

# NRP Development Framework

Supplementary Planning Document

South Norfolk Council / March 2009



South Norfolk Council in conjunction with Atelier  
PRO and Land Use Constulants.



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**Sainsbury Laboratory, John Innes Centre (JIC)**



**University of East Anglia (UEA)**



**Norfolk and Norwich University Hospital (NNUH)**

# Vision

## Norwich Research Park

### Europe's centre for research in health, food and environmental sciences

The Norwich Research Park (NRP) is a powerful co-operative of world class research facilities covering the **University of East Anglia**, the **Norfolk and Norwich University Hospital** and three independent research centres: the **John Innes Centre**, the **Institute of Food Research** and the **Sainsbury Laboratory**. With a total of over 9,000 staff across these institutions and 1,000 postgraduate research science students, the Norwich Research Park has one of the largest single-site concentrations of research in health, food and environmental sciences, computer and information systems and chemistry in Europe. An analysis of the most highly cited scientists in the UK over the past 20 years reveals Norwich is ranked 4th after London, Cambridge and Oxford (New Scientist, 1 July 2006/Thomson ISI). Located just 5 kilometres from Norwich City centre the NRP is at the heart of Norwich's future development and economic growth, the importance of which is recognised in County and Regional Strategies.

The extension to the Norwich Research Park, incorporating historic Colney Hall, will build upon the existing internationally renowned research centres at the NRP and underpin the international presence of Norwich as a centre of excellence in providing research and training particularly in plant, food, health, environmental and climate sciences. Promoting the continuing success of the NRP and the emerging A11 high tech employment corridor, as identified in the East of England Plan, will significantly contribute to the economy of Norwich and the wider area.

The NRP Campus will be an exemplar for the sustainable development of research and development parks. It will embrace strong, innovative design and contribute to the quality of life of local people by improving provision of local services and facilities. It will make a significant local contribution to tackling climate change, one of the greatest challenges of this century, by incorporating energy efficient design and techniques, water and material efficiency, off-setting carbon emissions and aspiring to carbon neutrality over the life time of the development.



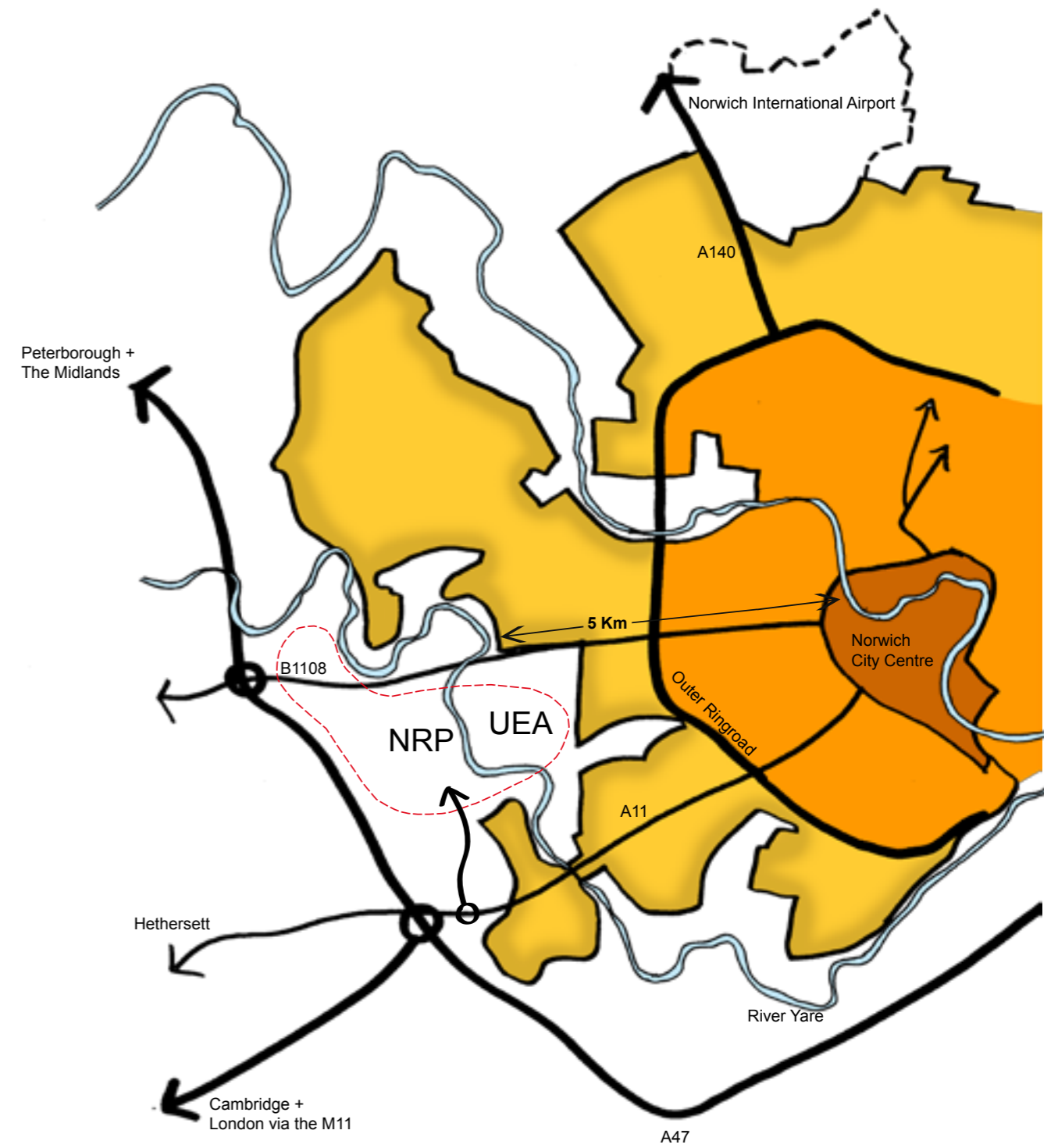
John Innes Centre (JIC)



Institute of Food Research (IFR)



Colney Hall



# Part 1: The Introduction

## 1.1 Purpose of this Development Framework

This Development Framework has been prepared to guide and co-ordinate the form of development on land allocated as an extension to the Norwich Research Park at Colney in the South Norfolk Local Plan (SNLP) (March 2003). It will also be applicable to any new development that is proposed as part of the existing components of the NRP.

The Development Framework has been prepared as a Supplementary Planning Document (SPD) to provide the parameters within which detailed planning applications for the NRP will be prepared and determined. The Framework acknowledges that there are fluctuations in the demand for research and development facilities and recognises that the nature of institutions at the NRP is changing. Health and education are emerging as new activities linked closely to and collaborating with the research and development institutions historically located at the NRP. The Development Framework therefore aims to establish development principles that allow sufficient flexibility in the manner in which development may occur.

### Objectives

The overall objectives of the Development Framework SPD are to:

- Implement the allocations and land uses in the South Norfolk Local Plan;
- Provide greater developer and landowner certainty over development at the NRP;
- Enhance the efficiency and certainty of the planning process;
- Ensure integration between existing, new and future areas of the NRP;
- Promote exciting buildings, spaces and landscape design of international quality;
- Fully utilise opportunities presented by the physical aspects of the site;
- Promote the sustainable development of the extension to the NRP; and
- Encourage viable development for which there is demand and which is compatible with the whole of the NRP cluster.

### Document Status

The Council has adopted the Development Framework as a Supplementary Planning Document (SPD). As an SPD it does not form part of the statutory Development Plan, but it will be a material consideration in determining planning applications. All matters covered in a SPD must relate to policies in a development plan document or a saved policy in a Development Plan. This Development Framework relates to the saved policies in the SNLP, set out in Section 1.4.

The SPD has been subject to a Sustainability Appraisal (SA), as required by the Planning and Compulsory Purchase Act 2004 and also a Habitat Regulations Assessment (HRA), as required by the Draft Conservation (Natural Habitats &c) (Amendment) (England and Wales) Regulations 2006. It has also been informed by a Transport Assessment, prepared in order to better understand the transport implications of additional development at the NRP and to identify appropriate measures to minimise this impact. More information on these assessments can be found in appendices to the SPD, which are available upon request from the Planning and Housing Policy Team at South Norfolk Council. These studies apply to both the main NRP campus and Colney Hall.

The SPD was prepared through consultation with local elected Members, key stakeholders and the general public.


## 1.2 Strategic Location


The NRP is situated to the south-west of Norwich, as illustrated in Figure 1. It is within easy travelling distance of the city centre, including both Norwich rail and bus stations, and less than ten kilometres from Norwich International Airport. The NRP is close to the intersection of the A11 and A47 trunk roads. The A11 connects Norwich to Cambridge, and via the M11 to Stansted Airport and London, whilst the A47 connects the NRP to Peterborough, the Midlands and the A1.



**Figure 2 Existing organisations and allocated land**

**Key**

 Allocated sites in the South  
Norfolk Local Plan (March 2003)

 Existing development and sites  
with planning permission

Local Plan Allocations:

Policy EMP1	Employment land allocations
Policy COL1	Research & development uses at NRP
Policy COL2	Norwich Research Park, contingency reserve
Policy COL4	Expansion of the Norfolk and Norwich University Hospital

Abbreviations:

JIC	John Innes Centre
UEA	University of East Anglia
IFR	Institute of Food Research
NNUH	Norfolk & Norwich University Hospital

## 1.3 NRP: The Existing Site and Development Context

The location of the NRP, its existing constituent organisations and the allocated sites for additional development are presented in Figure 2. The areas of existing development and the allocated sites define the geographical extent of the Development Framework SPD.

