

APPENDIX 7 : EXTENDED PHASE 1 HABITAT REPORT THE ENVIRONMENTAL DIMENSION PARTNERSHIP (EDP), SEPTEMBER 2019



**Land North of
Junction 3 of the
M54, Shropshire**

**Extended Phase
1 Habitat Survey**

Prepared by:
**The Environmental
Dimension
Partnership Ltd**

On behalf of:
**Bradford Rural
Estates Ltd**

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Section 1

Introduction

Introduction

- 1.1 The Environmental Dimension Partnership Ltd (EDP) was commissioned by Bradford Rural Estates Ltd to complete an updated Extended Phase 1 Habitat Survey of an area of land referred to as Land North of Junction 3 of the M54, Shropshire (hereafter referred to as ‘the site’).
- 1.2 EDP previously undertook an ecological assessment of the site in 2018, however, subsequent to undertaking the assessment the redline boundary was changed such that it now incorporates additional areas of land to the west and areas previously included to the east are now no longer included. The revised redline boundary and location of the site is provided as **Plan EDP 1**.
- 1.3 The site is identified as a potential strategic site in the Shropshire Council strategic sites consultation document (July 2019) for the construction of a strategic employment site of around 50 hectares (ha); accompanied by around 3,000 homes and a local centre to provide services, facilities and infrastructure, as part of a planned settlement. The Extended Phase 1 Habitat Survey has been completed to supplement the evidence-base being collated to inform promotion as part of a preliminary ecological constraints/opportunities analysis.
- 1.4 The site is centred on Ordnance Survey Grid Reference (OSGR) SJ 785 091 and is illustrated on **Plan EDP 1** which accompanies this report. Much of the southern boundary of the site lies adjacent to the M54 motorway. The east of the site is largely bounded by the A41, with some additional areas of land immediately east of the A41. The northern boundary lies adjacent to the A5 with the western boundary lying adjacent to Lizard Wood, a large plantation woodland and arable fields and the B4379, a minor single track road. The wider landscape is predominantly arable with the nearest large town being Telford, located approximately 5.5km to the west.
- 1.5 This report addresses the ecology considerations pertaining to the site’s potential to accommodate a strategic employment and residential site. Specifically, it considers whether there are any ‘in principle’ ecological constraints to the site’s allocation for development or whether there are any other ecological constraints and opportunities which may influence the proposed development’s design, deliverability and/or capacity.
- 1.6 In the event that the allocation is confirmed, and a planning application is prepared, as per the requirements of the draft allocation policy, a full Environmental Impact Assessment (EIA) would be produced to inform the determination of that application by the Council.

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Section 2

Methodology

- 2.1 The findings, conclusions and recommendations of this report have been informed by a desk study and site survey carried out by experienced EDP Ecologists during 2019.

Desk Study

- 2.2 The methodology for the desk study is presented in full in **Appendix EDP 1**.

Site Survey

- 2.3 The survey technique adopted for the site visit was based on the standard 'Extended Phase 1 Habitat Survey' technique¹, based on habitat mapping and description, with additional information on Protected and Notable Species in the form of target notes. This level of survey does not aim to compile a complete floral and faunal inventory for the site. The level of survey involves identifying and mapping the principal habitat types based on the dominant and/or key flora.
- 2.4 The survey of the site was undertaken previously on 26 June and 28 June 2018 with the update survey of the additional areas of land completed on 05 July 2019. June and July are considered to be an optimal time of year for completing this type of survey.

Limitations

- 2.5 It should be acknowledged that the purpose of the survey was to inform major or 'in principle' ecological constraints, and not to inform a planning application at this stage. Therefore, while all areas of the site were visited, the survey did not involve data collection at the level of detail necessary to inform a planning application. This could potentially result in the omission of minor details from this report but does not compromise its purpose, i.e. the overall assessment of the site's general level of ecological constraint.

Important Arable Plant Area Inventory

- 2.6 During the site survey a number of arable weed species were noted and therefore, an assessment of the value of these species at a National level was assessed using Plantlife's² Important Arable Plant Area (IAPA) inventory. This ranks certain species depending on their rarity, with the results totalled. On sand/free draining soils as are

¹ Joint Nature Conservation Council (2004) *Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit* (reprinted with minor corrections for original Nature Conservancy Council publication)

² <https://www.plantlife.org.uk/uk/discover-wild-plants-nature/habitats/arable-farmland/surveying-arable-plants>

present within the site a score of 20 and above is considered to be of County importance, 35 and above National and a score over 70 being of European importance. However, it should be noted that a detailed survey of each field for the arable Species present was not undertaken, and the assessment undertaken provides only a broad evaluation of the site's potential value.

Evaluation

- 2.7 Based on industry standard evaluation guidance³, ecological features are evaluated where possible on a geographical scale of value as follows: International/European > National > County > District > Local > Less than Local. In the absence of data from Protected Species surveys, professional judgement has been used to assign a likely value to ecological features. The intrinsic ecological value of habitats is based upon consideration of criteria including: size, connectivity, likely distinctiveness, likely species-richness and intensity of management. For populations/species assemblage, the likely presence/absence and if present their value is based upon a size/diversity inferred from the presence of suitable habitat. Given the level of baseline information currently obtained, it is not possible to evaluate the importance of many species/habitats given that their presence/quality has yet to be confirmed.

³ CIEEM (2016). *Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater and Coastal, Second Edition*. CIEEM, Winchester

Section 3 Ecological Baseline

Preliminary Ecological Baseline

Designated Sites

Statutory Designations

- 3.1 Statutory designations represent the most significant ecological receptors, being of recognised importance at an International and/or National level. Statutory designations of International/European value include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites. Statutory designations of National value include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). Although Local Nature Reserves (LNRs) are statutory, their level of value is typically County level or less consistent with non-statutory designations and are therefore considered alongside non-statutory sites (see below).

