

KETTERING

ENERGY PARK

A unique opportunity to create one of the
UK's most sustainable developments
Revised Draft Masterplan Document



APRIL 2024



FIRST RENEWABLE
DEVELOPMENTS

DOCUMENT STATUS:	
REVISION:	REVISED DRAFT V1.2
AUTHOR:	MT
CHECKED BY:	MT
ISSUE DATE:	APRIL 2024

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FORWARD

This document presents the vision and the development principles for a proposed Energy Park adjacent to the Burton Wold Wind Farm in North Northamptonshire. The Masterplan responds to adopted planning policy as set out in the North Northamptonshire Joint Core Strategy and will be a guide for future development at the site.

The Energy Park proposal responds to a number of issues:

- Improving energy security and resilience;
- Supporting biodiversity and securing net gains;
- The transition to a low/zero carbon society;
- Making best use of existing resources;
- Providing suitable employment land for businesses that will support the economy in a way that minimises impacts upon the environment; and
- Provide a location for employment uses that have high energy demands, for businesses that want to minimise their carbon footprint.

The Energy Park incorporates existing renewable energy infrastructure, such as the Burton Wold Wind Farm, and will supplement this with additional energy infrastructure that will serve modern, energy efficient employment uses at the site. Advanced agricultural uses will sit alongside the employment uses and also benefit from the on-site energy provision and potentially excess heat from the employment units if available.

The Energy Park will also be able to provide energy storage capacity that can be fed back into the grid when needed, to optimise the use of the on-site renewable energy. A grid connection will be provided to allow the import and export of energy to and from the site to serve businesses that come to the Energy Park.

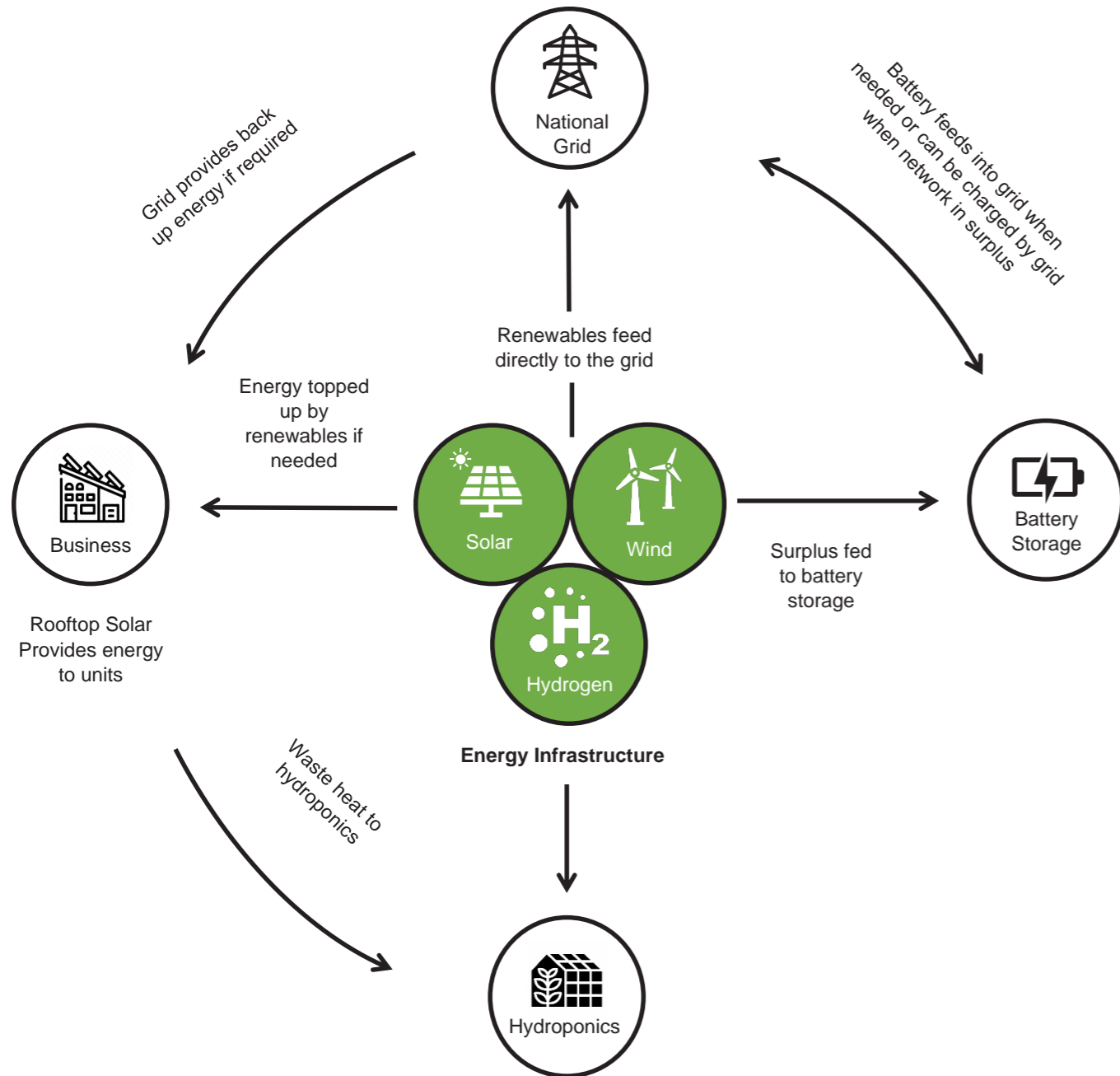
The Energy Park is intended to be a new location for businesses that have high-energy needs, which will benefit most from the available energy on site and the significant power capacity that will be provided at the Energy Park. Businesses will have the potential for 100% of their energy needs to be met by the on-site renewables and opportunities for energy generation will be taken through the addition of PV panels on the roof of new buildings.

The park will provide for a variety of employment needs and include a Future Technology Centre to support businesses that are involved in technological advancements and research and development associated with the transition to a low carbon future.

The Energy Park will be based in a landscaped setting that secures a biodiversity net gain and provides a high-quality setting for new employees at the site. This Masterplan has been prepared to provide a road-map of how this is achieved and confirms the key principles for the Energy Park.

This Masterplan has been amended in response to comments received as part of the public consultation carried out across 2023 that resulted in a number of Recommendations from the North Northamptonshire Planning Communities EAP.

This Masterplan document will support an Outline Application for the Energy Park proposals, which is anticipated to be submitted later in 2024. This document will act as a template for how development can be planned to realise the vision for the Energy Park proposals.



1. INTRODUCTION

THE ENERGY PARK PROJECT IS PROPOSED ADJACENT TO THE BURTON WOLD WIND FARM, WHICH IS SITUATED TO THE EAST OF BURTON LATIMER AND SOUTHEAST OF KETTERING WITHIN THE UNITARY AUTHORITY OF NORTH NORTHAMPTONSHIRE COUNCIL.

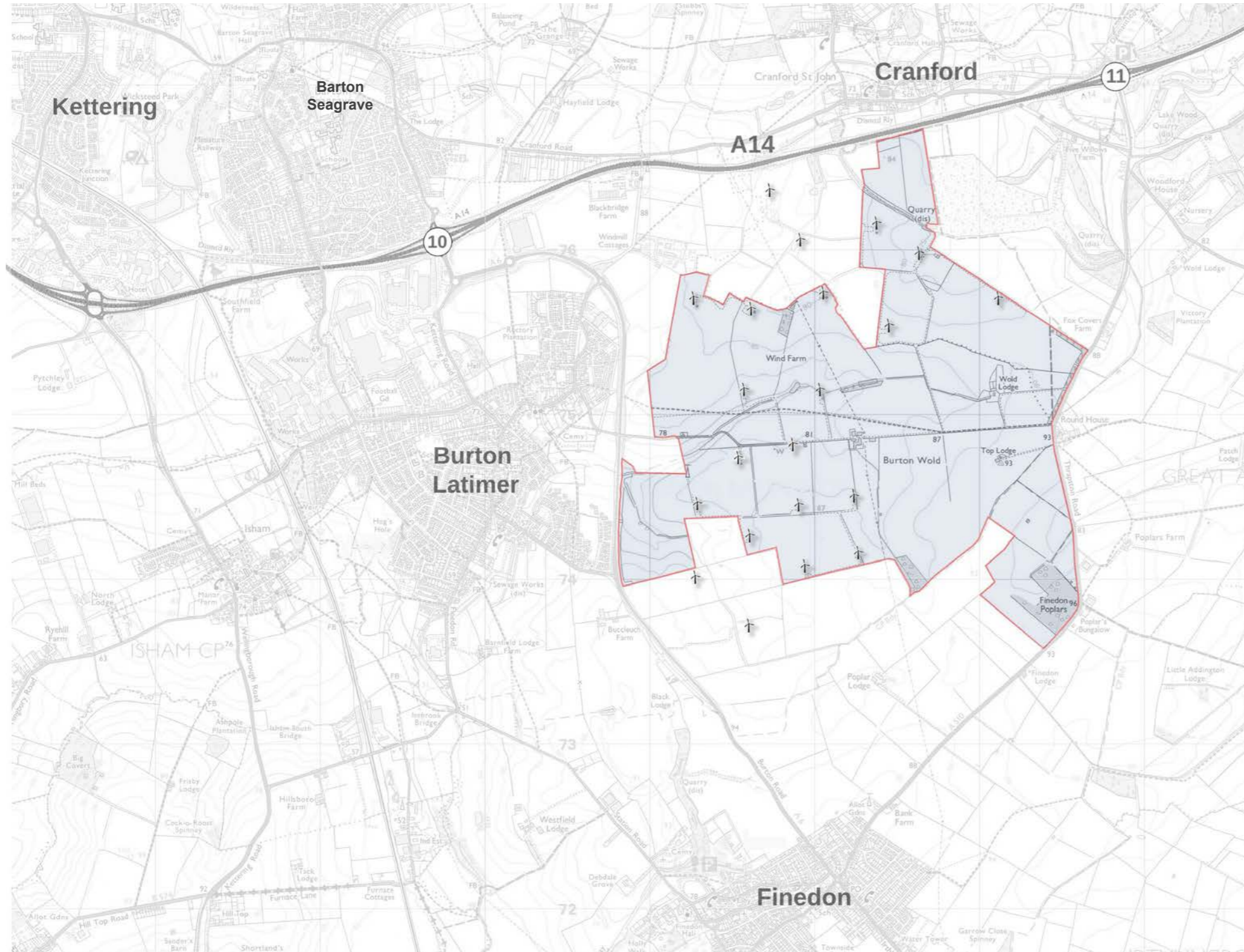


FIGURE 1. AREA OF SEARCH

This site has been identified as a location for an Energy Park within the North Northamptonshire Joint Core Strategy.

This Masterplan document follows the conclusions drawn from the opportunities and constraints document, which assessed the site's characteristics and identified key issues that the development of an Energy Park would need to consider. The masterplan will further respond to the policies within the Joint Core Strategy to realise the potential of the energy infrastructure at the site and facilitate a development that will incorporate a mix of uses including additional energy infrastructure, advanced agricultural uses/hydroponics and new employment premises.

Policy 26 of the Joint Core Strategy requires a masterplan to be prepared to guide future development. The Energy Park has the potential to improve energy security and resilience and become an exemplar development that could support the transformation of Kettering to a low carbon economy. It is proposed that this masterplan document will inform future planning applications at the site and will include recommendations and a strategy that subsequent proposals will respond to.

The project is being led by First Renewables Ltd in conjunction with the Beaty family who have farmed the land for a number of years. The area of land that is controlled by First Renewable is shown in Figure 1.

This draft masterplan has been prepared following consultation with stakeholders, and local Town and Parish Councils.

2. THE VISION

THE VISION FOR THE ENERGY PARK IS:

“To create a sustainable development that responds to Climate Change, based around renewable energy, where energy generation matches or exceeds demand from adjacent energy intensive uses. The Energy Park will provide a catalyst for new investment within North Northamptonshire and will be based on principles of sustainability to minimise the impacts of development and support low carbon development that will contribute to the future economy.”

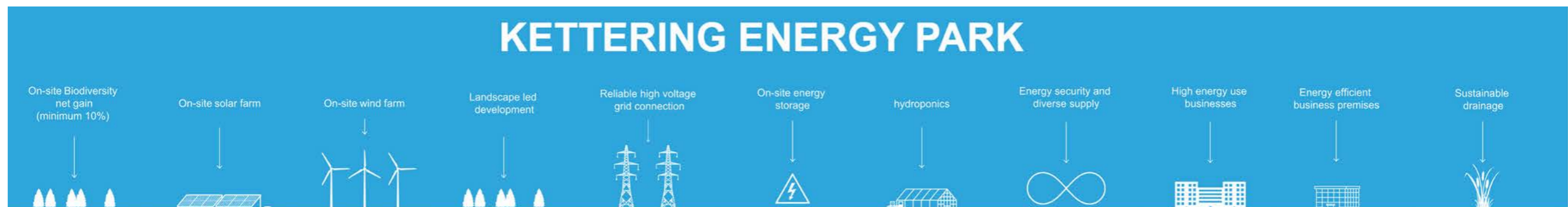
The vision is underpinned by the following principles:

- Responding to the energy crisis through provision of renewable energy infrastructure that will increase resilience and improve energy security;
- Responding to the need to provide sufficient supply of high-quality employment land to meet the needs of businesses, with good access to a suitable power supply;
- Matching renewable energy production with demand on-site;
- Securing a low carbon development;
- Implementing a Green Infrastructure Strategy that will integrate with existing ecological and landscape settings;
- Implementing a Sustainable Transport Strategy that will offer alternative and sustainable forms of access and modes of transport to the site;
- Creating a criteria for future employment development & use classes to attract high energy users* and businesses that focus on innovation;
- Promoting principles of sustainability to respond to the Climate Change and Environment Emergency declared by North Northamptonshire Council;
- Allow businesses to grow in a sustainable way within energy efficient premises using adjacent renewable energy;
- Mitigating and adapting to Climate Change;
- Provide the opportunity to accommodate advanced agricultural uses to improve food security; and
- Develop the site in a manner that is sympathetic to local character and history, including the surrounding built environment.
- Respects and complements the character of the surrounding area.
- Provides a mix of complementary employment uses to facilitate development of local knowledge, expertise and research to respond to the requirements of JCS Policy 2.

*A high energy user is one that has a requirement for energy that is above the standard benchmark of 50 kva per sq m.

The Masterplan’s vision and principles will be brought forward in conjunction with a Green Infrastructure Strategy. This Strategy will allow the development to come forward in a way that will:

- Respect existing landscape features and planting where possible;
- Provide a sympathetic landscape setting for the new development with amenity areas for new employees;
- Reduce the visual impact of development;
- Incorporate above ground sustainable drainage features; and
- Secure a minimum biodiversity net gain of 10%, with a target of 15% where possible, with native planting as part of a co-ordinated approach to landscape and drainage.



3. PLANNING POLICY CONTEXT

THE PROPOSALS FOR THE ENERGY PARK WILL DIRECTLY RESPOND TO THE CLIMATE CHANGE AND ENVIRONMENT EMERGENCY THAT HAS BEEN DECLARED BY NORTH NORTHAMPTONSHIRE COUNCIL AS WELL AS MANY OF THE KEY REQUIREMENTS OF THE NATIONAL PLANNING POLICY FRAMEWORK. THE ENERGY PARK SEEKS TO ACHIEVE A SUSTAINABLE FORM OF DEVELOPMENT THAT MAKES EFFECTIVE USE OF LAND, IMPROVES BIODIVERSITY, USES NATURAL RESOURCES PRUDENTLY, HELPS MITIGATE AND ADAPT TO CLIMATE CHANGE AND SUPPORTS THE MOVE TO A LOW CARBON ECONOMY (NPPF PARAGRAPHS 8, 152 & 154).

NORTH NORTHAMPTONSHIRE KEY DIAGRAM

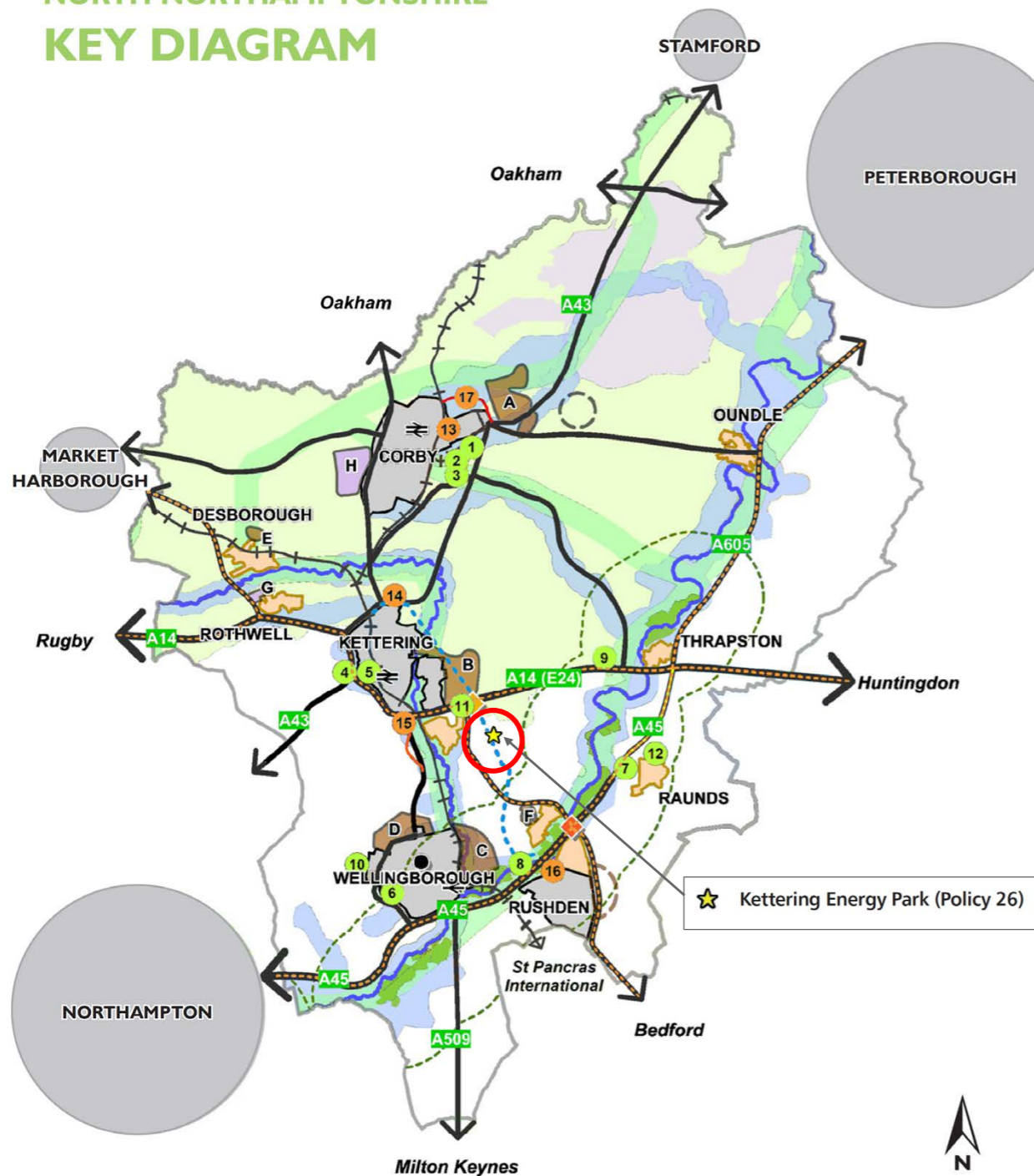


FIGURE 2. KEY DIAGRAM FROM CORE STRATEGY

At a more local level, the North Northamptonshire Joint Core Strategy (Core Strategy) was adopted in 2016 and this identifies that there is an opportunity to provide an Energy Park at Burton Wold. In strategic terms, the site has therefore already been considered as a suitable location to accommodate an Energy Park as this was reviewed in the course of preparing the Core Strategy.

Policy 26 of the Core Strategy (Renewable and Low Carbon Energy) identifies that development of the Energy Park will provide a decentralised energy network using renewable technologies.

The policy provides a flexible planning framework under which development can come forward at the Burton Wold site. For completeness, the relevant text of the policy is reproduced below:

Land at Burton Wold is identified for an Energy Park to add to the range of renewable energy technologies already present. The development will serve as a decentralised energy network which will link the energy production to existing and new developments.