### Existing development at the NRP

The NRP should be seen as an integrated campus of complementary science, research and related business activities. Existing development at the NRP comprises four principal institutions, plus Colney Hall, which are geographically close to each other and each recognised as leaders in the field of environmental, health and life sciences. Linkages at all levels of the organisations are nurtured. These key components are:

- The **University of East Anglia (UEA)** which lies to the east of the River Yare and is directly connected to the remainder of the NRP by an existing foot and cycle path link across the Yare valley. The NRP has largely developed in its present location as a result of the existence of the University. The UEA is recognised both nationally and throughout the world for its position and role as a provider of higher education and research. The UEA is likely to continue to act as a major catalyst for research opportunities and as a source of highly qualified individuals for employment at the NRP.

The University features a range of building styles and types and includes nationally known buildings such as Lasdun's 'Ziggurats' and Foster's Sainsbury Centre. The architectural quality of many of these structures is recognised through statutory listing. Environmental quality is outstanding in terms of the integration of the built and un-built environment.

The outstanding quality of much of the buildings and landscape within the UEA campus establishes a quality threshold that should be maintained in the new areas of development.

The UEA triangle site to the west is awaiting development and has road and other infrastructure already in place.

- The **Norfolk and Norwich University Hospital (NNUH)**, which has a single, dense and well-organised design. It consists of a building core with peripheral access roads and parking. It is located to the south-east of sites allocated for new development at the NRP, adjacent to allocations COL1 and COL4.
- The **John Innes Centre (JIC)**, which includes the **Sainsbury Laboratory** and **Genome Centre**, has undergone organic growth over time. In planning terms its organisation is seemingly ad-hoc, having a range of types and scales of buildings and lacking clarity of circulation. It is located in the centre of the NRP providing the link between existing development and the new sites allocated for research and development uses.
- The **Institute of Food Research (IFR)** site has a similar organisational design to the NNUH site. It contains substantial buildings at a lower density. It is set in a 'lanscaped' context with a relatively high quality environment. The IFR is located to the east of the Core Area, adjacent to the B1108 Watton Road.
- **Colney Hall** which lies to the north west of the central campus, comprises an emerging cluster of health care organisations coming within Use Class D1 Non-residential institutions. Historic buildings have been sensitively and carefully converted.

### Landscape Character Areas

The NRP falls within two Character Areas set within two different Landscape Types as identified in the South Norfolk Landscape Character Assessment (2001). These are:

- **Yare Valley Urban Fringe Character Area**, set within the Valley Urban Fringe Landscape Type: this accounts for the north-eastern part of the NRP. The area is significant in that it provides an open and distinctive boundary with the City administrative boundary. Particular characteristics include its valley form, which is relatively unusual for South Norfolk and its woodland and waterways (although no waterways are within the area covered by this SPD); and

- **Yare Tributary Farmland with Parkland**, set within the Tributary Farmland with Parkland Landscape Type: this is characterised by arable landscapes, intermittent long views to the city of Norwich and a gently undulating topography.



**Colney Hall**

### **The Central Campus**

The Central Campus covers the COL 1 allocation south of the B1108 Watton Road as well as the adjoining COL 2 and COL 4 allocations, illustrated in Figure 2, and is currently accessed by the Watton Road and its side roads, Hethersett Lane and Colney Lane.

The Central Campus is characterised by its open nature and relatively little sense of enclosure. This is emphasised by open, gently rolling topography, relatively large fields and an absence of significant hedgerows. The majority of the Central Campus is actively farmed and there are limited habitats of value. There is an awareness of adjacent development e.g. the NNUH/JIC visually and the A47/Watton Road acoustically, but despite its urban fringe location, the site has a quiet integrity.

One principal element within the Central Campus is the shelterbelts, which are generally comprised of dense mixed woodland of a similar age. These shelterbelts are particularly significant because of the openness of the landscape.

Developers should note the significance of building silhouettes in such an open landscape.

### **Colney Hall**

The Colney Hall estate has a more complex character than the Central Campus and the existing development at the NRP. The area surrounding Colney Hall is divided into two landscape areas; those more open parkland areas closer to the Hall and areas of woodland to the north and east. The physical characteristics of Colney Hall create an opportunity for high quality development in a mature setting.

Colney Hall was subject to an ecological assessment in 2001, which outlined the higher and lower value areas on the estate. The Hall itself is a Grade II listed building set within the remnant of a historic landscape. The landscape is not on the English Heritage Register of Parks and Gardens but is on the Norfolk County Council local list.

Colney Hall is accessed by a relatively narrow and attractive private drive from the Watton Road. There are no known rights of way across the site.

Further information about Context can be found in Appendix 2 to the Framework.



University of East Anglia (UEA) across the Broad



The Global Clinic, Colney Hall



Cambridge Laboratory, John Innes Centre (JIC)



Edith Cavell Building,  
Norfolk and Norwich  
University Hospital (NNUH)



Genome Centre Atrium,  
John Innes Centre (JIC)



**Big C Family Cancer Information and Support Centre, NNUH**

## 1.4 Planning Policy Context

This Framework has been written to implement the current South Norfolk Local Plan allocations, as illustrated in Figure 2. It is recognised that the long term success and viability of the NRP is of strategic importance for Norwich and the regional economy. In the East of England Plan (May 2008) it is defined as a key location for employment growth and it will make a major contribution to the employment target for the area of 35,000 additional jobs in Greater Norwich between 2001 and 2021 (East of England Plan, Policy E1). It also forms part of the Greater Norwich Development Partnership bid for Growth Point funding from the Government and has been ranked as the top priority by members on the Partnership board.

The Local Plan Policies for Norwich Research Park, which allocate the area for B1(b) Research and Development and Hospital related uses, are set out in full opposite.

**The Central Campus:** This incorporates the three allocated sites south of the B1108 Watton Road, covered by Local Plan policies COL1 (part), COL2 and COL4, which are considered sufficiently similar to be grouped together.

**The Colney Hall Site:** Colney Hall is also covered by Local Plan Policy COL1, but has specific guidance in the Framework because of its separate location and different environment.

### Future Policy Development

Given the strategic importance of the NRP, it is essential that consideration be given to the potential for expansion in the future. There will, therefore, be an opportunity to consider the role, extent and possible further expansion of the NRP as part of the emerging Local Development Framework. In particular, there are areas beyond the current Local Plan allocation that will be considered for future expansion of the NRP and supporting developments.

### East of England Plan (May 2008)

#### Policy NR1: Norwich Key Centre for Development and Change

Norwich should be a regional focus for housing, employment, retail, leisure, cultural and educational development.

Particular aims, reflecting its identification as a new growth point, should be to:

- provide for 33,000 net additional dwellings in the Norwich Policy Area (NPA) in the period 2001-2021 facilitated by joint or coordinated Local Development Documents prepared by Norwich, South Norfolk and Broadland;
- achieve a major shift in emphasis across the Norwich Policy Area towards travel by public transport, cycling and walking;
- support and enhance the retail, leisure and cultural role of Norwich through development which complements the outstanding historic heritage of the city centre;
- promote the city as a destination for tourists and visitors and a gateway to the wider rural and coastal areas of the county and the Broads; and
- address the deprivation concentrated in parts of the urban area.

Planning for employment growth should focus on:

- the city centre, particularly media and creative industries, finance and insurance, and information communication technologies;
- Thorpe St Andrew and Longwater, Costessey (business park uses);
- Colney/Cringleford (expansion of the research park reserved for research and development, higher education, and hospital/health related uses);
- Norwich Airport (uses benefiting from an airport-related location); and
- Wymondham/A11 corridor (high-tech development and rail-related uses).

Local delivery arrangements should be adopted to plan and deliver these aims. The broad extent of the Norwich Policy Area, based on that of the previous Structure Plan, should be established in Local Development Documents.

Requirements for transport infrastructure arising from development in the Norwich area should be determined having regard to the Norwich Area Transportation Study, which provides a strategy for improving access by all modes of transport across the Norwich policy area.

### South Norfolk Local Plan (March 2003)

#### Policy COL 1: Research and development uses at Norwich Research Park

Planning permission will be granted for research and development uses on land shown on the Proposals Map at the Norwich Research Park, Colney, provided that:

The design and layout of all such development, including any proposals for the extension, infilling or development of existing buildings respects the layout, scale and quality of the existing Research Park buildings, where appropriate, and contributes positively to their landscape setting.

Any planning permission granted for development at the Norwich Research Park will be limited to that falling within class B1(b) of Part B of the Schedule to the Town and Country Planning (Use Classes) Order 1987 (and the equivalent class in any successor Order), or to that which is ancillary to existing buildings and uses on the same site, and conditions will be imposed to this effect.

#### Policy COL 2: Norwich Research Park, contingency reserve

14 hectares between Hethersett Lane and Watton Road (B1108) as shown on the Proposals Map is proposed as a "contingency reserve" for the Norwich Research Park (research and development uses). Planning permission will be granted on this site within the plan period provided that:

- i) The uses proposed cannot be located on other allocated land by reason of  
Site size required, or  
Detailed end user requirements, or  
Other sites are committed.
- ii) The design and layout of all such development, including any proposals for the extension, infilling or development of existing buildings respects the layout, scale and quality of the existing Research Park buildings, and contributes positively to their landscape setting.
- iii) Any planning permission granted for development at the Norwich Research Park will be limited to that falling within class B1(b) of Part B of the Schedule to the Town and Country Planning (Use Classes) Order 1987 (and the equivalent class in any successor Order), or to that which is ancillary to existing buildings and uses on the same site, and conditions will be imposed to this effect.

