitors or families with higher car ownership.
101. The detailed design of parking areas will be key to the success of the development and will be a matter to be considered further at reserved matters stage.

## **Travel Plan**

102. In line with policy TRA12 significant residential developments such as this should be supported by a travel plan. A travel plan will seek to promote behavioural change and promote non-car modes of transport and should form a condition of any approval.

## **Mitigation**

103. Key to the reduction of traffic movements across the City is the Norwich Area Transport Strategy which includes measures to promote non-car modes of transport across the City. TRA11 seeks commuted sums from development such as this to promote non car transportation improvements in the area including the provision of better cycle infrastructure linking developments like this to major employment and service locations. The development triggers a requirement for a commuted sum of £282.15 per dwelling which would be spent on transportation improvements in the wider area.

## **Health Impact**

### **Health Impact Assessment**

104. The application has been submitted with a health impact assessment in line with the requirements of JCS policy 7. This has been undertaken in line with the GNDP recommended methodology. The main impact this identifies, as one might expect is the loss of the greenspace on site itself as an area for informal recreation. The overall loss of this space is difficult to mitigate against in its entirety in the context of

a need to provide further housing in the Norwich area. However as discussed in other sections of this report the impact has been mitigated so far as possible by retaining key areas of green infrastructure on the site and helping to link these in the design of the new development. The development also offers extensive opportunities for new planting on site to soften the development. In terms of areas for recreation this is described further in the section below.

105. Many of the other impacts identified within the health impact assessment are addressed in other sections of this report including transport impact, noise, air quality, biodiversity and green infrastructure.

106. One issue which the health impact assessment identifies and which is not picked up elsewhere is the matter of lifetime homes which seeks to enable 'general needs' housing to provide, either from the outset or through simple and cost-effective adaptation, design solutions that meet the existing and changing needs of diverse households. This offers the occupants more choice over where they live and which visitors they can accommodate for at any given time scale. This requirement goes beyond the requirements of building regulations. In line with the requirements of policy HOU5 and the supplementary planning document on accessible and special needs housing it is recommended that 10% of the dwellings on the site be designed to lifetime homes standard.

### **Open Space, Play Space and Sports Provision**

107. The proposals provide a linked network of green spaces which provide for informal recreation and play provision. The overall provision of green space on the site is considered to be acceptable and is considered to provide satisfactorily for the new development whilst also along with offsite improvements detailed earlier in this report providing mitigation for the loss of the site itself as a recreational space utilised by the existing residential areas of Bowthorpe.

108. The main area of equipped playspace on the site is proposed within the central community green space, this will need to provide for the whole of the development. Whilst walking distances to this green space from the periphery of the development are slightly in excess of those recommended in the supplementary planning document on play provision given its central location it is considered to be acceptable.

109. The site proposals lack any formal sports provision, it is suggested that this is in part due to the topography of the site which restricts the laying out of formal sports pitches on the site, it is also suggested that the wider area is well served for formal sports provision with the site not being too distant from the UEA and facilitates at Bowthorpe Park. A multi-use games area at the Runnel is also nearby and proposed to be enhanced as part of the Bowthorpe Open Space Strategy. It has been suggested that improvements could be made at Bowthorpe Park including an improved bowling green and pavilion (£130k), improved tennis courts (£143k) and an enhanced multi-use games area (£94k). Policy SR4 and its associated open space SPD requires provision of open space to serve developments and requires a range of types of open space including sports facilities and youth facilities. The applicants calculations of formal open space on the site exceeds the total requirements for open space under SR4 (which for 1000 homes would be 2.4 hectares). However this includes the large areas covered by the attenuation basins which are functional and of limited usability, nevertheless even after subtracting these the provision on site is only just under the 2.4 hectares required and therefore it is not considered that

a commuted sum can be justified in this case and given the site constraints it is not considered appropriate to refuse the application due to lack of formal sports facilities, particularly as some facilities do exist in the vicinity of the site.

110. On balance the provision of open space across the site is considered to be acceptable in principle and in line with policies SR4 and SR7 subject to appropriate conditions for further details and the provision of the green infrastructure. Given the wide distribution of green space across the site it is recommended that the provision of each piece of green infrastructure be linked to the development of adjacent blocks via condition.
111. The Council does not intend to adopt the new green space on site and therefore it will be necessary to condition the ongoing management and maintenance of all public space on site which is not adopted highway. The likely solution will be a residents management association for the site.

## **Residential Amenity**

### **Existing Properties**

112. Properties bordering the site include those to the north of Earlham Green Lane and Clover Hill Road, to the east along St Mildreds Road and to the west on Tippett Close.
113. To the north of the site the distance between dwellings and the existence of a landscape buffer mean that no overlooking or overshadowing issues are likely to result from new properties on the development. The main implications for properties to the north is likely to be towards the north east of the site where hedging along Earlham Green Lane is thinner. Private views from properties on Beloe Avenue, Tunstall Close and Donchurch Close over the site would be lost although this is not considered to be material to the determination. Wall to wall distances to new properties would be at least 25m and this is considered to be sufficient to avoid significant overlooking or overshadowing.
114. Concern has been raised by a number of residents on Beloe Avenue and Swaffield Street relating to the proposed new bus link in this location and the impact of overlooking to the rear of properties from double-decker buses using this route. For the majority of this route buses will be moving and it is considered that the impact of amenity to adjacent properties would be minimal. Buses will potentially wait at traffic lights at either end if a bus is approaching from the other direction. To the east the traffic lights are set back into the site and it is not considered that any material impact in terms of overlooking would result. To the west a bus would wait towards the rear boundaries of properties at 46 and 47 Swaffield Street which would be most affected. Here there would be more significant potential for overlooking and loss of amenity. However given the limited extent of time a bus is likely to wait in this location and the fact that a bus will only ever need to wait here for any significant period of time if a bus is approaching from the other direction, the impact is not considered to be sufficient to warrant refusal of the application.
115. To the southwest of the site a new attenuation lagoon will border properties at Tippett Close to the west. This is not considered to result in any significant amenity implications. A small development block adjacent to the access to the site will position properties adjacent to Tippett Close and Bishy Barnabee Road, given the

distances between the block and existing properties it is considered that the principle of residential development in this area is acceptable and that it will be feasible at detailed design stage to design a scheme which does not have any significant amenity implications.

