

NW Bicester

An application for the exemplar phase of the
NW Bicester Eco Development proposals submitted by
P3Eco (Bicester) Limited and the A2Dominion Group

Environmental Statement Volume 0: Non-Technical Summary



P3Eco Ltd

a2dominion



P3 Eco (Bicester) Ltd and A2dominion Group

Bicester Eco Development

Exemplar Environmental Statement


Volume 0: Non-Technical Summary

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This report has been prepared for P3 Eco (Bicester) Ltd and A2dominion Group in accordance with the terms and conditions of appointment for Exemplar Development Environmental Statement dated May 2010. Hyder Consulting (UK) Limited (2212959) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

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1 Introduction

In July 2009, the Department for Communities and Local Government published 'Planning Policy Statement (PPS): eco-towns' as a supplement to PPS1 Delivering Sustainable Development. The PPS1 supplement includes requirements on sustainability, affordable housing, low and zero carbon technologies and public transport. Within the PPS1 supplement, eco-towns are defined as sustainable developments of at least 5,000 homes.

Four 'first wave' locations were identified with the potential to have an Eco-town; one of which was on land to the north-west of Bicester in Cherwell District. The North-West Bicester (NW Bicester) Eco Development lies to the north-west of Bicester, approximately 1.5km from the town centre, and comprises an area of approximately 416 hectares. The Eco Development is intended to provide a new form of sustainable community within Cherwell District, and to extend the benefits of this community to the existing town of Bicester.

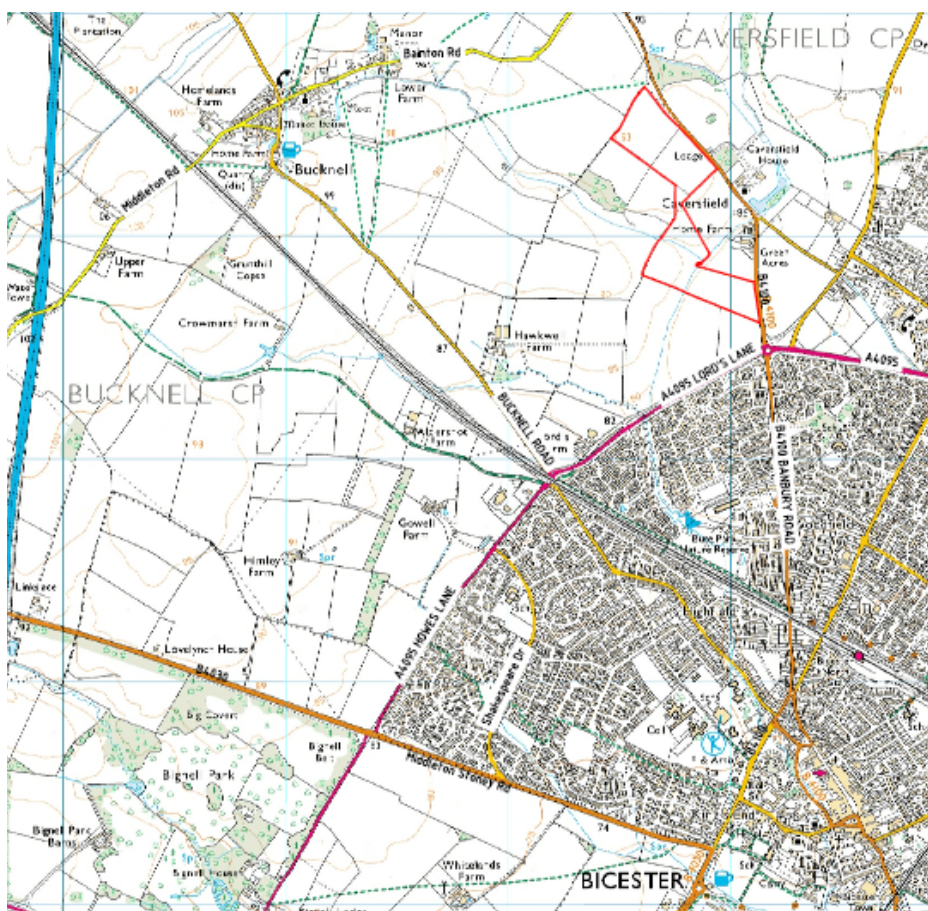


Figure 1: Exemplar Development Location

The Exemplar Development, shown on Figure 1 above, is being brought forward by P3 Eco (Bicester) Ltd and A2dominion Group as the first element of the project, expected to be constructed in phases between 2011 and 2026. The Exemplar Development is proposed for the north-eastern edge of the Eco Development area, covering 21.1 hectares.