#### Policy COL 4: Expansion of the new Norfolk and Norwich Hospital

A site of 5ha of land between the Norfolk and Norwich Hospital and Hethersett Lane is allocated for hospital and hospital related activities in addition to research and development uses permitted by policy COL 1 at the Norwich Research Park.

# Part 2: Key Development Parameters

## 2.1 Key Development Principles

Three overarching principles have been identified that the NRP should seek to promote and that specific development proposals should seek to achieve. These are:

### I. **Sustainability: An exemplar of sustainable, energy efficient development**

Minimise carbon dioxide emissions from development at the NRP through energy efficient design and on site renewable energy generation.

The overall aspiration of the NRP is to achieve carbon neutrality over the lifetime of the development. Development should also follow the principles of water reduction and water efficiency.

Developers should be aiming to achieve BREEAM (Building Research Establishment Environmental Assessment Method) “Excellent” standards with “Very Good” as a minimum., see [www.breeam.org](http://www.breeam.org) for further information.

### II. **Access: Encouraging non-car use access and pedestrian movement**

Encouraging an increase in the proportion of walking, cycling and public transport use, through the provision of sustainable transport facilities, in particular enhanced cycling facilities, bus services and safe and pleasant pedestrian links. This is both to and from the NRP and within the wider NRP/UEA cluster.

### III. **International Quality Design: Maintaining the exemplar of architecture and landscape at the UEA throughout the NRP**

Given the international importance of the NRP and the quality of its setting this should be recognised in terms of the quality of architecture, landscape and new public realm.

High quality design teams, with an understanding of and reference to international best practice, should carry out the design and masterplanning.

An agreed design development process and Design and Access Statements should be used to foster early awareness of the character and context of the NRP in addition to environmental issues and impacts.

## 2.2 Proposed Land Use

Land allocated as an extension to the NRP is covered by Policy COL 1 in the adopted South Norfolk Local Plan (2003). Policy COL 1 allows for 'research and development' uses under Class B1 Class II (b) of the Schedule to the Town and Country Planning (Use Classes) Order 1987. Class B1 Class II (b) is described as:

"Use for research and development of products and processes... capable of being carried out within a residential area without detriment to the amenity of the area due to noise, vibrations, smell, fumes, smoke, soot, ash, dust or grit". (Town and Country Planning (Use Classes) Order 1987)

There is also an area of 5 hectares of land allocated under Local Plan Policy COL 4 for hospital and hospital related activities. This land is located between the Norfolk and Norwich University Hospital and Hethersett Lane and is allocated in addition to research and development uses permitted by Policy COL 1.

### Viability of research and development

It is important that development at the NRP accords with the policy in the Local Plan; however, in some circumstances, other material planning considerations relevant to a specific proposal may outweigh the Local Plan policies.

There is significant public sector interest in ensuring that development at the NRP is brought forward and innovative solutions may be appropriate. Where developers are concerned as to the viability of commercial proposals, early discussions with the public sector would be helpful.

### Acceptable land uses at the NRP

There has been a change in emphasis towards a range of acceptable land uses at the NRP since policies in the South Norfolk Local Plan were adopted in March 2003. There is now an increasing focus on life sciences, medical, environmental and climate research as well as the development of complementary uses linked directly to the key institutions and their activities.

A degree of flexibility is important as the nature of research can change rapidly over short periods. In this context there may be an element of flexibility in the type of uses that could be permitted as long as some connection can be demonstrated with one of the main anchor institutions.

*It is important to emphasise that general manufacturing/ office development with no tangible link to research and development or the NRP will not be acceptable.*

The following could be a useful guide for potential developers:

#### Acceptable Uses:

- Research and development particularly in environmental, health and life sciences; and
- Health related uses.

#### Possible Uses:

- Ancillary uses to research and development (see below for suggested list); and
- Uses complementary to one of the four main anchor institutions at the NRP.

Where uses are proposed under the 'Possible' category the developer will need to demonstrate that they are:

- Supportive and essential to the proposals core function;
- Compatible with the objectives of this Development Framework SPD; and
- Contribute to the achievement of the NRP Vision 2008-2013 (EEDA, July 2008). (Early discussion is recommended with Local Planning Authority).

**Ancillary** use is defined as 'a subsidiary use connected to the main use of a building or piece of land, e.g. storage space within a factory'. The Local Planning Authority will consider the following ancillary uses acceptable as part of the wider mix of employment uses to service and fulfil the primary objective of research and development at the NRP.

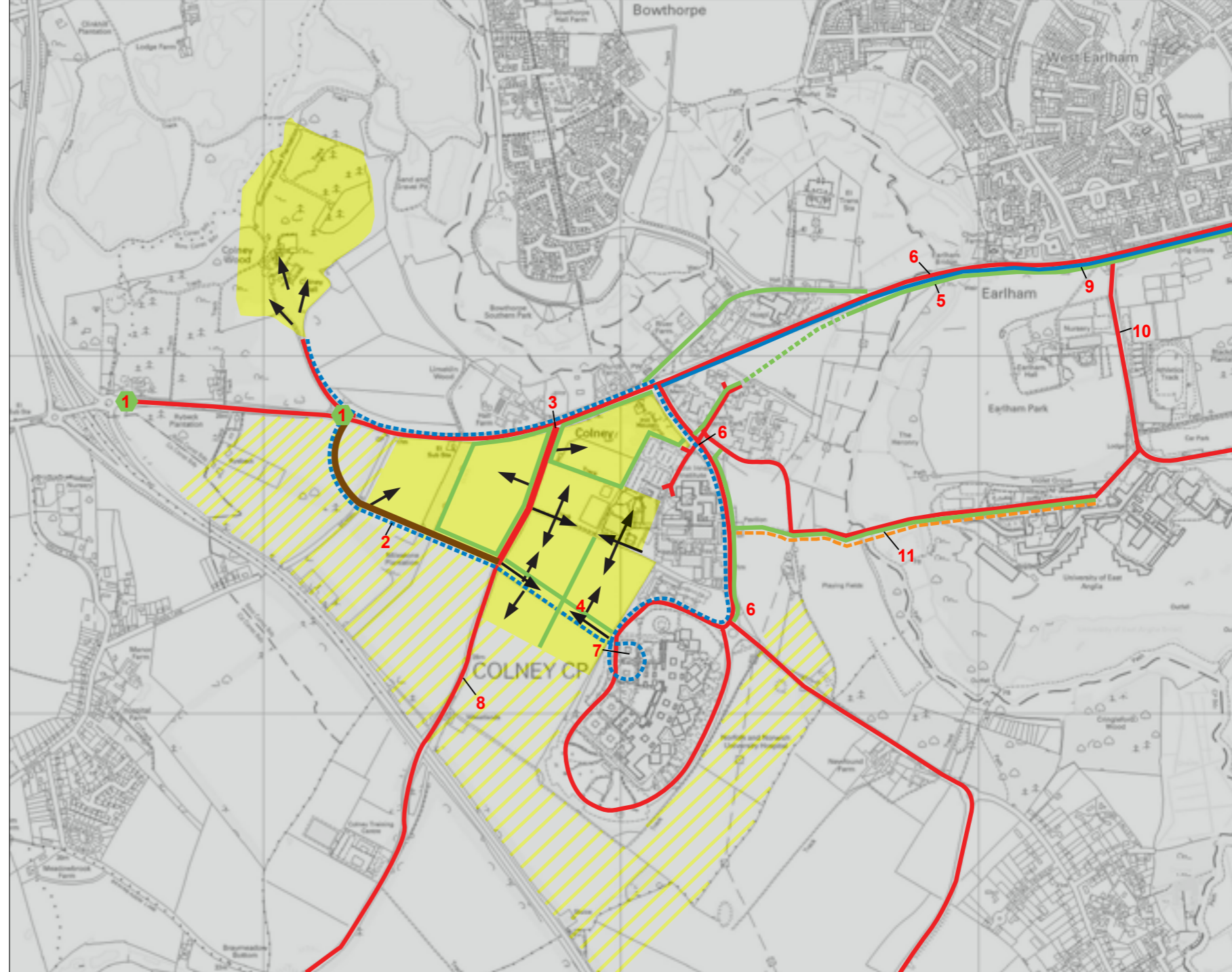
This is not an exhaustive list and other uses may be acceptable following discussion with the local planning authority:

- Patient hotels, recuperative/respice care;
- Education and training facilities;
- Social/networking and conference facilities to encourage and develop knowledge transfer;
- Residential institutions linked to research and development uses on site e.g. short stay accommodation for scientists/suppliers etc;
- Small scale retail/shop provision to serve NRP workers e.g. convenience store, post office, hairdresser, dry cleaner;
- Café/restaurant/sandwich bar; and
- Supporting business infrastructure e.g. lawyers, banking facilities etc.

#### Unacceptable Uses:




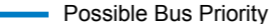






- General manufacturing, offices, storage, distribution or other uses with no link to research and development or any tangible link to existing organisations

Some ancillary uses may have particular implications which need to be assessed as they emerge, including transport implications that should be discussed with Norfolk County Council as Highway Authority.