Proposals within the Energy Park should meet criteria a) to i) above and should also be in accordance with a comprehensive masterplan which will be prepared in consultation with the local community and stakeholders and agreed by the local planning authority;

This will:

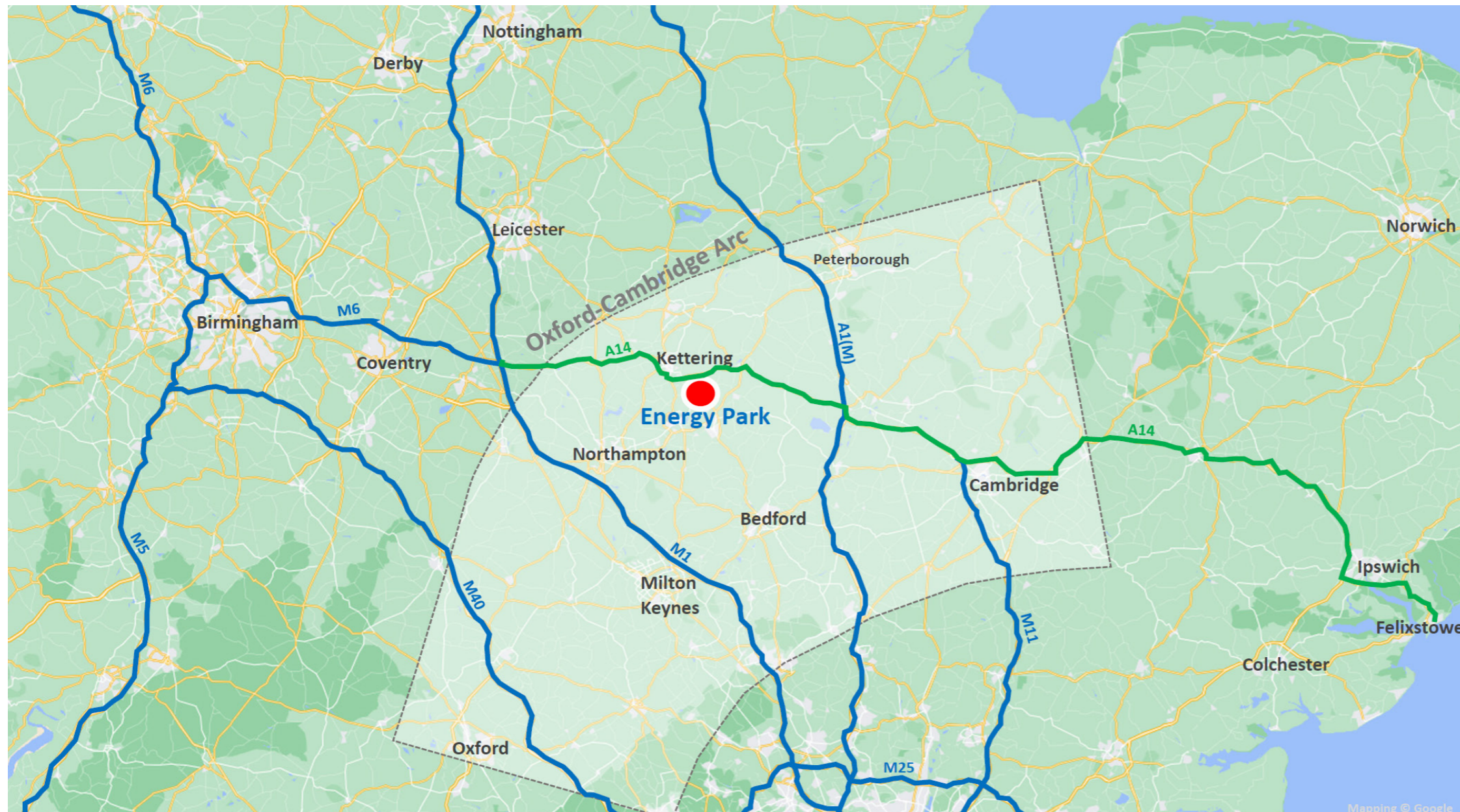
1. Define development boundaries and also the renewable / low carbon technologies and land uses to be developed on the site;
2. Make provision for a mix of complimentary employment uses to facilitate development of local knowledge, expertise and research and development;
3. Demonstrate how the proposal will contribute towards meeting the energy needs of existing and planned development, including East Kettering SUE, strategic development at Junction 10 of the A14 and employment uses associated with the site;
4. Create a model for zero carbon energy through the installation of exemplary energy efficiency standards in buildings which use energy produced on-site in their operation.

This Masterplan document aims to address the above points of this policy requirement as it will define the boundaries of the proposed development and also identify which energy technologies and other uses could be developed at the Burton Wold site. For reference, the full text of Policy 26 is included in the Appendix.

An assessment against these policy requirements is included in this document in Section 23 and the Appendix.

4. STRATEGIC OVERVIEW & EMPLOYMENT NEED

THE PROPOSED ENERGY PARK WILL INCLUDE NEW EMPLOYMENT DEVELOPMENT TO SUPPORT INVESTMENT AND ECONOMIC GROWTH FOR BUSINESSES WITH HIGH ENERGY DEMAND. THE DEVELOPMENT WILL BENEFIT FROM ACCESS TO THE EXISTING AND PROPOSED ENERGY INFRASTRUCTURE AND CREATE AN ECOSYSTEM OF LIKE-MINDED USES THAT WILL SUPPORT THE TRANSITION TO A LOW CARBON ECONOMY. THIS SECTION PROVIDES AN OVERVIEW OF THE SITE'S CREDENTIALS AND THE NEED FOR ADDITIONAL EMPLOYMENT LAND WITHIN THE KETTERING AREA.



The site is located to the south east of Kettering and has excellent access to the A14, and the wider strategic road network, which puts other towns and cities in the UK within easy reach. The site is also within the sphere of influence of the Oxford Cambridge Arc, the Oxford Cambridge pan-Regional Partnership (PrP) and the associated knowledge and technology centres that the cities of Oxford and Cambridge support, facilitating the use of local knowledge, expertise and research

FIGURE 3. STRATEGIC CONNECTIONS PLAN

STRATEGIC OVERVIEW

- Kettering Energy Park is well-connected at both regional and national level with good access to key transport hubs such as the Port of Felixstowe, the motorway network (M1, A1(M), M6 & M11), and nearby urban areas, so new businesses will be able to benefit from the site's excellent location near to Junction 11 of the A14.
- Located within the Oxford-Cambridge Arc, infrastructure in the area is expected to improve and the site has the potential to attract high-quality businesses and investors and offer more cost-effective lab space, R&D premises or other high-tech operations than more traditional areas where there is limited availability with higher-costs.
- Local population growth has the potential to enhance the workforce available to Kettering Energy Park and equally, the employment component of the site will provide jobs to the growing population.
- The Energy Park is intended to provide a resilient and robust supply of electricity for the uses at the site and also have the ability to export energy to the National Grid by acting as a buffer at times of peak demand elsewhere in the UK. The site is crossed by 132kv overhead power lines and an agreement is in place with the network operator to import 40 MW and export up to 65 MW of supply. This provides a robust energy supply to businesses, which is identified as a weakness of employment land in the Kettering area, and also provides flexibility for the National Grid and makes best use of the energy generated at the site.
- The Park intends to match energy production with consumption, to supply renewable resources for energy intensive businesses, and provide a catalyst for new investment within the area and supports North Northamptonshire's ambitions of carbon neutrality by 2030.

NORTH NORTHAMPTONSHIRE ECONOMIC PROSPECTUS (JUNE 2020)

- The Economic Prospectus sets out the longterm economic potential of North Northamptonshire, highlighting the area's existing strengths and recognising opportunities for future growth.
- The document sets out both the potential opportunities presented at the Kettering Energy Park, stating that the site has potential to support and encourage clean growth technologies and innovation through existing infrastructure and new development, which in turn will support a circular economy.
- The masterplan framework recognises the opportunities available at this site and the provision of green renewable energy infrastructure, connected transport solutions and sustainable, modern employment units, will respond to the objectives of the Economic Prospectus through its contribution to the local and wider economy.

EMPLOYMENT NEED

A review of employment need in the Kettering and wider area has been undertaken using a range of sources, including Local Authority evidence and market research. This research has revealed that there is a continuing need for high-quality employment premises across a range of sectors. Business requirements include: high levels of connectivity to the rest of the UK, a pleasant environment for employees, good access to power, and increasingly, the opportunity to reduce carbon emissions from operations. The Energy Park site meets these requirements and will be attractive to a range of different businesses, indeed the North Northamptonshire area is seen as a location that should be attractive to businesses but a lack of supply and connection to power supply are issues that have deterred investment.¹ Other key points from the research has noted the following:

- Market analysis undertaken by North Northamptonshire Council² notes that investment is often lost due to the undersupply and suitability of employment space in the local and regional areas;
- There is high demand for suitable employment space offering a variety of units, varying in size and type
- There have been high levels of demand for new employment units in the East Midlands area, however the supply of floorspace is limited with less than a years supply available over the last few years.³
- Recent work undertaken by the South East Midlands Local Economic Partnership (SEMLEP)⁴ has identified that there is a shortfall in land availability up to 2040 to meet employment needs in the SEMLEP area, particularly for sites with the ability to accommodate larger units with access to a suitable power supply. Work from the SEMLEP also notes that industrial and warehouse development also support a high proportion of technical and managerial positions and in 2021 65% of job postings for warehouse developments were for such skilled roles.

Provision of high-quality, modern employment floorspace at the Energy Park site can therefore help to address the significant under supply of employment premises, enable local businesses to expand and provide a location that will attract new employers and investors to the area. The proposed development makes an ideal location to establish employment uses that have high energy requirements, such as cold stores and data centres, as well as operations that use robotic retrieval systems.

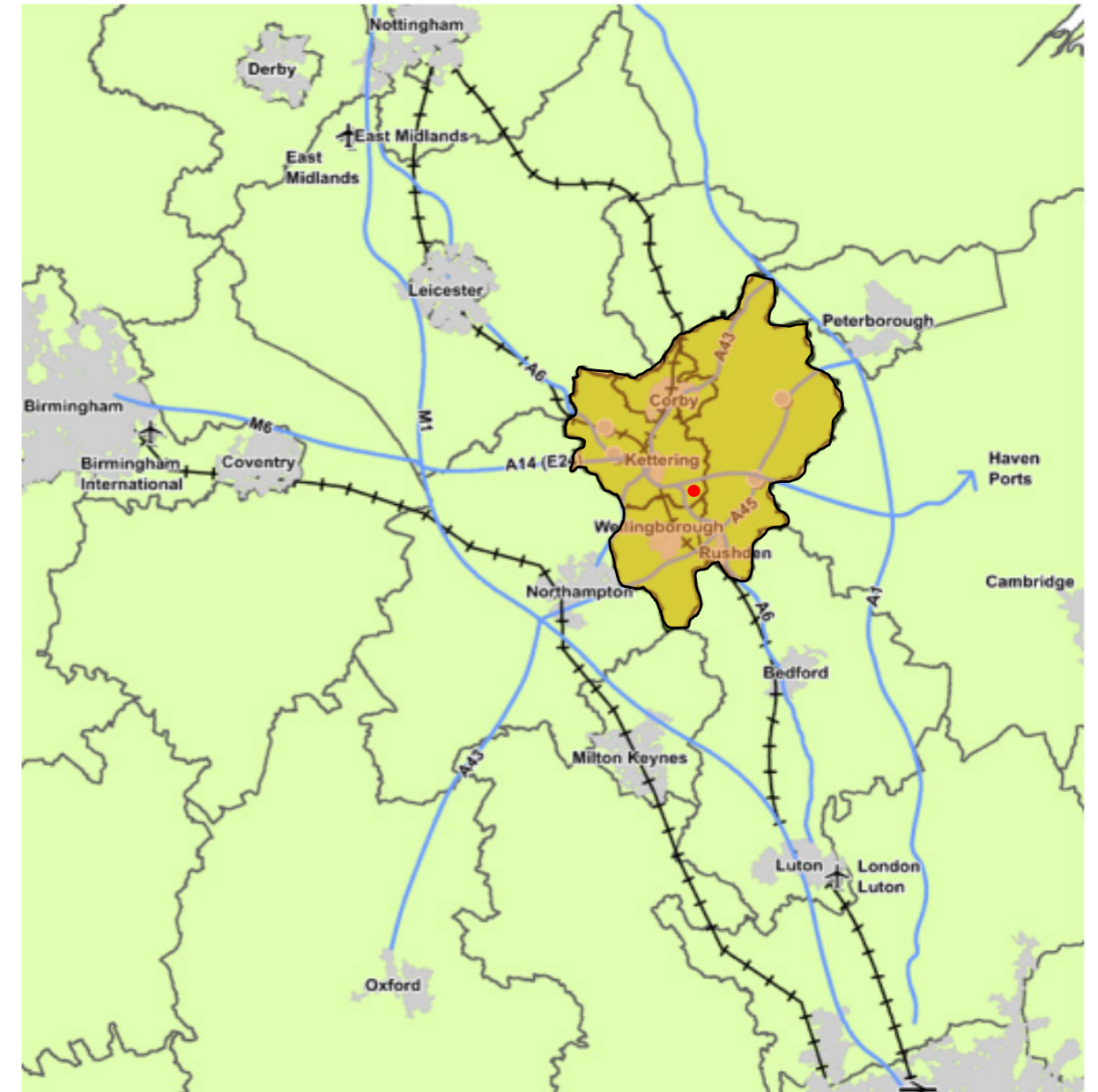


FIGURE 4. REGIONAL CONTEXT PLAN SHOWING NORTH NORTHAMPTONSHIRE AND THE ENERGY PARK

Footnote [1] - SEMLEP Local Industrial Strategy Evidence Base (SEMLEP, November 2018)

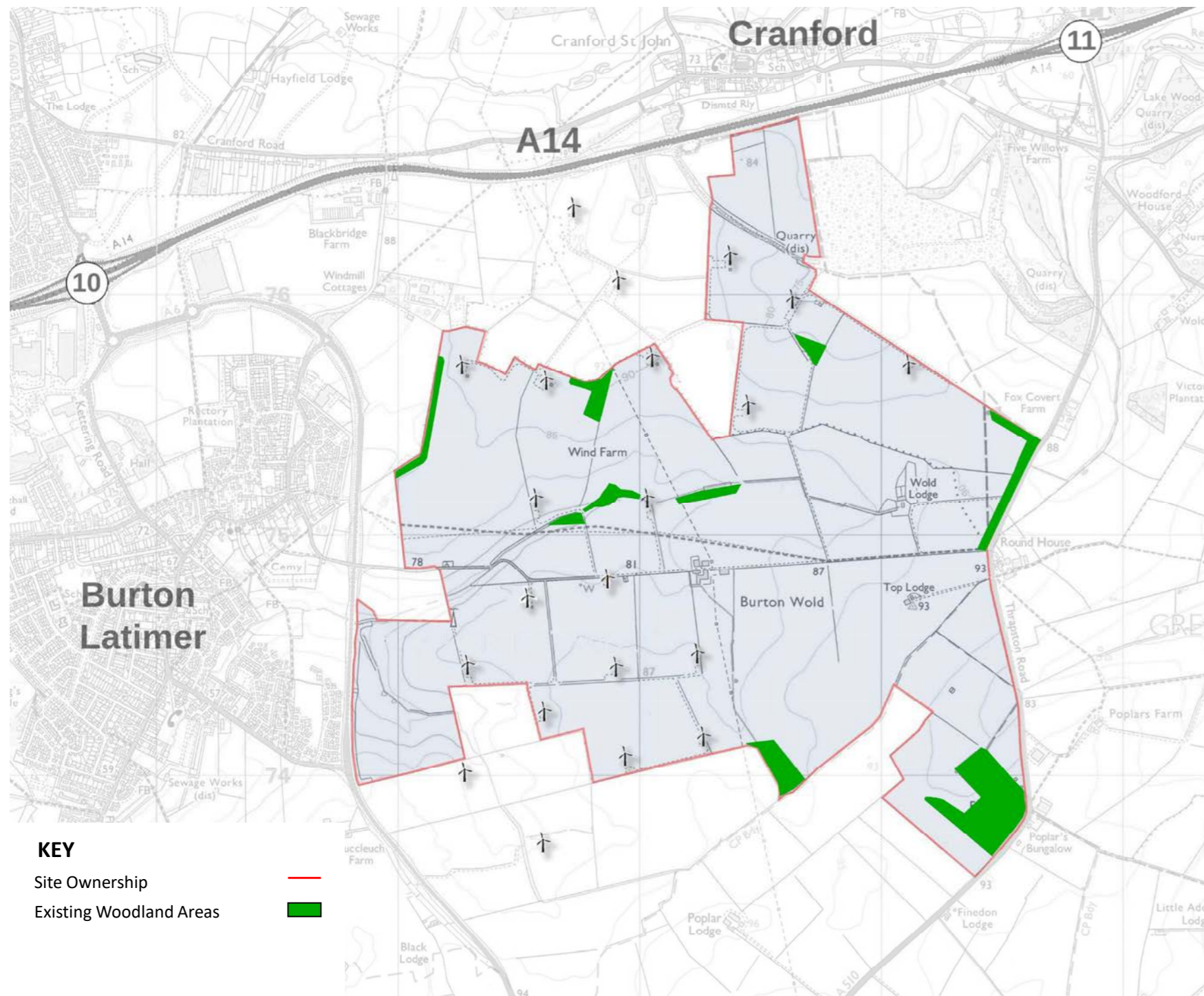
Footnote [2] - Kettering Employment Land Review (Aspinall Verdi, November 2018)

Footnote [3] - Big Shed Briefing (Savills, January 2022) & 2022 Industrial & Logistics Market Update & Outlook (JLL, January 2023)

Footnote [4] - Warehousing and Logistics in the South East Midlands (Iceni on behalf of SEMLEP, September 2022)

5. SITE ANALYSIS & CHARACTERISTICS

THE AREA IDENTIFIED FOR THE KETTERING ENERGY PARK MASTERPLAN, SHOWN ON FIGURE 4 BELOW, IS TO THE SOUTHEAST OF KETTERING AND COMPRISES MAINLY GRADE 3 ARABLE FARMLAND, EXTENDING IN AREA TO APPROXIMATELY 445 HECTARES. THE TOWN OF BURTON LATIMER IS TO THE WEST OF THE SITE AND THE VILLAGE OF CRANFORD ST JOHN IS TO THE NORTH, WHILST FINEDON IS LOCATED TO THE SOUTH. THE BURTON WOLD SITE IS ALREADY HOME TO THE BURTON WOLD WIND FARM, WHICH ACCOMMODATES TURBINES OF UP TO 135 M IN HEIGHT TO THE TIPS OF THE BLADES.



The site lies to the south of the A14, is bounded by the A510 Thrapston Road to the east, and the A6 Burton Road to the west. The A510 connects to Junction 11 of the A14. It is home to the Burton Wold wind farm, which accommodates a number of turbines, which, at the time, were some of the tallest onshore turbines approved. The site comprises mainly of wet clay soils and is considered to be subgrade 3b quality. A minor area of the site is of subgrade 3a quality subject to lesser wetness and workability limitations.

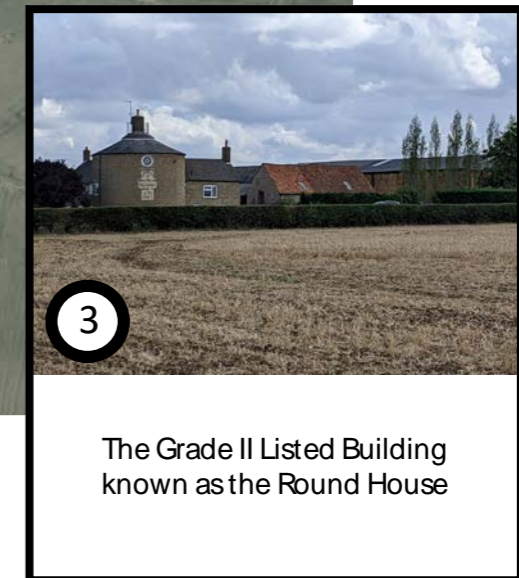
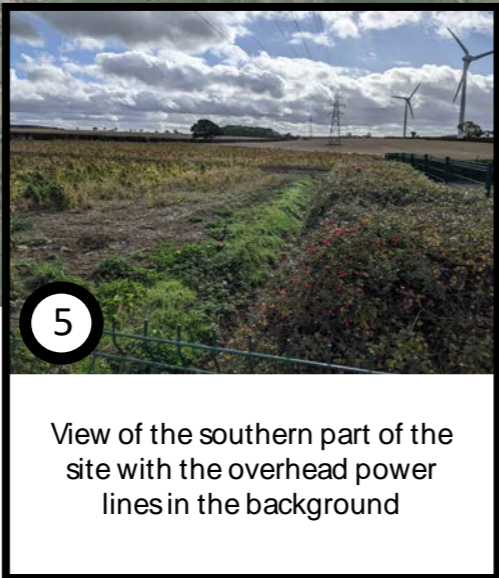
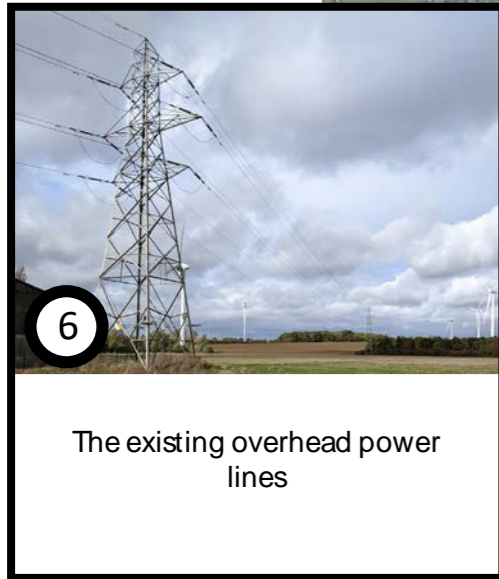
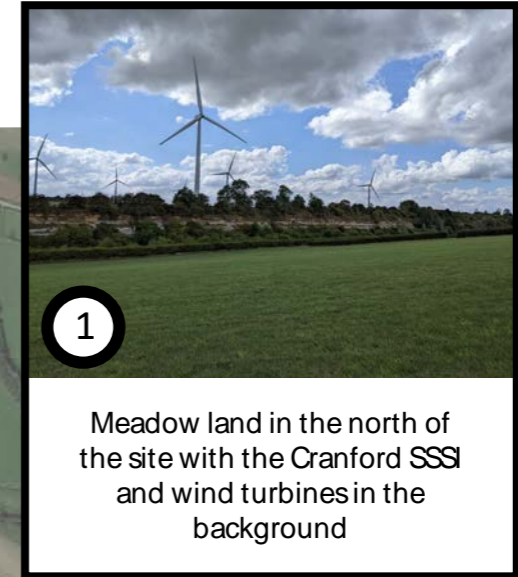
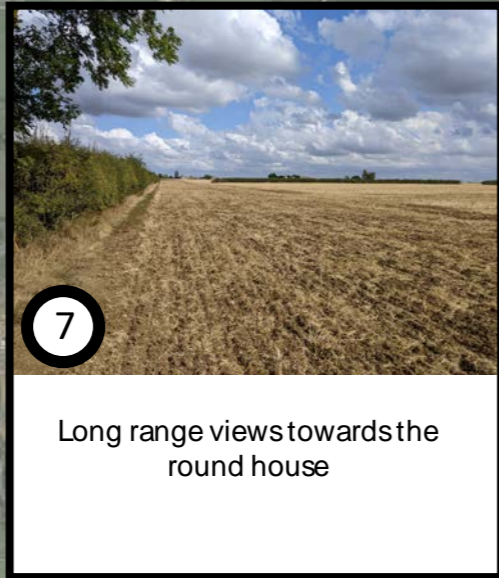
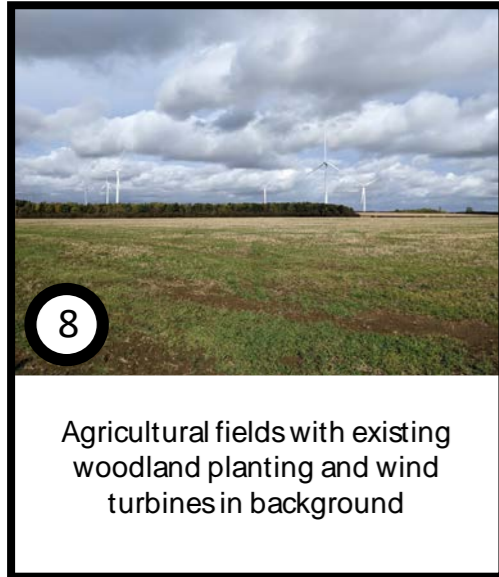
The site is therefore close to a number of population centres and is readily accessible by the existing road network. The Energy Park would therefore benefit from an existing labour supply, which will increase once the new Hanwood Park development of circa 5,500 new homes is developed to the East of Kettering.