This document is the Non-Technical Summary of the Environmental Statement for the proposed Exemplar development, which is published in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (Circular 02/99), which implement EC Directive 85/337/EEC and subsequent amendments. The Environmental Statement presents in detail the findings of the Environmental Impact Assessment. There is a legal requirement to provide a Non-Technical Summary to ensure that the non-technical reader

can fully appreciate the likely environmental effects of the new development before a decision is made by the Local Planning Authority.

The Environmental Statement has been prepared in relation to this Exemplar development only, and therefore does not relate to the full extent of the NW Bicester Eco Development.

2 Description of the Exemplar Development

The Exemplar Development will create a sustainable community, in accordance with PPS1: eco-town principles. The development proposals include provision for 394 residential units, an energy centre, a primary school and a nursery school. There will be an Eco Business Centre, as well as office accommodation, retail units and social and community facilities. All these will be supported by associated means of access. Service infrastructure, lighting and car parking will also be installed. As well as the buildings, the development will incorporate amenity space and landscaping. Figure 2 illustrates the Village Centre proposals.

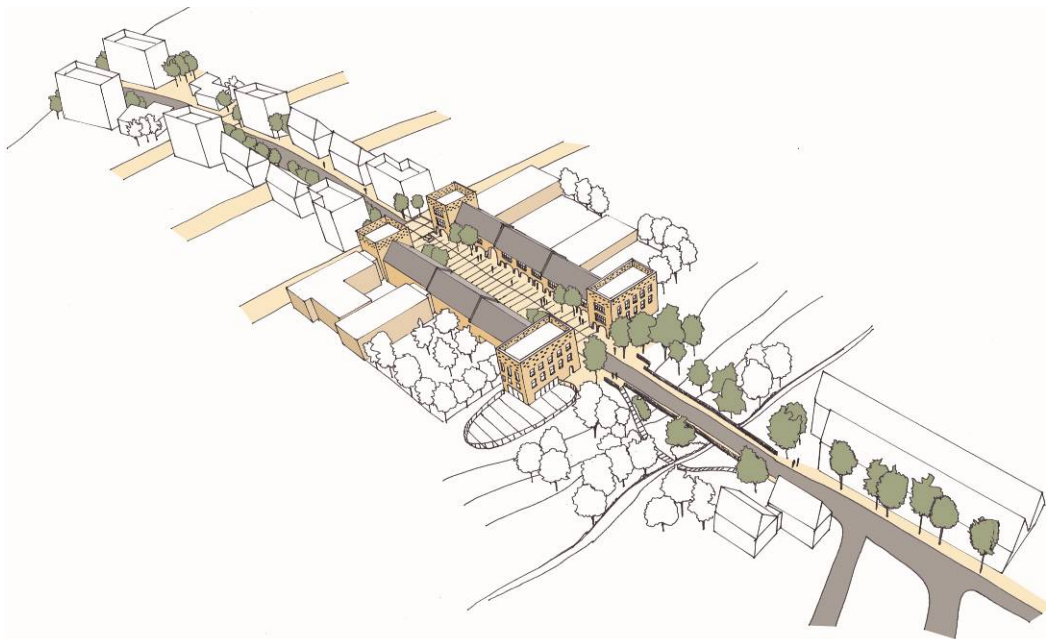


Figure 2: Artist's Impression of Exemplar Development Village Centre

The Exemplar Development planning application is being submitted as a hybrid application comprising:

- Full planning permission will be sought for the residential development, energy centre, means of access thereto, and associated car parking, landscape, amenity space and service infrastructure.
- Outline application for all non-residential uses, with consent being sought for access to those blocks.

3 Environmental Impact Assessment Findings

3.1 Landscape and Visual Impact

The landscape and visual implications of the proposed development have been assessed. The proposed development site is not afforded protection through landscape designation and local landscape character is defined by a rolling topography, mixed farmland enclosed by woodlands

and hedgerows, and villages exhibiting strong local character. The visual influence of the proposed development is contained by topography, enclosure and settlement, such that visual receptors, or those with a view of the proposed development, would be limited.