Statutory Designations – International

- 3.2 International statutory designated sites include Natura 2000 sites regarded as being important at a European level including, SPAs, SACs and Globally important wetlands designated as Ramsar Sites⁴.
- 3.3 The site is not covered by or lies adjacent to any statutory designations of International importance.
- 3.4 There are two designations of International importance within 15km of the site which, are considered pertinent to the proposals (see **Appendix EDP 1**). These are:
- Mottey Meadows SAC: Which is located approximately 4.7km to the north-east of the site measured as a straight-line distance from the closest part of the site to the closest part of the SAC. The SAC is designated for its lowland hay meadow habitat which is dependent on maintaining a traditional management practice, maintaining autumn/winter high water levels and reducing nutrient levels. The SAC is identified as being vulnerable to nutrient run-off from adjacent agricultural land and changes in surface and ground water levels. The site is owned and managed by Natural England; and
 - (In Part) The Midland Meres and Mosses Phase 2 Ramsar Site: This site is located approximately 10.8km to the north of the site when measured as a straight-line distance from the closest part of the site. The component part of the Ramsar Site within 15km of the site is known as Aqualate Mere. The Ramsar is designated for its

⁴ Although Ramsar sites are not technically part of the Natura 2000 network, they are designated at a European level and most fall within Natura 2000 designations in any case

peatland habitat and the species which this habitat supports both in terms of specific flora and fauna. The Ramsar Site is considered vulnerable to eutrophication, particularly from surrounding land use and recreational pressures.

Statutory Designations – National

- 3.5 National designations include SSSIs and NNRs.
- 3.6 The site itself is not covered by any statutory designations but there are three statutory designations within 6km. Details are described in **Table EDP 3.1** and illustrated at **Appendix EDP 1**.

Table EDP 3.1: Nationally-designated Statutory Sites of Nature Conservation Importance within 5km of the Site

Site Name	Designation	Size (ha)	Grid Ref.	Approx. Distance from Site	Interest Feature(s)
Motley Meadows	SSSI	See details above with respect to <i>Statutory Designations – International</i>			
Belvide Reservoir	SSSI	89	SJ862102	5.9km north-east from the closest part of the site to the designation.	Breeding, overwintering and migratory bird use. Nationally important numbers of shoveler (<i>Anas clypeata</i>) and Regionally important numbers of goldeneye (<i>Bucephala clangula</i>). Conditions are unfavourable, declining with a small proportion being favourable.
Big Hyde Rough	SSSI	11	SJ864083	6.4km east from the closest part of the site to the designation.	An ancient woodland in favourable condition with mixed species and canopy layers. Adjacent to the stream running through the wood is an area of ungrazed marsh grassland.

Non-statutory Designations

- 3.7 In Shropshire, non-statutory designations are known as Local Wildlife Sites (LWSs) whilst in Staffordshire they are known as Sites of Biological Importance (SBIs). The non-statutory designated sites are of County level value. In addition, there are other non-statutory designations which may be pertinent in the locality and those of potential value which may be included in Local plans. This includes Biodiversity Alert Sites (BASs), proposed/potential Sites of Biological Importance (pSBIs) or potential Local Wildlife Sites (pLWS). These areas have lesser significance on a County level and may have lower intrinsic value due to size or damage but provide a valuable conservation resource.
- 3.8 The site itself is not covered by any non-statutory designations and none occur within 2km of the site.
- 3.9 Information provided by Shropshire Ecological Data Network (SEDN) states one area of ancient woodland is situated within the site at land south of Castle Wood, along the southern boundary.

Other Designations

- 3.10 Although not designated as a non-statutory site, the 'parkland' priority habitat of Weston Park (open to the public) is 600m north of the site. It is a historic estate comprising 400ha of registered parkland containing the additional priority habitats 'woodland' and 'semi-improved grassland'.

Main Habitats

Overview

- 3.11 The site in summary includes a central wooded corridor, running north to south which follows the course of a tributary of the River Worfe. This corridor is approximately 100m wide at its widest point and is bordered by arable fields on both its western and eastern boundaries. Within the wider site are several waterbodies and areas of woodland. The habitats recorded are shown on **Plan EDP 1** with target notes provided which highlight specific habitat examples or features referred to in the following text.

Arable

- 3.12 The majority of the site comprises arable farmland which at the time of the survey were sown with lettuce and other salad crops, wheat and barley. A notable feature of the majority of these fields was the presence of fields margins 3 - 5m, with these ranging from supporting areas of arable weeds to more permanent grassland. Areas of land were also 'set aside' and were dominated by arable weeds. A field on the eastern boundary also appeared to be deliberately sown with a cornfield annual mix (see Target Note (TN1) on **Plan EDP 1**), with corn marigold (*Glebionis segetum*) (a priority species) recorded. Corn marigold is associated with acid/sandy habitat as are present within the site,

However, although considered rare it is a common component of cornfield annual seed mixes and its native distribution is ambiguous because of this. Other arable weeds recorded across the site included species which are classed as Nationally threatened such as corn spurrey (*Spergula arvensis*) and common cudweed (*Filago vulgaris*).

- 3.13 The arable weed assemblage across the site using the Plantlife IAPA inventory produced a score of 17. As such the assemblage is not considered to be of County or higher-level importance but should be considered to be of Local value.
- 3.14 Field margins which supported more established grassland were dominated by false oat-grass (*Arrhenatherum elatius*), Yorkshire-fog (*Holcus lanatus*), Timothy-grass (*Phleum pratense*) and tall fescue (*Festuca arundinacea*). Forb species such as musk mallow (*Malva moschata*), oxeye daisy (*Leucanthemum vulgare*) and field scabious (*Knautia arvensis*) were recorded as occasional.

Semi-improved Neutral Grassland

- 3.15 This habitat type is present in the east of the site. The dominant species include false oat-grass and Yorkshire fog with other grasses including Timothy-grass, crested dog's-tail (*Cynosurus cristatus*), tall fescue, sweet vernal-grass (*Anthoxanthum odoratum*) and meadow foxtail (*Alopecurus pratensis*). Forbs included tufted vetch (*Vicia cracca*), creeping buttercup (*Ranunculus repens*) and common mouse-ear (*Cerastium fontanum*). It is distinguished from the species-poor grassland described below by having a greater diversity of both grasses and forbs and a lower proportion of ruderal species.
- 3.16 To the north east of the site is a reservoir which was surrounded by a small area of semi-improved neutral grassland (see TN2 on **Plan EDP 1**). Within this grassland common spotted orchid (*Dactylorhiza fuchsia*) was frequent.

Species-poor Semi-improved Grassland

- 3.17 Areas of species poor semi-improved grassland present in the east of the site included areas of set aside, unmanaged grassland (see TN3 on **Plan EDP 1**) dominated by false oat grass. In addition to this were two fields adjacent to the western boundary which appear to be newly created hay meadows (see TN4 on **Plan EDP 1**). Whilst appearing to be well managed and lacking coarse grass species such as false oat grass (a species typically associated with a lack of management) these hay meadows were dominated by grass species including red fescue with forb species limited. They have therefore been mapped as poor semi-improved grassland.
- 3.18 To the south-east of the site, east of the A41 is a livery (see TN5 on **Plan EDP 1**). Numerous horses were present within most of the paddocks. The habitat comprised short-grazed grassland dominated by false oat-grass, Yorkshire-fog and meadow grasses (*Poa* spp.). Ruderals including thistles (*Cirsium* spp.), rosebay (*Chamerion angustifolium*) and common nettle (*Urtica dioica*) were distributed rarely to occasionally.