116. To the east given the distances between the proposed blocks and St Mildreads Road and the significant landscape buffer no material amenity issues in the form of overlooking or overshadowing are considered likely.

117. The impact of noise is dealt with in the sections below. The impact of overlooking and overshadowing will be given further consideration at detailed design stage.

### **Proposed Properties**

118. It is considered that the density of the scheme its layout and network of green spaces would provide for a satisfactory level of amenity for future residents of the development. Clearly this matter will require further more detailed consideration at reserved matters stage however the parameters of the outline would enable a high quality development to come forward at reserved matters stage. The impact of noise is dealt with in the sections below.

## **Environmental Issues**

### **Site Contamination**

119. The site does not in general have a history of commercial use and therefore it is unlikely that there is any inherent legacy of contamination throughout the site. There is however a small area of the site formally used as a gravel pit (the marl pit) to the north west of the site. This may have been filled with unknown material over the years and will require investigation to ensure it is suitable for its intended use. The southern half of the site is also located within ground source protection zone 1 and therefore it is imperative to ensure that the development will not cause risk of ground water contamination. As such contamination conditions are necessary to be imposed as part of any consent.

### **Waste Management**

120. Redevelopment of the site will inevitably result in waste production, there is no reason to consider that the level of waste would be particularly high for a development of this scale or have any particular more significant environmental implications. The correct management of waste from the development can be significantly reduced by careful design and management. The site will be subject to the Site Waste Management Plan Regulations 2008 and therefore it is not considered that any further requirements are necessary via condition on the consent.

### **Noise**

121. The main implications to assess with regard to noise from the finished development is road traffic noise both to future residents of the site and to existing properties adjacent to the main access routes to the site.

122. The application was submitted with a noise assessment dealing with the noise impact to proposed dwellings on the site, this has now been updated to consider existing dwellings adjacent to the accesses on Dodderman Way and Clover Hill and also to take into account the revised number of dwellings (being 1000 as opposed to 1200 detailed in the original noise assessment) and also the proposed reduction in

speed from 30mph to 20mph.

123. This concludes that as a result of the revisions to the parameters noise levels to existing properties adjacent to the accesses would be within acceptable levels and in line with relevant WHO guidance and the relevant British standard. In terms of properties within the site noise levels would be higher due to the likely orientation to the main road and proximity of the main road. It is therefore considered to be appropriate to condition noise insulation details for properties abutting the main spine road and condition road speeds through the site to be no more than 20mph to reduce road traffic noise.

### **Air Quality**

124. An air quality assessment has been submitted with the application. It should be noted that the site is outside of any air quality management area. The conclusion of the submitted report is that the changes in local air quality brought about by the proposed development are unlikely to cause any exceedance of the relevant air quality objectives or any significant change in local pollutant concentrations.

### **Flood Risk**

125. A small section to the south of the site is located within flood zone 2. During the course of the application the proposals have been revised to remove all housing from flood zone 2. This is considered to be acceptable and in line with the flood risk sequential test outlined within the NPPF. A condition is recommended that finished floor levels of all proposed dwellings are at least 300mm above the 1:1000 year flood level inclusive of an allowance for climate change.

### **Surface Water Drainage**

126. Provision of sustainable urban drainage on the site has been complicated by the sites location within ground source protection zone 1 where certain methods cannot be used due to the need to avoid contamination of ground water. In this case the revised surface water drainage proposals involve the provision of two attenuation basins to the south west corner of the site with restricted discharge to the River Yare along with the use of soakaways for those properties which are outside ground source protection zone 1. The proposals are considered to be acceptable and subject to more detailed design will satisfactorily resolve issues of surface water flooding on the site. Conditions for the detailed design and provision of surface water drainage for each phase are necessary.

### **Archaeology**

127. The development site has been subject to archaeological evaluation and part of the site has been subject to a formal excavation. This has identified a need for further investigation, analysis, publication and mitigation which should form a condition of any consent.

### **Energy Efficiency and Renewable Energy**

128. JCS policy 3 requires developments of this scale to provide at least 10% of the expected energy requirements from decentralised and renewable or low carbon technology, to demonstrate if it is viable or practical to exceed this minimum percentage and to demonstrate that the scheme has seized any opportunities to make the most of any available local economies of scale to maximise provision.

129. Use of a district heating system on the site has been considered as this, if it were feasible and viable, would deliver the greatest proportion of onsite provision. This



has been considered and discounted given the number of phases and likely timescale for redevelopment as well as the lack of any commercial use so that there is a more consistent energy load throughout the day.

130. The suggested approach is to improve fabric over and above building regulations and to meet code for sustainable homes level 4 pre-2016. Post 2016 the energy statement seeks to achieve a carbon zero development via fabric improvements and allowable solutions.
131. In terms of renewable energy the document reviews the available technologies and concludes that renewable energy should be maximised on site via the provision photovoltaic panels, ground source heat pumps for houses with larger plots and shared small scale combined heat and power units for high density clusters. This approach is considered to be acceptable and further details will need to be secured via condition.
132. The Environment Agency have recommended that to avoid pollution of ground water any ground source heat pumps should be closed loop systems. It is therefore suggested that this be conditioned unless details of an alternative is otherwise agreed in writing.