The proposed development is in keeping with landscape character through carefully considered design, with retention of open land and/or provision of planted landscape buffers adjacent to heritage features, safeguarding the majority of existing vegetation, extensive Green Infrastructure proposals, and proposed built form in response to local settlement. Green Infrastructure is the living network of integrated and multifunctional green spaces, water and environmental systems in and beyond urban areas.

In views to the proposed development, existing vegetation and extensive planting proposals would generally dominate, serving to integrate built form with the rural landscape and resulting in minimal change to visual amenity. Figure 3 illustrates the landscape proposals for the Exemplar Development. Overall, the significance of landscape effects is considered to be neutral and the significance of visual effects is considered to be slight adverse.

3.2 Ecology

The ecological impact assessment has influenced the Masterplan of the proposed Exemplar development to reduce impacts on wildlife and habitats as far as possible. Its influence has also produced a design that incorporates habitat enhancement and creation measures that will result in proposals leading to a net gain in biodiversity, as required by PPS1: eco-towns. Care has been taken to ensure that the habitats retained and created as part of the proposed development are resilient to the anticipated effects of climate change.

The existing site contains grassland habitats of limited value to wildlife, the River Bure and its tributary, an area of recently established mixed broadleaved trees plantation within tall unmanaged grassland, a 'main' badger sett and a bat roost. Species-rich hedgerows form the field boundaries. Surveys also found two uncommon invertebrate species. Nesting birds were recorded in the hedgerows and nest boxes, and it is likely that common lizards are also present. A barn owl nest box nearby and others present on site will be relocated to ensure barn owls are not disturbed by the proposed development.

The proposed development, which includes the Energy Centre, will have no direct or indirect effect on designated sites of nature conservation importance. The design has sought to retain the hedgerow network (including moving and replanting nearby if existing hedgerows are crossed) and buffers created by locating areas of open space, including allotments and semi-natural habitats associated with drainage features (ponds, grassland and ditches) close to ecological features. Each watercourse is only crossed once to provide access, so these natural wildlife corridors are retained. Sensitive lighting design will be used on bridges to retain dark corridors and avoid disturbance to nocturnal species, such as bats and badgers. New tree, shrub and orchard planting will take place close to the watercourses to enhance the value of these wildlife corridors. A confirmed 'main' badger sett and bat roost will be retained within areas of green space, and bird nest boxes and boxes for roosting bats will be provided. Features will also be incorporated into homes to provide habitats for bats. New habitats of value to wildlife will be created as part of the proposed development.

The proposed development will ensure that features of value to wildlife are retained (the hedgerows and watercourses) and that new habitats of value to wildlife will be created. The latter will ensure that there is a net gain in biodiversity as required by statutory planning policies.

3.3 Flood Risk and Hydrology

The River Bure and associated tributaries drain the Exemplar Development study area. The proposed development is restricted to areas of low flood risk on the site, so the development will have a low risk of flooding from fluvial sources.

The development can be undertaken without increasing the flood risk elsewhere by maintaining surface water runoff at or better than greenfield rates. The drainage strategy will provide attenuation at source, infiltration and treatment through the Sustainable Drainage Systems (SuDS) measures which are also likely to result in an improvement over the existing water quality which is affected by agricultural activity.

There is no access to water-based recreation in the area of the proposed Exemplar development at present, but this will be transformed by the development, which will use the watercourse as an asset and provide beneficial recreational opportunities in the Eco Development.



Figure 3: Landscape Framework Plan for Exemplar Development

3.4 Air Quality

The development has the potential for air quality impacts through construction and operational (traffic and energy generation) activities. The air quality assessment identified that there will be a slight adverse impact from construction dust during the construction phase at houses close to the development. The preliminary conclusions are that there are no permanent residual impacts associated with traffic as the overall rating for the impact of traffic emissions is negligible. This will be checked once complete monitoring data is available to confirm these conclusions. Energy centre emission impacts are predicted to be between slight adverse and negligible for annual mean Nitrogen Dioxide (NO₂) concentrations and negligible for annual mean Particulate Matter (PM₁₀) concentrations at sensitive receptor locations. Exceedences of the relevant Air Quality Limit Values were not predicted at any location.