- 3.19 At the east of the site is a small area of poor semi-improved acid grassland associated with a castle mound (TN6) This area of grassland was characterised by supporting abundant common bent (*Agrostis capillaris*) and sheep sorrel (*Rumex acetosella*).

Woodland

- 3.20 Several areas of plantation woodland are distributed across the site, these include mixed coniferous and broadleaved areas, as well as separate broadleaf and coniferous-dominated areas. The species composition in broadleaved and mixed plantation is similar, with both habitat types containing occasional Scot's pine (*Pinus sylvestris*) trees. Non-coniferous species forming the canopy include English oak (*Quercus robur*), ash (*Fraxinus excelsior*), field maple (*Acer campestre*) and sweet chestnut (*Castanea sativa*). The ground flora and shrub layer are of poor quality, with the latter being barely present. Ground flora include brambles (*Rubus fruticosus* agg.), common nettle and bracken (*Pteridium aquilinum*). Many of the areas of plantation are small, although there is a large area of coniferous plantation known as Lizard's Wood located in the west of the Site. This woodland covers approximately 96 Ha, of which 90 Ha lies within the site. The woodland was not fully accessed during the survey but was noted to support a mix of mature coniferous species, with the woodland bordered by mature oak and beech trees (*Fagus sylvatica*). The understorey is in places dominated by rhododendron (*Rhododendron ponticum*). In addition to Lizard's Wood, there is also a large tract of broadleaved plantation extending in a north - south direction in the north-west of the site. This area follows the watercourse running through that area of the site and the main planted areas consist of hybrid poplar (*Populus* sp.). The ground flora is dominated by dense stands of common nettle and cleavers (*Galium aparinum*).
- 3.21 A small area of woodland plantation in the south of the site is listed as being 'Ancient Replanted Woodland' although it did not differ significantly from the other areas of woodland described above. In addition, a narrow tract of woodland in the north-west of the site (to the south of the hamlet of Burlington, and immediately adjacent to the A5) is listed as 'Ancient and Semi-natural Woodland'. This was mainly comprised of willows, with dense coverage of ruderal and scrub species, especially at the edges. The woodland was not obviously characteristic of ancient woodland based on the findings of the field survey.

Hedgerows

- 3.22 Being a large arable site containing numerous fields, there are a similarly large number of hedgerows distributed throughout the site. These on the whole are species poor comprised of either hawthorn (*Crataegus monogyna*) or blackthorn (*Prunus spinosa*) and are mostly intact with occasional mature oak and ash trees. Of note, was a relatively large oak tree to the east of the site which is potentially a veteran tree. The location of this tree is provided as TN7 on **Plan EDP 1**.

Waterbodies

- 3.23 A large fishing lake is present in the south-east and there are two small reservoirs used for irrigation of the adjacent arable fields in the north of the site. Most of the remaining

waterbodies within the site include small in-field ponds, many of which are associated with small groups of trees or outgrown hedgerows. Most of these ponds are in an ecologically poor condition and have little standing water, being either subject to natural succession or suffering from over-shading, excessive leaf-litter and a resultant lack of aquatic/emergent vegetation and low water quality. In addition, many of the waterbodies shown on mapping are now no longer present.

- 3.24 In the east of the site a small amount of Himalayan balsam (*Impatiens glandulifera*), a non-native species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) was recorded (see TN8 on **Plan EDP 1**).

Watercourses

- 3.25 There are two separate watercourses extending through the site, flowing north to south. The watercourse in the west of the site is big enough to contain fish (trout were seen during the survey) and is heavily shaded by adjacent areas of woodland. The watercourse adjacent to the eastern boundary is a small stream connecting meres and lakes lying to the north and south.

Scrub and Shrubs

- 3.26 There are small areas of scrub across the site, mostly associated with ponds and unmanaged sections of hedgerow. These were too small to map but comprised hawthorn, blackthorn and brambles.

Species

- 3.27 Based on the information obtained, the following observations were made:
- Badgers (*Meles meles*): Desk study records show numerous observations of badgers around the area including within the site. Incidental observations made during the field survey revealed a well-used main sett within an area of woodland adjacent to the western boundary (TN9 on **Plan EDP 1**), a further well used main sett within the banks of the reservoir (TN10 on **Plan EDP 1**) recorded in the east of the site and a disused outlier (TN11 on **Plan EDP 1**) and one disused subsidiary sett in the west of the site, as well as two latrines;
 - Great Crested Newts (*Triturus cristatus*): No records of great crested newt (GCN) were returned from the desk study. As mentioned in the habitat description, many of the ponds are unsuitable or of very low suitability for GCN, being either fishing lakes, dry or in very poor condition with little water and no aquatic vegetation. Notwithstanding this, low numbers of the ponds visited during the survey were found to be of good suitability for GCN, with areas of open water, emergent and aquatic vegetation and no evidence of fish/fowl. Not all waterbodies were visited during the survey and off-site waterbody screening was not undertaken. In the event that any of the ponds are used by GCN as breeding habitat, then there are ample areas of suitable terrestrial habitat in the east of the site, including a network of established hedgerows, small areas of

woodland and semi-improved grassland. It is worthy of note, however, that the motorway and various watercourses around the site would restrict dispersal of amphibians;