### **Sustainable Construction**

133. The submitted energy statement outlines objectives for fabric improvements detailed above and broad principles to reduce energy usage such as the orientation of dwellings. However there is little information at this stage relating to sustainable construction, this will be largely due to the current outline stage of the application process, it is considered that further detail should be considered at reserved matters stage. At this stage it is not considered that the parameters of the master plan would necessarily hinder a range of sustainable construction techniques.

### **Water Conservation**

134. Under JCS policy 3 to ensure all housing is water efficient, new housing development must reach Code for Sustainable Homes level 4 for water on adoption of this document and developments of over 500 dwellings must reach code level 6 by 2015. The energy statement commits to both of these and it is considered appropriate to condition this as part of any consent. Given the timescales for development it is suggested that any phases commenced from 1 January 2015 onwards should comply with the higher figure.

### **Light Pollution**

135. Lighting at the site could have a significant visual impact and also a significant ecological impact where adjacent to areas of green infrastructure. These impacts will need to be balanced against the need for lighting for safety and security reasons. It is considered that these impacts can be minimised by careful design and therefore the details should form a condition of any consent.

### **Construction Impacts**

136. There is potential for impacts during the construction stage in terms of dust emitted from the site, noise, access, oil/fuel/hazardous substance storage and silt containment. This is clearly an inevitable part of any development however the impacts can be minimised via conditioning a construction method statement to cover location of compounds, dust suppression, construction access, road cleaning, storage of hazardous substances, silt containment and construction hours

particularly when developing blocks at the boundaries of the site.

## **Consequential Development**

### **Foul Water Drainage**

137. There are capacity issues both at the Whitlingham Sewage Treatment Works (WSTW) and in the foul drainage network being the Yare Valley Sewer. Anglia Water have advised that at present WSTW has capacity for the development however with the extent of other development to the South of Norwich upgrades are likely in the long term at WSTW to cope with development.
138. Of greater significance and a more direct consequence of this development are upgrades required to the Yare Valley Sewer which will be necessary to facilitate this and other developments to the south of Norwich in South Norfolk. These works would involve a new 750mm pipe along the sewer network between Eaton Street and Trowse a circa 5.6km length of pipeline. This route runs along the Yare Valley and through a number of County Wildlife Sites, Local Nature Reserves and through the flood plain. Three Score represents approximately 15% of the growth which has been identified as having a need for these improvements and although it would depend on the extent of other growth which comes forward would represent 880m of the pipelines length. The works would have temporary environmental impacts during the construction phase. The works have not yet been fully designed but would be subject to the EIA process in themselves and if significant effects are likely the EIA would identify these effects and any mitigation necessary. The works are directly linked to this development and the potential implications should be considered and balanced against the merits of this proposal. It is considered by officers that whilst there may be potential for significant effects, given the short term nature of any impact this is not considered to be a reason to withhold consent.
139. In terms of the development itself the proposals will require foul sewers currently running across the site to be diverted under the new road network and given the lack of capacity it is considered appropriate to condition that no development shall take place on each phase until there is capacity in the foul sewerage network and at Whitlingham Sewage Treatment Plant to take the flows from the phase of the development in question.

### **Overhead Power Lines**

140. A number of overhead power lines run across the site. The two lower voltage cables running through the centre of the site will be removed underground as part of the development. Lines to the east of the site will be retained. To the west of the site high voltage cables run across the southwest corner. There is a desire for these to be situated underground. It is understood that the development is feasible and can comply with the relevant safety standards without these being removed, however their removal underground is desirable from a visual perspective and in terms of values on the site. Whilst not a requirement of the development the undergrounding of these cables may be a consequential result of this development and could result in further works outside the application site in both the conservation area and the Earlham and Bowthorpe marshes. Whilst the end result may be an enhancement the temporary construction is likely to have effects beyond the development currently proposed. Again this must be considered as part of the current application but, particularly as the works are not a necessary prerequisite of the development, this is not considered to be a reason to withhold consent.

## **Cumulative Development**

141. In considering the environmental impact regard should be given to the cumulative impact of the development alongside the rest of Bowthorpe. Cumulatively the development of Bowthorpe has had a significant impact on this part of the River Valley, particularly in terms of its use, ecological and visual impact. The site is surrounded by housing and is the last site in the area to be developed and on balance given the vital need to provide housing, the ecological value of the site and subject to the conditions recommended in the report the cumulative environmental impact is not considered to be so significant to warrant refusal of the application.

## **Local Finance Considerations**

142. Under Section 143 of the Localism Act the council is required to consider the impact on local finances. In this case this would be through the potential generation of S106 monies (although it should be noted that these are considered to be mitigating the impacts of the development in question), council tax and grant money from the New Homes Bonus. The completion of the development would lead to significant grant income for the council. Where this would be spent and the extent to which the spending of monies would be linked to this development of the Bowthorpe area is currently unknown. This is a material consideration but in the instance of this application the development plan and other material planning considerations detailed earlier in this report are considered to be of greater weight.

## **Planning Obligations**

### **Affordable Housing**

143. The proposed development commits to the provision of 33% affordable housing with an 85:15 social rented:intermediate tenures mix. This will be secured via the S106 agreement. Due to the significant infrastructure which will be required at the first phase this will only provide 30%, however the short fall will be made up in latter phases, this is considered to be acceptable and in line with JCS policy 4.

### **Transport Improvements**

144. The proposals trigger a requirement for a transport contribution of £282.15 per dwelling these monies would be spent on a number of non-car transportation improvements in the wider area including improvements to bus provision, cycle and pedestrian footpath enhancements and improved signing.

### **Off Site Biodiversity and Recreation Enhancement**

145. A number of off site enhancements have been identified earlier in the report to mitigate against the biodiversity impact of the development, these would be secured via commuted sums under the S106 agreement and are as follows:

- .145.1. Yare Valley Walk Extension, £90,690;
- .145.2. Earlham and Bowthorpe Marshes Path Improvement Works, £66,500;
- .145.3. Historic Parkland Restoration, £93,500;
- .145.4. Bunkers Hill Wood Enhancement Commuted Sum, £57,000.