3.5 Noise and Vibration

The noise and vibration assessment was carried out to identify and assess the suitability of the existing noise and vibration levels across the proposed development for residential use and also assess the impact upon road traffic noise levels and the effects of construction noise at existing receptors within the local area.

The assessment considers the suitability of the site for residential development and also considers both construction and operational noise impacts associated with the proposed development.

A baseline noise survey served as a basis for the assessment of the suitability of the site for development and for assessing construction and operational noise impacts. The baseline noise measurements indicate the majority of the site falls within Noise Exposure Category (NEC) A, which means that noise need not be considered as a determining factor in granting planning permission.

The construction impacts were assessed in accordance with British Standard 5228: 2009. Assumptions were made regarding the construction plant that would typically be used for developments of this nature. The construction noise impacts will depend on proximity of the construction works to receptors, the nature or intensity of the construction, the type of plant being used and the time of day. Construction noise impacts are generally of fairly short duration and can be mitigated against.

The operational impacts will arise from increased road traffic and from fixed plant and similar installations to be constructed on site. Operational traffic noise impacts have been assessed and shown to be negligible when assessed against the relevant standards. No mitigation measures will be required for road traffic noise.

Noise from operational plant was assessed in accordance with British Standard 4142: 1997. Once details of the operational plant to be installed on site are confirmed, a more detailed assessment can be carried out in accordance with BS 4142. Operational noise limits will need to be agreed with the local Environmental Health Officer.

3.6 Built Heritage and Archaeology

The assessment of effects on cultural heritage assets within the proposed Exemplar development and the surrounding study area has been carried out using a combination of desk-based work, aerial photograph analysis and archaeological field evaluation.

This assessment has shown that there is a low potential for archaeological remains to exist within the proposed Exemplar development. The archaeological field evaluation carried out at the site uncovered no evidence for any archaeological remains. There will be no impact on the archaeological resource from the development during both the construction and operation phase.

There are no buildings of historic value within the proposed Exemplar development itself therefore the development will have no direct physical impacts upon any built heritage assets. There are, however, a number of built heritage assets within the study area. These are St Lawrence's Church (Grade II* listed), the Home Farmhouse (Grade II listed) and Caversfield House (non-listed) and the other buildings at Home Farm. The development will have an impact on the setting of all of these assets. As part of the design process measures have been put in place to reduce this impact, including maintaining a sightline from St Lawrence's Church, retaining hedgerows around the boundary of the proposed Exemplar development which will

shield the historic buildings from the proposed development and the use of building style and materials which will blend in with the historic buildings. The impacts on the setting of the built heritage assets in the construction period has been assessed as negligible. The Grade II* and Grade II listed buildings will experience a slight adverse effect and there will be a neutral effect on Caversfield House and other buildings at Home Farm.

The development lies within the Oxfordshire Estate Farmlands character area. This is a rural landscape characterised by 18th and early 19th century arable fields with hedgerows. The historic landscape within the study area has been assessed as low value. Where possible hedgerows will be retained and in other places the line of the hedgerows will be preserved within the design. Measures will also be put in place during the construction phase in order to prevent accidental damage of the hedgerows which are to be preserved. However, overall the development is going to change the landscape from a rural setting to an urban environment. Therefore this assessment has concluded that the proposed development will have a significance of effect of slight adverse.

3.7 Contaminated Land

The contamination assessment set out to identify the potential risks to human health and controlled waters that the development of the proposed Exemplar Eco Development may present. The baseline conditions for the Exemplar development and vicinity have been determined based on a Phase 1 Desk Study and from laboratory testing results obtained from a follow-up preliminary intrusive ground investigation undertaken on site in August 2010.

In those areas of the site covered by the intrusive ground investigation, no contaminated soil or groundwater was discovered. In those unexplored areas of the site, it cannot be conclusively stated that there are no contaminants present. However, should localised contaminated areas be encountered, the degree of contamination is not expected to be significant, and it is considered that mitigation measures would significantly reduce or completely mitigate any potential impacts. No residual effects are identified.

Construction impacts are considered to be neutral to minor adverse and will be mitigated thorough the use of appropriate personal protective equipment (PPE) and good site management practices.

Operational impacts are considered to be neutral and therefore require no mitigation measures.

Overall, the contamination risks associated with the Exemplar development are considered to be very low, though the risks from naturally occurring radon gas require basic radon protection measures to be incorporated in the construction of new dwellings and extensions.