Initial assessments have been undertaken to identify constraints, opportunities and key areas of the site where development of new energy infrastructure, business premises and other complementary uses could be located.

Potential development zones for the Energy Park have then been identified based on this analysis. The assessment work for the masterplan has also considered proposals to mitigate any potential impacts that may arise from development at the site. In addition, opportunities are identified that could be incorporated into the masterplan where these would benefit the local area and surrounding communities.

FIGURE 5. SITE LOCATION

S I T E P H O T O G R A P H S



6. SITE CONSTRAINTS & OPPORTUNITIES

THE MASTERPLAN FOR THE ENERGY PARK IS BASED AROUND THE WIND TURBINES THAT COMPRISE THE BURTON WOLD WIND FARM, THE CONSENTED SOLAR FARMS AND AN AGREED CONNECTION TO THE OVERHEAD 132KV POWER LINES THAT RUN NORTH-SOUTH ACROSS THE SITE. THESE KEY FEATURES ARE THE REASON BEHIND THE IDENTIFICATION OF THIS SITE TO ACCOMMODATE AN ENERGY PARK. A DETAILED REVIEW OF THESE MATTERS WILL BE PROVIDED AT OUTLINE APPLICATION STAGE WHICH WILL INCLUDE DOCUMENTS AS SET OUT WITHIN SECTION 21.

Alongside the site's existing energy infrastructure, prior assessments have been undertaken which have helped identify the site's constraints as well as opportunities for development. This has helped identify and understand the principle matters that will directly influence the master planning of the proposed development of the site. The opportunities and constraints are set out in the opportunities and constraints document that supports the masterplan and which are summarised below.

SITE OPPORTUNITIES

- Provide additional energy infrastructure to improve resilience and support the transition to a low/zero carbon society
- Optimise the use of existing and new renewable energy sources by accommodating storage capacity at the site
- Provide modern, high quality employment premises that will allow businesses with a high energy demand to adapt to a low/zero carbon economy
- Support the development of new, modern, energy efficient employment premises on the least constrained land
- Future businesses can directly benefit from the renewable energy supply
- Optimise the Energy production at the site by including PV's on the roofspace of future buildings
- Make future buildings energy efficient, targeting BREEAM 'Excellent'
- Secure a net gain for biodiversity on site, securing a minimum 10% requirement as set in the Environment Act. This will be bettered where possible and efforts are being made to see if a target of 15% can be met.
- Improve cycle and pedestrian access on and to the site
- Introduce a sustainable transport hub on site
- Potential to introduce new lab space
- Accommodate new, native planting which will provide landscape buffers, amenity areas and screening of the new development
- Incorporate above ground sustainable urban drainage features
- Support modern agricultural practices and provide space for hydroponic uses

SITE CONSTRAINTS

- Location of existing and consented energy infrastructure
- Need to maintain operational farm buildings on site
- Requirement to accommodate surface water drainage to mitigate potential flood risk
- Existing planting and habitat features
- Existing public rights of way
- Setting of the Round House and Poplars Barn, which are designated Heritage assets
- Potential visibility of development

Key Drivers for the Masterplan include:

- Topography & ridgeline
- Primary routes and key linkages
- Waterbodies and watercourses
- Public rights of way
- Existing trees & hedgerows

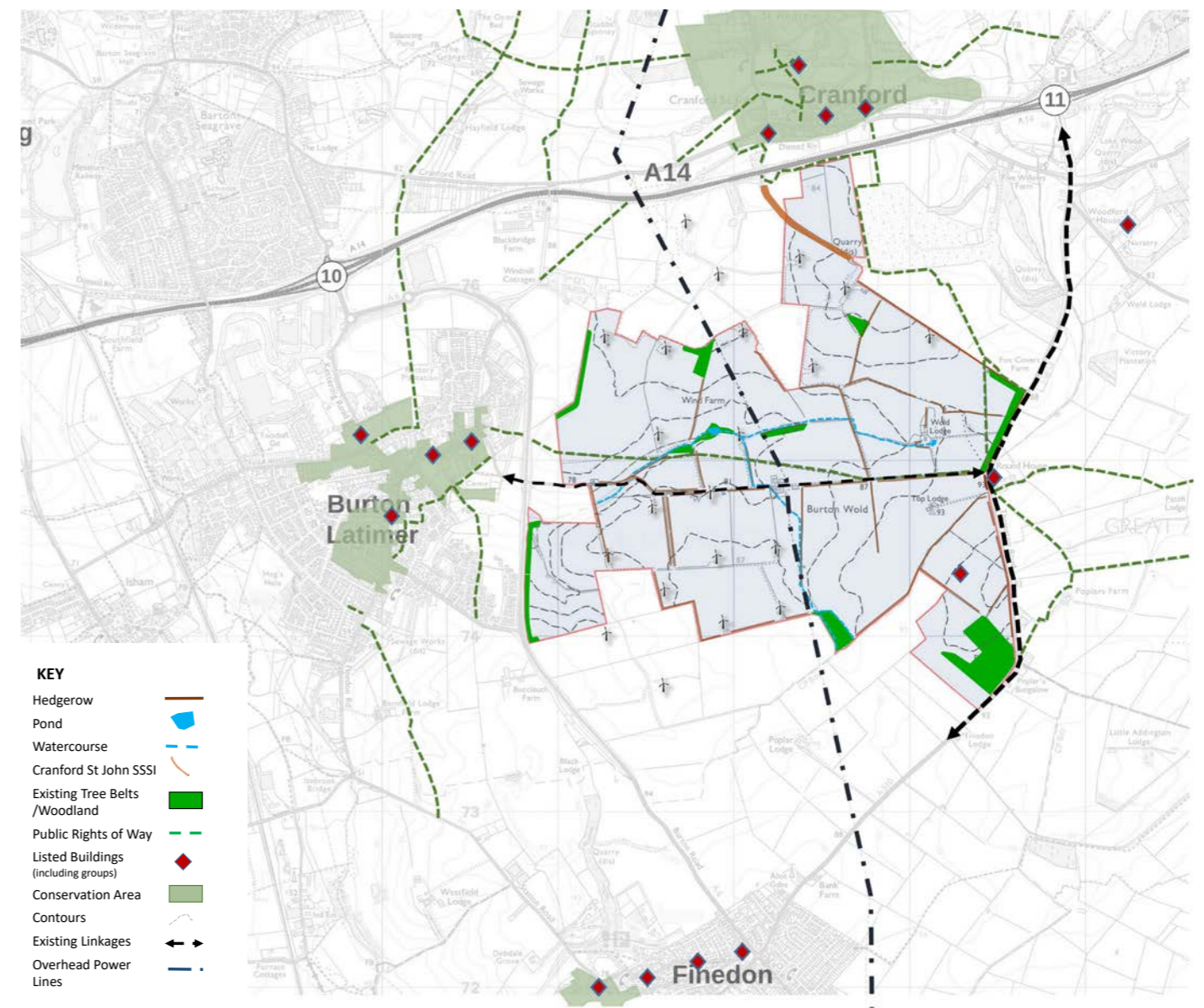


FIGURE 6. CONSTRAINTS

7. SITE ASSESSMENT

The opportunities and constraints document and this Masterplan document have been informed by the following individual assessments:

- Ecological Surveys
- Highways Modeling and Assessment
- Landscape Review
- Flood Risk and Drainage Review
- Assessment of Archaeology/Heritage
- Mining Risk Assessment

This work has enabled us to identify what areas of the site are deemed most suitable for each aspect of development:

The development zones on site were refined to take into account the identified constraints. In order to minimise views from outside the boundary and to make use of the least constrained land, the development zones for the Energy Park have been defined as follows:

- The area best suited for advanced agriculture has been identified as the zone near the existing turbines. The proposed hydroponics would be no more than 8m in height so they won't impact the operation of the wind turbines and would be located to relate to the proposed employment area, making best use of this constrained part of the site.
- New access into the site will be achieved from the A510 north of the Round House. A new estate road and roundabout will be incorporated to accommodate the flow of traffic into the site. Locating the access in this location takes account of site levels, visibility and the setting of the Round House.
- Development will be set back from the southern and eastern boundaries. This will allow for a landscape buffer to reduce views of the development site in areas that are most prominent such as views from the A510, A6 and the existing pedestrian rights of way from within and without the area of search. The proposed landscape buffer to the east will provide an open frontage to the Round House.
- Rationalise solar farms to ensure better use of land and provide more regular development plots.

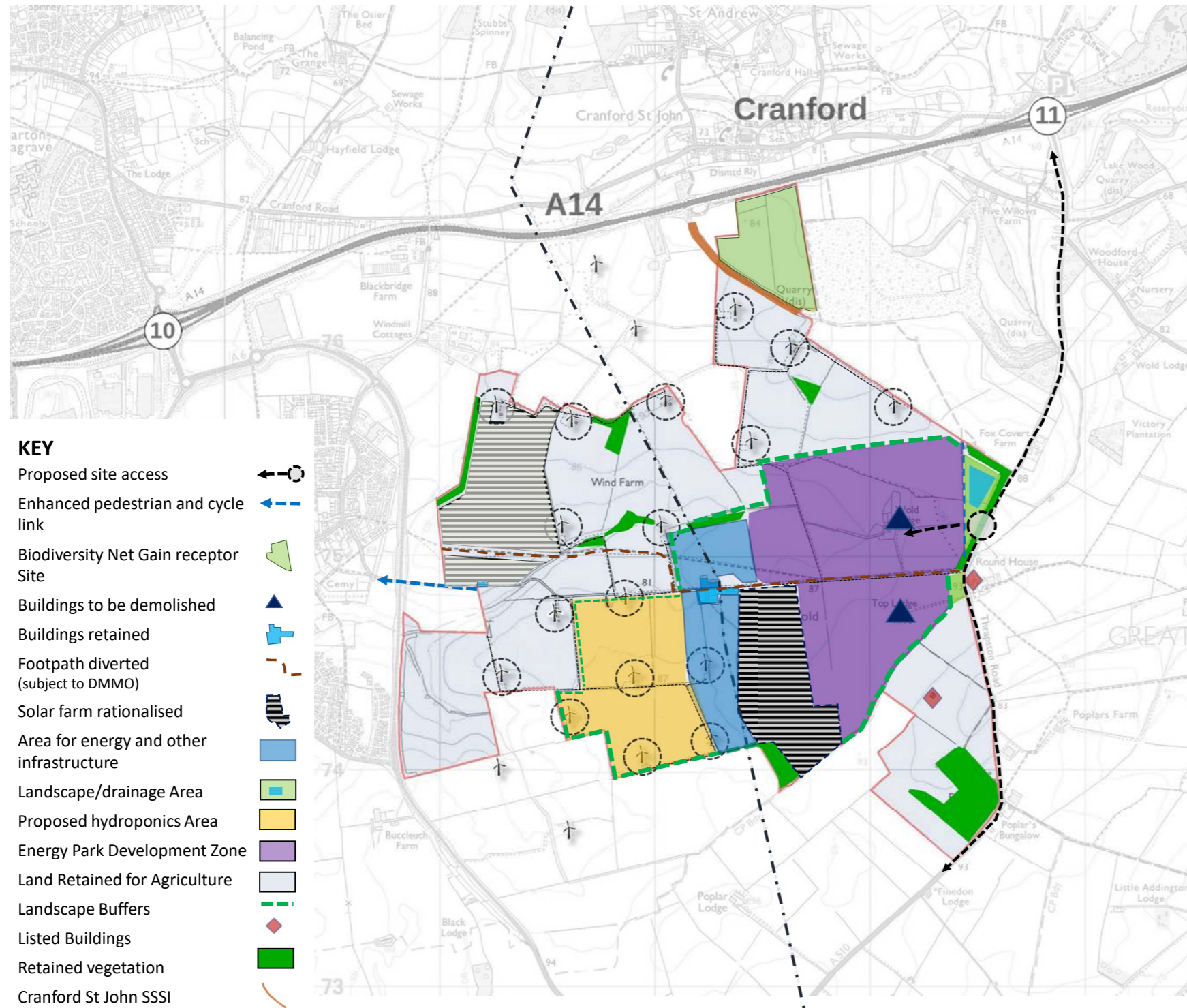


FIGURE 7. PROPOSED DEVELOPMENT ZONES

8 . C O N S U L T A T I O N

THE MASTERPLAN HAS BEEN DEVELOPED FOLLOWING INITIAL CONSULTATION WITH KEY STAKEHOLDERS AS WELL AS COMMENTS RECEIVED VIA A WEBSITE THAT SET OUT THE PROJECT'S AMBITION AND OBJECTIVES. THE MASTERPLAN WAS ALSO SUBJECT TO A PERIOD OF PUBLIC CONSULTATION, INCLUDING A PUBLIC EXHIBITION, WHICH ALSO CONSIDERED VIEWS FROM STATUTORY CONSULTEES AND STAKEHOLDERS.

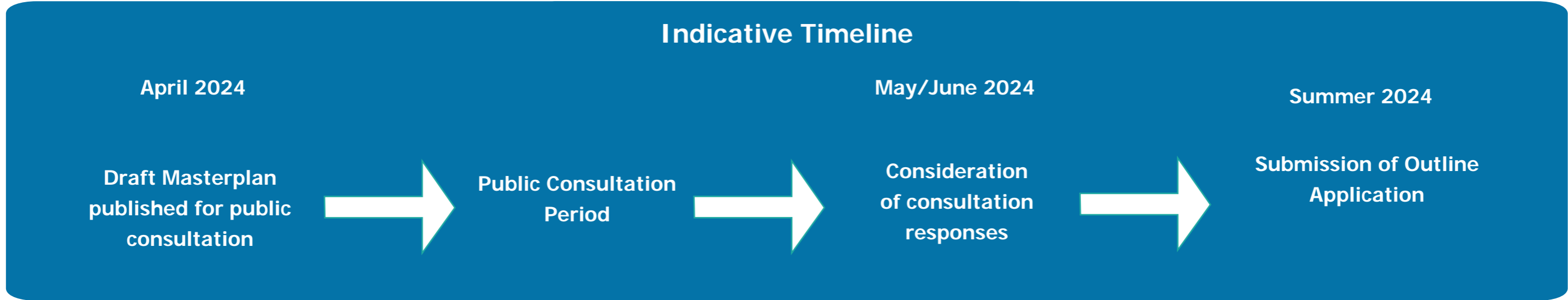
Initial consultation was undertaken over the course of 2022 to support the preparation of this Masterplan document. This included engagement with key stakeholders including National Highways, the Highway Authority, Natural England and a range of other agencies. Introductory meetings were also held with nearby Town and Parish Councils to brief them about the emerging Masterplan and to raise awareness of the key principles that made up the Energy Park proposals. A project website was launched in October 2022 to provide additional information about the Energy Park which also provided the opportunity for feedback. A briefing of the work undertaken to date in the preparation of the Masterplan was also provided to the Council Executive Advisory Panel for Planning Policy in October 2022.

The issues that were raised as a result of this initial consultation have informed the preparation of the initial draft Masterplan. A summary of the key issues that were raised from this consultation is provided overleaf.

This draft Masterplan document was subject to a period of public consultation for 7 weeks in 2023 using a variety of engagement methods. This provided the opportunity for stakeholders and members of the public to comment on the Masterplan document and the principles for future development of the Energy Park.

Feedback from the consultation period has been reviewed by the project team and North Northamptonshire Council. The masterplan has now been updated to take account of comments made during this consultation. A number of key changes have now been made to the Masterplan, which can be summarised as follows:

- Reduction in the amount of employment floorspace that can be developed from 390,000 sq m to c 302,000 sq m
- Amendment to the mix of uses to reduce the maximum amount of B8 floorsapce that can be provided to 50%
- Reduction in maxim height of new buildings from 30 metres to 25 metres
- Further reduction in scale of development opposite the Round House building
- Increased amount of land available for Energy Infrastructure
- Amendment to the Energy Criteria to require new businesses coming to the site to comply with all 3 of the criteria



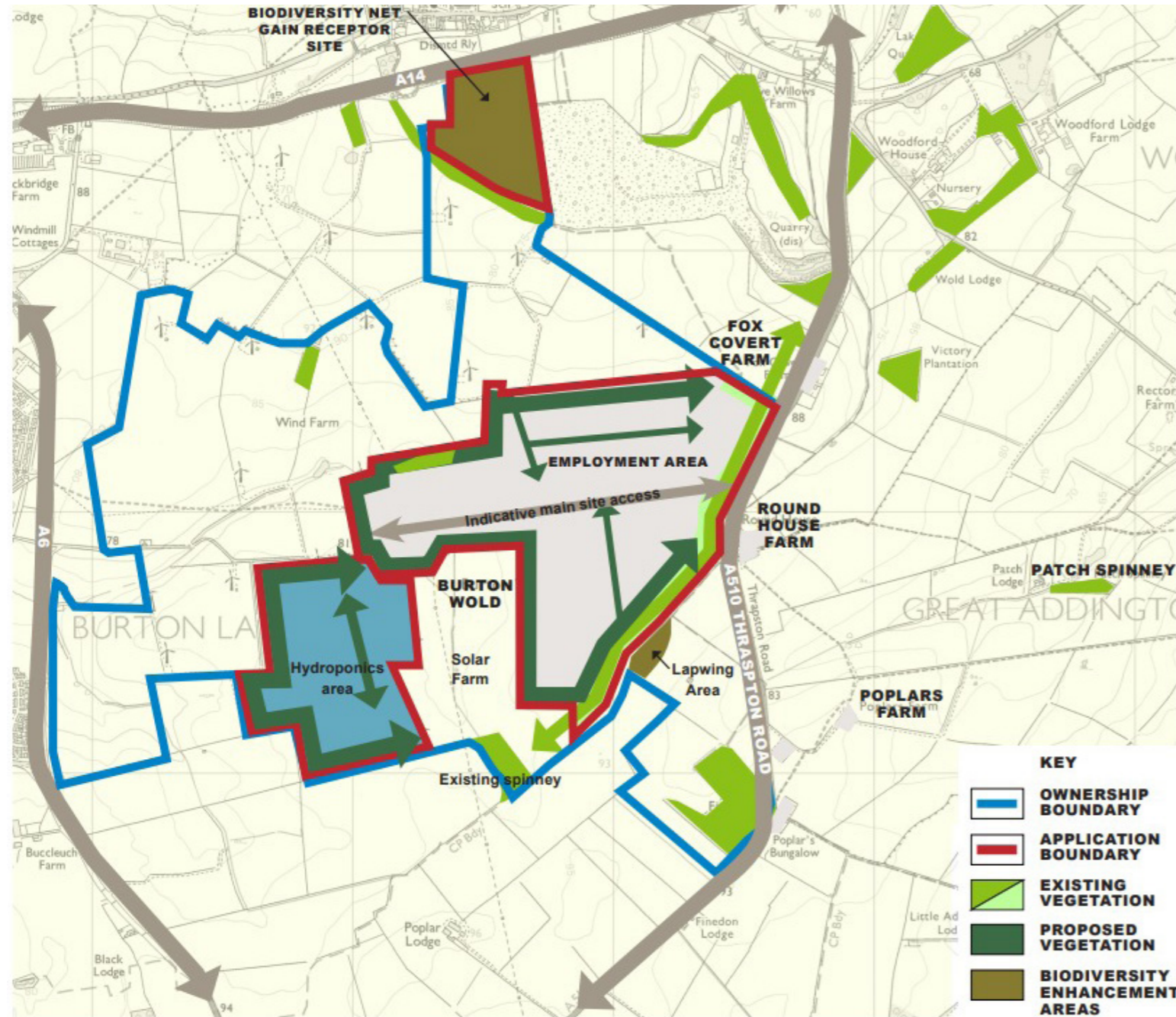
CONSULTATION

The consultation that was undertaken to support the preparation of this Masterplan has helped to shape the principles of development and the form of the Masterplan. Some of the key issues that have been incorporated into the Masterplan as a result of this initial consultation is summarised below. Further detail on some of these points will then be incorporated into a future planning application for the site.