### **County Education and Library Commuted Sums**

146. The County Council have requested commuted sums towards education provision

of £1,362,348.00 and library provision of £60,000. They have also requested a monitoring fee of £600. The figures are based on 1000 dwellings and may need to be adjusted in the S106 agreement to a formula based approach per dwelling.

147. Fire hydrants on the site will be provided via condition.

### **Police Services**

148. Norfolk Constabulary have requested commuted sums towards police facilities in the area and have placed a holding objection on the application whilst they gather further information to justify such a commuted sum. Since October 2012 when the letter was received no such justification has been provided. JCS policies 7 and 20 refer to the need to provide police facilities and infrastructure to support new development. However the policies do not detail the specific funding source for new infrastructure and there is no supported supplementary planning document relating to these policies to expand on or support the provision of developer contributions to police facilities. In this case no specific infrastructure or facilities which would be necessary as a result of the development have been identified either on or off site.

149. In order to meet the tests of necessary to make the development acceptable; directly related to the development; and fairly and reasonably related in scale and kind to the development it is considered that the relevant infrastructure or facilities required directly as a result of the development would need to be identified and costed. In the absence of such information and a clear policy basis for a commuted sum it is not considered that such a request would meet the relevant tests. This approach is consistent with recent case law in South Norfolk relating to commuted sums under S106.

### **Conclusions**

150. The proposed development would provide much needed housing in line with the site allocation and would contribute significantly to the identified housing need in Norwich. The biodiversity of the site is considered to be low to medium and the more significant medium quality areas have been largely retained as part of the development. Subject to the implementation of mitigation and enhancement measures which have been conditioned, it is considered that the overall impact on the site would be a minor negative impact. The layout of the site and parameters proposed are considered to take into account the constraints and opportunities of the site, link green infrastructure and provide new open space. The parameters are considered to provide for a high quality design to be agreed at reserved matters stage. The proposals will have a major adverse impact on the landscape of the site itself and would impact on the setting of the Yare Valley marshes. To an extent the visual impact to the Yare Valley and Conservation area can be mitigated through the detailed design and landscaping. The proposals subject to the mitigation proposed are not considered to have any significant transportation impacts. In terms of amenity whilst there will be some implications for neighbouring residents these are not considered to be significant enough to warrant refusal of the application and it is considered that the proposals would provide for a satisfactory level of amenity to future residents of the site. The impact of potential consequential development to the foul drainage and electricity networks has been considered as has the cumulative impact of other former developments in Bowthorpe.

151. Taking the above matters into account and the environmental information

submitted it is considered that on balance given the need to provide housing and subject to conditions and the contents of the S106 agreement the proposals are considered to be acceptable.

## **RECOMMENDATIONS**

To approve Application No (12/00703/O Three Score site land south of Clover Hill Road Norwich) and grant planning permission, subject to the completion of a satisfactory S106 agreement to include the provision of affordable housing and contributions to transport, education, library, S106 monitoring and offsite biodiversity and recreation enhancements and subject to the following conditions:

Conditions relating to the accesses and spine road proposed in full:

1. Standard 3 year full time limit for the accesses and spine road;
2. Development in accordance with the plans and details submitted;
3. Arboricultural conditions for details and method statements the for delivery of the main spine road and accesses;
4. Site clearance and tree/hedge removal to take place outside bird nesting season;
5. Details of landscaping treatment of accesses into the site including replanting and boundary treatments;
6. Design, construction and surfacing of bus gate prior to occupation;
7. Design, construction and surfacing of spine road base carriageway;
8. No use of the bus gate until the appropriate traffic regulation orders have been secured and implemented;
9. Details of any lighting of the spine road to be agreed;
10. Conditions to the whole development:
11. Standard outline time limit for the remainder of the development;
12. Reserved matters to relate to appearance, landscaping, layout and scale;
13. Reserved matters to be in line with the parameters set out within the outline application;
14. Phasing to be agreed prior to commencement but can be varied on agreement;
15. Restrict the use of the commercial floor space to A1 shops, A3 café/restaurants or A5 hot food takeaways only and for at least one unit to be in A1 retail use;
16. Reserved matters submissions for layout and landscaping to include arboricultural implications assessments and updated ecological surveys and reports with full details of mitigation and enhancement measures proposed;
17. Conditions for the provision and phasing of new on site green infrastructure including biodiversity mitigation and enhancement measures and provision of play space;
18. Conditions for the management and maintenance of all green infrastructure on site including annual maintenance plans and management responsibilities.
19. Conditions for the provision of off site green infrastructure to the south of the site including path improvements, landscaping and biodiversity mitigation between the site and the marshes;
20. Design codes for the river valley and conservation area frontage to be provided prior to submission of reserved matters;
21. No occupation of development fronting onto the spine road until it has been widened in accordance with details to be agreed at reserved matter stage;
22. No occupation until the bus gate and spine road has been provided;
23. Provision of a travel plan;
24. No development until details of the design and construction of roads, footways

- and cycleways have been submitted;
25. No occupation of any dwelling until its access, parking, cycle and bin storage have been provided in accordance with details to be agreed;
  26. No occupation until the appropriate traffic regulation orders have been implemented;
  27. Provision of two bus shelters within the site;
  28. 10% of dwellings on the site to be designed to lifetime homes standard;
  29. Contamination conditions;
  30. Construction method statement
  31. Details of the surface water drainage proposals and for the provision of drainage for each phase of development;
  32. Details of the future management and maintenance of the surface water drainage infrastructure;
  33. Finished floor levels of all proposed dwellings at least 300mm above the 1:1000 year flood level inclusive of an allowance for climate change;
  34. A scheme of further archaeological investigation;
  35. No development of any phase until there is sufficient capacity in the foul sewage network to take the flows from the development;
  36. A scheme of noise insulation measures to properties which border the main spine road;
  37. Road traffic speed limits within the site to be no greater than 20mph;
  38. Details for the provision of renewable or low carbon technologies on site;
  39. Any ground source heat pumps to be closed loop systems unless otherwise agreed;
  40. Details of all external lighting;
  41. Provision of fire hydrants.