- Reptiles: The site does not generally represent good quality habitat for reptiles as it is comprised of predominantly arable land within extensive areas of arable present in most directions. However, there are areas of suitable habitat within the site, including within Lizard wood, other woodland edge habitats, semi-improved grassland and tall ruderal and some are connected to other areas of more suitable habitat offsite. The network of hedgerows would allow dispersal if present. Given the habitat limitations, reptile numbers would be expected to be low if present at all and would be restricted to the most common and widespread species;
- Bats (roosting): The desk study returned five species of bat; brown long-eared (*Plecotus auritus*), Natterer's bat (*Myotis nattereri*), noctule bat (*Nyctalus noctula*), common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*). The site contains suitable roosting habitat for all these species, although in terms of area potential roosting habitat is small being limited to the farm/livery buildings and barns on site, a number of mature trees (mostly at field boundaries and within areas of plantation woodland) and a stone retaining wall in woodland in the south of the site (TN12 on **Plan EDP 1**);
- Bats (activity): The site represents a large area of moderate-quality foraging habitat, with this assessment being based on the presence of a variety of habitats (open agricultural areas, established hedgerows, waterbodies, watercourses, farm buildings and semi-improved grassland). This is typical of the wider area and the diversity of habitats is a reflection of the size of the site, as opposed to its quality. There are some good quality rural mosaic habitats around the site, notably Weston Park which lies close by to the north;
- Water Vole (*Arvicola amphibius*): No water vole records were present within the search area and the watercourses extending through the site are of generally very low suitability due to heavy shading (preventing establishment of suitable food plants) and/or shallow water depth (typically 0.1 – 0.2m, with upwards of 1m being regarded as optimal). However, parts of the watercourse and connected waterbodies in the centre of the site (immediately west of the village of Tong) are potentially suitable, having grassy banks and sufficiently deep water in parts;
- Otters (*Lutra lutra*): No otter records were received from the desk study, although an otter spraint was found adjacent to the central watercourse. While not identified from the desk study, otters are known to be present in the wider area and there are two notable water features (the brook in the west of the site and the fishing lake in the centre) which would comprise a good source of food. Although otters are therefore regarded as likely to be present, their distribution would be expected to be restricted to the riparian corridors of the central and western watercourses. No holts or other 'places of shelter or rest' were incidentally recorded during the survey;

- White-clawed Crayfish (*Astropotamobius pallipes*): There are confirmed records of this species being present within and around the site as recently as 2001, although signal crayfish have been recorded in the area in 2013. The two watercourses within and adjacent to the site offer suitable habitat for breeding and foraging, with the substrate providing refuge and a suitable medium for the location of burrows. White-clawed and signal crayfish rarely co-exist for long, with the white-clawed usually succumbing to competition and disease brought by the signal crayfish. As no white-clawed crayfish have been recorded since 2001 it is unclear whether they would still be present within the site or adjacent habitats;
 - Dormouse (*Muscardinus avellenarius*): Dormouse are very rare in Shropshire and were recently thought to be absent. However, at this extremity of the range, this species is only present within optimum areas of habitat which are well connected to other similar areas. Based on this, dormouse are unlikely to be present, although this could be robustly determined through localised, targeted survey; and
 - Breeding and Wintering Birds: Numerous desk study records of birds were returned, as would be expected for a rural site of this size. Schedule 1 species which may breed at the site include barn owl (*Tyto alba*), hobby (*Subbuteo falco*) and red kite (*Milvus milvus*). A number of species listed within the Shropshire Biodiversity Action Plan for 'Farmland Birds' are also confirmed as being present, with many likely to overwinter and breed at the site.
- 3.28 A small, untreated stand of Japanese knotweed (*Fallopia japonica*) is present at the east of the site (TN13 on **Plan EDP 1**). The stand was comprised of three separate plants at the time of the survey, which were in leaf.
- 3.29 A small stand of Himalayan balsam (*Impatiens glandulifera*) is present on the banks of a watercourse on the eastern boundary of the site.

Section 4 Conclusions and Recommendations

- 4.1 This section of the report utilises the data obtained from field and desk-based studies to provide an early indication of the site's suitability or otherwise for inclusion in the Local plan. Other strategic considerations are discussed where appropriate, such as valuable habitats or mitigation strategies. As explained in the opening sections of this report, the document informs 'in principle' ecological constraints but does not aim to discuss the specifics of any mitigation, ascertain presence or absence of Protected Species or identify localised impacts of development at the site. The conclusions will feed in to a Green Infrastructure Strategy for the site.

Designated Sites

Statutory Designations – International

- 4.2 Consideration of these sites was previously undertaken by EDP in 2017 in their Preliminary Habitats Regulations Assessment (HRA) report (see **Appendix 3**). This report concluded that there are only two European Designations within 15km of the site, namely Motte Meadows SAC and a component site of the Midland Meres and Mosses Phase 2 Ramsar Site called Aqualate Mere.
- 4.3 With respect to Motte Meadows SAC, at the time of writing the report stated that the Local Planning Authority had already screened out any likely significant effect on the designated interests of the SAC both alone and in combination with other policies of the local plan. However, the Council's preliminary HRA work did not consider development of this scale in this part of the County. It was considered likely that the conclusion of the Council's initial work was, however, sound, subject to confirmation and clarification in due course of the ground water effects and the foul drainage design for the scheme.
- 4.4 In relation to the Midland Meres and Mosses Phase 2 Ramsar Site – Aqualate Mere, EDP's Preliminary HRA report considered that, subject to the findings of the Council's recreational impact study which were due to be prepared to inform the next stage of the Local plan review it is considered unlikely that the proposals will have any likely significant effects, either alone or in combination, on the designated interest of the Ramsar Site.
- 4.5 Subsequent to the issuing of the Preliminary HRA report Shropshire County Council published their 'Preferred Strategic Sites: Habitat Regulations Screening Report' in July 2019, provided as **Appendix EDP 2**. The conclusions of this report are broadly inline with the conclusions of the Preliminary HRA undertaken by EDP:
- That only two International sites (Motte Meadows SAC and Aqualate Mere Ramsar Phase1) are present within 15km of the site; and

- That no, air-other, water (Local), recreational and biosecurity or adverse effects of lighting, arising from the proposed development would impact these two sites.

4.6 With regards to impacts arising from traffic emissions the report states that uncertainty remains, and re-screening will take place in the next Local Plan Review HRA. However, given the closest designated site is approximately 5km away, it is unlikely that traffic emission arising from the proposed development would have a significant adverse impact.

Statutory Designations – National

4.7 The site is not covered by or immediately adjacent to any Nationally important statutory designations and the closest such designations are at least 3km from any part of the site. It is therefore, not considered that National statutory designations form an ‘in principle’ constraint to development and on a preliminary basis. It is considered unlikely that the proposals will have a significant adverse effect on the designated interests of those National statutory designations within 5km of the site. However, it would be prudent to consider potential for hydrological connectivity between the site and Belvide Reservoir SSSI as the technical work to inform the proposals are progressed. This would be completed to confirm no indirect effects upon the designated features of the SSSI.

Non-statutory Designations

4.8 The site itself is not covered by any non-statutory designations such as Local Wildlife Sites or Sites of Biological Importance and none occur within 2km of the site.

4.9 There are two parcels of ancient woodland within the site, which should be retained and a minimum buffer of 15m around the boundary of the woodland is recommended in Standing Advice produced by Forestry Commission and Natural England⁵.