To ensure buildings are sustainable	➤	The masterplan ensures that all employment buildings at the site will have high levels of thermal and energy efficiency to make most use of the available energy at the site, with a target of achieving BREEAM Excellent and an EPC rating of A. Solar PV will be installed on the roof space to further increase the
To confirm that the proposal will mitigate traffic produced as a result of development	➤	We have carried out a transport assessment to help identify potential traffic implications as a result of the development. It was concluded that the development could be accommodated on the existing road network without any likely significant adverse impacts. However, more detailed modelling will be carried out at the application stage. We are working closely with National Highways and the Highway Authority to ensure that concerns and issues are addressed.
Incorporation of a Lapwing Area	➤	The masterplan will provide an area of wetland and grassland specifically for Lapwing habitat. This will ensure that suitable habitat areas and opportunities for this species will be safeguarded within the site.
Views to and from the Round House	➤	The masterplan has been prepared to set development back from the eastern site boundary so that new development respects the setting of the Listed Building. The masterplan has also considered views within the site towards the Roundhouse to ensure that the proposed development does not obscure views of this building.
Additional and greater quality pedestrian, cycle and transport connections	➤	The masterplan includes the provision of additional cycle and footpaths which will improve accessibility on site and to Burton Latimer and Cranford as well as public access around the site. The provision of enhanced bus links to the site to provide offer connections to key transport hubs such as Kettering and Wellingborough Railway Stations will be explored. A Mobility Hub is also proposed as are measures such as EV charging points and car share schemes further improving more sustainable transport options.
What improvements are needed to? - Junction 11 of the A14 - The A510/A6 Junction at Finedon	➤	The key route to access the site will be along the A510 from Junction 11 of the A14. Highway Modelling has been undertaken which identifies that existing road network, including Junction 11 of the A14, has the capacity to accommodate an increase in traffic movements following development at the Energy Park. Additional assessment work will be undertaken to support a future planning application including detailed assessment of junctions such as the A510/A6 junction at Finedon where improvements may be needed. Management measures will also be considered to route development traffic to Junction 11 of the A14.
Landscaping is protected to ensure the area remains an attractive landscape	➤	The masterplan has been prepared in conjunction with a strategic landscape strategy. The proposed development will retain existing trees and vegetation where possible, whilst incorporating new areas of woodland and scrub planting to the perimeter of the site. The landscape will also maintain environmental connection with the existing vegetation whilst softening the built form into the immediate surroundings.
The extent of the development	➤	Individual site analysis and assessments have allowed us to develop a boundary of the Energy Park that will make best use of the site and the available renewable energy and will allow the objectives of the project to come forward in an appropriate manner.
The need for a community fund	➤	The enthusiasm for a community fund has been noted and will be carefully considered and explored throughout the submission process. The masterplan identifies that the provision of a community fund will be set out in a future application detailing any mechanism to achieve this.

9. GREEN INFRASTRUCTURE & LANDSCAPE STRATEGY

THE OVERALL GREEN INFRASTRUCTURE STRATEGY IS BASED UPON UTILISING EXISTING SITE FEATURES, INCLUDING HEDGEROWS, WOODLAND AND SPINNEYS, AS A BASIS FOR DEVELOPING A STRONG LANDSCAPE SETTING FOR THE DEVELOPMENT, ENHANCING BIODIVERSITY AND ECOLOGICAL CONNECTIVITY ACROSS THE SITE, AND OPENING UP A NETWORK OF AMENITY ROUTES AND GREEN CORRIDORS.



New areas of woodland and scrub planting will create a strong wooded edge to the perimeter of the site, forming a continuous loop of vegetation. This will help to screen and soften views of the site, minimise its effects on the character of the surrounding landscape, whilst providing an attractive walking route and opening up valuable habitats for a wide variety of species.

The proposed wooded edge, along the boundary with the A510 Thrapston Road, should be set back from the road edge to help preserve some of the open rural character of the Road corridor. The existing hedgerow will be retained, along with the wide grassy verge to the carriageway edge.

Behind this existing boundary hedge a wide swathe of species-rich wildflower grassland will be utilised, creating a graduated landscape treatment to the boundary, increasing in height from the low grassland through to scrub, then woodland. Where possible, all opportunities will be taken to extend areas of planting into the site, creating wildlife corridors between large areas of hardstanding whilst also performing screening and security functions.

LANDSCAPE STRATEGY

The landscape strategy can be divided into various areas within the scheme;

1. Entrance and Round House outlook;
2. Periphery / Boundary planting;
3. Main Avenue & Estate Roads;
4. Amenity spaces, and;
5. Hydroponic / Advanced Agricultural

Further descriptions for these areas follow below.

Generally the proposed site layout allows for the retention of a number of these existing trees and vegetation. Native species are proposed in the landscape areas along with species of benefit to local flora and fauna, selected to provide seasonal variation of flower, colour and form.

The site proposes to introduce new employment buildings and hydroponic / advanced agricultural uses to take full advantage of the existing and proposed renewable energy sources.

The proposed vegetation and planting to the developed areas of the site aims to provide continuity and environmental connection through the main site and between all spaces into the wider setting.

FIGURE 8. GREEN INFRASTRUCTURE STRATEGY

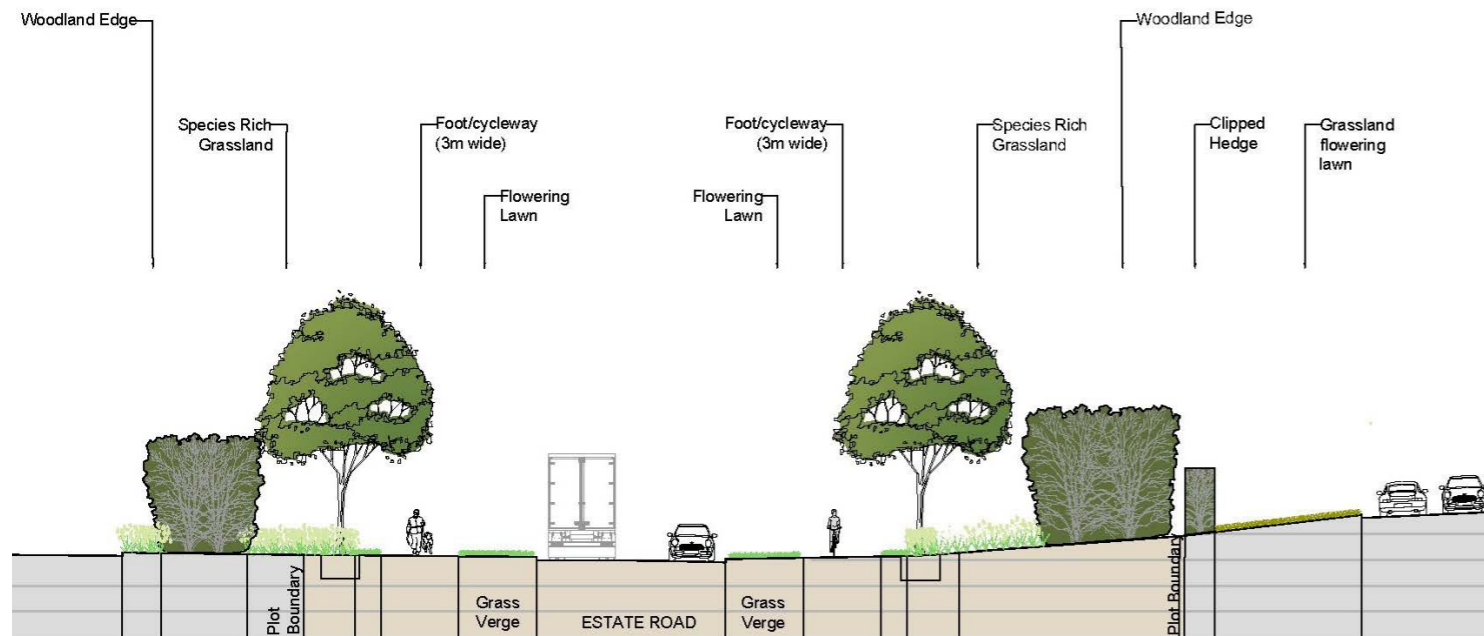


FIGURE 9. INDICATIVE ROAD CROSS SECTION GRAPHIC

BNG RECEPTOR SITE

The receptor site is currently an area of open meadow land that is made up of the overburden from historic open cast mining works. It has the potential to be enhanced with a suitable planting scheme to improve its biodiversity value. For management purposes, open public access will be restricted but the opportunity exists to include a permissive route across it to connect to the nearby rights of way.

SOLAR FARM

Where solar farms are proposed, these will be located to minimise the impact on existing landscape features such as boundary hedgerows wherever possible. Retained features will be enhanced and the available ground cover will generally accommodate wildflower planting to contribute to biodiversity and also offer opportunity for grazing.

HYDROPONIC / ADVANCED AGRICULTURAL USES

The hydroponic development will comprise of glass houses and similar structures that will be used for agricultural production. These will be smaller in scale than the employment development and require less infrastructure. Existing hedgerows, trees and drainage features will be retained wherever and supplemental planting will be provided around the periphery along with areas of species-rich grassland where possible. The hydroponics systems will incorporate ponds for storage of rainwater as part of a rainwater harvesting system, which will be designed to support biodiversity, as far as possible, as a secondary function.

ENTRANCE AND ROUND HOUSE OUTLOOK

The entrance into the development site has been aligned to retain a row of mature existing trees creating an instant avenue. The design retains an open frontage opposite the Round House, with taller tree planting to screen the development set back from the A510. This will respect the setting of the building with views from within the site towards the listed Round House building maintained, connecting to the heritage of this structure.

PERIPHERY/ BOUNDARY PLANTING

The landscape proposals seek to supplement the existing vegetation and strengthen the boundary planting providing a dense screen to the periphery.

Opportunities to accommodate bunds around the site periphery will be explored to accommodate planting and increase the level of screening for the development. The location and scale of any bunds will be detailed at application stage.

MAIN AVENUE AND ESTATE ROAD

As part of the sustainable drainage network a number of ponds and kerbside features providing drainage solutions will be provided which will also offer varied habitat opportunities. Alongside the ecological and drainage benefits, the water features will provide focal points and amenity value with paths creating scenic walking routes for site users.

Connecting the various units will be a shared path along the main Estate Road and where possible this will be lined with trees and away from the highway edge, providing separation to walkers and cyclists from the vehicular traffic moving around the estate.

Areas of grassland and verges around the site are to be seeded with species-rich grassland and wildflower mixes to improve and encourage biodiversity habitats.

AMENITY SPACE

Various amenity spaces will be provided within the site. The concept for these spaces will echo principles of private gardens, creating modest secluded spaces to provide a break from the working environment and an opportunity to reflect in a natural setting.

CONCLUSIONS

It is envisaged that the proposed landscape treatment will enhance the retained features and the existing landscape and provide multiple benefits to users and visitors to the site, alongside maintaining an environmental connection with the existing vegetation. The addition of new planting brings additional benefits and seasonal variety. Over time the tree, hedge and shrub planting will establish to provide improved screening and habitat diversity, softening the built form into the immediate surroundings.

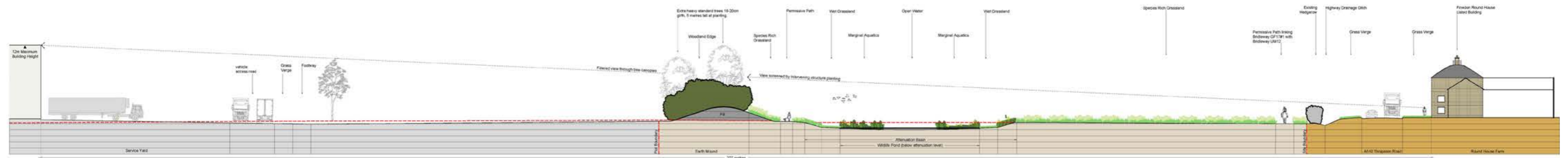


FIGURE 10. INDICATIVE ROUND HOUSE CROSS SECTION

10. BIODIVERSITY NET GAIN

THE EXISTING ECOLOGICAL VALUE OF THE SITE IS CONSIDERED TO BE LIMITED, PRIMARILY AS A RESULT OF THE INTENSIVELY MANAGED ARABLE FIELDS WHICH COMPRISE THE VAST MAJORITY OF THE SITE. THERE ARE FEATURES OF COMPARATIVELY GREATER BIODIVERSITY VALUE PRESENT WITHIN THE SITE, IN THE FORM OF BROADLEAVED PLANTATION WOODLAND, HEDGEROWS, TREES AND WATERBODIES. THESE HABITATS ARE TYPICALLY ASSOCIATED WITH FIELD BOUNDARIES AND PROVIDE NARROW CORRIDORS PASSING THROUGH THE SITE.



Proposed Biodiversity net gain receptor site



A comprehensive biodiversity strategy has been developed for the site which will enhance the diversity and species-richness of habitats present within the site and promote new and improved opportunities for faunal species. The strategy extends throughout the new development and includes the provision of a network of broad biodiverse green corridors in addition to more extensive areas designed and managed specifically for ecological enhancement.

Ecological surveys have however identified that the site is utilised by a range of faunal species. Foraging and commuting bats (including the more notable species Barbastelle) have been recorded to utilise linear corridors passing through and across the site, in addition to Great Crested Newts and breeding birds. Survey work has also identified that the site is utilised during the winter period by Lapwing, a species which is associated with the nearby Upper Nene Valley Gravel Pits SPA / Ramsar site.

The aim of the biodiversity strategy is to not only mitigate for adverse effects arising due to the proposals, but moreover to deliver measurable biodiversity benefits compared to the existing situation. The proposals also seek to improve connectivity passing across and through the site for faunal species compared to the existing situation, through the provision of large, well-designed, biodiverse green infrastructure corridors.

To retain and improve on existing opportunities for Barbastelle bats (in addition to other bat species), broad corridors supporting extensive tree, scrub and hedgerow planting will be provided, delivering strong vegetated features which represent better foraging and commuting opportunities compared to the existing situation. With the adoption of a sensitive lighting strategy in key areas, this will ensure that bats will be able to move across and through the site post-development and will improve connections to adjoining habitats in the wider proximity of the site.

Through the provision of species-rich native wetland and wildflower grassland habitats within the site, together with the instigation of a long-term management regime with biodiversity as a fundamental element, habitats within the new development will also be more diverse than those currently found throughout much of the site. Moreover, opportunities for key faunal groups such as amphibians (including Great Crested Newts), invertebrates and nesting birds will be provided.

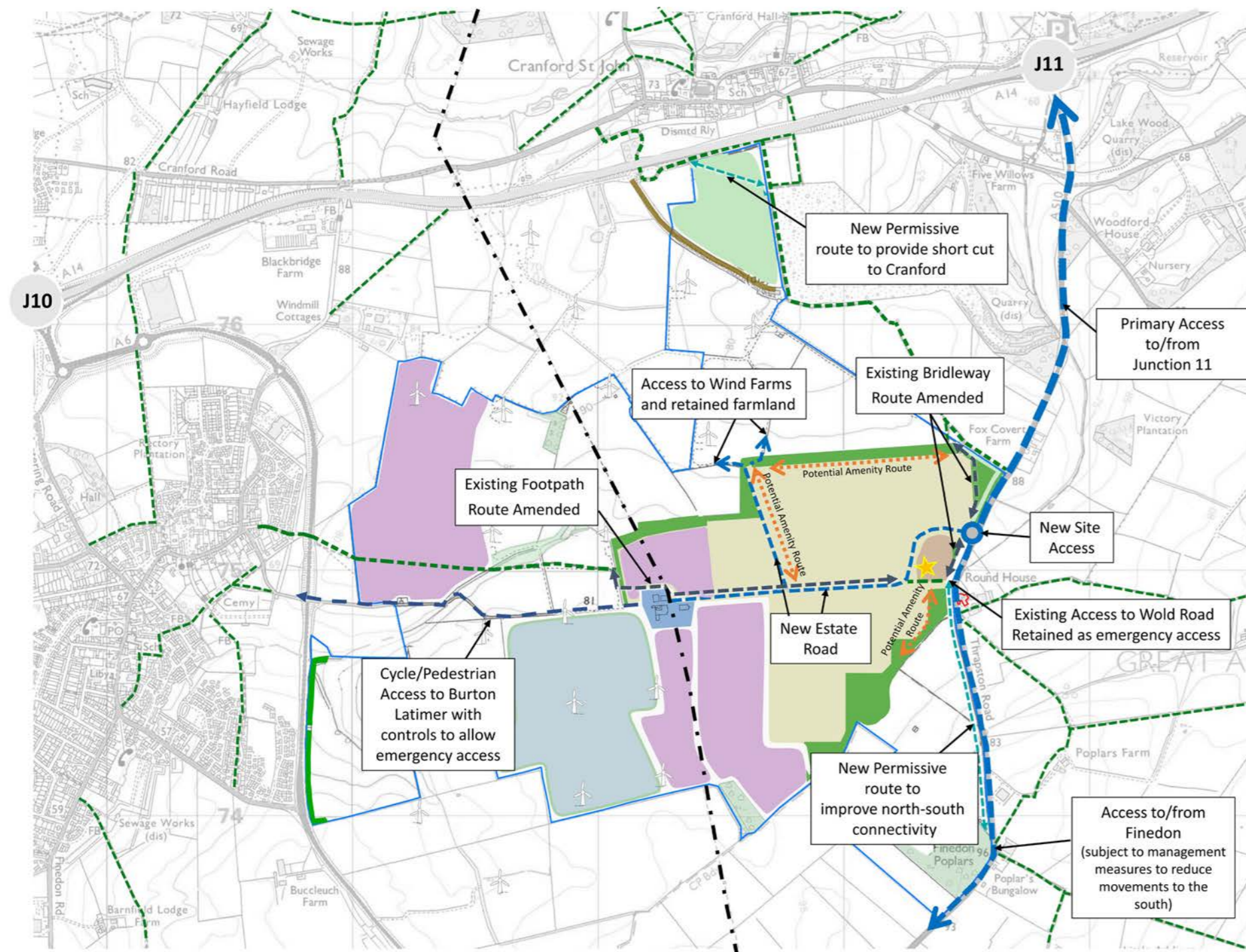
Additional benefits to biodiversity in the local area will be provided in the form of enhancements to a large grassland field to the north of the site (identified as the BNG mitigation area which covers an area of 16.4 Ha / 40 acres). This extensive parcel of land will be subject to a long-term management regime for the explicit purpose of biodiversity enhancement, which will significantly improve the diversity of the grassland sward, and in turn provide wider benefits for other species. National Legislation requires a minimum Biodiversity Net Gain of 10% and the intention is that this is bettered where possible and efforts are being made to see if a target of 15% can be met.

Further to discussions with Natural England, the proposals will also include the provision of an area of wetland and grassland which will provide long-term optimal opportunities for wintering Lapwing. This area will be designed to meet all key requirements for this species, including good visibility at ground level and will be subject to management to ensure that it always provides ideal habitat for this species. Moreover, this will also provide wider ecological benefits for other faunal groups.

Where solar farms are provided, a suitable planting scheme of wildflower seed mix will be established to enhance biodiversity and offer opportunities for grazing.

11. ACCESS & MOVEMENT FRAMEWORK

A TRANSPORT ASSESSMENT HAS BEEN PREPARED TO UNDERSTAND THE TRANSPORT MOVEMENTS AND IMPLICATIONS OF THE PROPOSED ENERGY PARK DEVELOPMENT. THE MODELLING AND ASSESSMENT WORK THAT HAS BEEN UNDERTAKEN IDENTIFIES THAT NO SIGNIFICANT IMPACTS ARE CONSIDERED LIKELY AS A RESULT OF THE DEVELOPMENT. IN ORDER TO IMPROVE OPTIONS FOR SUSTAINABLE TRAVEL TO AND FROM THE SITE AND TO ENSURE SAFE AND EFFICIENT ACCESS, THE FOLLOWING FEATURES WILL BE INCLUDED AS PART OF THE DEVELOPMENT PROPOSALS FOR THE ENERGY PARK.



MOVEMENT FRAMEWORK

The proposed Movement Framework is set out in Figure 11 and identifies the key aspects of access to and from the site. The new access to the site will comprise a roundabout junction on the A510 to the north of the Round House and the new estate road will connect to this.

The estate road will form the primary access into the site with the existing junction of Wold Road and the A510 retained for emergency access, and this will be downgraded, potentially to a grasscrete type surface (subject to access requirements) to improve the visual appearance of this part of the site.

The existing public rights of way across the site will need to be amended to take account of the development and indicative routes are shown on the movement framework. Prospective amended routes will be detailed at application stage.

These public rights of way will be enhanced through the provision of two new permissive routes to increase public access and enhance north south connectivity. These will not be formal rights of way as the land will be subject to ongoing farming/management so more flexibility is needed for these routes, but public access will be secured through the S106 Agreement for any proposal.