(Reasons for approval: The environmental information submitted with the application has been taken into account in the determination of the application and the decision has been made with particular regard to the policies 1, 2, 3, 4, 5, 6, 7, 9, 12, 19 and 20 of the adopted Joint Core Strategy for Broadland, Norwich and South Norfolk 2011, policy CS16 of the adopted Norfolk Minerals and Waste Core Strategy and Minerals and Waste Development Management Policies Development Plan Document 2011, saved policies NE1, NE2, NE4, NE7, NE8, NE9, HBE4, HBE8, HBE9, HBE12, EP1, EP5, EP16, EP17, EP18, EP20, EP22, SHO3, HOU5, HOU6, HOU8, SR1, SR2, SR4, SR5, SR7, SR10, SR11, SR12, TRA3, TRA5, TRA6, TRA7, TRA8, TRA10, TRA11, TRA12, TRA14, TRA15 and TRA16 of the adopted City of Norwich Replacement Local Plan 2004, the National Planning Policy Framework and other material considerations.

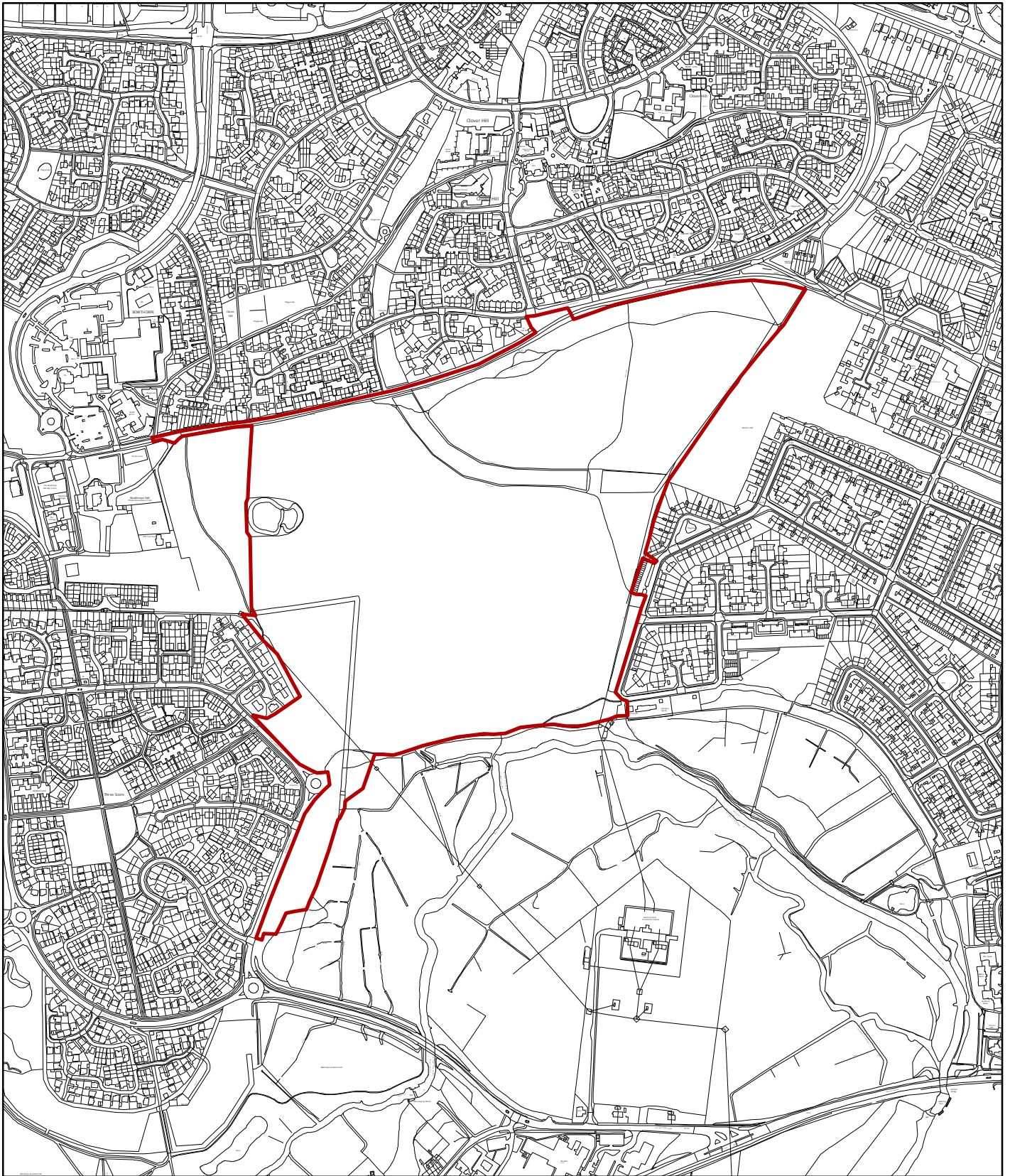
The proposed development would provide much needed housing in line with the site allocation and would contribute significantly to the identified housing need in Norwich. The biodiversity of the site is considered to be low to medium and the more significant medium quality areas have been largely retained as part of the development. Subject to the implementation of mitigation and enhancement measures which have been conditioned, it is considered that the overall impact on the site would be a minor negative impact. The layout of the site and parameters proposed are considered to take into account the constraints and opportunities of the site, link green infrastructure and provide new open space. The parameters are considered to provide for a high quality design to be agreed at reserved matters stage. The proposals will have a major adverse impact on the landscape of the site itself and would impact on the setting of the

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Taking the above matters into account and the environmental information submitted it is considered that on balance given the need to provide housing and subject to conditions and the contents of the S106 agreement the proposals are considered to be acceptable.