4.10 Therefore, non-statutory designations do not form an ‘in principle’ constraint to the proposals.

Other Designations

4.11 Weston Park is located approximately 600m north of the site. The park includes parkland which supports priority woodland and semi-improved grassland habitats. The park is open to the public and likely to be subject to a degree of recreational pressure, which will be managed by the owners of the park. Hence, potential recreational impacts arising from the proposed development are unlikely to have a significant impact on the park.

4.12 The site is not covered by any statutory designations. The closest National level designations lie 3.3km and 4km away from the site these are Belvide Reservoir and Big Hyde Rough SSSIs respectively. The closest International level designations are

⁵ Forestry Commission and Natural England (updated 04 January 2018) Ancient woodland and veteran trees: protecting them from development. Available from: <https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences>. [Accessed: 08/03/18].

Mottey Meadows SAC, located 3.5km to the north-east of the site and The Midland Meres and Mosses Phase 2 Ramsar site located 10.8km to the north of the site.

- 4.13 With regards to Belvide Reservoir SSSI, Natural England's Views About Management (VAM) reference the need to prevent pollution and do not suggest that development at the site would contravene any of the VAMs.
- 4.14 Big Hyde Rough is designated for its ancient woodland and, as this is 4km from the site, it would not be affected by development at the site provided that basic best practice measures are adopted.
- 4.15 While the details of any development at the site are unknown the National and European level statutory sites within the search area have not identified a likely significant effect at this stage and certainly do not pose an 'in principle' constraint to the proposals. While at such an early stage, there are a number of unknown factors, but based on all evidence available at this stage the likelihood of significant negative effects is considered very low.

Non-statutory Designations

- 4.16 Non-statutory designations do not pose a constraint to the proposals due to the absence of such sites from the search area.

Habitats

- 4.17 As detailed above, a search of online resources indicates the site and adjacent areas may support a number of Priority Habitats. In themselves, they are not considered 'in principle' constraints to the proposed development however, the duty to conserve biodiversity set out in the Natural Environment and Rural Communities Act (NERC Act) will need to be accommodated by the proposals. At this stage it is recommended that the following 'key principles' are adhered to:
- The ecology report submitted in support of the planning application will need to consider the location and potential quality of these Priority Habitats;
 - Where Priority Habitats are confirmed, the design/layout of the proposed development needs to retain, buffer and protect the Priority Habitats; including from any increases in recreational pressure that may arise from the proposals; and
 - In addition to retaining, buffering and protecting, the proposals will need to include a strong Green Infrastructure Strategy and framework for its delivery and management to ensure that existing Priority Habitats are managed and enhanced appropriately in the long-term and to ensure the delivery of net biodiversity gain commensurate with local and emerging National Policy⁶.

⁶ Ministry of Housing, Communities and Local Government (July 2018). National Planning Policy Framework, July 2018, Para. 170(d)

4.18 Habitats which may require further detailed survey if they are likely to be affected by the proposals include hedgerows (Hedgerow Regulations Assessment survey), the arable fields (IAPA survey), semi-improved grassland (NVC survey) and the areas of ancient semi-natural and ancient replanted woodland (NVC survey). It is understood that the large area of coniferous plantation known as Lizard's Wood, as well as the various other tracts of woodland across the site will be retained.

Species

4.19 The findings of this study have not identified any 'in principle' constraints posed by Protected Species or Notable Species at this stage. However, the baseline will need to be supplemented in due course by a suite of detailed species surveys, the findings of which will need to inform the Green Infrastructure strategy and species-specific mitigation strategies to avoid/compensate/mitigate and deliver net gain.

4.20 The range of Protected and Notable Species which could be present at the site is a reflection of the site's large area and the range of habitats which it therefore contains. The need or otherwise for Protected Species surveys would depend heavily on which areas/habitats of the site would be affected and in some cases the severity of those impacts.

4.21 Detailed surveys would be required to secure planning permission. To inform a planning application, surveys would be required for:

- Bats (roosting) – if suitable trees and/or buildings will be affected;
- Bats (activity) – likely required if any area of the site is developed;
- Badger – likely required if any area of the site is developed;
- Breeding and Wintering Birds – required if any area of the site is developed;
- Great Crested Newt – likely required if any area of the site is developed;
- Water Vole – required if the central water features are affected;
- White-clawed Crayfish – required in the event that the proposals may affect watercourses (including indirect effects);
- Dormouse – although at the extreme extent of their range, the presence of ancient woodland on site and well established hedgerows warrants survey in order to be conclusive;
- Otter – required if any of the watercourses, lakes or nearby areas of grassland and woodland are affected; and

- Reptiles – likely required if any area of the site is affected.

4.22 The distribution of white-clawed crayfish can often be accurately established through consultation with Local recording groups and with the Environment Agency, although if this is inconclusive then field surveys would be required if development is considered likely to affect the watercourses.

Overall Conclusions in Respect of Ecology

4.23 A large, potential strategic site has been identified in primarily arable land to the east of Telford. A desk study and a field survey have been undertaken at the site.

4.24 From an ecological perspective, the studies have not identified any ‘in principle’ constraints to taking the site forward for development via allocation in the Local plan, subject to delivery of a comprehensive Green Infrastructure Strategy and other specific mitigation. This assessment should be revisited as more information about the potential use and layout of the site becomes apparent.

4.25 The site contains a number of habitats which are suitable for use by a variety of Protected Species. However, this is not a reflection of the quality of the site *per se*, but due to the large area and therefore, associated range of habitats present. It may be possible to remove the need for specific Protected Species surveys by avoiding certain habitats, such as watercourses and mature trees. Notwithstanding this, site design is an iterative process and therefore it may be helpful to undertake Protected Species surveys at an early stage in the proposals.

4.26 The site offers a number of habitats which could be easily be retained and enhanced to contribute to overall net ecological gain, in particular ponds, woodlands and hedgerows.

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Appendix EDP 1 Ecological Desk Study

Methodology

- A1.1 The desk study is an important element of undertaking an initial ecological appraisal of a site proposed for development, since it enables the initial collation and review of contextual information such as designated sites together with known records of Protected and Priority Species.
- A1.2 EDP undertook an ecological desk study for the site in February 2018 to check designated sites and Protected Species within the site's potential Zone of Influence since 2016. The desk studies involved collating information from both statutory and non-statutory bodies, including:
- Staffordshire Ecological Record (SER);
 - Shropshire Ecological Data Network (SEDN); and
 - Multi-Agency Geographic Information for the Countryside (MAGIC⁷).
- A1.3 Biodiversity information was requested for the following search areas measured approximately from OSGR SJ 785 091:
- 20km radius for sites of European importance;
 - 6km radius for Annex II bat species records;
 - 6km radius for sites of National importance;
 - 2km radius for sites of Local importance;
 - 2km radius for other Protected/Notable Species records; and
 - 500m radius for Priority Habitats.
- A1.4 Any pertinent information received as a result of the updated desk study has been included and specifically referenced within the results section.