Amenity routes will be provided within the site to provide pedestrian access primarily for use by employees although public access will be provided for these routes.

FIGURE 11. MOVEMENT FRAMEWORK DRAWING

Improved accessibility will be achieved on site through the following:

- Improved pedestrian routes on and off site to connect to existing rights of way and connections, comprising new permissive routes and amenity routes within the site
- Provision of a shared pedestrian and cycle route along-side the new estate road
- Opportunities to enhance cycle links off site to encourage cycle culture
- Enhancement of bus provision to the site
- Provision of a Mobility Hub including EV charging points, car share schemes, bus stops for shuttle bus and ancillary facilities

MOBILITY HUB

The changing technology and patterns of personal mobility will be supported by the provision of the on-site mobility hub. The mobility hub will be located in a visible and accessible location within the site. This will provide travel information and be adjacent to facilities for public transport and active travel modes together with community facilities where appropriate.

PEDESTRIAN AND CYCLE ACCESS

An interconnecting network of pedestrian and cycle routes will ensure that the development has a high level of permeability, which promotes direct access to Kettering Energy Park.

The proposal will include the provision of a shared footway and cycleway, alongside the main estate road and will include a cycle connection providing accessibility through to Burton Latimer. This will have some form of control along its route to limit vehicular access to emergency vehicles, which will be detailed at application stage.

Opportunities to connect to off-site cycle / bridleway infrastructure will be detailed at application stage with the objective of increasing the potential for cycle access to the site, reducing car dependency and improving sustainable transport opportunities for the local communities and future users.

BUS NETWORKS

There are currently limited opportunities within the vicinity of the site to travel by bus. It is therefore proposed to improve bus connectivity to the site as part of a sustainable transport strategy.

Options for improved bus provision that will be considered include the extension of existing routes or a site specific shuttle bus offering links to Kettering and Wellingborough Railway Stations, which could potentially be extended to other locations as required.

The proposed strategy to improve bus connections will be based upon anticipated operational requirements of new businesses and take account of times of highest demand such as shift change times.

If a shuttle bus service was provided then an indicative route for this is illustrated in Figure 13. A detailed strategy for enhanced bus provision will be prepared to support a future planning application.

Improving connectivity to the site will reduce reliance on private car trips, support new businesses at the site and contribute to a more sustainable form of development.

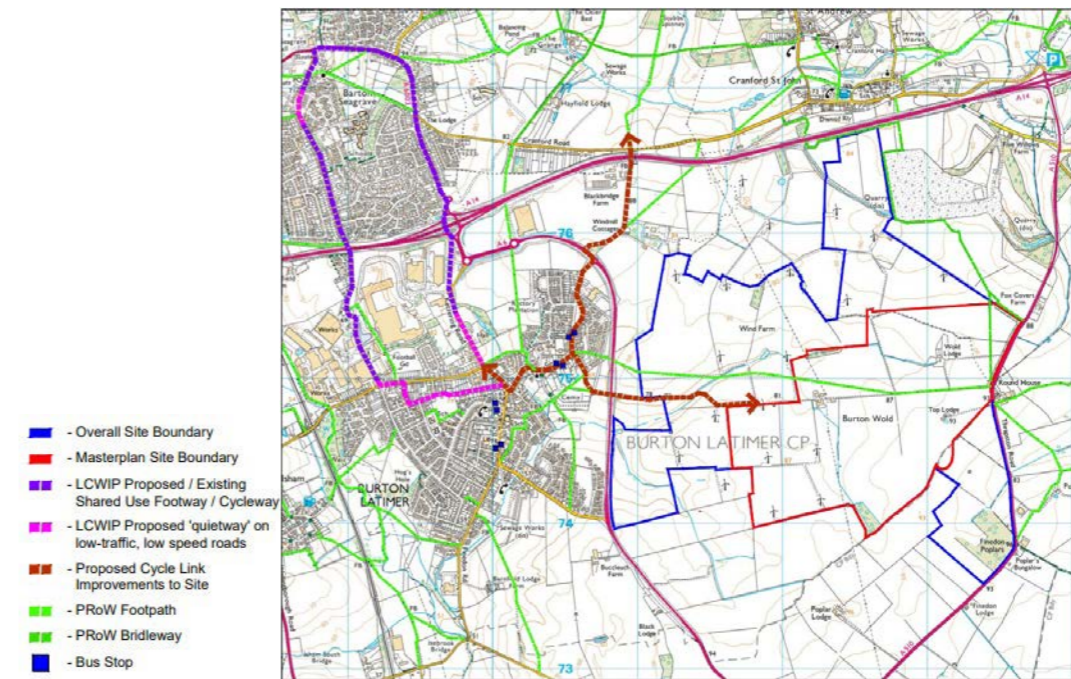


FIGURE 12. SITE ACCESSIBILITY PLAN

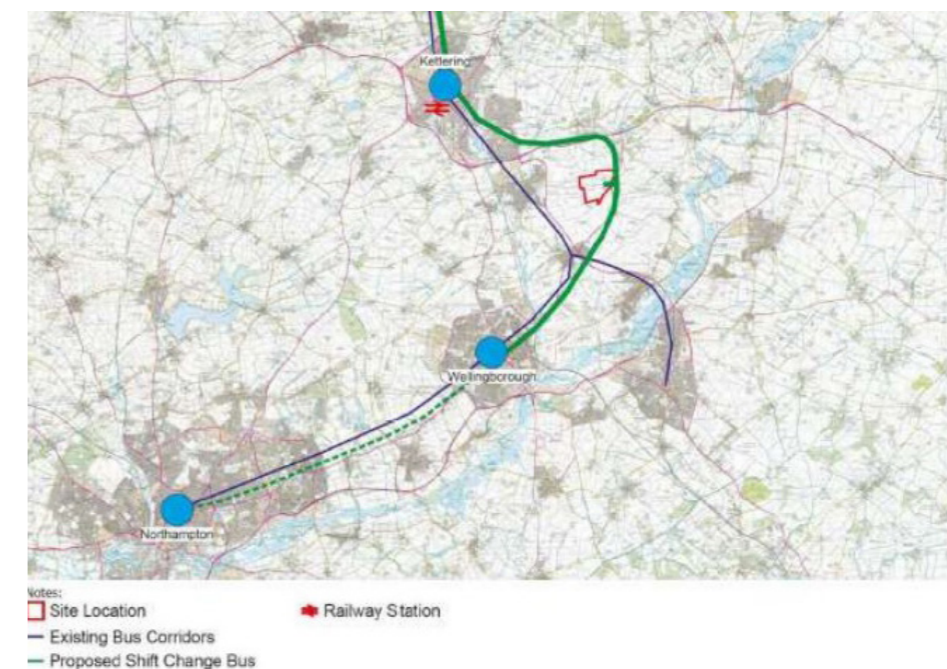
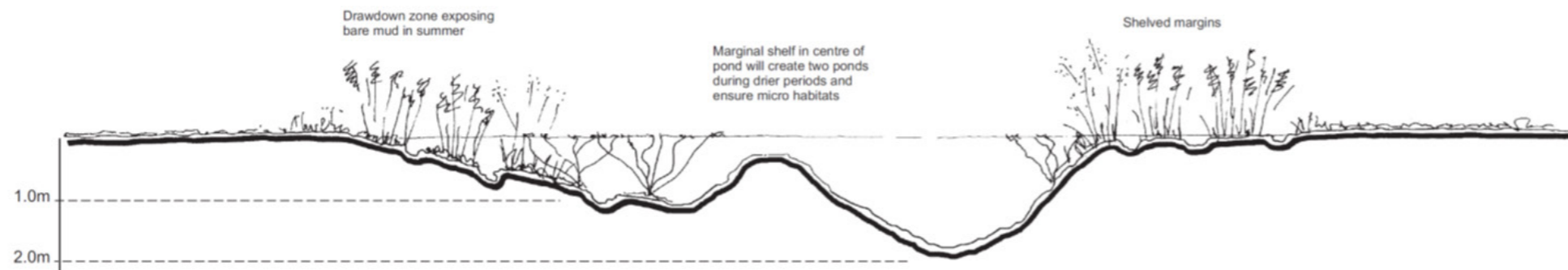


FIGURE 13. BUS ROUTE PLAN

12. DRAINAGE STRATEGY

THE SITE IS WITHIN FLOOD ZONE 1, WITH A LIMITED AREA OF THE AREA OF SEARCH FALLING WITHIN FLOOD ZONE 3. WHILST THE SITE IS AT LOW RISK OF FLOODING A SURFACE WATER DRAINAGE STRATEGY WILL BE NEEDED AS PART OF ANY DEVELOPMENT PROPOSALS. THE PROPOSED SURFACE WATER DRAINAGE WILL AIM TO MIMIC THE EXISTING SITE BY BEING COGNISANT OF THE PRE-DEVELOPED CATCHMENT AREAS AND BY RESTRICTING FLOWS BACK TO EXISTING GREENFIELD RUNOFF RATES. THE DRAINAGE APPROACH WILL BE CO-ORDINATED WITH THE LANDSCAPE AND BIODIVERSITY STRATEGIES.



The site is located within the study area of the Ise River Partnership and therefore complies with the objectives of the River Ise Strategic Plan which aims to enhance the quality of the Valley's Natural environment, strengthen it's natural capital and develop it's ecosystems. The site is located within the study area of the Ise River Partnership and therefore complies with the objectives of the River Ise Strategic Plan which aims to enhance the quality of the Valley's Natural environment, strengthen it's natural capital and develop it's ecosystems. Efforts have been made to ensure that the environment within the Oxford Cambridge Arc is protected, restored and enhanced as per the Shared Regional Principles. Sustainable drainage systems (SuDS) will be utilised across the site to control the surface water such as ponds and swales offering not only water quantity & quality benefits but amenity & biodiversity ones as well.

The Hydroponic area will collect rainwater at source, storing and re-using water for growing plants/crops. Elsewhere, the strategy is for rainwater to be carefully managed, collected, treated, and stored locally to individual plots. Final downstream SuDS features could then be used for water polishing, providing additional storage with restricted outfalls into the surrounding water courses.

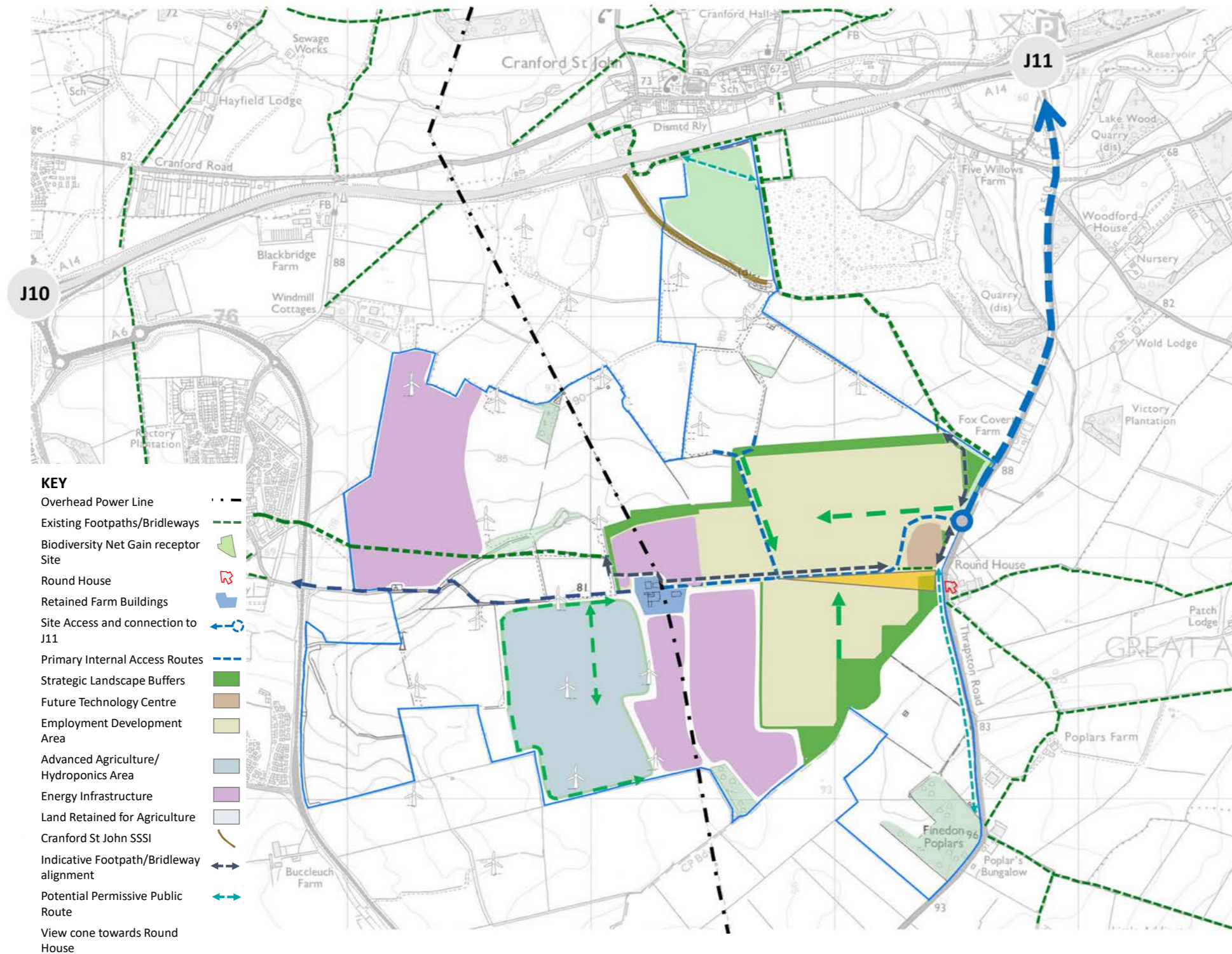
To ensure the development does not put surrounding areas or itself at greater risk of flooding, attenuation features are proposed to accommodate storms up to the 100yr + climate change event.

Areas such as HGV parking & dock areas will incorporate treatment such as oil separators, ensuring surface water is adequately treated in combination with other SuDS features before outfalling to the surrounding watercourses.

A variety of attenuation basins and features will be provided at the site; some will drain, whereas others will retain a minimum level of water to create different habitat areas to support biodiversity. The basin design will be co-ordinated with the landscape architect and ecologist so that these form multi-function assets for the development.

13. MASTERPLAN FRAMEWORK

THE OVERARCHING VISION FOR THE KETTERING ENERGY PARK IS TO CREATE A SUSTAINABLE AND ATTRACTIVE LOCATION WHICH PRESERVES THE NATURAL ENVIRONMENT AND SUPPORTS THE LOCAL ECONOMY THROUGH THE PROVISION OF EMPLOYMENT SERVICES AND RENEWABLE ENERGY SOURCES.

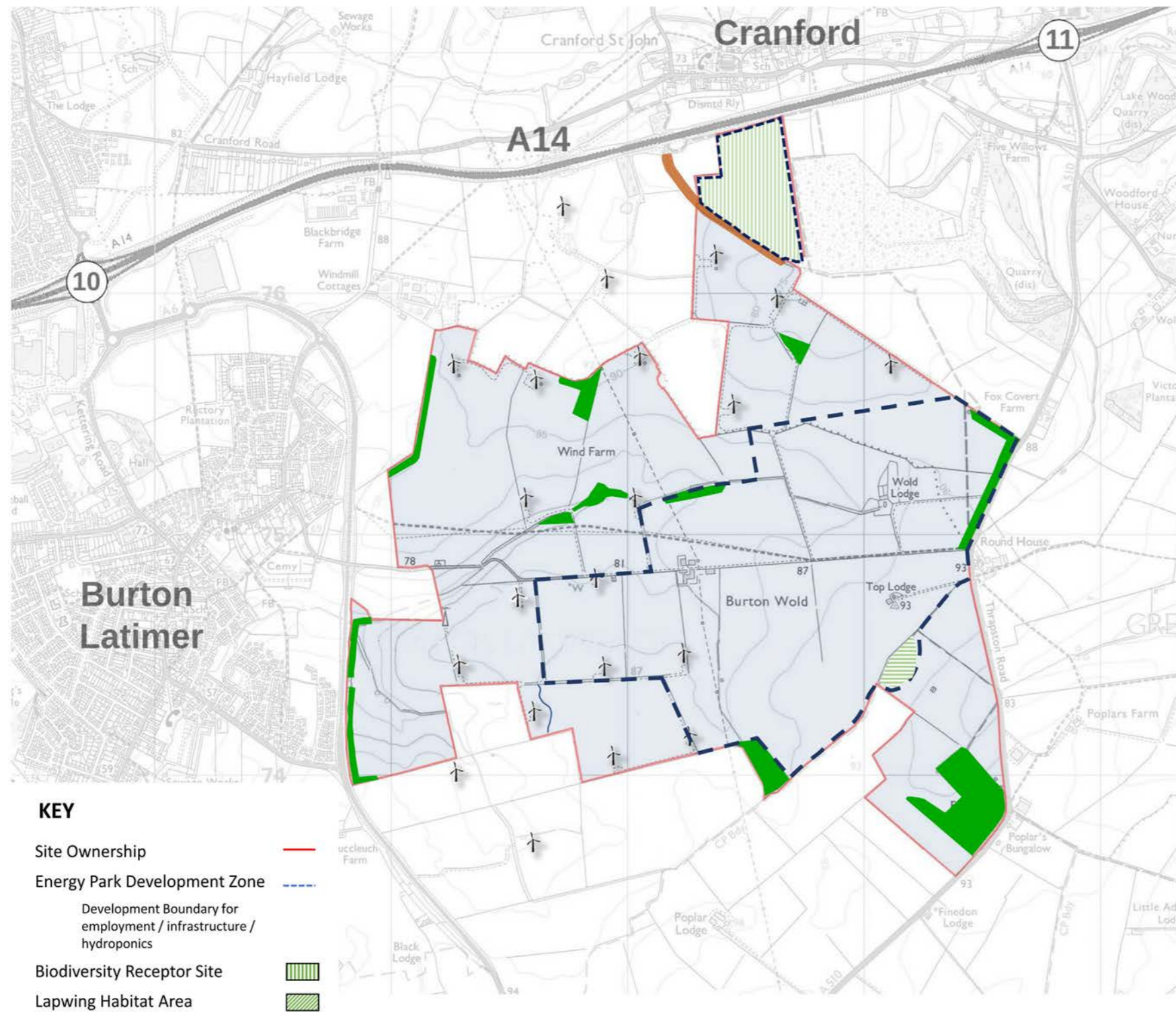


The key components of the Masterplan framework are set out on Figure 13 to identify the type of development that could come forward at different parts of the site. This has been informed by the assessment work and the opportunities and constraints that have been identified.

The framework is intended to provide an adaptive and flexible base to support development at the site. The subsequent sections provide more detail on how this framework will be implemented, identifying parameters and requirements for mitigation or more detailed assessment.

FIGURE 14. MASTERPLAN FRAMEWORK PLAN

14. DEVELOPMENT BOUNDARIES

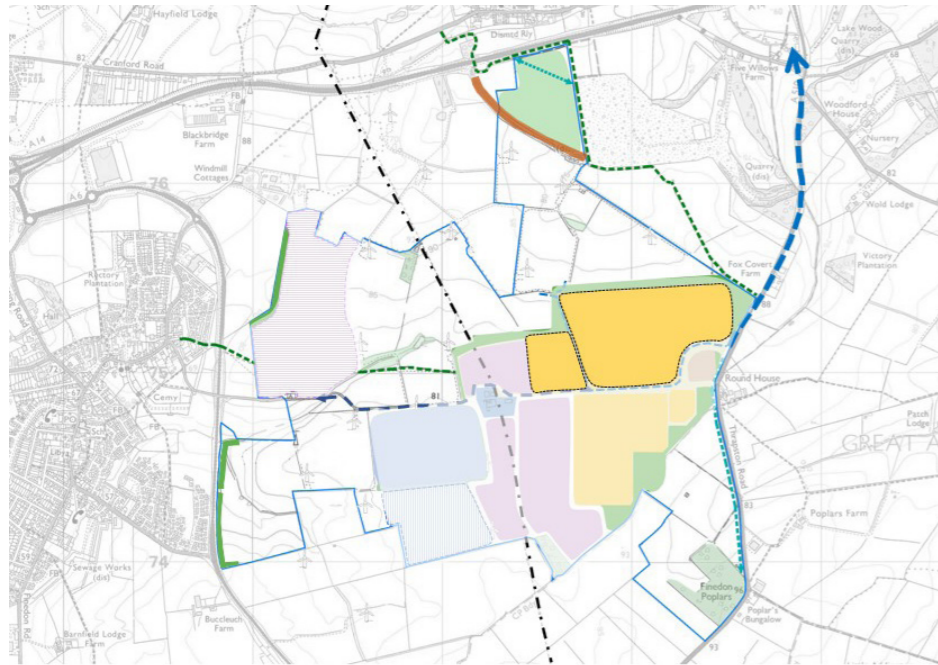


The proposed boundaries for the Energy Park have been identified and are illustrated on Figure 14. These boundaries include areas for consented and proposed Solar PV, areas for energy infrastructure, employment development, advanced agriculture, landscape buffers, and land needed for biodiversity enhancement.

FIGURE 15. DEVELOPMENT BOUNDARIES

15. DEVELOPMENT ZONES

The proposed development zones at the site are set out below with further information on the scale of development that would be appropriate in these zones.