3.8 Agriculture and Land Use

The soils across the site are fairly uniform, with approximately 95.1% being classed as Grade 3b land, with the remainder (4.9%) classed as Grade 3a. Grade 3 agricultural land is subdivided into two classifications, namely Grade 3a considered good quality Best and Most Versatile (BMV) agricultural land and Grade 3b considered moderate quality agricultural land. The main limitation on land productivity relates to soil depth, and only where deeper alluvial soils are present can the land be classed as BMV. Given the minimal area (approx 1ha) of BMV land affected, it is considered that the proposals would have no more than a slight adverse impact on agricultural land. The proposal to include areas for local food production, and provide advisory support for residents in relation to soil management, will further mitigate the loss of this land.

During construction, appropriate soil handling methodologies will be used, in line with current guidance, to ensure the sustainable re-use of soils and maximise the value of the soil resource within the proposed design. This will ensure the use of soils with the optimum characteristics are allocated for the given end use, such as food production, habitat creation or SuDS. In addition, a considerate construction approach would be used to minimise potential impacts on the agricultural enterprise, a beef suckler cow farm. This will focus on limiting disturbance to livestock and ensuring no restrictions on the farmer to access and move livestock across the remaining areas of the landholding outside the site boundary.

The key potential impact identified relates to increasing disturbance to livestock once the homes become occupied. This impact could start to be felt up to 2 years before the construction phase is complete. However, the rest of the landholding would form part of the NW Bicester Eco Development.

3.9 Human Health

The potential effects on human health of the construction and operational phases of the proposed Exemplar development have been assessed. A number of mitigation measures have been incorporated into the design process to maximise potential health benefits and to minimise the likelihood of adverse health effects occurring.

During the construction phase, health effects were assessed as positive with regard to the potential employment opportunities that will be created and the wider upskilling benefits that may be delivered. The impacts on the following health determinants were assessed as having a neutral effect on health: safety and security, air quality, noise and vibration, physical environment and urban design, healthy lifestyles, transport and access, waste management and contamination, community and social infrastructure and access to and provision of health facilities and services. These assessments were informed by the results presented in the other Environmental Statement chapters and the likelihood of there being a change to health status.

During operation the proposed Exemplar development will generate a number of jobs and could potentially attract a significant amount of new investment within the immediate area. Therefore indirect positive health effects were predicted. Positive health effects are also likely to occur (both physical and mental) as a result of the commitment within the design to creating a site where walking and cycling are encouraged, the provision of community facilities that will provide opportunities for community engagement and interaction, the use of Secured by Design principles that will help to reduce levels of crime and control perceptions of fear of crime and as a result of the comprehensive green infrastructure strategy that will provide a high quality environment and areas for informal sport and recreation. The air quality, noise and vibration and traffic and transport assessments also concluded that there would be no significant adverse effects during operation and this will also help to reduce the risk of potential associated adverse health effects for the population living at the proposed Exemplar development and those communities living in the vicinity of it.

3.10 Socio-Economics and Community

The socio-economic impact assessment has assessed the potential impact of the proposals on local businesses, industry, housing, existing facilities and services, and identified development and change likely to be facilitated or inhibited by the proposal.

The potential impacts identified during the construction phase of the proposal will, with the exception of employment (considered 70 full time employed up until 2026) be short term and temporary in their nature. Adverse impacts such as the potential to generate local disturbances,

reduce public safety and undermine the nature of local amenities will be minimised through the implementation of identified mitigation measures.

Potential impacts during the operation of the proposal will depend on the nature of identified receptors but overall, the operational stage of the proposal has the potential to generate a number of significant benefits for the local and regional socio-economic environment. This includes the generation of a range of employment opportunities on site but also off-site as a result of associated construction works and the potential to increase the level of business investment. Additional impacts include the expansion in the quality and capacity of education facilities, a net increase in the provision of affordable housing, the potential to generate healthier active lifestyles for residents and the potential for the development to become an exemplar for the implementation of the 'eco-town' model that could generate benefits from tourism expenditure.

Overall, it is considered that with the appropriate mitigation measures, the potential impacts of the proposal on the defined social and economic environment would be positive.