#### Article 31(1)(cc) Statement

The local planning authority in making its decision has had due regard to paragraph 187 of the National Planning Policy Framework as well as the environmental information submitted, the development plan, national planning policy and other material considerations, following negotiations with the applicant and subsequent amendments to the Environmental Statement the application has been approved subject to appropriate conditions and for the reasons outlined above. )



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Planning Application No 12/00703/O

Site Address Three Score Site Land South of Clover Hill Road

Scale 1:7,500



**NORWICH**  
City Council

PLANNING SERVICES





This drawing is for indicative purposes only. It must not be considered as a final design or construction document. Contractors must always refer to the original source information.

**KEY:**

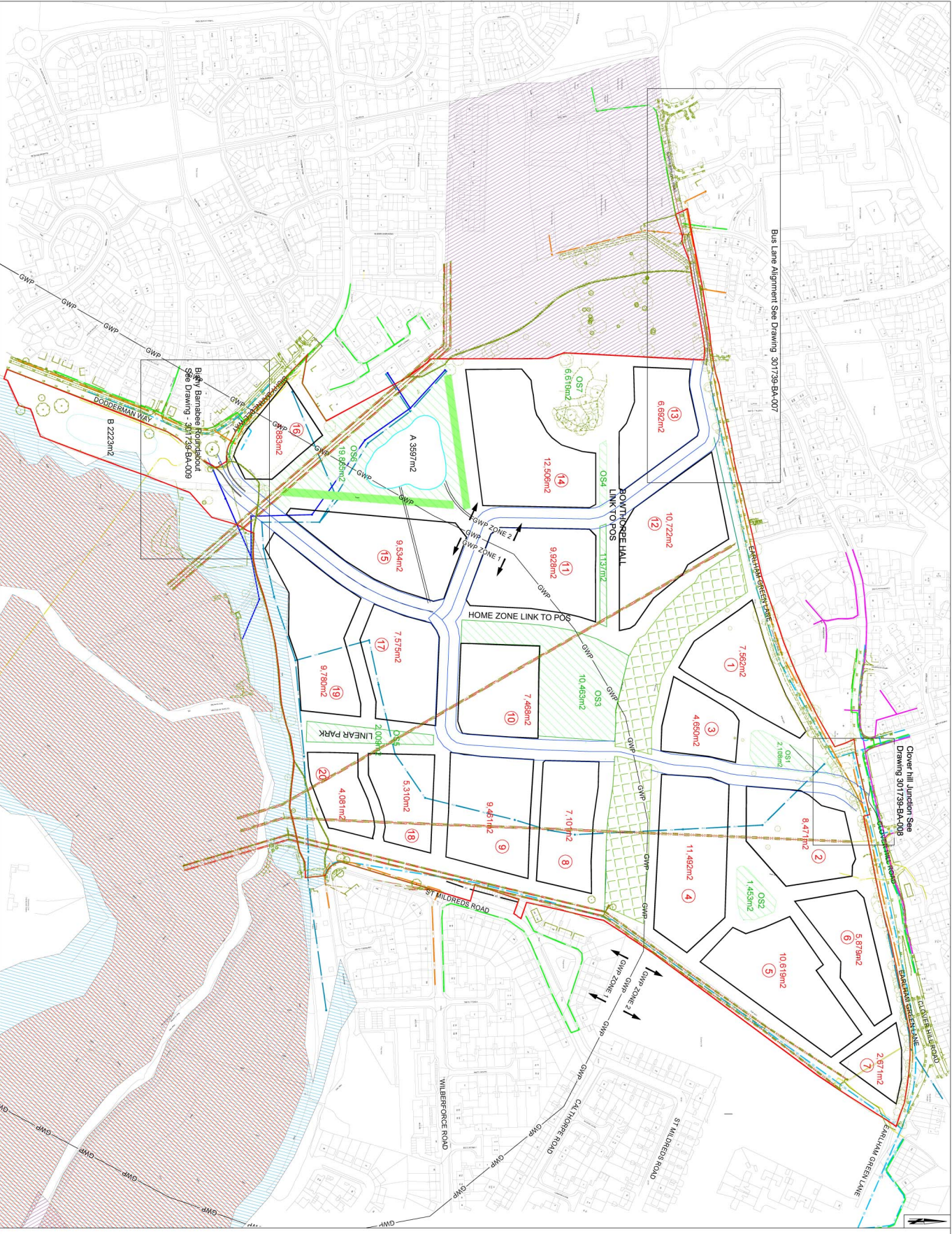
- OS Map Feature
- Proposed New Spine Road
- Proposed New Housing Blocks
- Existing Footpath
- Existing Contours @ 1m intervals
- Existing Significant Tree
- Existing Established Hedge/grow
- Green Ball

**Utilities:**

- Underground Electric
- Overhead Electric
- Underground BT
- BT Joint Box
- Overhead BT Plant
- Virgin Media
- Gas Main Pipe
- Water Main Pipe
- Surface Water Pipe
- Surface Water Manhole
- Foul Water Pipe
- Foul Water Manhole

**Zones:**

- GWP Groundwater Protection Area Zone Boundary
- Conservation Area
- Flood Risk Zone 2
- Flood Risk Zone 3



Bus Lane Alignment See Drawing 301739-BA-007

Clover Hill Junction See Drawing 301739-BA-008

Bigby Barrabee Roundabout See Drawing - 301739-BA-009

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working with  
**MAVQUINNEY** **Mott MacDonald**

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Meridian Lane  
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Fax 01603 226760  
Web www.mottmac.com