EMPLOYMENT ZONE NORTH

The Employment Zone North is the area of the site located to the north of Wold Road and forms the lower part of the main employment area. This lends itself to the development of larger footprint employment units if demand is present for such occupiers. Whilst the height of new development would generally be expected to be in the region of circa 25-27 metres, there may be instances where additional height is needed by occupiers.

The existing public footpath is located in this northern area and the route of this will need to be amended to facilitate the development. Any amended route will seek to minimise the length of any diversion and provide an appropriate route. Any formal diversion will be subject to an application to amend the Definitive Map following the planning stage.

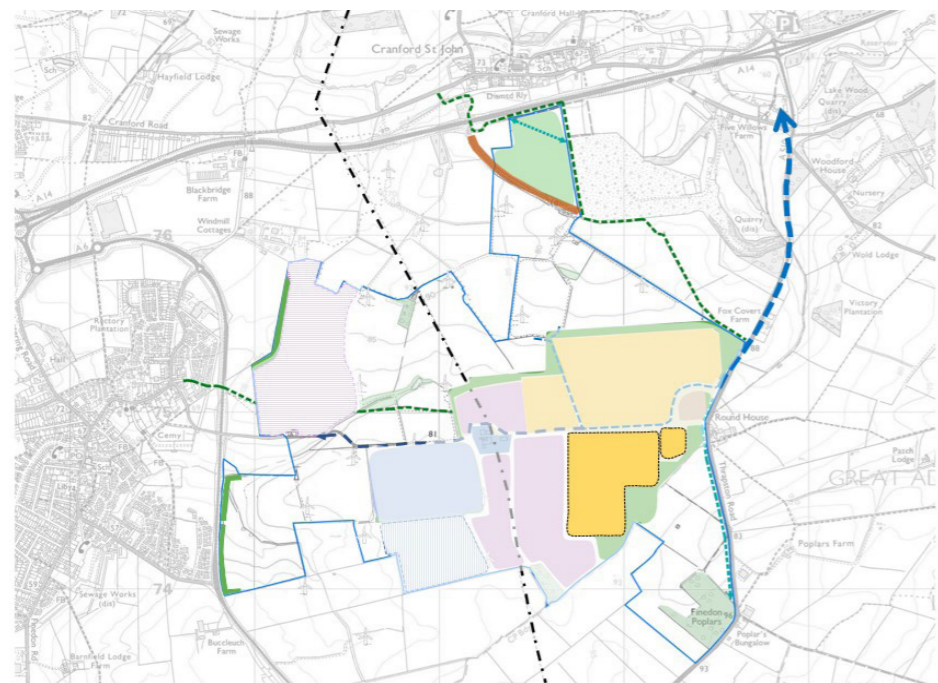
Development in this area will also need to ensure that access is maintained to the wind turbines for maintenance purposes. It is proposed that the existing track running to the north from Wold Road is upgraded to form part of the estate road network to provide access to the new development, continuing north for access to the turbines.

Development of this area will include new buildings, areas for car parking and service yards as well as on-plot soft landscaping to support biodiversity and connect the different areas of habitat together. The on-plot landscape will break up the development, provide more screening where possible, provide amenity areas for employees and accommodate drainage infrastructure.

Anticipated Building Heights: Maximum 21-25 metres from Finished Floor Level

Maximum Floorspace: Initial feasibility work identifies that circa 178,900 sq m of floorspace could be accommodated at this part of the site (not including mezzanine)

Appropriate Uses: Class E (research & development, light industrial), B2 & B8



EMPLOYMENT ZONE SOUTH

The Employment Zone South is the area located to the south of Wold Road and forms the slightly higher part of the site. The Round House is also located to the east on the other side of the A510. Development on this part of the site will therefore need to respond to these features. This part of the site accommodates zones for different heights, with strategic buffer zones to the east and along the southern boundary. The buffer zone to the east will provide an appropriate outlook from the Round House, with development set back from the A510. Taller landscape features and tree planting will also be set back into the site adjacent to the development plot to screen new buildings whilst maintaining a more open character opposite the Round House. Views towards the Round House will be maintained with a view cone respected where buildings will not be allowed, although landscape features and smaller structures (e.g. substations, cycle shelters etc) will be permitted. As part of the landscape provision, a habitat area for Lapwing of 3Ha in size will be provided at the southern boundary.

The strategic landscape buffers to the southern and eastern boundary will help to screen the development and also to ensure that the setting of the Round House is not significantly affected. Building heights in the eastern part of the site opposite the Round House will be limited to a maximum of 18 metres, with higher buildings to the west as the landform falls away in height away from the A510.

This employment zone will extend into part of the consented solar farm area to the west, which will optimise the flexibility of this zone to provide employment units. This will not result in the loss of power capacity compared to the consented solar farm as the revised solar farm site will be rationalised and provide the same level of power capacity as the consented layout.

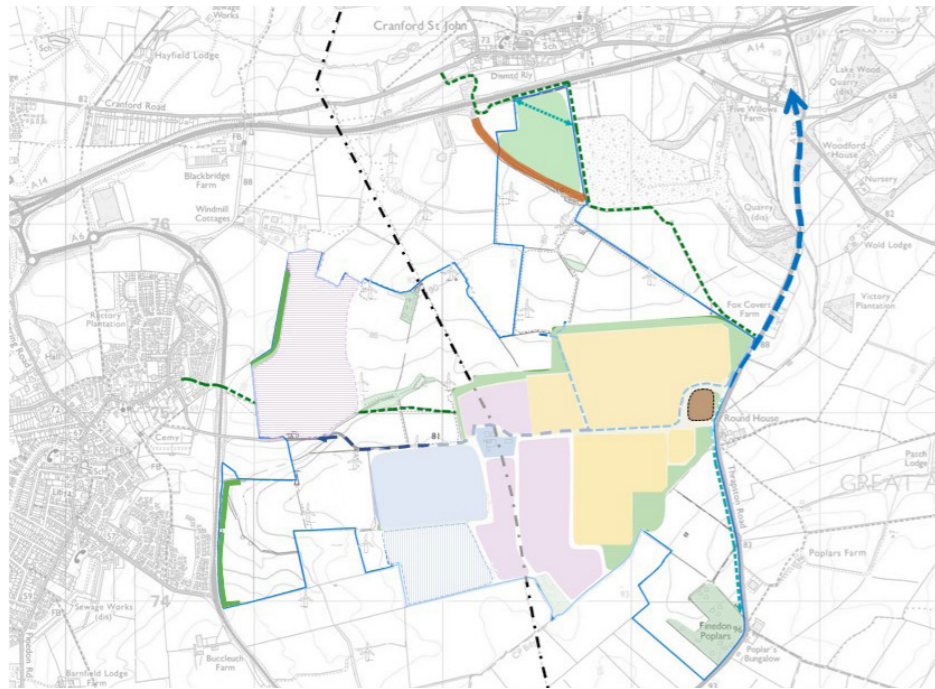
This part of the Energy Park could support circa 116,200 sq m of floorspace.

Anticipated Building Heights: Maximum of between 12 metres and 25 metres from Finished Floor Level

Maximum Floorspace: Initial feasibility work identifies that circa 140,000 sq m of floorspace could be accommodated at this part of the site (not including mezzanine)

Appropriate Uses: Class E (research & development, light industrial), B2 & B8

DEVELOPMENT ZONES



FUTURE TECHNOLOGY CENTRE

The Future Technology Centre is at the gateway to the Energy Park site and will be home to smaller scale development, with a focus on development that aligns with technological advancement and the transition to a low carbon society. Uses such as EV charging facilities or office, research and development, light industrial uses including potential lab spaces would be appropriate at this part of the site.

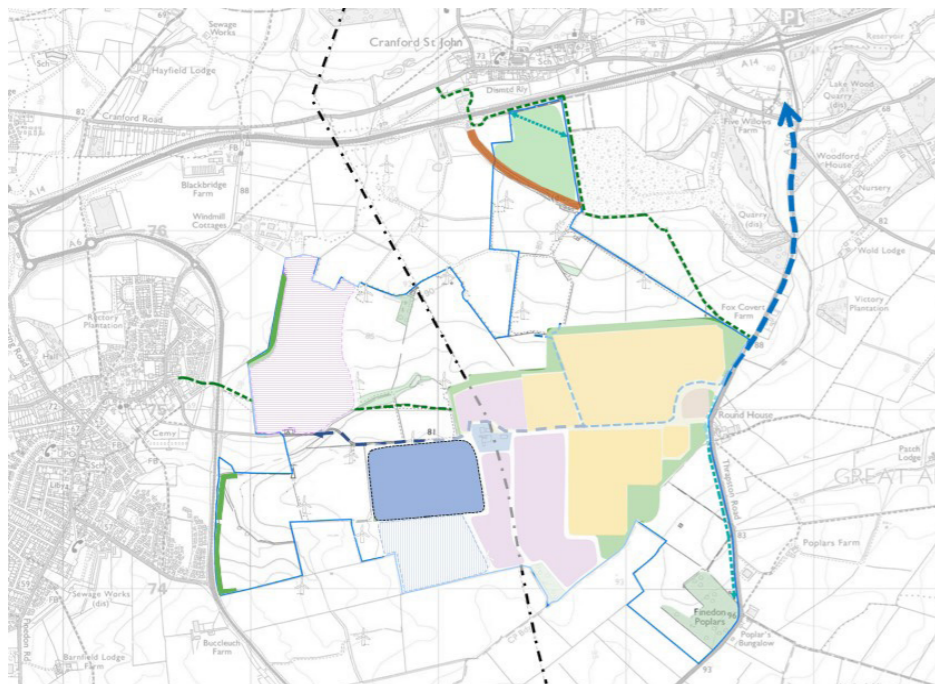
This area is also seen as being the best place to accommodate communal facilities for the Energy Park such as the Mobility Hub and management offices. The potential to accommodate some form of visitor centre will also be explored. This part of the site could also accommodate ancillary uses that could support the wider operations at the Energy Park, such as a café or childcare facilities.

This smaller scale development is best suited to this location as it is immediately opposite the Round House, having the ability to break up the form.

Anticipated Building Heights: Maximum 13 metres from Finished Floor Level (c. 3 / 4 storeys).

Maximum Floorspace: Initial feasibility work identifies that circa 6,900 sq m of floorspace could be accommodated at this part of the site.

Appropriate Uses: Class E (office, research & development, light industrial), charging infrastructure, ancillary uses (e.g. café, childcare), transport facilities (e.g. Mobility Hub), visitor centre/educational resource.



ADVANCED AGRICULTURE/HYDROPONICS

The advanced agriculture area can take many forms, covering glasshouses of various sizes to more industrial-looking units with less glazing. The key principle behind them is that they provide an environment where heat and light can be closely monitored and controlled and the nutrients that plants require can be tailored to the specific crop that is being grown. The benefits of a hydroponic system are:

- Greater Quality Control
- Extended growing season
- Less reliance on imports
- More efficient use of water and less reliance on soil as a growing medium
- Greater yield of crops
- Fewer food miles in the supply chain

The most well-known hydroponic system in the UK is Thanet Earth where salad crops are being grown, but the type and range of systems are growing at a considerable rate with industrial units being used to grow herbs and salads close to urban areas to supply the restaurant and hospitality trade. To indicate the form of hydroponics that could potentially be installed, the example of gashouse at Thanet Earth has been used, which comprises large glass houses with associated basins that collect rainwater runoff for use in the hydroponic system. The Thanet Earth example is powered by a combined heat and power plant, but it is the intention that any hydroponic system at the Energy Park could be powered by the on-site renewables potentially in combination with businesses that generate excess heat.

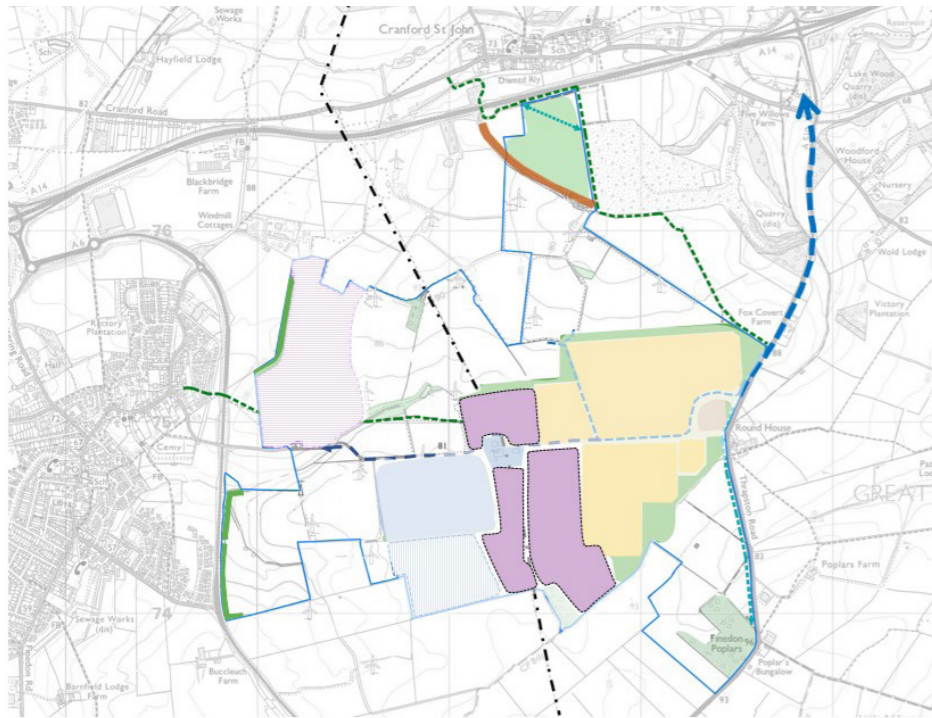
The Hydroponic area covers 27 HA. An additional 20 HA of land will be available for future hydroponic use.

Anticipated Building Heights: Maximum 8 metres from Finished Floor Level.

Maximum Floorspace: Subject to detailed layout, and operational requirements.

Appropriate Uses: Agricultural use in association with glasshouses, poly-tunnel type structures, using hydroponic or other advanced agricultural systems as well as associated development including cold stores, packing areas, agricultural based research, employee facilities. Any proposals for cold stores or other storage and distribution facilities associated with the hydroponics/advanced agriculture uses would form part of the overall employment provision at the Energy Park and would not be in addition to that provided on the North and South Employment Zones.

DEVELOPMENT ZONES



ENERGY INFRASTRUCTURE

New Energy Infrastructure is best located adjacent to the employment zones and close to the overhead power lines, which are the end use points of the energy. A new point of connection will be provided adjacent to the overhead power lines to allow the import and export of energy from the grid. Battery storage will be an important part of the infrastructure to make best use of the renewable energy and to smooth flows across the Grid.

A range of energy infrastructure could be suitable at the site, although at the present time this is considered to be best suited to additional solar PV and battery storage to increase resilience and energy security. There is the potential for hydrogen related energy infrastructure to be located at the site, either to connect to new networks in the area or from on-site generation from the renewable energy sources, however hydrogen technology is still subject to research to establish the contribution it can make to the transition to a low carbon society.

The site includes two areas that already have planning permission for solar farms. Solar Farm A is adjacent to the proposed Employment Zone South and this will be rationalised to make best use of the land to optimise the development of the employment zone.

Solar Farm B is located to the west of the Masterplan area adjacent to the A6.

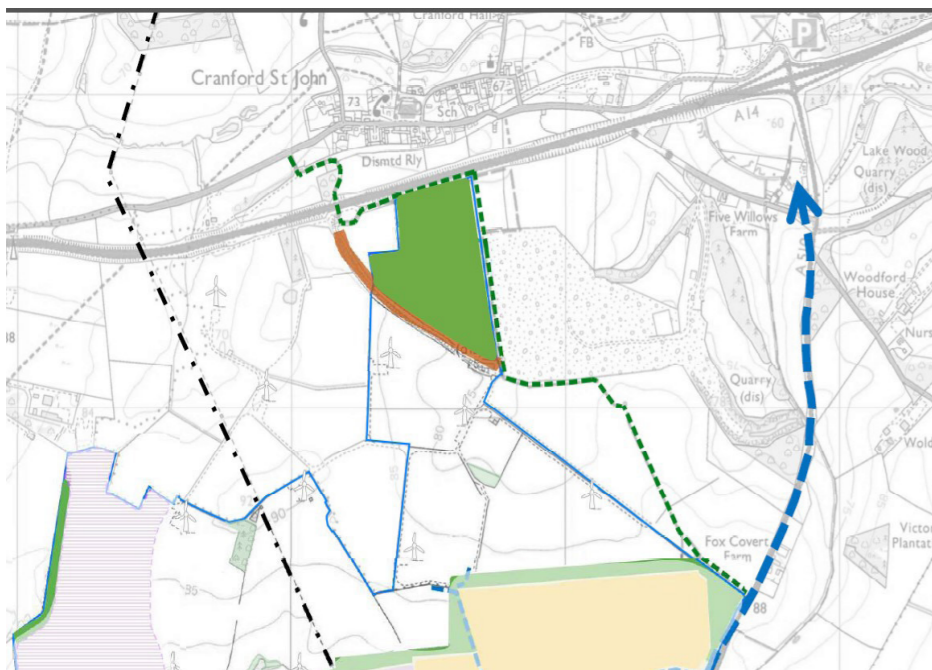
It is anticipated that the Grid Connection will be located directly underneath the overhead power lines to the north of the retained farm buildings.

The site benefits from 21 wind turbines that measure up to 110m. The existing turbines are functional and viable, even after operating for many years. Applications can be made to extend their lifetime and re-gear them to replace the turbines to more modern and potentially more efficient operations.

Anticipated Heights: Variable depending upon infrastructure requirements

Maximum Floorspace: N/A

Appropriate Uses: Sui Generis energy related uses – solar pv, air source heat pumps, hydrogen generation (B2 use) from on-site renewable energy, battery & energy storage, Combined Heat and Power (from renewable/clean sources) substations and infrastructure to connect to the national grid, as well as other appropriate energy uses. Biomass and anaerobic digestion are not considered to be appropriate uses. Whilst there are no proposals to accommodate additional wind turbines at the Energy Park site, the existing turbines may be re-gearred to improve their efficiency or have their life extended by amendments to the time limits of their permissions. This approach will make best use of the embodied carbon used in their construction to allow them to continue their energy generation into the future.



BIODIVERSITY NET GAIN RECEPTOR SITE

The Biodiversity Net Gain Area is adjacent to the Cranford geological SSSI and is on the former overburden from the open cast mining that revealed the geological feature. This area is poor quality agricultural land and is used for grazing and can be enhanced with relative ease to improve its biodiversity value. This area has been selected as a receptor area to provide a biodiversity net gain for the masterplan area to achieve a minimum net gain of 10%, with a target to reach 15%. A management regime will be prepared for this site to identify the steps needed to secure the proposed net gain.

Anticipated Building Heights: N/A

Maximum Floorspace: N/A

Appropriate Uses: N/A

16. PROPOSED USES

The proposed uses at the site are those which will make good use of the renewable energy at the site and are set out below. The parts of the site that are suitable for these uses are illustrated on Figure 15. A criteria for future employment development and use classes has been proposed to ensure the Masterplan can attract the types of industries and workforce that will complement the vision of the Masterplan, and demonstrate that renewable energy is at the heart of the proposals.

ENERGY INFRASTRUCTURE

Additional Energy Infrastructure will be provided at the site to supplement the existing wind turbines and Solar PV farms that have already been consented. Appropriate infrastructure includes:

- Infrastructure to form a point of connection to the National Grid through overhead power lines
- Battery storage to help equalise energy supply to the Energy Park and the National Grid, offering strategic balancing services to enable maximum renewable deployment in the region
- Additional ground mounted Solar PV
- Potential for hydrogen based infrastructure to be incorporated
- Potential for sustainably powered CHP
- Air Source Heat Pumps
- Other suitable technologies that could be accommodated at the site in an appropriate manner
- Re-gearing or extending time limits for existing wind turbines

Uses Not Suitable

Energy infrastructure including biomass, anaerobic digestion and additional wind turbines at the site are not considered appropriate as part of the energy park proposals.

EMPLOYMENT

The Energy Park has the potential to provide new premises that will create diverse and innovative workplaces. It is proposed that the Energy Park will create an environment and facilities designed to attract innovators and pioneers in the green economy, and also provide capacity to accommodate businesses struggling to find space in areas of high demand such as Cambridge. It is proposed that employment uses that have a high energy demand or that are associated with the transition to a low carbon society and economy will be accommodated at the site, to include the following:

- Stand-alone offices (Use Class E)
- Research and Development (Use Class E)
- Light Industrial (Use Class E)
- Manufacturing and Industrial (Use Class B2)
- Storage and Distribution use with high energy demands (Use Class B8)
- Data Centres

All new buildings at Kettering Energy Park will target BREEAM 'Excellent' and have EPC ratings of 'A' to ensure they are energy and water efficient so that best use is made of the renewable energy. It is also proposed that additional Solar PV will be included on the roof space of new buildings.

There has been considerable demand from B8 occupiers over the last few years, especially for larger units that have a good power supply and the ability to reduce their carbon footprint during operation. This site can accommodate large units and benefit from access to renewable energy infrastructure so it will be attractive to occupiers with higher energy demands.

AGRICULTURAL PRODUCTION

Some energy dense operations that could be accommodated at the site, such as manufacturing or cold storage uses, produce usable heat as a by-product. Whilst the site is too far for this to be used to serve other areas in the vicinity of the site, it could be used to serve advanced agricultural or hydroponic uses where these may have a heat requirement.

There is therefore an opportunity to attract high tech food production through hydroponics which utilises the on site energy and potentially waste heat where produced by operations at site.