**Figure 3 Access and Movement**

**Key**

- |  |   |  |
|--|---|--|
|  Allocated Development Areas                                  |  Proposed Bus Route  | <b>1</b> Junction improvements   |
|  Potential Expansion Area<br>Allocation to be reviewed in LDF |  Possible Bus Priority measures, to be agreed with the highways authority as required.                                   | <b>2</b> New 6.5m access road  |
|  Indicative access  |  Improved connectivity between the UEA and NNUH/NRP, including a pedestrian cycle and public transport cross-valley link | <b>3</b> Hethersett Lane / B1108 junction closed to car traffic                      |
|  Cycleway / Pedestrian Routes                                 |  Signal Control Junction   | <b>4</b> Bus only access to hospital   |
|  Existing Highway and other links                             |   | <b>5</b> Bus priority measures as required   |
|  New link road  |   | <b>6</b> Cycle crossing junction improved  |
|  |   | <b>7</b> Bus headstop  |
|  |   | <b>8</b> Offline cyclepath   |
|  |   | <b>9</b> Watton Road / Wilberforce Road junction improved for cyclists / pedestrians |
|  |   | <b>10</b> Possible bus contraflow  |
|  |   | <b>11</b> Potential for improved sustainable link between UEA and NNUH/NRP           |

## 2.3 Movement and Access

### I. The Transport Assessment

The impact of increased traffic generation and the consequent need for highways and public transport improvements is critical to the successful development of the NRP. A strategy needs to be in place that meets the needs of the NRP as a whole and not just individual sites, institutions or developers.

A Transport Assessment has been undertaken to better understand these implications. This assessment modelled the traffic impacts of various scenarios with the aim of achieving the most realistic balance between allowing new development on a commercial basis and expenditure on new transport infrastructure and facilities.

More information about the Transport Assessment can be found in Appendix 3, which is available upon request from the Planning and Housing Policy Team at South Norfolk Council.

Three scenarios were developed to identify different transport strategies to cater for additional traffic generation. These scenarios comprised:

- A public transport focused access strategy, in which car-use would be constrained with minimal parking and extensive additional sustainable transport facilities provided by way of compensation;
- A car-dependent access strategy, which followed the typical existing NRP access and parking arrangements with limited additional sustainable transport facilities; and
- A mixed public transport and car access strategy, in which car use would be modified through a combination of reduced parking ratios and added sustainable transport facilities.

These scenarios were all assessed as part of the Sustainability Appraisal prepared by Land Use Consultants in 2007, see Appendix 1. The mixed public transport and car access strategy was chosen as it had a higher number of significant positive effects and a lower number of significant negative effects compared to the car-dependent access strategy. The public transport focused access strategy was dismissed, as it did not provide employee parking which was expected to threaten the commercial viability of the NRP.

### II. Key elements of the mixed public transport and car access strategy

There are certain key improvements that make up the mixed public transport and car access strategy, which are set out below and illustrated in Figure 3. This strategy sets out one valid approach to addressing the transport issues. In order to facilitate development, potential developers will need to address these improvements directly or through viable alternatives. It is envisaged that Norfolk County Council will implement key elements of this proposal, with developers expected to contribute to these improvements to the extent that it benefits their development.

This is not necessarily the only transport solution for the NRP although it has been agreed in principle by the Highways Agency. A developer may wish to put forward an alternative transport plan, but this will necessitate the developer providing evidence to support their scheme and discussions with Norfolk County Council and the Highways Agency regarding the viability of the development of the NRP as a whole.

An alternative approach to transport infrastructure may include more flexible, less car based solutions such as greater use of public transport or Park and Ride. An alternative plan may also be part of a longer term transport strategy for the area as a whole linked to emerging solutions to cater for the growth of Norwich to 2021 and beyond.

The key elements of the proposed mixed public transport and car access strategy are:

#### Connections to the Trunk Road Network

Development at the NRP will impact on the A47 Trunk Road, principally at the A11/A47 (Thickthorn) and B1108/A47 junctions.

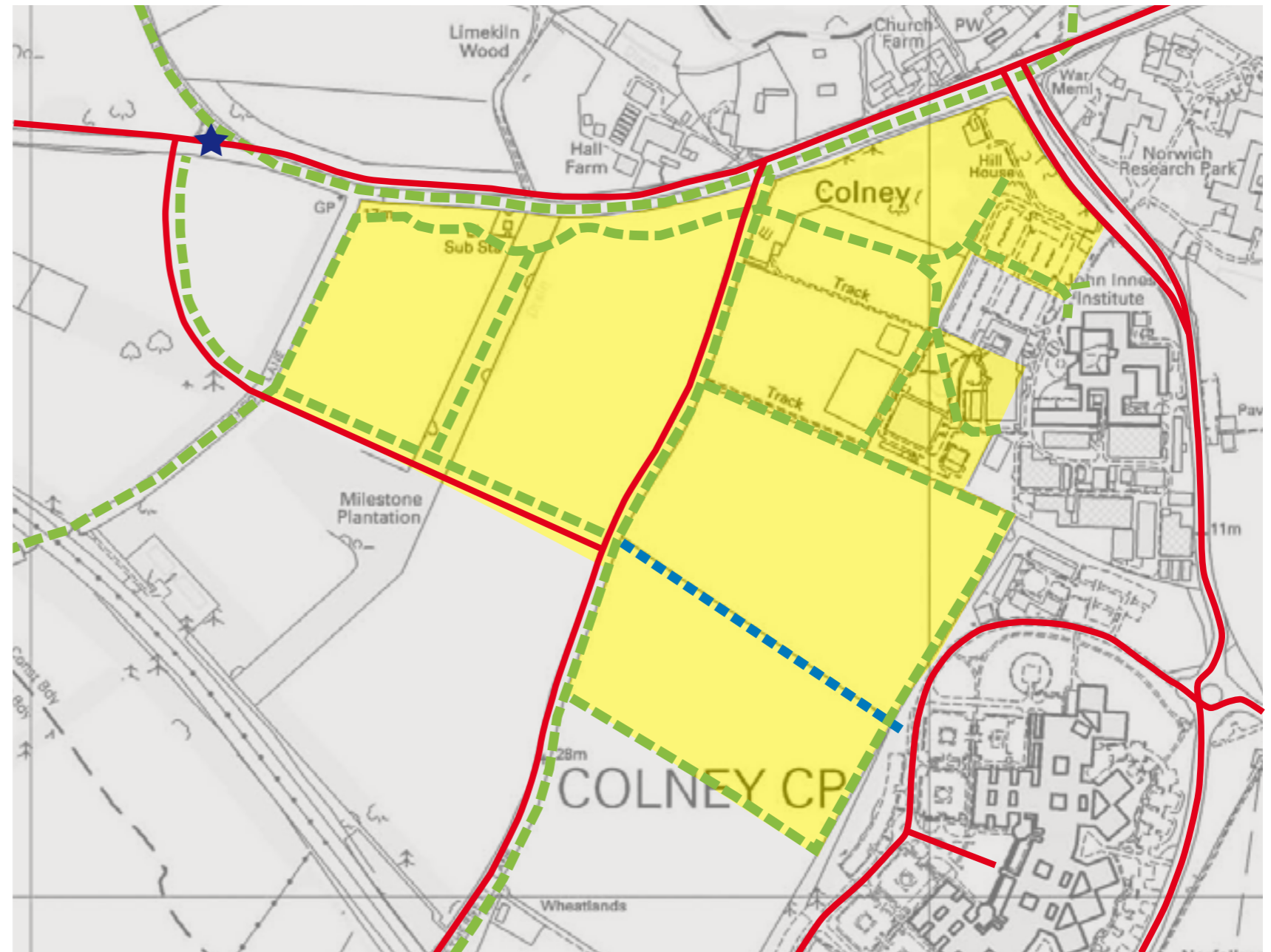
As part of the implementation of the Cringleford Link Road, Norfolk County Council has carried out capacity improvements to the Thickthorn junction, which cater for the planned development of the NRP based on current allocations in the South Norfolk Local Plan and potential extensions for a further 25 hectares. This constitutes a significant public sector contribution towards infrastructure costs of the NRP and overcomes any constraints on development posed by the Thickthorn junction. Further developments outside the NRP which impact on the Thickthorn junction will need to take account of the NRP as part of the base situation.

Norfolk County Council has agreed an 'in principle' layout for the B1108/A47 junction with the Highways Agency, based on partial signalisation of the existing roundabouts. This layout will accommodate the traffic predicted from all currently allocated land in the NRP and will be funded by the NRP developers. Detailed design and final approvals from the Highways Agency will be a matter for potential NRP developers.

#### B1108 Watton Road: Access and Improvements

Upgrading the B1108 Watton Road to 7.3m single carriageway standards and providing new junctions off this road to access Colney Hall and the wider NRP allocation. This will include the creation of a new junction on the B1108 at the foot of Colney Hall Drive to provide access to both the Colney Hall allocation, using the drive modified as required, and to a new Link Road (see following paragraph) through the Central Campus.

Figure 4 Central Campus Circulation Plan (based on the indicative layout)



**Key**

- Area of development
- Proposed cycle path / major pedestrian link
- Existing and proposed roads
- Potential bus link with hospital
- New signal - controlled junction

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A new 6.5m wide Link Road, from the new junction listed above, connecting the B1108 with Hethersett Lane and closure of the existing B1108/Hethersett Lane junction to car traffic.