**DRAWING TITLE**  
Three Store - Bowthorpe  
Constraints Base Plan

REV.	DESCRIPTION	CHECKED	DATE	DESIGNED BY	DATE	DRAWING NO.
A	Hedge/grow added	AH	08/12	JCR	28/8/12	301739-BA-008
B	Groundwater Protection Zone Limits Updated	AH	10/12	JCR	28/8/12	301739-BA-009

REV.	DESCRIPTION	CHECKED	DATE	DESIGNED BY	DATE	DRAWING NO.
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APPROVED BY: MG 08/12

SCALE AT A1: 1:2000

FILE NO: 301739-BA



**BOWTHORPE  
THREE SCORE**

Outline Planning Application  
Site Analysis Plan

**Key**

- Development boundary
- Conservation area
- Existing scrub & woodland edge

- Existing trees & potential bat roosts  
Maintained and protected
- Sightings of reptiles
- Woodland and tree belt
- Double hedgerow

- ▤ Significant views
- ⋯ Pedestrian desire lines

10m



Section through site

38m  
Clover Hill Road

0 50 100 150 200 Metres






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**BOWTHORPE THREE SCORE**

**Green Infrastructure Plan**

-  Existing off site Green Space unchanged by development
-  Arterial Green Links
-  Secondary Green Links
-  Development boundary
-  Natural buffer
-  Existing Green Spaces retained and enhanced
-  Proposed Green Space
-  Existing significant landscape features retained & enhanced
-  Development blocks
-  Bowthorpe Community Garden
-  Proposed wildflower meadow

200 150 100 50 0 200 Metres

Woodland managed and maintained  
 Management plan for wood to be developed. A glide is proposed to allow light into the wood & enhance bio diversity