EMPLOYMENT USES ENERGY CRITERIA

- A key part of the Energy Park proposals includes the provision of new energy efficient employment space at the site. It is the intention that new premises built at the site will be for businesses that have high energy demands or which are associated with the transition to a low carbon economy or society. Any business wanting to come to the Energy Park will therefore need to meet the criteria for the Energy Park before they can take occupation of any new premises.

The criteria has been prepared following consultation with North Northamptonshire and the South East Midlands Local Economic Partnership.

The proposed criteria that businesses coming to the Energy Park will need to reach is set out below, with any business/occupier needing to meet all three of the below criteria. For the avoidance of doubt this encompasses – Criteria 1 (part a, b, or c - or any combination thereof), Criteria 2 and Criteria 3

1. The proposed operations are associated with activities related to:

a. Energy infrastructure, potentially including: Solar, CHP (if sustainably powered), hydrogen, air source heat pump, battery storage and other appropriate technologies (biomass is excluded from this list);

b. Automation of operations, e.g. manufacturing using robotic assistance / automated processes, logistics and distribution operations using intelligent robotics, automated scanning or picking, as well as measures that can increase efficiency and productivity; and/or

c. Engineering, manufacturing, R & D or other operations linked to low/zero carbon sectors or the transition away from fossil fuel dependency.

2. A minimum of 50%** of the energy demand from operations within the new unit is provided by the on-site renewable infrastructure;

***The renewable energy produced at the site is considered to be capable of providing up to 100% of the operational energy needs, however due to solar and wind being intermittent sources of energy 50% is stated as a minimum.*

3. Every Unit will have access to a minimum power supply based on the ratio of 1MW per 100,000sq ft/9,290sq m.

*Please note this criteria does not apply to uses such as visitor centre, education, or ancillary uses for café/childcare.



PROPOSED USES

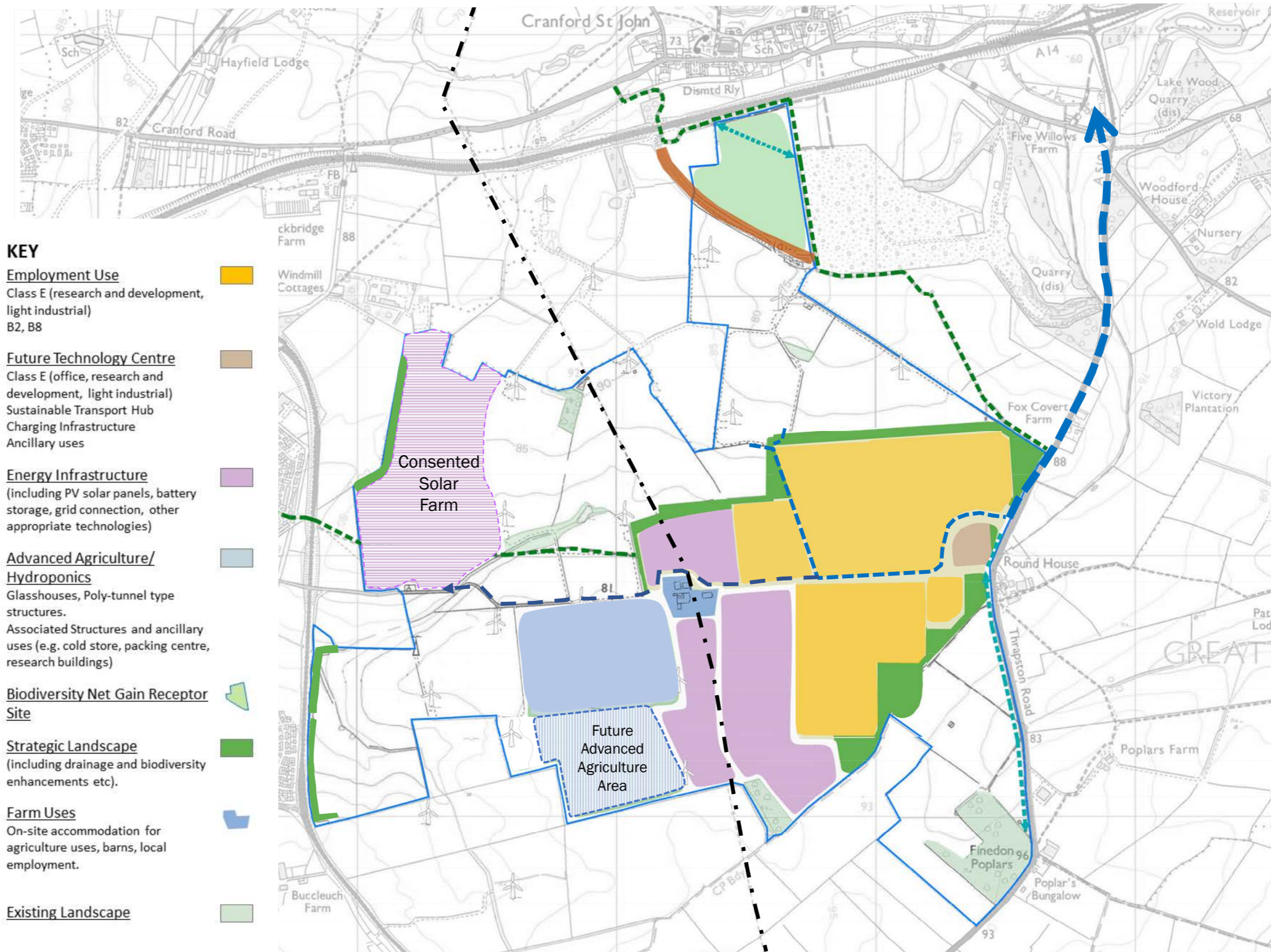


FIGURE 16. LAND USE FRAMEWORK

17. BUILDING HEIGHTS

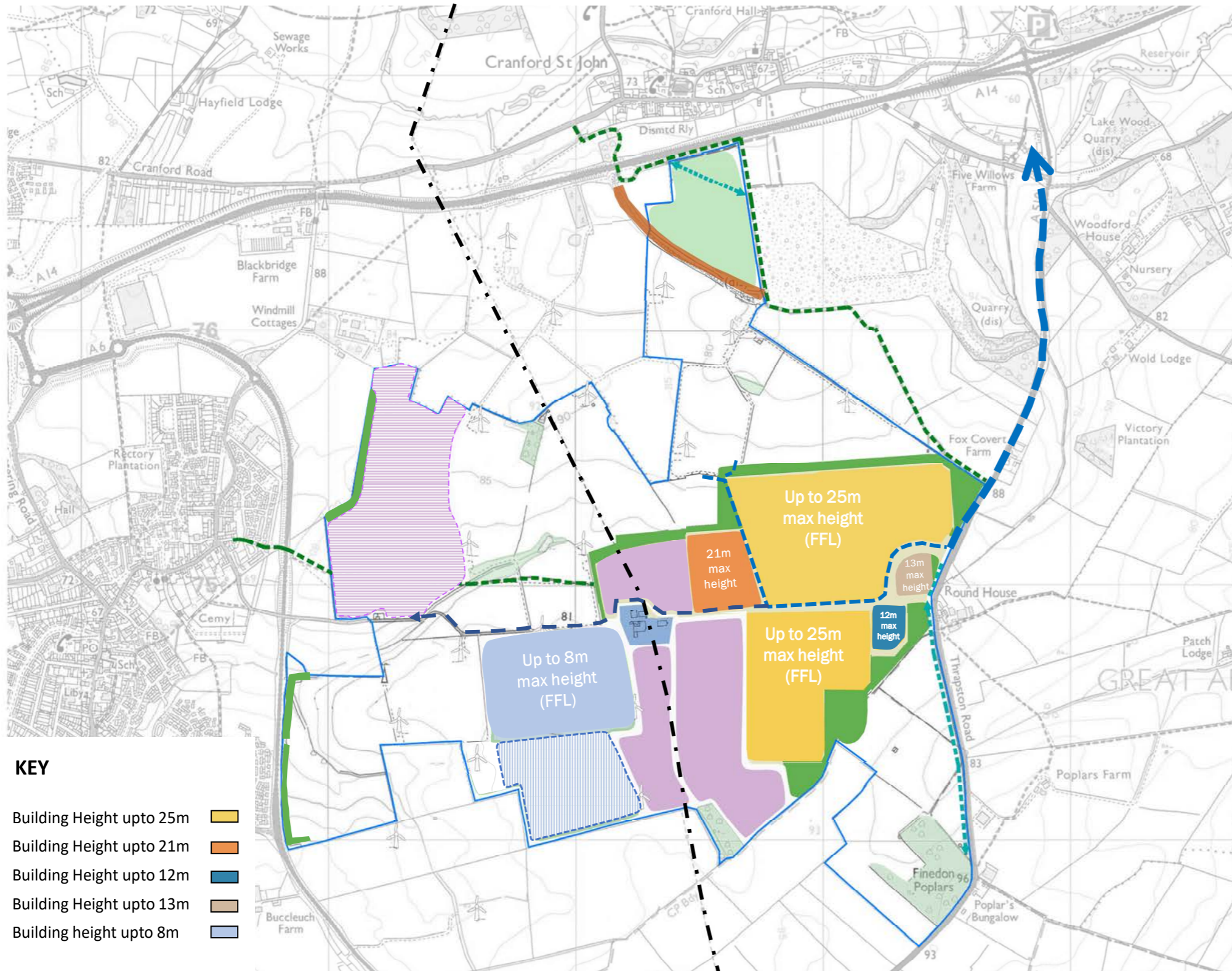


FIGURE 17. BUILDING HEIGHTS - 'FFL' REFERS TO FINISHED FLOOR LEVEL

One of the objectives for the Energy Park is to minimise the effects on the surrounding landscape. It is acknowledged that the Energy Park proposal will introduce built form and areas of hardstanding on what is currently open farmland, so landscape buffers have been identified to provide screening and soften views towards the site.

Building heights have also been considered to locate lower heights to the east and south where site levels are higher and the setting of the Round House needs to be respected.

The heights of the employment units respond to demand whilst providing flexibility to accommodate a range of occupier requirements. There is scope for taller buildings to be accommodated on the northern part of the site which was assessed as having lower site levels and lower sensitivities. The heights of the proposed buildings are illustrated on Figure 16 and will be assessed as part of a Landscape and Visual Review. Further details on landscape approach is provided in Section 9.

The landscape and visual impact of the proposals will be assessed at application stage through preparation of the Landscape and Visual Impact Assessment.

18. SUSTAINABILITY

THE UK GOVERNMENT IS DEVELOPING POLICIES RELATING TO INFRASTRUCTURE, INNOVATION, AND INVESTMENT TO ENABLE OUR ECONOMY TO GROW IN A GREENER, MORE SUSTAINABLE WAY. THE ENERGY PARK AIMS TO BE AT THE FOREFRONT OF THIS AGENDA, PLAYING AN IMPORTANT PART IN CREATING SUSTAINABLE JOBS, SUPPORTING INNOVATION IN THE GREEN TECH SECTOR, SUPPORTING BIODIVERSITY AND WORKING TOWARDS NET ZERO.

The key objective of the Energy Park project is to make use of the on-site renewable energy through the co-location of employment and hydroponic uses and to supplement this with additional infrastructure to support low/zero carbon development. Other features that will contribute to the sustainability of the project are set out below:

1. The availability of renewable sources of energy together with improving grid energy security will enable businesses with high energy needs to invest long term at Kettering Energy Park
2. Provision of charging infrastructure for Electric Vehicles
3. Potential for Green Hydrogen and Charging Infrastructure
4. Enhancement of sustainable transport opportunities to and from the site
5. Support for Biodiversity providing a net gain following development
6. Sustainable urban drainage features such as ponds and drainage channels to mitigate the effects of climate change of up to 70 years as part of a holistic approach to landscaping and biodiversity
7. Providing a community fund to support local initiatives related to energy and sustainability
8. Improving public access and supporting cycling and walking

SUSTAINABLE EMPLOYMENT BUILDINGS

The employment buildings at Kettering Energy Park will target BREEAM Excellent. They will have the smallest possible embedded carbon footprint and incorporate the following:

Building Efficiency

- Locally sourced sustainable materials where possible
- Off-site efficient manufacturing
- Recycled components aggregate
- Recycling of construction waste
- Use of unbonded materials
- Recycled yarn carpets
- Considerate Constructors Scheme

Energy Efficient Operation

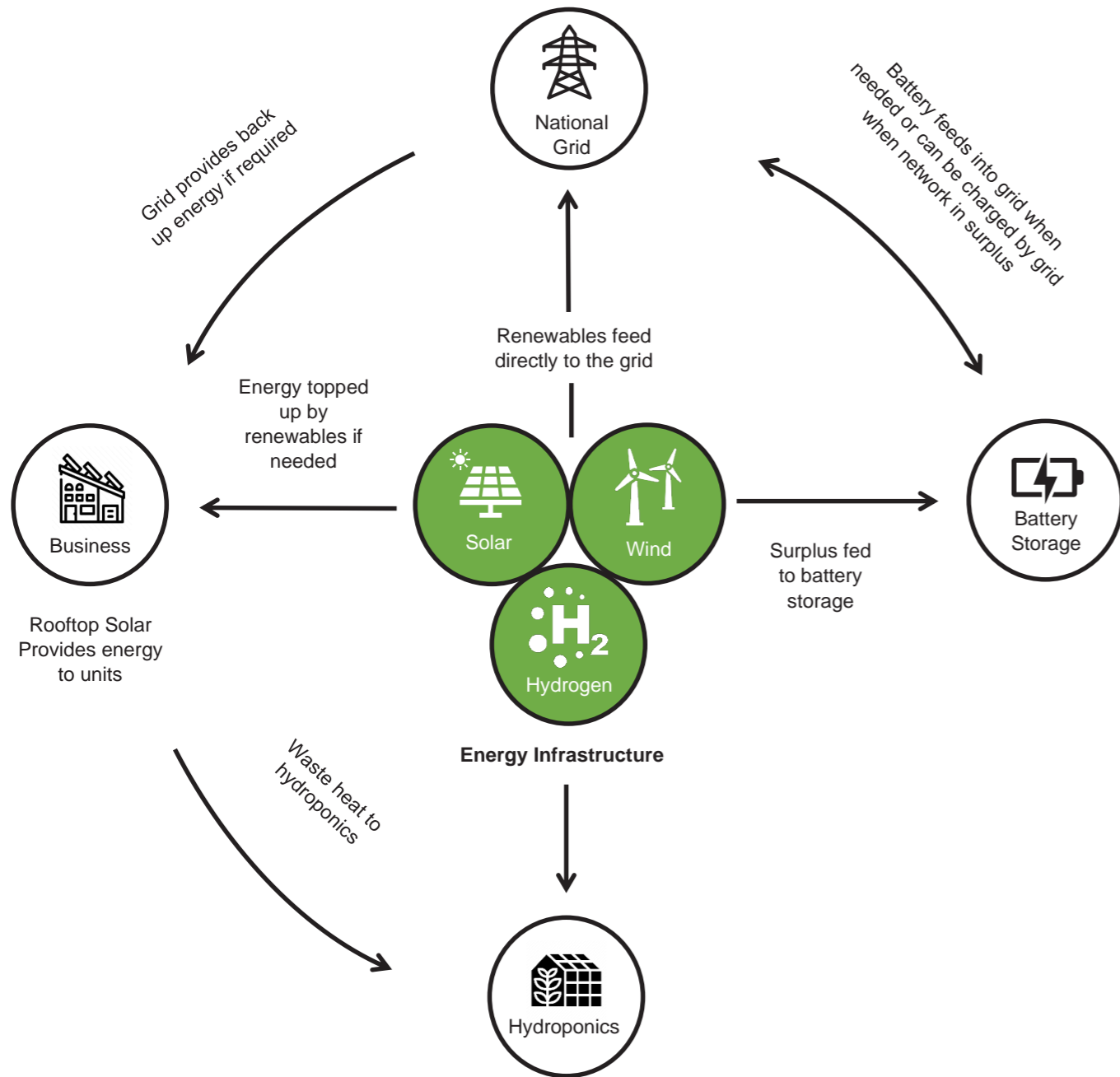
- Class A energy certificate
- 15% roof lighting
- LED Sensor lighting
- LED Sensor lighting
- Very high insulation and air tightness
- 10% active EV car charging points with ability to increase in future

Water Efficiency

- Rainwater harvesting
- Water conserving sanitary ware
- Water saving taps
- Water leak detection system

Robust Building Form

- Flexible Buildings with large interior volumes to accommodate range of activities
- Ability to sub-divide or add mezzanine floors if required
- Construction techniques to allow replacement of building elements and recycling at end of life. The above measures support the transition to a low carbon future taking a proactive approach to mitigate and adapt to climate change



ADVANCED AGRICULTURE/HYDROPONIC USES

The Hydroponic uses will have limited demand for energy although there will be a heat requirement which could be provided from excess heat generated at the Energy Park. Water for the hydroponic uses will be provided by a rainwater harvesting system although a backup is likely to be required. The proposed hydroponic uses will likely have large elements of glazing, ETFE materials or similar to provide light and a controlled environment that allows photosynthesis to occur using as lightweight structures as possible to minimise the materials needed in their construction.

19. BUILDING DESIGN PRINCIPLES



SITING & LAYOUT PRINCIPLES

- The layout and orientation of each building should be designed to contribute to a sense of place and identity for the Energy Park, including safe access and clear wayfinding through the site from the arrival point;
- Each plot layout will be designed to make efficient use of the available site whilst not restricting comprehensive development of the wider Energy Park;
- Unless dictated otherwise by the client's brief, offices shall face public routes within the site, for the purposes of access, place making, occupier amenity, and visual appearance;
- Service areas are to be generally of a minimum depth of 50 metres, which is an industry standard, unless the client brief for individual plots determines a different depth;
- Loading areas, where possible, should be located away from the estate road frontage, unless it is deemed necessary by the operational brief or by the site's orientation. Where service or loading areas do face the estate road then measures should be provided to avoid adverse visual or acoustic impacts;
- Where possible, the layout of buildings should maximise views out to the wider countryside from within the site, making visual and physical connections to enhance the sense of place, particularly towards the Round House;
- Plot and building layouts should take account of Building Regulations requirements for Fire Brigade access from an early stage in the design process;
- Employment buildings will generally have ancillary office provision of between 5-15%

SCALE PRINCIPLES

- To avoid adverse visual impacts on the surrounding area and nearby heritage assets, and their settings, building heights shall be limited to those heights shown on the building heights plan. Flexibility may be needed to extend up to 30 metres in height, however taller buildings up to this height will be limited to areas where it is feasible to accommodate larger buildings. Buildings in proximity to the Round House, on the higher parts of the site will be limited to a lower height;
- The buildings should incorporate an appropriate roof form that will be considered as part of the detailed Landscape and Visual Impact work to support a planning application. The depth of roof structures should be minimised where possible to optimise clear internal heights, and to reduce visual impacts and the perceived mass of new buildings;
- The use of muted colours, different tones and textures should be used to provide articulation to the built form to reduce the apparent scale of buildings, minimising landscape and visual impacts on the surroundings. The colours and tones of the new development will be informed by the Environmental Colour Assessment that will support the Landscape and Visual Impact Assessment;
- Projections, such as canopies, dock shelters, hubs and eaves overhangs, can create more depth to the elevational treatment, which will reduce the perceived mass of larger buildings.



PLACEMAKING PRINCIPLES

- The layout of the development shall identify and establish “active frontage” for each building, and the layout of the plots should enable buildings to present an appropriate active frontage by positioning offices and other occupied areas facing onto adjoining public spaces wherever possible;
- Permeability should be established through the estate, by opening up vistas and establishing visual connections between roads, buildings and the surrounding area;
- Such permeability will require that active frontage assist with way finding with glazing sized and situated to establish visual connectivity between public and private realms;
- Considerations of reducing crime and improving perception of public safety will necessitate that plot layouts have well integrated circulation routes overlooked from building frontages, especially from offices, along with the promotion of street-level activity by careful layout and design;
- There will be a need to provide secure premises for new businesses at the site and principles of permeability will need to respond to this requirement;
- Public amenity space should be located in attractive parts of the development and form part of larger public spaces, such as in proximity to public footpaths and bridleways, and situated well away from the operational areas of the development;
- Opportunities to provide for the well being of future employees will be explored with the provision of amenity routes, trim trails, and staff amenity areas.

APPEARANCE, ARCHITECTURAL AND BUILDING TREATMENT PRINCIPLES

- New employment buildings will generally be rectilinear in plan to permit installation of storage processes and to minimise waste of internal space, unless in circumstances where the client brief dictates otherwise;
- External materials for the new employment buildings will largely consist of metal cladding with a consistent and common palette of colours and cladding types and will be designed to be unfussy and modern in appearance, as well as appropriate to their application, in particular respect to office facades;
- Offices should be designed with a close attention to detail, ensuring satisfactory junctions between areas of cladding and glazing;
- Any roof top plant will be located centrally, and set back from the facades and screened by louvered panels or parapets;
- Staff entrances to buildings should be made readily identifiable, with the use of projections, canopies and full height glazing;
- Where possible, window systems should be combined to create larger areas of glazed wall to counterbalance areas of solid cladding and to enable greater connectivity between inside and out;
- Facades to be modelled through the use of canopies, eaves and solar shading to add interest to building facades.