Local road improvements, mainly to improve safety, including work on the B1108 (including the provision of cycleways) and on Hethersett Lane.

### **Pedestrian and Cycle Improvements**

The transport strategy requires the provision of a comprehensive network of convenient, safe and attractive routes. These routes should be within the NRP allocation, between the Central Campus and Colney Hall and linking both areas to the existing NRP and beyond, including a sustainable cross-valley link between the UEA and the NNUH/NRP.

Figure 4 shows an illustrative primary circulation network, based around the existing and proposed public highways, with an indicative principal cycle and pedestrian network. It is envisaged that these cycle and pedestrian routes will be shared surfaces built to best practice (3m minimum width) with appropriately designed road crossings. At least some of these routes will be sensitively lit, taking account of existing habitats and protected habitats. Where routes connect to the existing NRP, paths should link into suitable existing routes or identify and establish new links.

Where these links are to be used by local bus service they should be designed accordingly.

### **Public Transport Improvements including a Cross-Valley Link to the UEA**

Additional bus services including a new sustainable transport link to the NNUH from the west.

The importance of enhancing the linkage between the existing elements of the NRP, including the UEA and the the NRP west of the River Yare, is considered essential to facilitating the development and viability of the new allocations and their sustainable transport links. This linkage should be consistent with the transport strategy shown in Figure 3 and should respect the environmental and landscape character sensitivities of the river valley. An indicative route option for such a link is shown in Figure 3. Whilst both the specific design and route of the link will be dealt with at the planning application stage, its use should be strictly restricted to public transport, pedestrians and cyclists.

### **Car Parking and Park And Ride**

Development proposals should give appropriate consideration to all means of access and should avoid undue weight being given to vehicular access. Despite potentially reduced parking ratios and shared car parks separate from the buildings, parking will have both a significant development footprint and potential environmental impact.

As a guide, parking ratios are to be 1 space per 60m<sup>2</sup> of floor area, excluding plant (1:60). This figure is to be considered as an average across the allocation. There is an element of flexibility in this figure as it is accepted that early phases of development may have ratios lower than 1:60 to reflect the fact that some sustainable transport facilities, such as bus services, will take some time to be effective or economically viable. Later phases should compensate for this by having ratios above 1:60. Shared parking is one way of maximising opportunities and providing flexibility, but not necessarily the only solution. Parking for disabled drivers will continue to be provided at ratios compliant with current parking standards.

The use of and further extensions to Park & Ride should be investigated as a potential transport solution to increase the flexibility of parking on the NRP site. There is no obligation on a developer to provide a Park & Ride service, but any proposals should be discussed with Norfolk County Council.

If the extended Park & Ride option is pursued it is envisaged that the developer would fund a dedicated service, to be separate from that which currently runs directly between the Park & Ride site and the city centre, and would either lease or buy a number of car parking spaces from Norfolk County Council or facilitate a new site.

The ability to provide this service would be dependent on the capacity of the chosen Park & Ride site or the ability to identify and bring forward additional sites. Options could exist to provide a service from either the Costessey or Thickthorn Park and Ride sites, subject to agreement from Norfolk County Council and the Highway Agency.



**John Innes Centre (JIC)**

## 2.4 Development Density

Careful consideration has been given during the preparation of this Framework to the appropriate density of development for the NRP. In order to understand the appropriate level of development in the allocated areas it is assumed that accessibility to the site is achieved through the mixed public transport and car access strategy presented in Section 2.3. However, it is important to underline that alternative approaches to ensuring a sustainable pattern of access to the development area may allow different development densities.

### Plot Ratios

The density of development has been expressed in terms of 'plot ratio', which is defined as the allowable gross internal area (excluding roof plant) in square metres per square metre of available land.

This mixed public transport and car access strategy assumes 1,520 additional peak AM trips by 2021 and it is this figure which has formed the basis for plot ratio and car parking figures in this Framework. The overall plot ratio for the main site is approximately 25%, which leads to a total capacity on the allocated land of 123,150 m<sup>2</sup>. 25% should be seen as an average for the whole site and will permit the creation of denser areas of development in some places on the site whilst leaving other areas more open. It is not anticipated that an area would be developed to a plot ratio greater than 35% unless there is an exceptional case to be made, for example a major use requiring a building of over 10,000 m<sup>2</sup>. It is envisaged that the plot ratio at Colney Hall will be limited to less than 25% because of its more constrained and environmentally sensitive nature.

This Framework has not sought to prescribe square metres of development to individual parts of the allocation but it is important that the overall level of development of 123,150 m<sup>2</sup> is recognised to respect the reasoning behind the figures in the Transport Assessment.

The Local Planning Authority will have regard to the implications for bringing forward the whole of the allocation when assessing individual planning applications.

### Development Flexibility

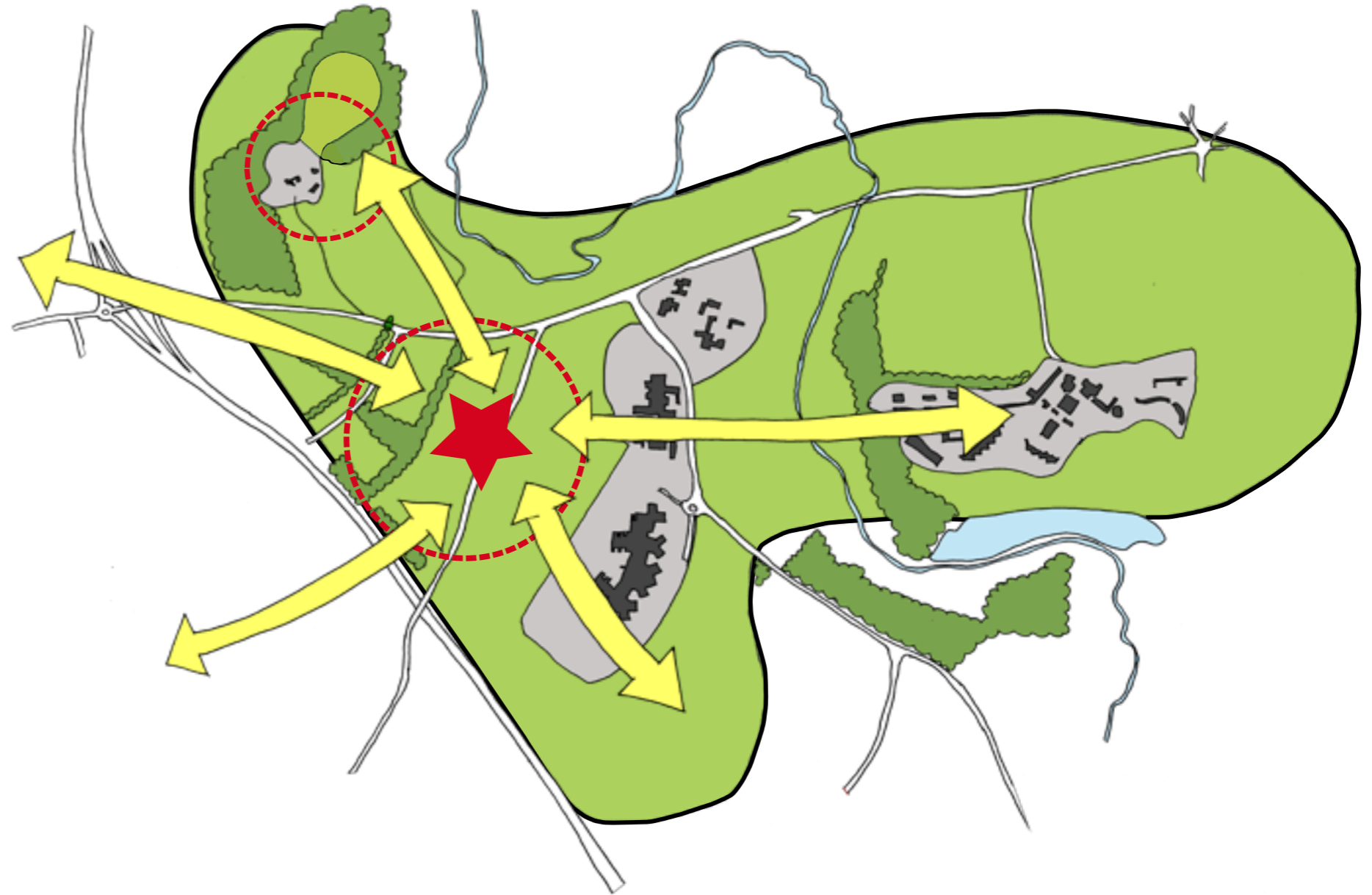
There is some flexibility in the manner in which the relationship between plot ratio and parking provision is considered. For example a higher plot ratio development density would need to be balanced against more constrained car parking and improved non-car access to restrict trip generation.

If a developer wanted to increase the overall site capacity of the allocation they would either have to:

- work within the current peak AM trip generation figure and present evidence on how transport solutions can be managed in a better way e.g. making better use of Park & Ride or public transport, so that the trip generation figure is not increased even though development density is; or
- undertake extra work to justify the increase in trip generation or prove that the proposed development would not adversely affect the morning peak AM traffic flow figure, e.g. that the traffic generated would be off peak hours only. This would require discussion with the Highways Agency given the potential effects on trunk road functions.

These ideas, and any others designed to increase the flexibility of development at the NRP, would require further discussion with the Local Planning Authority and the developer would need to bear in mind how the proposed development would fit with the character of the area.