⁷ MAGIC Partners. Interactive Map. [online] Available at: www.magic.gov.uk. Accessed 26 February 2018.

Results

Statutory Designations

- A1.5 International statutory designated sites include Natura 2000 sites regarded as being important at a European level including, SPAs, SACs and Globally important wetlands designated as Ramsar Sites. National designations include SSSIs and NNRs.
- A1.6 The site itself is not covered by any statutory designations but four statutory designations were observed within 5km of the site. Three European level important sites occur between 4 - 18km of the site. Details are described in **Table EDP A1.1**.
- A1.7 Additionally, the site is situated within a Nitrate Vulnerable Zone 2017 Designation in regard to surface water. Also, the site is not sited within a SSSI Impact Risk Zones for residential development.

Table EDP A1.1: Statutory Sites of Nature Conservation Importance within the Site's Potential Zone of Influence

Site Name	Designation	Size (ha)	Grid ref.	Approx. Distance from Site	Interest Feature(s)
Donington and Albrighton	LNR	5	SJ810045	2km S	Consists of a woodland conservation area with mature trees and willow carr, a series of pools and meadow.
Belvide Reservoir	SSSI	89	SJ862102	5.9 km NE	Breeding, overwintering and migratory bird use. Nationally important numbers of shoveler (<i>Anas clypeata</i>) and Regionally important numbers of goldeneye (<i>Bucephala clangula</i>). Conditions are unfavourable, declining with a small proportion being favourable.
Big Hyde Rough	SSSI	11	SJ 864083	6.4km E	An ancient woodland in favourable condition with mixed species and canopy layers. Adjacent to the stream running through the wood is an area of un-grazed marsh grassland.
Mottey Meadows	SAC SSSI NNR	44	SJ840134	4.7km NE	Lowland hay meadow with associated species including fritillary (<i>Fritillaria meleagris</i>) at its

Site Name	Designation	Size (ha)	Grid ref.	Approx. Distance from Site	Interest Feature(s)
					most northerly native range. Conditions are favourable across the seven types of grassland.
Aqualate Mere within Midland Meres and Mosses Phase 2	RAMSAR SSSI	241 Within a phase size of 1593	SJ770205	10km N	Aqualate Mere is the largest of the meres with the most extensive reedswamp community with water, fen, grassland and woodland. Supports an assemblage of invertebrates, Nationally important numbers of breeding herons (<i>Ardea cinerea</i>) and passage shoveler (<i>Anas clypeata</i>). It is Regionally significant for breeding waders. The SSSI is in favourable conditions with some areas of lowland grass and woodland in unfavourable conditions.
Cannock Chase	SAC SSSI LNR Country Park	1245	SJ988179	18km NE	Noted for dry and wet heaths of European importance with associated rare invertebrates and flora. Most of the site is in unfavourable, recovering conditions with areas of dwarf shrub heath being favourable and swamp being unfavourable with no change.

Non-statutory Designations

A1.8 Non-statutory designations in Shropshire are known as Local Wildlife Sites and Sites of Biological Importance (SBIs) in Staffordshire. The sites are of County level value. In addition, there are other non-statutory designations which may be pertinent in the locality and those of potential value which may be included in Local Plans. This includes Biodiversity Alert Sites (BASs), proposed/potential Sites of Biological Importance (pSBIs) or potential Local Wildlife Sites (pLWS). These areas have lesser significance on a County level and may have lower intrinsic value due to size or damage but provide a valuable conservation resource.

A1.9 The site itself is not covered by any non-statutory designations and none occur within 2km of the site.

Other Designations

A1.10 Although not designated as a non-statutory site, the historic priority habitat parkland of Weston Park (open to the public) is 600m north of the site. It is an historic estate, open to the public, situated in 400 (ha) of registered parkland with priority habitat woodland and semi-improved grassland.

Protected and Notable Species

A1.11 Several Notable or Protected Species were found within the site. Multiple farmland birds including barn owl were present across the site. SER provided information stating no Annex II bat species have been recorded within 6km of the site. The nearest Annex II bat observations were barbastelle (*Barbastella barbastellus*) and lesser horseshoe bat (*Rhinolophus hipposideros*) at a location 9.5km west (2015 - 2009) in accord to SEDN. Badger activity has been recorded within the site at Lizardmill Farm, Stanton Farm and near Church Pool. Notable flora has also been noted within the site at locations such as Lizard Lane and Tong Norton. This includes invasive species. Many brooks running through the site have been noted as containing white clawed crayfish and the non-native, signal crayfish. Further results and details are illustrated in **Table EDP A1.2**.

Table EDP A1.2: Notable Species Records within the Site's Potential Zone of Influence

Scientific Name	Common Name	Grid Ref.	Approx. Distance from Site	Date	Comments	Status
Birds						
Barn Owl, Corn Bunting, Grey Partridge, Hobby, House Martin, House Sparrow, Lapwing, Lesser Redpoll, Linnet, Peregrine Falcon, Red Kite, Skylark, Starling, Stock Dove, Swift, Tree Sparrow, Yellow Wagtail, Yellowhammer		Multiple observations and locations within the site.		2014 - 2012	Observations include: Church Farm, Lizard Hill, Offoxey Farm, Tong Hill Farm and Whiteladies plantation. Some noted as breeding.	WCA S. 1 NERC S. 41 Red and amber listed BoCC