3.11 Waste

The potential environmental effects resulting from waste materials during the construction and operational phases of the Exemplar development has been assessed. A Preliminary Site Waste Management Plan (SWMP) has been prepared for the development to plan, implement, monitor and review waste minimisation and management during construction. A Sustainable Waste and Resources Plan (SWRP) has been prepared to set targets for residual waste levels, recycling levels and landfill diversion, and demonstrates how these targets will be achieved.

During the construction period there are two key phases of development which could result in impacts upon the generation of waste and capacity of the local waste management infrastructure to accommodate this material. These are the excavation phase and the construction phase. There would be a neutral effect resulting from the excavation phase as excavation volumes have been minimised through design and any excavation materials will be reused on site. There will be a slight adverse effect resulting from construction waste, but the SWMP will manage, monitor and audit the construction waste generated.

During the operational phase, waste arising from the Exemplar development would result in a neutral effect upon waste disposal facilities. The SWRP would be implemented, ensuring waste minimisation targets are met. The Cherwell District Council recycling and waste collection system will be extended into the Exemplar development, initial recycling and composting targets of 70% will be set, initial residual waste level targets will be set per household and a community composting project will be established.

3.12 Traffic and Transport

The traffic and transport assessment has considered the potential impacts associated with the Exemplar proposals and the predicted associated effects on sensitive receptors in the area. Traffic count data was collected in July 2010 to inform the baseline conditions, with further surveys undertaken in October 2010 as a verification exercise. Following a screening assessment, the study area was set to include A4095 Howes Lane, A4095 Lord's Lane and B4100 Banbury Road.

The assessment demonstrates that the Exemplar development traffic will have a negligible impact upon severance, pedestrian delay, pedestrian amenity, fear and intimidation, hazardous loads, and dust and dirt.

An assessment on driver delay, and accidents and safety was undertaken, taking into account the impacts of other committed developments in the area. There will be a negligible impact on receptors in the study area related to driver delay, and accidents and safety. Overall, there will be a negligible effect upon sensitive receptors from traffic and transport during the construction and operational phases of the Exemplar Development.

3.13 Cumulative Effects

Cumulative effects associated with the Exemplar Development have been considered. These are the combined effects of the Exemplar with other developments within the vicinity of the site, the combined effects of the Exemplar with the NW Bicester Eco Development, and the combined effects of different environmental aspects of the Exemplar development on a particular receptor. The baseline for the assessment included other future developments in the vicinity. The potential cumulative effects with other elements in NW Bicester Eco Development relate to the following cumulative impact areas; landscape, ecology, hydrology, air quality, noise and vibration, heritage, soils and contamination, agriculture and land use, human health, socio-economics, waste and transport. Since NW Bicester Eco Development is indicative, it was not possible to quantify impacts, although potential adverse cumulative effects were identified for air quality, noise and vibration, heritage and transport. Potential beneficial cumulative effects were identified for human health and socio-economics.

The potential cumulative effects with other developments are likely to be during the construction phase on traffic and transport, air quality and noise and vibration associated with the combined effect of construction vehicles and operation of machinery. No likely cumulative effects are anticipated during the operational phase of these other developments.

Combined or impact interactions are likely to occur during the construction phase. Each environmental chapter has identified mitigation measures to reduce impacts. Following implementation of these mitigation measures, there may still be combined effects of noise from construction vehicles and road traffic, and dust emissions from construction vehicles and construction activities. Other combined or impact interaction effects are considered to be mostly negligible.

4 Consultation

A full copy of the Environmental Statement is available to view at the following deposit locations via the Cherwell District Council online 'Public Access' system from the 26 November 2010 to the 22 December 2010, although Cherwell District Council may extend the deadline at their discretion.

- Cherwell District Council, Bodicote House, Bodicote, Banbury, Oxfordshire, OX15 4AA
- Banbury (Castlequay) Linkpoint, 43 Castle Quay, Banbury, Oxfordshire, OX16 5UW
- Bicester Linkpoint, 38 Market Street, Bicester, OX26 6AL
- Kidlington Linkpoint, Exeter Hall, Oxford Road, Kidlington, OX5 1AB

A full set of drawings will be available at Bicester Town Council, The Garth, Launton Road, Bicester, Oxon, OX26 6PS.

The Environmental Statement will also be available to view in the Planning section on CDC's website; www.cherwell.gov.uk. The Planning Application will also be available to view on the NW Bicester website; www.nwbicester.co.uk.