Figure 5 Indicative Development Overview



**Key**

Existing Area

New Cental Hub

Woodland/Tree Planting

New Linkages - Public Realm, Landscape and Sustainable Movement

New NRP Development Area - Local Plan Allocation (illustrative)

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## 2.5 Masterplan Principles

The Central Campus allocation is characterised by a relatively open and less defined landscape with few key features that are likely to determine the location and form of development. The exception is the network of both mature and recently planted shelter-belts. Due to its proximity to the existing NRP and the urban fringe, and with its larger developable areas, the Central Campus allocation will entail significant and complex levels of development. In order to achieve a sufficiently appropriate high quality of design, integrating exciting buildings, landscape spaces and routes, it is essential that a comprehensive masterplan or integrated series of masterplans be created. The development overview at Figure 5 suggests various principles for the Central Campus on completion. The key principles that should define the development of the masterplan are:

### I. Integration with the existing the NRP and

**UEA** The quality of the buildings and spaces has already been highlighted as an important exemplar of the approach that should be adopted in the new development areas within the NRP. It is also essential that the new areas of development are integrated as much as possible with these existing areas. The overall aim is to create a single integrated research area with an identifiable character in terms of new and older development and the high quality of built form and landscape. Any attempt to create segregated or isolated areas of development will be strongly discouraged.

### II. Creating a Sense of Place: High Quality Buildings and Spaces

- The masterplan will be expected to have a clear overall concept or vision designed to maximise the quality, usability and excitement offered by the development site. This vision will fully integrate building and landscape design.
- The masterplan will create a clear and legible hierarchy of buildings and spaces; these will be defined by the importance of their location in terms of accessibility, land use and townscape.

- The layout will be defined by the creation of a high quality and safe public realm that encourages pedestrian and cycle movement within and across the NRP.
- Important routes and spaces will be defined by a limited number of landmark buildings/focal sites.
- New areas of development and buildings should be 'outward' looking towards public or semi-public spaces.
- There will be a clear distinction between building fronts and backs with buildings generally fronting onto open space with service access to the rear.
- Whilst it is not necessarily desirable that there should be a uniformity of design or style within the site, it is essential that there is a common approach to lighting, signage, public realm, public art, and other 'unifying' features.

### III. Central Hub

In the more focal areas within the plan a 'hub' or central meeting place will be created. This will be a location for mixed use and socialising spaces that encourage social and economic connectivity across the NRP. This will provide an important space where researchers and other workers can develop ideas and create business opportunities. A potential location for such a facility is shown in Figure 5. This location is shown purely for illustrative purposes and has been chosen due to its central location between existing and proposed development.

### IV. Landscape Strategy

The quality of the landscape design will be a key feature of the success of the overall NRP development area. The development of the integrated approach to an NRP masterplan should be supported by the development of an integrated landscape strategy. It is essential that the landscape within individual development areas is coordinated with this wider strategy.

The key features that this strategy might include are:

- A definable and high quality concept or vision that is multifunctional and engenders a sense of excitement
- Full integration between the strategy and existing landscape features that are to be retained in the development area and the wider context such as the UEA and Yare River Valley.
- Green or landscape corridors that cross the site and compliment the infrastructure of pedestrian, cycle and vehicular movement. It is proposed that these landscape corridors will form the basis of the landscape infrastructure on the Central Campus allocation, acting as multi functional buffers and movement corridors. Their suggested location and extent should be determined partly by existing topography and the potential for these corridors to contain drainage systems. It is envisaged that these will consist of ditches, attenuation ponds and possible reed beds for grey water treatment. The intention is for these corridors to be:
  - a) Semi-natural areas rich in bio-diversity and managed for nature conservation;
  - b) Capable of safe use for informal recreation; and
  - c) A pleasant context for the cycle paths and pedestrian network that will run through them.
- Sustainable features, including:
  - a) Ensuring a Sustainable Drainage Systems (SuDS) approach is taken.
  - b) Providing wildlife corridors through the site.
- Ensuring that areas of car and cycle parking are fully integrated into the landscape strategy.

Figure 6 Colney Hall Illustrative Masterplan



**Key**

- - - Indicative extent of the 6 - 8ha area for development
- - - Extent of 15ha Local Plan allocation
- Existing built development
- Woodland / tree framework and sensitive areas
- Significant view to / from Hall

**Main development locations:**

1. Rose Garden
2. Pump House
3. Hall Extensions
4. Walled Garden
5. Plantation

## V. Colney Hall

Colney Hall, with its strong sense of place, individual identity and distinctive environmental attributes, should attract a form of high quality development that will respond to its outstanding setting and be sufficiently flexible to be able to cope with the higher level of physical constraints. It is considered to be a very positive feature of the NRP that it is able to offer such diverse development opportunities. Given the existing character of Colney Hall, and the constraints this imposes, there is the need for a more site specific approach, both over the whole estate and within identified sub-areas.

### Development Envelope

Although the area of the COL1 policy allocation for Colney Hall totals 15 hectares the policy acknowledges that “It is likely that, on taking account of the location and the aim to produce a high quality of building and landscaping, only 6-8 hectares may be developed”.

Analysis of the site suggests that development would be best located in the envelope shown indicatively in Figure 6. This envelope has been selected on the basis of least environmental impact with the key factors being:

- Designed views to and from the listed Hall;
- Slopes;
- Remnants of a designed landscape, in particular specimen trees;
- Higher value deciduous woodland;
- Sensitivities attached to the walled garden; and
- Visual intrusion and sensitivities on the Yare Valley corridor.

The development envelope shown in Figure 6 is given as guidance only. Detailed applications will be considered using these criteria and others that might be appropriate in order to make the most suitable use of the advantages of the Colney Hall site.

### Development Quantum

The nature of the Colney Hall site means that development here has significantly more constraints than the Central Campus. However these constraints also offer significant opportunities for the creation of high quality development. To achieve this will require an understanding of the local environment and a sensitive development.

It is recommended that a plot ratio of up to 25% (see section 2.4 Development Density) be assumed for the 8 hectares of developable land, which yields a development area of approximately 19,200 m<sup>2</sup>. Traffic modelling of this quantum of (B1b) use class shows this level of development can be successfully accessed from the single proposed B1108 junction at the foot of Colney Hall Drive.

Special care will be needed if developers choose to seek a higher quantum of development. Factors to consider will include the access arrangements; the sensitive character of the site; and the potential implications on the integrity of the wider NRP area. Any masterplan for the site may present an alternative development scenario to the one given in this Framework and this would need to be supported by detailed background information.

Further analysis of the suggested developable area shows there to be up to five potential development hubs in which development can be considered, these are listed in Section 3.5. The Framework does not set out to prescribe levels of development to the individual locations.

### Colney Hall Illustrative Masterplan

The illustrative masterplan, Figure 6, shows the identified development hubs and recommended development envelope; these can only be illustrative and will depend on the nature of the detailed proposals that come forward. It would be unrealistic to constrain designs, however, the quality of development and design will be particularly important. The following factors encapsulate the issues:

- Key to successful development at Colney Hall will be site sensitive design with an understanding of the character and attributes of the site and the opportunities and constraints presented, which may suggest some areas can be developed in different ways;
- Development should understand the heritage, landscape (including any significant geological features) and ecological sensitivities of the site and should ‘tread lightly’ with regard to these sensitivities. The adoption of a development approach that minimises environmental impacts and provides mitigation and enhancement would seem particularly appropriate; and
- The strength of environmental character allied to the current owner’s aspirations offer significant opportunities to create development proposals, which exemplify the qualities of the NRP – innovation, sustainability and quality of environment.

## 2.6 Development Phasing

Given the scale and complexity of the development at the NRP, the phasing by which schemes are brought forward will be important. Various assumptions about phasing are set out below; however, the approach to phasing is flexible according to the aspirations of future occupiers. Nonetheless, there are key features of the scheme that will need to be in place before development can proceed. These features include:

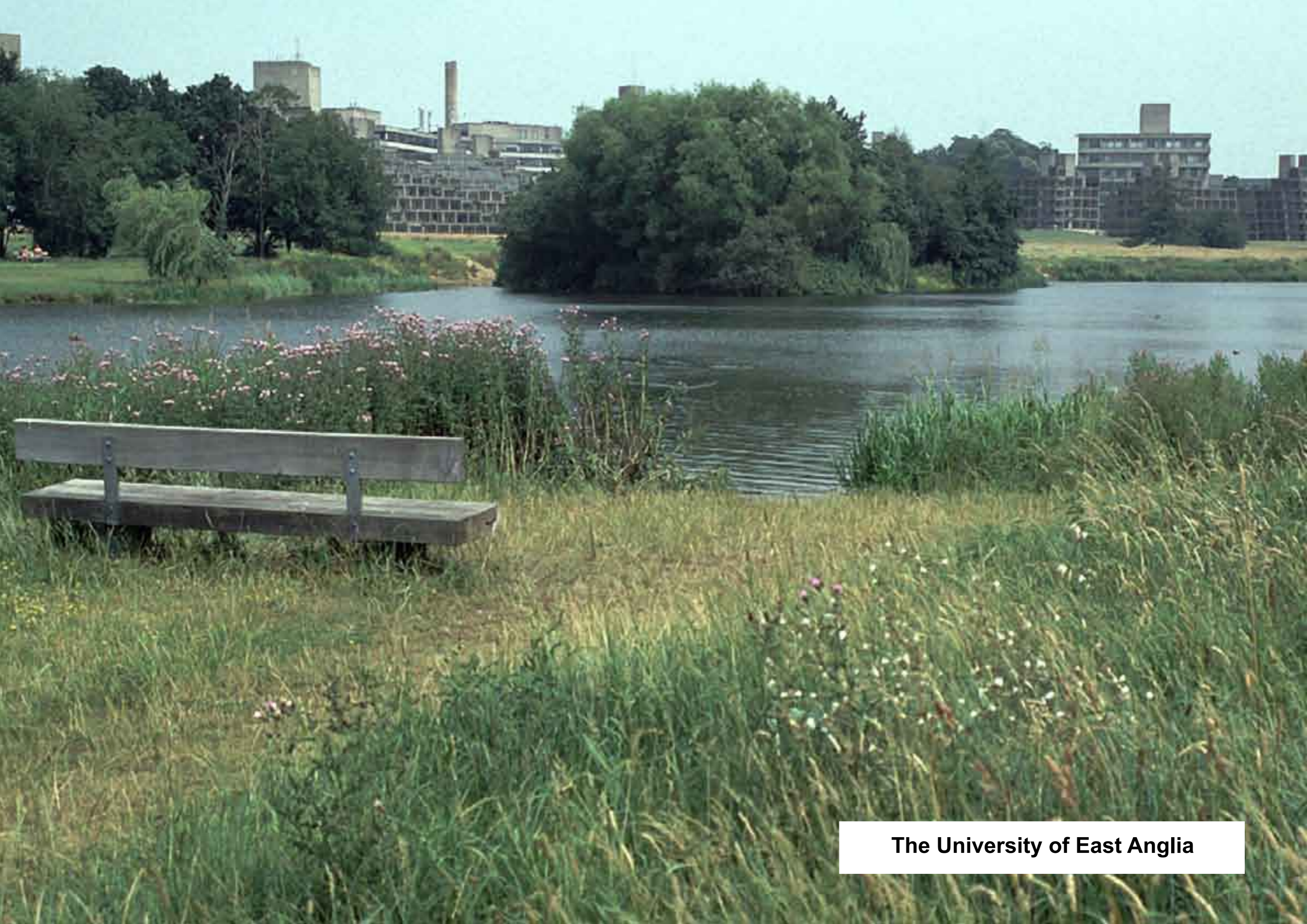
- A comprehensive masterplan, and landscape strategy;
- Sufficient supporting documentation and analysis to allow planning applications to be successfully considered, including an Environmental Impact Assessment where necessary; and
- New or enhanced access to and across the development area, in accordance with the Transport Strategy or a justified alternative approach.

Once suitable transport infrastructure is in place this allows any part of the allocation to be developed, although it has been assumed that development will commence nearest to the existing NRP and work outwards, to make the most of connections to existing uses/institutions.

Development at Colney Hall and expansion of the hospital has also been assumed to take place in the first phase of development.

Land allocated as contingency reserve in the Local Plan has been assumed to come on stream later. However, there is flexibility built into the Local Plan to allow early or alternative commencement to areas within the policy area if appropriate.

Figure 3 also indicates the areas of potential expansion of the NRP beyond those allocated in the current Local Plan. Defining the allocation for these 'expansion areas' will be a matter of priority within the Local Development Framework currently being developed by the Greater Norwich Development Partnership for the period to 2026.



**The University of East Anglia**

# Part 3: Detailed Sustainability and Design Considerations

This section sets out the more detailed sustainability and design principles that will guide development at the NRP. Developers should be aware that these principles are presented for guidance only and are not intended to preclude other equally sustainable development options.

## 3.1 Sustainable Development and Carbon Reduction

### I. Carbon Reduction and minimising water use

The overall aspiration of the NRP is to achieve carbon neutrality over the lifetime of the development; the council would welcome proposals that embody a carbon reduction policy. To contribute towards meeting targets for reducing emissions of greenhouse gases occupiers at the NRP should consider signing up to the UEA's Carbon Reduction (CRed) programme to reduce carbon emissions.

Developers should seek to design buildings to achieve a high standard of energy efficiency and energy conservation through consideration of siting, design, density, materials, orientation, landscaping and layout. Developers will be expected to explore innovative methods of using renewable energy sources. It will be important to orientate the buildings on site to maximise the benefits of natural daylight, whilst at the same time seeking to manage the effects of solar gain.

Due to the wide range of potential users/occupiers there will be some areas that require closely controlled environmental conditions, high levels of air extraction or other energy dependent systems. To retain a sustainable research environment it is suggested that these areas be zoned, whilst leaving other parts of buildings to be naturally ventilated where possible. Generally buildings should be designed to allow for and make the best use of natural ventilation and be able to maintain comfortable internal temperatures during heat waves

The Local Planning Authority would expect any planning application to include a full energy audit; specifically measuring embodied energy, energy used in construction and energy used in operation. The energy audit should demonstrate mitigation measures to reduce carbon emissions from these three energy uses. As part of the energy audit developers should apply the National Calculation Method of energy use in a proposed building to demonstrate compliance with Part L2A of the Building Regulations 2000 (2006).

Developers should also make allowances for the anticipated impacts of climate change and seek to maximise water conservation, including consideration of systems that harvest rainwater and recycle and reuse grey water.

Materials palettes should consider sustainability issues and environmental impacts and locally sourced materials should be incorporated where appropriate.

### II. BREEAM (Building Research Establishment Environmental Assessment Method)

The aspiration of the NRP is that each building should be aiming to achieve an "Excellent" standard under BREEAM, with "Very Good" as a minimum. More details about BREEAM can be found at [www.breeam.org.uk](http://www.breeam.org.uk)

BREEAM Plus: BREEAM, although widening its scope, is still strongly focused on building performance. Designers are encouraged to extend the BREEAM aspirations to external treatments to deliver a high quality external environment. This is particularly important at the NRP given its location, aspirations and the proposed use of shared car parks with deliberately extended walking distances to buildings.

### III. Drainage

Sustainable drainage system (SuDS) principles should be adopted throughout the NRP. The Environment Agency supports this approach and is able to provide detailed advice to developers. Designs will be required to minimise and attenuate surface water through the use of porous surfaces, swales, attenuation ponds and the like. Attenuation ponds should be designed to cater for 1 in 100 year rainfall events based on the expected development area likely to feed into the ponds. Where this is not possible developers shall provide appropriate attenuation within each development area. Rainwater harvesting should also be considered. Where appropriate surface water should be conveyed via open ditches and the size of drainage systems should anticipate climate change. Foul water and grey water systems should adopt appropriate measures to maximise water conservation and recycling of water.

Where possible, these elements should be designed to provide biodiversity and landscape benefits (including provision of amenity space and transport links), and improve water resources and quality. Consideration should be given to the capacity of the nearest available sewer, the Yare Valley sewer. This may need to be modelled to assess the impact upon the downstream system, including the pumping station at Trowse and Whitlingham Waste Water Treatment Works.

All areas have Groundwater Source Protection Zone II status and SuDS proposals should include suitable facilities to prevent groundwater pollution. Drainage systems should be designed to accommodate high-risk storm events and should anticipate more violent rainfall events predicted through climate change.



**School of Midwifery, NNUH**

### 3.2 Parking

The approach to parking numbers and layout should be well integrated into the overall masterplan, landscape strategy and individual site design. Shared parking areas can offer advantages. Parking areas should be sited:

- To combine effective service and flexibility for future buildings;
- To be part of a clear circulation system with logical approach roads and user friendly pedestrian feeds to buildings;
- To have safe pedestrian connections designed as part of the landscape expression of the site and as a positive experience so that walk times of up to 5 minutes are acceptable; and
- Have minimum environmental impact.

The car parks themselves should provide:

- Safe and secure parking, ideally with Park Mark accreditation;
- Have good perimeter screening (without detriment to personal safety);
- Use simple materials; and
- Resolve issues such as run-off, contamination, light spillage, light disturbance to fauna etc.

Parking areas have particular potential to use recycled materials. There is the possibility to use porous paving for everyday parking and roadways. Overflow or rarely used car parks should consider the use of unmetalled surfaces, naturally binding gravels etc.

Service routes and service yards should be planned to avoid issues of safety, visual intrusion and disturbance. Where possible service routes should double as shared routes, where pedestrians have priority. Research based development could have higher than average needs for utilities, communications etc. Therefore, developers should identify service corridors and where possible use a common duct approach with adequate spare capacity. Cycle access to all buildings should be convenient providing appropriately located, safe and adequate bicycle parking facilities for staff and visitors.

### 3.3 Security and Lighting

Lighting and security can be key elements of new developments such as the NRP. Lighting on this urban fringe site, adjacent to open countryside and the Yare Valley, will need to be carefully controlled to minimise light spillage and glare.

Security of research establishments is an important aspect and security measures will need to be capable of providing adequate reassurance without undue environmental impact. Preference will be given to schemes that treat the building elevations as the principal secure line.

Where perimeter access needs to be controlled, designers should consider the use of naturalised features such as ditches/water bodies or landforms e.g. ha-has, hedges and woodland strips.