Scientific Name	Common Name	Grid Ref.	Approx. Distance from Site	Date	Comments	Status
Barn owl, corn bunting, cuckoo, grey partridge, grey wagtail, hobby, house martin, house sparrow, kingfisher, lapwing, lesser redpoll, lesser spotted woodpecker, linnet, marsh tit, merlin, peregrine falcon, pochard, red kite, redstart, reed bunting, shelduck, skylark, snipe, starling, stock dove, swift, tree sparrow, willow tit, woodcock, yellow wagtail, yellowhammer		Multiple observations and locations in the wider 2km search radius.		2014 - 2012	Some noted as breeding.	WCA S. 1 NERC S. 41 Red and amber listed BoCC
Mammals						
<i>Meles meles</i>	European Badger	Multiple observations and locations within 2km. Ranging from within site to 1.3km.		2016 - 2013	Observations include near Lizardmill Farm, Stanton Farm, near Church Pool and A41.	PBA
<i>Lepus europaeus</i>	Brown Hare	SJ7608	Within 2km of the site.	2014		NERC, S. 41
<i>Mustela putorius</i>	Polecat	Multiple observations and locations within 2km.		2015 - 2009	Observations include Cosford, north of Woodside Farm, near Tong Park Farm.	NERC, S. 41
<i>Erinaceus europaeus</i>	Hedgehog	Multiple observations and locations within 2km.		2015 - 2013		NERC, S. 41
Bats						
<i>Plecotus auritus</i>	Brown Long-eared Bat	SJ780059 SJ788060	1.3km S 1km S	2013 2008	Ruckleywood Farm Neachley House	EPS WCA, NERC, S. 41
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	SJ802051 SJ767078 SJ8104	1.5km S 660ms Within 2km	2013 2013 2011	Coach House Farm Stanton Hill	
<i>Myotis nattereri</i>	Natterer's Bat	SJ780059	1.3km S	2010	Ruckleywood Farm	

Scientific Name	Common Name	Grid Ref.	Approx. Distance from Site	Date	Comments	Status
<i>Nyctalus noctula</i>	Noctule Bat	SJ802051 SJ8104	1.5km S Within 2km	2013	Coach House Farm Albrighton Station	
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	SJ780059 SJ802051	1.3km S 1.5km S	2013 2010	Ruckleywood Farm Coach House Farm	
Plants						
<i>Hyacinthoides non-scripta</i>	Bluebell	Multiple observations and locations within 2km. Ranging from within site to 1.6km.		2011 - 2009	Observations include: Albrighton, near Lizardmill Farm and Tong.	WCA, Sch. 8 Local BAP species Axiophyte
Blue fleabane, buck's-horn plantain, bugloss, corn spurrey, greater tussock-sedge, hairy brome, large bitter-cress, marsh woundwort, musk stork's-bill, purple willow, ramsons, scots pine, small teasel, small-leaved lime, spiked sedge, spindle, water fern, water horsetail, wavy hair-grass, wood anemone, wood melick, wood millet, wood speedwell		Multiple observations and locations within 2km. Ranging from within site to 1.8km.		2016 - 2009	Observations include: Albrighton, Cosford, Lizard Lane, Ruckley, Timlet and Tong Norton.	Local BAP species Axiophyte Nationally rare/ scarce
Few-flowered garlic, Indian balsam, Japanese knotweed, rhododendron, three-cornered garlic, water fern		Multiple observations and locations within 2km. Ranging from with site to 1.9km.		2010 - 2007	Observations include: Timlet and Tong Norton.	Invasive species WCA, Sch. 9
Invertebrates						
Centre-barred sawfly, cinnabar moth, rosy rustic		Multiple observations and locations within 2km. Ranging from 300m-1.9km.		2011 - 2009		NERC s.41
<i>Austropotamobius pallipes</i>	White-clawed crayfish	Multiple observations and locations within 2km. Ranging from within the site to 1.6km		2001	Dated observations from Albrighton Brook, Burlington Brook, Neachley Brook, Norton Mere and Ruckley Brook.	EPS NERC s.41

Scientific Name	Common Name	Grid Ref.	Approx. Distance from Site	Date	Comments	Status
<i>Pacifastacus leniusculus</i>	Signal Crayfish	SJ814051	1.5km S	2013	Albrighton Brook	Invasive species WCA, Sch. 9

Abbreviations used within the table: BoCC Birds of Conservation Concern, EPS European Protected Species, NERC Natural Environment and Rural Communities Act 2006, WCA Wildlife and Country Side Act 1981.

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Appendix EDP 2
Shropshire Council - LPR 2016-2036 Preferred Strategic Sites HRA
July 2019

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Shropshire Council

Local Plan Review 2016 - 2036

Preferred Strategic Sites

**Habitats Regulations
Assessment**

Screening Report

July 2019

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1. Introduction

- 1.1. It is a legal requirement for Local Authorities to prepare a Habitats Regulations Assessment (HRA) for plans and projects which have the potential to impact on habitats of European importance.
- 1.2. This Preferred Strategic Sites HRA Screening Report is the fourth phase of the HRA of the Shropshire Council Local Plan Review (LPR) 2016-2036. It should be noted that the LPR is still in the process of preparation.
- 1.3. The Issues and Strategic Options document was published for public consultation between 23rd January and 20th March 2017. This set out options for the level and general distribution of housing growth and for economic growth, and was accompanied by the HRA Initial Screening Report.
- 1.4. The Preferred Options: Scale and Distribution of Development consultation document was published for consultation between 27th October and 22nd December 2017. It set out the preferred scale and distribution of housing and employment development in Shropshire 2016-36, identifying a settlement hierarchy of a Strategic Centre, Principal Centres, Key Centres, Community Hubs and Community Clusters. It also proposed draft policies for the management of development within Community Hubs and Community Clusters. It was accompanied by the HRA Screening Report Preferred Options Scale and Distribution of Development.
- 1.5. The Preferred Sites consultation document was published for consultation between 29th November 2018 and 8th February 2019. This identified preferred sites in the Strategic Centre, the Principal and Key Centres and Community Hubs for housing and employment use. It included the numbers of dwellings and the amount of employment land (in hectares) for each site. It also asked for comments on a cross subsidy exception sites policy. It was accompanied by the Preferred Sites Habitats Regulations Assessment Screening Report.
- 1.6. The current strategic sites consultation document identifies three preferred strategic sites and asks for views on whether a fourth potential strategic site should be preferred. Strategic sites are individually more than 25ha in size and are not associated with meeting the needs of those settlements in the preferred sites document. Two brownfield sites (the former Ironbridge Power Station and Clive Barracks at Tern Hill) are proposed for mixed use development, whilst a third (RAF Cosford) would offer increased employment, education opportunities and housing to meet the needs of RAF personnel. The potential strategic site at Junction 3 of the M54 would provide employment and housing

- 1.7. A review of policies in the adopted Local Plan has not yet been undertaken: this will be published later in the plan making process and will form the basis for subsequent HRA reports.
- 1.8. The purposes of this HRA Screening Report are to
 - identify which international sites could possibly be affected by the proposals in the Strategic Sites consultation document and which can be screened out at this stage,
 - determine potential pathways by which the international sites may be affected,
 - to give recommendations for any potential avoidance or mitigation measures to be considered when drafting planning policies for later LPR documents,
 - comment on requirements for further information gathering.
- 1.9. A summary of this HRA Screening Report (the Preferred Strategic Sites Habitats Regulations Assessment Screening Report Summary) is also available on Shropshire Council's website.