EXTERNAL LIGHTING

- External lighting will be needed to meet the operational requirements of businesses at the site and to meet health and safety requirements;
- A lighting strategy should be prepared with any planning application in conjunction with the project ecologist to identify the principles of any external lighting that will be provided at the site to demonstrate how light spill and sky glow will be minimised wherever possible with lighting directed to those areas where it is needed;
- Dark zones should be identified within the development where to allow wildlife to transit without light interference and;
- Opportunities to use timers, photocells and demand activated lighting systems should be explored so that lighting is only on when required.

20. ILLUSTRATIVE LAYOUT

An illustrative masterplan has been prepared to test potential layouts that consider the capacity of the site and to make sure that the employment area of the site is flexible enough to respond to the needs of different businesses. The illustrative masterplan is shown providing a range of different unit sizes and building typologies.

The proposed uses for the site include B8 use for logistics and distribution, which will generally require larger footprint buildings, whilst other uses include manufacturing and industry (B2) as well as offices, light industry and Research and Development uses (Class E), which will generally require smaller unit types. The final form of layout will be led by the requirements of occupiers across these use classes and flexibility is needed to be able to accommodate the needs of their businesses.



FIGURE 18. ILLUSTRATIVE LAYOUT

21. DELIVERY

IT IS ANTICIPATED THAT THE ENERGY PARK CONCEPT WILL BE DELIVERED THROUGH AN OUTLINE PLANNING APPLICATION, COVERING ADDITIONAL ENERGY INFRASTRUCTURE, EMPLOYMENT, INFRASTRUCTURE AND HYDROPONIC ELEMENTS. DEVELOPMENT OF THE SITE WILL BE PHASED, SO THE ENERGY PARK IS LIKELY TO COME FORWARD UNDER MORE THAN ONE APPLICATION.

The first application for the site will cover the key elements of the Energy Park, including key infrastructure elements such as the means of access, strategic landscape buffers and mitigation requirements for impacts identified by the supporting reports.

It is anticipated that some of these infrastructure requirements will be detailed within an outline application to give certainty over these elements. To retain flexibility to respond to occupier's requirements the hydroponic, energy and employment components of the Energy Park will be part of the outline permission and detailed layouts for development will be subject to subsequent Reserved Matters submissions. The outline application may not cover all of the land covered by the masterplan.

Parts of the development will be covered in outline and not all of the area covered by this Masterplan will necessarily be subject to a single outline application.

KEY REQUIREMENTS FOR OUTLINE APPLICATION

The outline application will be supported by the following:

- Access Details for new roundabout on A510
- Acoustic Assessment
- Air Quality Assessment
- Archaeological Assessment
- Design Code/Principles document
- Drainage Strategy & Foul Water Drainage Strategy
- Ecology Appraisal & Biodiversity Net Gain Strategy
- Heads of Terms for S106
- Heritage DBA & Heritage Impact Assessment
- Illustrative/Testing Layouts
- Indicative Phasing Plan
- Landscape and Visual Assessment (including Environmental Colour Assessment)
- Landscape Strategy
- Outline Construction Management Plan
- Parameters Plan
- Transport Assessment
- Nighttime Landscape & Visual Assessment
- Natural Capital Assessment

The supporting reports will assess the impacts of the development based on the maximum extent of development that could come forward at the site to ensure that a robust assessment is made of critical issues.

PLANNING CONDITIONS & S106 REQUIREMENTS

The uses and buildings provided at the Energy Park will be subject to occupier requirements. To retain flexibility for future occupiers, the outline application will reserve some details for future determination and applications to provide information relating to the layout, scale, appearance and landscaping will be made in due course.

A range of planning conditions and legal obligations will therefore be used to ensure that likely impacts identified at the outline planning stage will be addressed and mitigated at the Reserved Matters stage. Strategy documents will be provided to support the outline application to clarify the approach that will be taken for the various issues such as:

- Drainage
- Landscape
- Biodiversity

New infrastructure is likely to be secured through S106 agreements. In the absence of a CIL charging structure it is proposed that these contributions will be secured through North Northamptonshire Council. Developer contributions are secured as part of the grant of planning permission, and are specifically related to the development impacts. Based on the information in this masterplan, it is anticipated that obligations will relate to the following:

- Training Opportunities
- Provision of required highway infrastructure/both on and off site
- Local improvements to highways / road infrastructure
- Landscape Management and Maintenance
- Drainage Management and Maintenance
- Biodiversity Enhancements both on plot and to Receptor area, as well as ongoing management
- Training and skills for the construction and operational phases
- Provision of Sustainable Travel Infrastructure and Travel Plan
- Traffic Routing/Management Plan
- Proposals for Community Fund to contribute to energy efficiency measures and reducing carbon emissions in the local area surrounding the site will be reviewed as part of any application

Details of the proposed Community Fund will be provided as part of the outline planning application. It is anticipated that this will take the form of a regular annual financial contribution to local Towns and Parishes to support local initiatives and projects related to energy efficiency, sustainability and the move towards a low carbon society.

The mechanism to provide a Community Fund, the amount of money that will be available and the areas that will benefit from the Fund will be detailed within the outline application and then secured via a legal obligation.

DESIGN CODE

Development will be expected to comply with relevant local planning policies as well as reflecting the vision and objections to the masterplan. A design code will be prepared to support the delivery of quality development at Kettering Energy Park. The purpose of the Design Code is to set out a number of key principles which shall be adopted across the site to create a distinctive and attractive place, desirable to work and visit for future generations.

The design code should be read in conjunction with the North Northamptonshire Joint Core Strategy and the adopted Kettering Site Specific Part 2 Local Plan.

Any future Reserved Matters applications would then need to adhere to the approved Design Code, which will be secured via a planning condition.

22. PROPOSAL BENEFITS

NATIONAL

- First of its kind
- Responding to the energy crisis
- Greater Energy Security for Businesses and the National Grid
- Greater Food Security
- Supporting the transition to a low/zero carbon economy and society..

ECONOMIC

- Directly supports circa 4,000 jobs within B2 operations and circa 1,600 jobs within Class B8 operations. These estimated employment density figures have been calculated using the Homes and Communities Agency Employment Density Guide 2015 figures. Exact employment figures will depend on occupiers that come to the site.
- Investment of c. £500 million during the construction phase (direct and indirect)
- Investment of £129 million per annum into the local economy through wages
- Additional high quality employment land, with potential to create circa 302,000 sqm of new employment space
- First Renewable have committed £40m to provide the enabling infrastructure for the Energy Park.
- Business rates of circa £6 million per annum

COMMUNITY

- Businesses locating to the site will be encouraged to offer skills and training opportunities for employees
- Strengthen the local workforce and open up more opportunities to residents. This will particularly benefit Kettering as the town has several neighbourhoods suffering from multiple forms of deprivation, including those which rank among the 10% most deprived neighbourhoods in the country in terms of local attainment and skills.
- A critical mass of such businesses based here would enable Kettering's long term growth as a centre for excellence for sustainable technology and innovation.

23. RESPONSE TO POLICY 26

POLICY 26 OF THE CORE STRATEGY (RENEWABLE AND LOW CARBON ENERGY) IDENTIFIES THAT DEVELOPMENT OF THE ENERGY PARK WILL PROVIDE A DECENTRALISED ENERGY NETWORK USING RENEWABLE TECHNOLOGIES. KETTERING ENERGY PARK HAS MET THE CRITERIA OF THE POLICY THROUGH THE FOLLOWING:

Define development boundaries and also the renewable / low carbon technologies and land uses to be developed on site

As a result of the site analysis and assessment of the opportunities and constraints at the site, a development boundary has been identified for the Energy Park that will allow the objectives of the Energy Park project to come forward in an appropriate manner.

This development boundary is presented in Figure 8 and meets this part of the criteria.

The land uses that are considered to be appropriate at the site have also been identified and these are presented in section of this document to meet this part of the criteria.

Make provision for a mix of complimentary employment uses to facilitate development of local knowledge, expertise and research and development.

The proposed uses for the Energy Park include those that can make use of the renewable energy at the site including employment uses that have a high energy demand.

A criteria for these employment uses has been developed in conjunction with the North Northamptonshire Council and the SEMLEP and this includes uses such as engineering, research and development and manufacturing that will support the transition to a low/zero carbon economy.

A mix of employment uses will be acceptable at the site including those within Class E, B2 and B8 to support the local economy and provide premises for business in hi-tech sectors that will help to expand the knowledge economy. It is also proposed that a skills and training package will be developed as part of a future planning application to support businesses at the site where they have vacancies which could be filled by people in the vicinity of the site.

Demonstrate how the proposal will contribute towards meeting the energy needs of existing and planned development, including East Kettering SUE, strategy development at Junction 10 of the A14 and employment uses associated with the site.

The Energy Park proposal will provide connectivity between the wind turbines and the consented and future energy infrastructure to the proposed employment premises and hydroponic structures.

An assessment has been undertaken of expanding connectivity further from the site to other areas, but this was not considered to be viable due to uncertainty regarding the phasing of other development and the Energy Park, the loads from this other distance and the capital cost and land ownership constraints of providing a connection further afield.

The most expedient approach to ensure that the Energy Park helps to meet the needs of other uses elsewhere is to improve resilience and form a purpose built grid connection to allow excess energy generated at the site to be fed back into the national grid and to provide battery storage to make better use of the renewable energy created at the site.

Create model for zero carbon through the installation of exemplary energy efficiency standards in buildings which use energy produced on site in their opportunities.

All employment buildings at the site will have high levels of energy efficiency to make most use of the available energy at the site, with a target of achieving BREEAM Excellent and an EPC rating of A.

Additional solar pv will be installed on the roof space to further increase the amount of energy generated at the site.

Adopting these high energy efficiency standards, which will minimise the energy required in the day to day running of the premises, facilitates the potential for business activity at the site to be 100% powered by renewable energy that is created at the site.

Policy 26 identifies additional detailed criteria that the development of the Energy Park needs to respond to. A response to elements of this further criteria can only be detailed at application stage, however a summary of how the proposed development of the site as set out in this Masterplan meets this criteria is set out in the Appendix to this document.

24. CONCLUSION

THE AMBITION OF THIS MASTERPLAN IS TO MAKE THE ENERGY PARK A LOW CARBON AND SUSTAINABLE DEVELOPMENT IN AN ATTRACTIVE LOCATION THAT SUPPORTS THE LOCAL ENVIRONMENT AS MUCH AS THE LOCAL ECONOMY.

- Existing renewable energy infrastructure is in place at the site and will be supplemented with additional infrastructure and a new grid connection
- The Energy Park will improve resilience in the energy network, increase energy security and respond to the current Energy Crisis
- A holistic approach has been taken to secure sustainable development from an environmental and economic perspective
- The Green Infrastructure Strategy sets out the design principles underpinning the Masterplan
- The site will provide premises for a mix of occupiers that have: energy intensive operations; automated processes; or, support industries linked to the transition to net-zero, creating jobs across a wide skill base
- The site has flexibility to accommodate other energy infrastructure, e.g. battery storage and more Solar PV
- This site will provide additional, high quality employment land that will provide companies with sufficient power and the ability to adapt to a low/zero carbon economy, addressing the lack of supply of such land.
- The site can accommodate c. 302,000 sq m of employment space providing in the region of 4,000 new jobs, adding c.£167m to the local economy each year from wages
- Significant interest has already been expressed from a number of occupiers



25. APPENDICES

POLICY 26 – RENEWABLE AND LOW CARBON ENERGY

Proposals for sensitively located renewable and low carbon energy generation will be supported where it can be demonstrated that the proposal meets all of the following criteria:

- a) The landscape impact of the development is minimised and mitigated against;
- b) The development links to a specific demand through a decentralised energy network or where this is not possible, the necessary infrastructure is provided to supply power to the National Grid;
- c) The siting of development avoids harm to the significance of a heritage asset and its setting in accordance with the provisions of the NPPF;
- d) The siting of development does not significantly adversely affect the amenity of existing, or proposed, residential dwellings and/or businesses, either in isolation or cumulatively, by reason of noise, odour intrusion, dust, traffic generation, visual impact or shadow flicker;
- e) The development does not result in an adverse impact on the capacity and safety of the highways network and of public rights of way;
- f) The development includes a managed programme of measures to mitigate against any adverse impacts on the built and natural environment resulting from the construction, operation and decommissioning of any equipment/infrastructure;
- g) The development does not create a significant adverse cumulative noise or visual impact when considered in conjunction with other developments planned within North Northamptonshire and adjoining local authority areas;
- h) The development retains and enhances on-site biodiversity and supports the enlargement of, and/or connection to, existing biodiversity assets such as wildlife corridors, where possible;
- i) Proposals for Solar Photovoltaic farms avoid the best and most versatile agricultural land.

Provision will be made for the removal of apparatus and reinstatement of the site to an acceptable condition, should the scheme become redundant and/or at the end of the permitted period for time limited planning permissions.

Land at Burton Wold is identified for an Energy Park to add to the range of renewable energy technologies already present. The development will serve as a decentralised energy network which will link the energy production to existing and new developments.

Proposals within the Energy Park should meet criteria a) to i) above and should also be in accordance with a comprehensive masterplan which will be prepared in consultation with the local community and stakeholders and agreed by the local planning authority;

This will:

1. Define development boundaries and also the renewable/low carbon technologies and land uses to be developed on the site;
2. Make provision for a mix of complimentary employment uses to facilitate development of local knowledge, expertise and research and development;
3. Demonstrate how the proposal will contribute towards meeting the energy needs of existing and planned development, including East Kettering SUE, strategic development at Junction 10 of the A14 and employment uses associated with the site;
4. Create a model for zero carbon energy through the installation of exemplary energy efficiency standards in buildings which use energy produced on-site in their operation.

Appendix 1 Policy 26 from the North Northamptonshire Core Strategy

A summary identifying how the development of the Energy Park will respond to the items A to I listed under Policy 26 is set out below:

<p>a) The landscape impact of the development is minimised and mitigated against;</p>	<p>The masterplan has been prepared following a strategic landscape review to consider the visibility of the site and any future development proposals.</p> <p>The proposed boundaries of the Energy Park, as set out in this masterplan, have been defined to move future development at the site away from more sensitive viewpoints and to provide potentially taller buildings on lower parts of these site or in locations that are less visually sensitive.</p> <p>These steps have sought to minimise the potential landscape impact of the development, however it is acknowledged that any development at this site will have some form of landscape and visual impact.</p> <p>Existing, prominent landscape features at the site will be retained where possible, such as existing plantation woodland and larger areas of woodland planting at the site, which will be supplemented with additional tree planting and strategic landscape buffers to mitigate the visual impact of future development.</p> <p>Any application for development of the Energy Park will be accompanied by a detailed Landscape and Visual Assessment to consider likely impacts and to detail specific mitigation measures at this application stage. The Landscape and Visual Impact Assessment will also be accompanied by an Environmental Colour Assessment to consider how new structures and development relate to the landscape context and to identify appropriate colour palettes and materials for the development</p>
<p>b) The development links to a specific demand through a decentralised energy network or where this is not possible, the necessary infrastructure is provided to supply power to the national grid;</p>	<p>The development of the Energy Park proposes the co-location of high energy use employment development and hydroponic uses as well as additional energy infrastructure to supplement the existing wind turbines and consented solar pv.</p> <p>The demand for energy is therefore linked to the employment uses and these will have the potential to be fully powered by available energy generated at the site.</p> <p>The employment and hydroponic uses at the site will therefore be able to operate within their own energy network, although for resilience and to ensure that there is a robust supply of energy available at the site, a point of connection to the national grid is also proposed to allow the import and export of energy to and from the Energy Park.</p> <p>The principles of this approach to the energy strategy are set out in the masterplan.</p>

<p>c) The siting of the development avoids harm to the significance of heritage assets and its setting in accordance with the provisions of the NPPF;</p>	<p>The masterplan has been prepared in consideration of the heritage assets both at the site and in the nearby area. Heritage assets such as conservation areas, Listed buildings and Registered Parks and Gardens were also identified and assessed as part of the strategic landscape review that supported the preparation of the masterplan.</p> <p>The closest heritage assets to the proposed Energy Park site are the Round House and Poplars Barn (which is a modern rebuild and is determined to have little significance in heritage terms). The masterplan has been prepared to set development back from the eastern site boundary so that new development does not lead to substantial harm to the setting of this building.</p> <p>The landscape strategy for the development also provides an open frontage to the development site immediately opposite the Round House with taller landscape and screening features set back from the boundary to provide a suitable relationship of the development with this building. The proposed relationship between the Round House building and the new development opposite this building is demonstrated by the illustrative cross section drawing.</p> <p>The masterplan has also taken views within the site towards the Round House into account to ensure that the proposed development does not completely obscure views of this building and maintains a visual connection. The view cone towards the Round House is illustrated by the below graphic, where landscaping and small ancillary structures (e.g. sub-stations and street furniture) will be allowed but buildings and larger structure will not.</p> <p>Views towards the Church Spire at Burton Latimer and inter-visibility of the development with Woodford House have also been assessed but it is not considered that the Energy Park will lead to any substantial harm in respect of these heritage assets.</p>
<p>d) The siting of development does not significantly adversely affect the amenity of existing, or proposed, residential dwellings and / or businesses either in isolation or cumulatively, by reason of noise, odour, intrusion, dust, traffic generation, visual impact of shadow flicker;</p>	<p>There are relatively few existing occupiers at the site, but the masterplan has been considered to minimise adverse effects on these occupiers.</p> <p>For example, the development will be set back from the Round House and Poplars Barn and the site access will be provided to the North of the Round House, with traffic directed to Junction 11 of the A14 to the north, thereby reducing noise and disturbance from traffic noise.</p> <p>It is not anticipated that there will be any greater incidence of shadow flicker as no new turbines are proposed and other matters relating to noise, odour and dust will be assessed in any future application and mitigation or management measures will be proposed to deal with any likely impacts at construction and operational phases in an appropriate manner.</p>
<p>e) The development does not result in an adverse impact on the capacity and safety of the highways network and of public rights of way;</p>	<p>Discussions have been held with National Highways and the Highway Authority to model the potential traffic generated by the development and this indicates that there is sufficient capacity to support additional vehicle movements on the network. As part of any proposal to accommodate new junctions on the public highway network, a road safety audit will be undertaken which will support any planning application to demonstrate that the new layout will not lead to any safety issues.</p> <p>The development of the Energy Park intends to have pedestrian and shared cycle routes within the site that are segregated from vehicular traffic and any accesses within the site will be designed to have appropriate visibility and give priority to pedestrians and cyclists across junctions from the main estate road. Car parking areas and any service yards will also be segregated to avoid conflicts between site users.</p> <p>Diversions to the existing public rights of way will be required as part of the proposals and the revised routes will be designed to be safe and as convenient for people as possible, avoiding conflict points with traffic where possible and providing suitable crossing points where needed.</p>
<p>f) The development includes a managed programme of measures to mitigate against any adverse impacts on the built and natural environment resulting from the construction, operation and decommissioning of any equipment/infrastructure;</p>	<p>This will be detailed in any planning application for the site, with specific reference to the construction and decommissioning stage.</p> <p>As no biomass, anaerobic digestion or additional wind turbines are proposed at the site, then the potential for adverse impacts is generally lower and the addition of further solar pv and battery storage, can be implemented on a modular system as the equipment used for this infrastructure is relatively small in scale allowing for easy erection, disassembly and transport to and from the site.</p>

g) The Development does not create a significant adverse cumulative noise or visual impact when considered in conjunction with other developments planned within the North Northamptonshire and adjoining local authority areas;

A strategic visual review has been undertaken of the proposed development of the Energy Park, identifying short and longer range views to assist in the definition of development boundaries so that the visual impact of the Energy Park is minimised, with areas for landscape buffers identified to provide screening of the new structures at the site.

Longer range views have been assessed and an Environmental Colour Review will be prepared to support any application so that the new buildings have an appropriate colour pallet to help them integrate with the existing landscape setting as far as possible. The proposed energy infrastructure at the site will generally be low level and have limited visibility, although likely visual and landscape impacts will be assessed as part of any application. A detailed Landscape and Visual Assessment will be undertaken as part of any application for the site.

Sources of noise from the Energy Park will be assessed to ensure that potential impacts from the development do not create an isolated or cumulative issue in respect of nearby sensitive receptors. New employment development will be located to minimise break out of noise wherever possible, using mitigation and management measures to address likely impacts at detailed planning stage. It is not anticipated that the proposed energy infrastructure will give rise to any significant noise impacts, but this will be assessed as part of any planning application.

h) The development retains and enhances on site biodiversity and supports the enlargement of, and/or connections to, existing biodiversity assets such as wildlife corridors, where possible.

Existing landscape features such as areas of existing tree planting and plantation woodland will be retained where possible. The site is predominantly in agricultural use as arable land, so has relatively low ecological value, however the development will lead to the loss of some features to allow the Energy Park to come forward.

The development will come forward in conjunction with a landscape strategy that will seek to supplement the retained landscape features and provide for biodiversity enhancements and the use of the northern meadow land as a site for Biodiversity Net Gain. The objective is to secure a minimum 10% net gain in biodiversity. The landscape and biodiversity strategy will consider existing habitat areas and allow transit routes, dark zones and look to expand on connections to wildlife corridors. The landscape and biodiversity strategy that accompanies any application will be based on the principles set out in this document at sections 9 and 10.

i). Proposals for Solar Photovoltaic farms avoid the best and most versatile agricultural land.

The land at Burton Wold is identified as being Agricultural Grade 3 in the general classification maps provided by DEFRA/Natural England and it is known to be relatively wet due to the character of the soil so the majority of the site is considered to be classified as grade 3b, which is not considered to be best and most versatile for agricultural production.

The addition of hydroponic uses at the site will improve yields and agricultural production as this provides a more controlled environment for growing produce.