### 3.4 Landscape Design

#### I. The Landscape Strategy

All detailed planning applications will require a landscape plan. This should be fully integrated with the overall masterplan and landscape strategy to maximise landscape synergy with the cross site landscape infrastructure and corridors. Particular attention should be paid to:

- Control/containment of views/screening of ancillary uses (service yards etc);
- Reinforcement of circular routes;
- Creation of shelter/shade/aspect to modify climate and create useable exterior environments;
- Integration with adjacent plots/landscape infrastructure, plot boundary treatment;
- Consideration of changes in levels/integration of building platforms;
- Potential future building expansion; and
- Biodiversity enhancement.

#### II. Planting

Native planting is likely to predominate and all landscapes should anticipate climate change.



**The Global Clinic, Colney Hall**

### 3.5 Colney Hall

Proposed layouts, buildings, external works and landscape should generally work in tandem with the existing character of the Colney Hall estate. The complexity of the site will require detailed topographical, ecological and historic studies so that proposals can clearly be seen to be site sensitive. In some cases such information already exists but may need updating. Development will need to be informed by baseline studies including those on landscape, heritage, visibility and ecological issues. The Design and Access Statement will be a particularly important document accompanying any applications.

Development proposals should be generated in accordance with a previously agreed masterplan rather than piecemeal. This plan will be more detailed than the illustrative masterplan in this document (Figure 6) and will need to be drawn up to accord with this SPD. The masterplan should be accompanied by a Management Plan for the whole site, which sets out the objectives for each of the identified development and non-development areas. Woodland management will be an important component of this Management Plan. Unless there is historic precedent, plantations should be gradually replaced with native broad leaf species and woodland managed for nature conservation.

An enhanced Phase 1 ecological survey will be a prerequisite of the Management Plan, as will any detailed specialist surveys recommended by the Phase 1 survey. Both the Management Plan and any development proposals should be in accordance with Planning Policy Statement (PPS) 9 – Biodiversity and Geological Conservation.

Construction work has the potential to cause significant damage at Colney Hall. Design proposals should be based on good site information, be realistic, and involve specialists where appropriate. There should be adequate protection and control measures put in place and all aspects of construction should be monitored. Clearance and earthworks should be carried out in phases to match the building programme and so retain the woodland character at all stages of completion.

The River Yare is immediately adjacent to land allocated for development. There is also an adjacent County Wildlife Site – The Heronry and Violet Grove (Ref: 1446). Consultation on possible impacts on this site should be undertaken with Norfolk Wildlife Trust.

Part 3 of the Framework identifies five potential development hubs at Colney Hall. Specific design principles for each of these hubs are presented below:

#### Rose Garden

The Rose Garden has good potential given its flat terrain, good existing access and visual screening particularly on the south side. Development should:

- Be located close to the southern perimeter to maximise the area available for parking to the north;
- Retain the existing hedge and tree belt along the southern boundary to reduce visual impacts on views from the drive;
- Retain existing mature historic trees (mainly oaks);
- Carefully plan vehicle access routes;
- Include informally designed parking areas which retain major trees, using flush kerbs, gravel surfacing and appropriate lighting; and
- Have carriageways designed as low speed shared surfaces.

#### Pump House Area

The sensitivity of the Pump House area centres mainly on possible visual intrusion on the Yare Valley Corridor. Other issues include:

- Achieving a satisfactory relationship with existing new/refurbished buildings, functionally and visually;
- Creating appropriate circulation, shared parking and pedestrian access area; and
- Retaining the important group of trees adjacent to the drive (which are part of the designed landscape)

#### Hall Extension

Any extensions to the Hall will need to be fully sympathetic to:

- Its listed status;
- Impacts on its setting;
- Potential protected species issues;
- Visibility and impacts on the designed view, both inwards and outwards from the Hall; and
- Impacts on specimen historic trees.

Given these constraints, opportunities are likely to be limited. Proposals that adopt the following approach are likely to be the most successful:

- Location to the south west of the building;
- Roof siting well below the backdrop of retained mature trees within the Pleasure Grounds;
- Retention of the open prospect from the Hall across the designed parkland;
- Consideration of the relationship to the Hall and the opportunity to undertake works to improve its external appearance; and
- Careful design and layout of access and parking, retaining historic vegetation to provide appropriate screening and retention of the landscape experience of the Hall Drive.

Careful consideration will be required of both the future function of the existing Hall and the functional and design resolution of the relationship between the existing Hall and the proposed extension. Full use should be made of the south facing aspect across parkland. Impacts on bat roosts in existing outbuildings would need special consideration and must comply with Natural England requirements.

### **Walled Garden**

The Walled Garden is considered of heritage significance and parts are likely to predate the Hall. It is listed Grade II and contains brickwork of considerable conservation interest. Any development in the vicinity would need to be:

- Sensitive to the scale, layout and materials of the walls and the space that encloses it;
- Small scale, principally single storey; and
- Of limited intrusion onto the enclosed space.

Ancillary development such as parking and access should be, wherever possible, kept out of the enclosed space and any such development between the Hall and the Walled Garden should take care not to further fracture the visual and spatial relationship between these two elements.

### **Plantation**

The Plantation has low heritage, landscape and ecological value and benefits from good existing woodland screening. It has the capacity to absorb considerable development but should avoid overpowering its woodland context. There are real opportunities to create new development within a woodland setting where vegetation comes close to the elevations and the 'woodland experience' is maximised. Developments should:

- Be generally two or three stories;
- Respond to the unusual context in its massing and materials;
- Take care in resolving level changes across the area with development generally following the slope;
- Include carefully designed vehicle access and parking and consider forming detached parking cut into low value woodland to the south of the Plantation;
- Factor in treatment of surface water run off (attenuation/ potential for habitat creation) given the large volumes anticipated, the absence of existing drainage infrastructure and the sizeable land take of these facilities; and
- Minimise visual intrusion on the Yare Valley.

The overall treatment of this part of the site should be in keeping with its woodland context. The overall character should be of buildings set in woodland. Detailed tree surveys will be required at an early stage so that significant trees can be identified and layouts formulated to ensure their retention.

# Part 4: Developer Checklist

This Framework has been drawn up on the basis of information collected from a number of sources. It brings these together to show that development of the NRP can be done respecting transport, environmental and landscape considerations. We accept that developers may choose to bring forward an alternative proposal. In that case these checklist points will form a useful starting point to present the justification for another proposal.

## 4.1 Process

- Ensuring full and early consultation with the the Local Planning Authority. This will involve early presentation of initial concepts, at least 3 months prior to submission of the detailed application. Arranging regular development meetings with planning and transport case officers. Presentations at an early stage with key local stakeholders;
- Targeted discussions with all relevant local authorities, South Norfolk Council, Norwich City Council and Norfolk County Council; and
- Reference will potentially be made to national design advisors, such as CABE.

## 4.2 Accessibility

Proposals should incorporate an integrated package of transport covering all modes.

### **Pedestrian and cycling links:**

- Good quality pedestrian and cycle links within the NRP extension and connections to the existing NRP and beyond, including a sustainable link between the UEA and the NNUH/NRP.

### **Public transport:**

Enhanced bus services to meet the planned mode shift, together with the supporting infrastructure to deliver reliable, attractive services, including:

- New bus link between the UEA and the remainder of the NRP;

- Infrastructure and support for bus services to/through the NRP;
- Dedicated bus service ('work' buses);
- New sustainable public transport link to the NNUH from the west;
- Possible bus priority measures on the B1108; and
- Possible provision of Park & Ride service.

### **Vehicular:**

- Creation of a new junction on the B1108 at the foot of Colney Hall Drive to provide access to the Colney Hall allocation and to the new Link Road;
- New 6.5m wide Link Road connecting the new B1108 junction with Hethersett Lane (see Figure 3);
- Closure of the B1108/Hethersett Lane junction to car traffic;
- Local road improvements, including work on the B1108/Hethersett Lane; and
- Signalisation of the A47/B1108 roundabout and the junction of the new Link Road.

## 4.3 Design

- Ensuring the design team are aware of international best practice;
- Coordination of the NRP masterplan;
- Coordinated public realm network and design, creating an integrated NRP approach to design;
- Landscape strategy and landscape proposals including corridors, ditches, attenuation ponds and possible reed beds for grey water treatment;
- Potential police drop-in point;
- Any justification for deviation from suggested plot ratio/car parking figures etc;
- An archaeological desk study shall be prepared, if so required by the Local Planning Authority, in conjunction with Norfolk County Council, with appropriate follow up work if considered necessary; and
- Ensuring that the development of the Design and Accessibility statement is used to increase design awareness and quality.

### **Design General**

- Plot ratio data and reasons for alternative suggestions;
- BREEAM submission details and anticipated BREEAM score;
- Energy Audit, including potential for renewable energy use;
- Site plan with building layout, access, parking etc;
- Floor plans, elevations and materials;
- SuDS proposals;
- Lighting and security proposals;
- Construction methodology including cut and fill details; and
- Management plan and aftercare proposals.

### **Design – Colney Hall specific**

In addition to the above, all development at Colney Hall should include:

- Baseline studies including ecological baseline survey and any habitat/species specific surveys, tree/woodland surveys, historic landscape surveys, architectural surveys and condition surveys;
- Masterplan for complete site with supporting report;
- Full set of proposals for the development seeking detailed planning permission including all surveys/conservation works/enhancements to heritage elements including the Hall Drive;
- Landscape and woodland management plan;
- Ecological impact assessment including mitigation;
- Tree protection proposals and impact statement together with proposals for a watching 'brief' by an arboriculturalist; and
- A supporting statement which will provide details of impacts on landscape character and on the visibility of the development, together with proposed mitigation.



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