Natural buffer between tree belt & development blocks

Tree and shrub lined avenue linking Marlpit to new Community Green

Equipped play area

Linear Park with Play Features leading from shop to Community Green

Hedgerow enhanced and maintained

Frontage enhanced & maintained

Lower lagoon & enhanced natural green space

Managed Marshland

Restored tree avenue

Bowthorpe Hall Conservation Area

Bowthorpe Hall

Marlpit informal green space

Access into Marlpit from this edge

SUDS lagoon & natural green space

Swale feature linear Park leading to River Valley

Community Green

Community Garden

Tree Avenue leading to Community Garden

Wide buffer along existing hedgerow

Community Garden

Community Garden

Community Garden

Community Garden

Community Garden

Community Garden

Community Garden

Community Garden

Community Garden

Community Garden

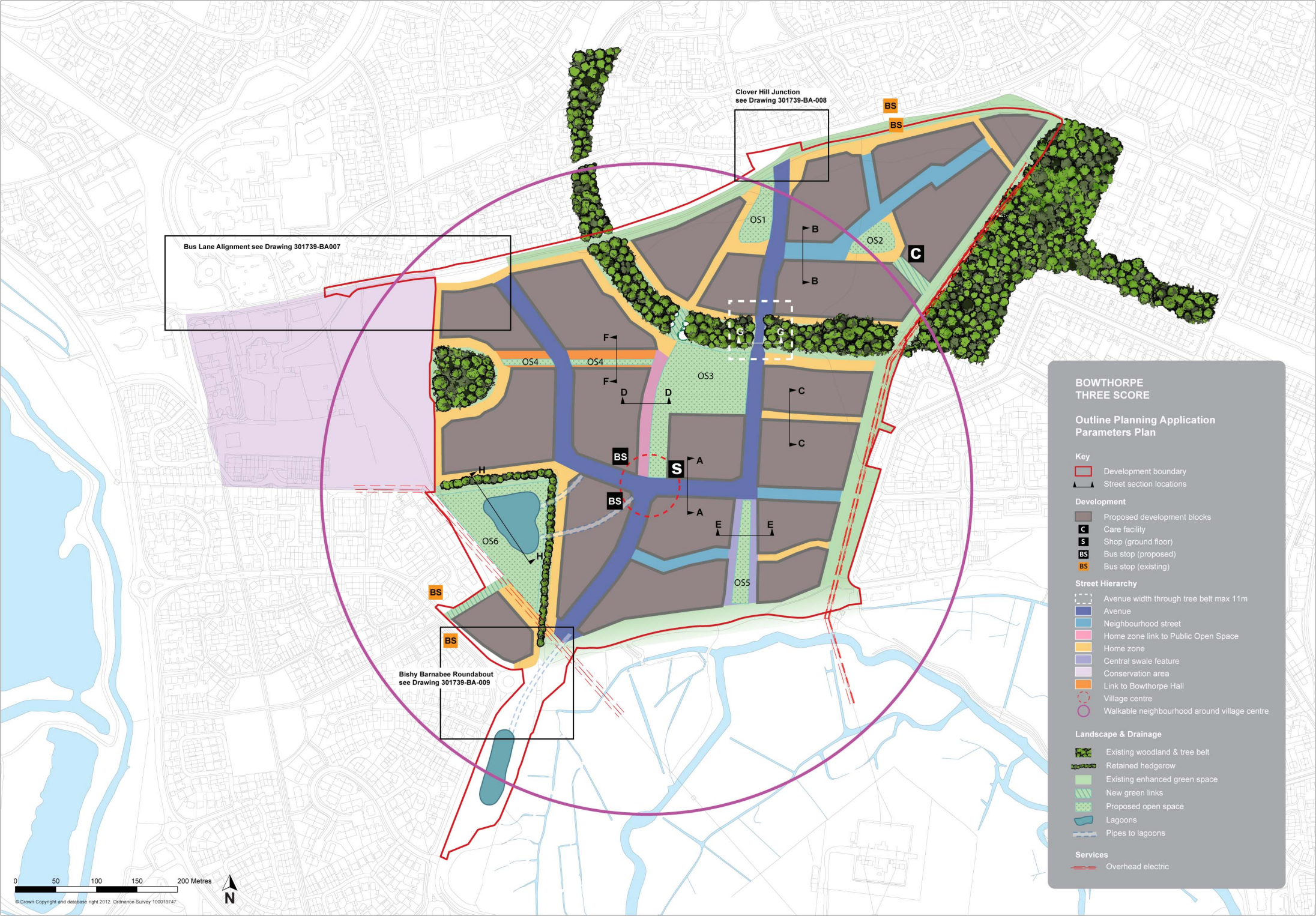
Community Garden

Community Garden

Community Garden

Community Garden

Community Garden



Clover Hill Junction  
see Drawing 301739-BA-008

Bus Lane Alignment see Drawing 301739-BA007

Bishy Barnabee Roundabout  
see Drawing 301739-BA-009

### BOWTHORPE THREE SCORE

#### Outline Planning Application Parameters Plan

**Key**

- Development boundary
- Street section locations

**Development**

- Proposed development blocks
- Care facility
- Shop (ground floor)
- Bus stop (proposed)
- Bus stop (existing)

**Street Hierarchy**

- Avenue width through tree belt max 11m
- Avenue
- Neighbourhood street
- Home zone link to Public Open Space
- Home zone
- Central swale feature
- Conservation area
- Link to Bowthorpe Hall
- Village centre
- Walkable neighbourhood around village centre

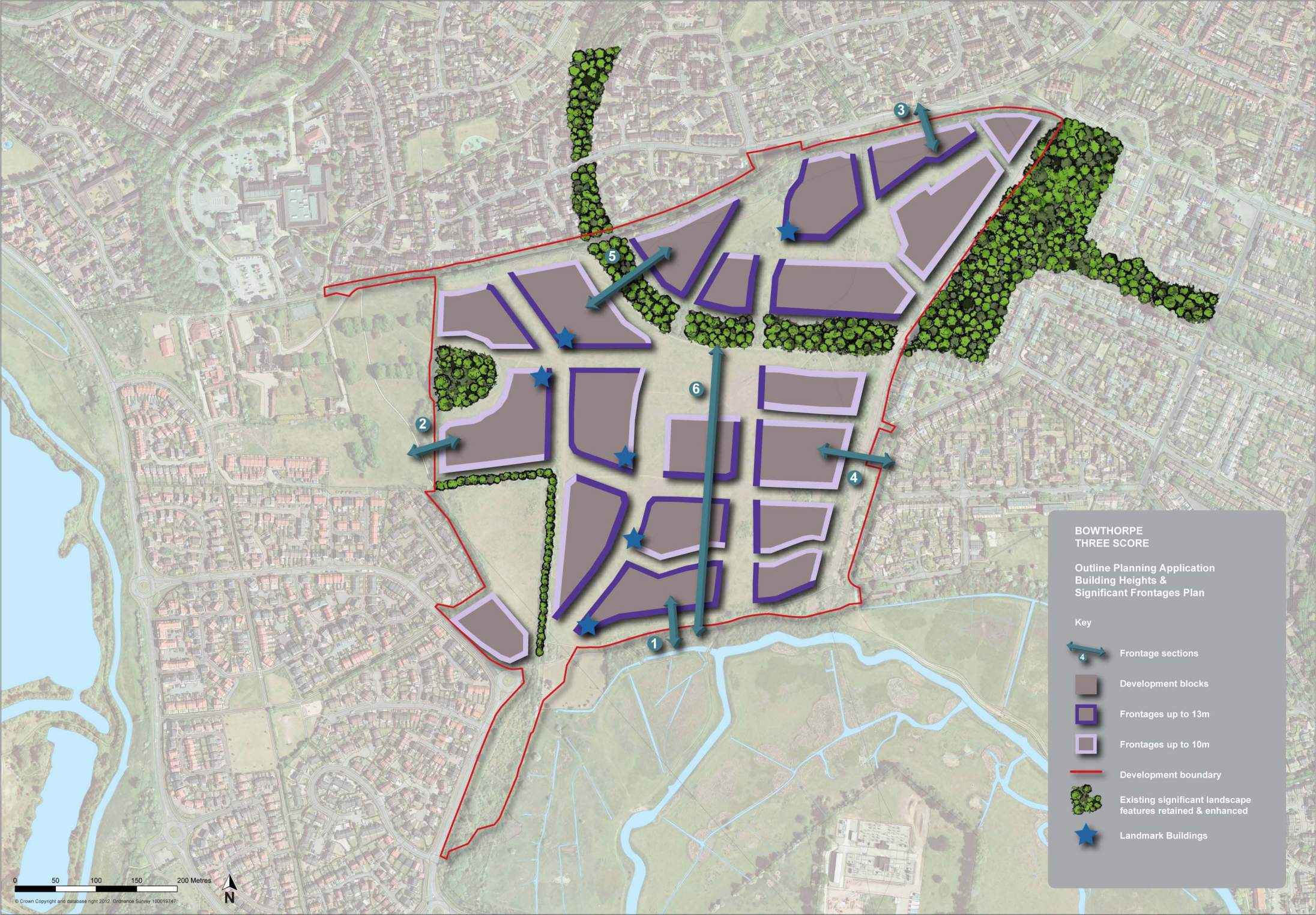
**Landscape & Drainage**

- Existing woodland & tree belt
- Retained hedgerow
- Existing enhanced green space
- New green links
- Proposed open space
- Lagoons
- Pipes to lagoons

**Services**








- Overhead electric





### BOWTHORPE THREE SCORE

Outline Planning Application  
Building Heights &  
Significant Frontages Plan

- Key
-  Frontage sections
  -  Development blocks
  -  Frontages up to 13m
  -  Frontages up to 10m
  -  Development boundary
  -  Existing significant landscape features retained & enhanced
  -  Landmark Buildings

0 50 100 150 200 Metres

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