What are Habitats Regulations Assessments?

- 1.10. Habitats Regulations Assessment (HRA) (required under the Conservation of Habitats and Species Regulations 2010 or the 'Habitats Regulations') plays an important role in protecting the conservation objectives of the Natura 2000 network of sites. These sites, often referred to as 'European Sites', include Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Candidate SACs (cSACs). Following UK government policy, potential SPAs (pSPAs), possible SACs (pSACs) and proposed and listed Wetlands of International Importance (Ramsar Sites) designated under the Ramsar Convention are also treated as though covered by the Habitats Regulations. The term 'international sites' includes all the above designations and is used throughout this report.
- 1.11. The purpose of a HRA is to ensure that the proposals of any plan or project, or the cumulative effect of a number of plans or projects, will not adversely affect the integrity of any international site.
- 1.12. The 'integrity' of the site is defined in ODPM Circular 06/2005: (Biodiversity and Geological Conservation – Statutory Obligations and their impact within the Planning System) as "the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or levels of populations of species for which it was classified".
- 1.13. European guidance (EU 2001) describes a four stage process to HRA and is summarised below:

Table 1: Stages of HRA process

Stage 1: Screening

The process to identify the likely impacts of a policy or proposal upon a Natura 2000 site, either alone or in combination with other plans and projects, and consider whether the impacts are likely to be **significant** or uncertainty exists. Previously, case law suggested straightforward counter-acting measures could be recommended for incorporation into policy wordings and then sites re-screened. However, recent case law (*People Over Wind v Coillte Teoranta C-323/17*) has indicated that this is not acceptable and if mitigation measures are required, HRA screening should proceed immediately to Stage 2.

Stage 2: Appropriate assessment

Consideration of impacts on the **integrity** of the Natura 2000 sites, either alone or in combination with other plans and projects, with regard to the site's structure and function and its conservation objectives. Where there are adverse impacts, an assessment of mitigation options is carried out to determine adverse effect on the integrity of the site. If these mitigation options cannot avoid adverse effects then proceed to stage 3.

Stage 3: Assessment of alternative solutions

Examining alternative ways of achieving the objectives of the policy or proposal to establish whether there are solutions that would avoid or have a lesser effect on Natura 2000 sites.

Stage 4: Assessment where no alternative solutions remain and where adverse impacts remain:

This is the assessment where no alternative solution exists and where adverse impacts remain. The process to assess whether the development is necessary for imperative reasons of overriding public interest (IROPI) and, if so, the potential compensatory measures needed to maintain the overall coherence of the site or integrity of the European site network

Background to the Shropshire Local Plan Review 2016-2036 and the HRA Screening Reports

- 1.14. The Shropshire Local Plan currently comprises the Core Strategy (adopted 2011) and the Site Allocations and Management of Development (SAMDev) Plan (adopted 2015), together with the adopted Neighbourhood Plans for Much Wenlock and Shifnal. These documents set out proposals for the use of land and policies to guide future development in order to help to deliver sustainable growth in Shropshire for the period up to 2026.

This Local Plan is now being reviewed, in line with the recommendations of the Inspector for the SAMDev Plan. The overall strategic approach of focusing growth in Shropshire's Strategic Centre, Principal Centres and Key Centres whilst enabling some controlled development in rural areas to maintain local sustainability remains the preferred development strategy.

Local Plan Review Preferred Strategic Sites:
HRA Screening Report

Many of the existing policies in the Core Strategy and SAMDev do not need to be amended and will be carried forward as part of the new Plan. The review will therefore focus on key areas of change, including options for the level and distribution of new housing and strategies for employment growth during the period 2016 - 2036, together with any amended policies and new site allocations which are needed to demonstrate that these requirements can be delivered. The existing Core Strategy and SAMDev Plan will remain in force until any new Plan is adopted. This is anticipated around 2021.

- 1.15. The product of the review will be a new Local Plan document which merges the Core Strategy and SAMDev Plans and contains both strategic policies and more applied policies which primarily inform planning decisions, together with existing (unimplemented) sites and new site allocations.
- 1.16. This fourth HRA Screening Report relates to the Shropshire Local Plan Review: Preferred Strategic Sites document published for consultation on 1st July 2019.
- 1.17. The Local Plan Review (LPR) is not directly connected with or necessary to the management of an international site (Habitats Regulations 63(1)(b)).

2. Methodology

Purpose of the HRA Screening Report

- 2.1. This Screening Report seeks to:
- identify which international sites could possibly be affected by development on sites in the LPR strategic sites consultation document,
 - identify the potential pathways by which the sites may be affected,
 - Identify all aspects of the LPR strategic sites which would have no effect on an international site, so that that they can be eliminated from further consideration in respect of this and other plans;
 - identify all aspects of the LPR strategic sites which would not be likely to have a significant effect on an international site (i.e. would have some effect, but minor residual), either alone or in combination with other aspects of the same plan or other plans or projects. At this stage, mitigation measures are not considered;
 - identify those aspects of the LPR strategic sites where it is not possible to rule out the risk of significant effects on an international site, either alone or in combination with other plans or projects, in the absence of mitigation measures. A full Appropriate Assessment will be required for these sites. Where there is a lack of sufficient detail at the preferred strategic sites stage, consideration will be deferred to the next stages of the LPR where the results of commissioned research and policy wording will be known, and
 - where possible, make recommendations on areas of further research required to inform the next stages of the HRA, signposting sites which will be particularly sensitive to development and recommending potential avoidance or mitigation measures to be considered including in policy wording.

Identification of international sites requiring consideration

- 2.2. This HRA Screening Report should be read in conjunction with the Shropshire LPR Preferred Sites Habitats Regulations Assessment Screening Report (November 2018) and the Shropshire Site Allocation and Management of Development Plan Habitats Regulations Assessment (July 2014). These HRA Reports identified international sites in and around Shropshire (together with their designated features and conservation objectives), which could potentially be impacted by proposed plans or projects in the County.
- 2.3. Following the precautionary principle, the first step in the screening process was to identify all international sites in Shropshire and within 15km of the county boundary. This figure was chosen as a starting point as the largest screening buffer identified in the literature for negative effects was 15km (recreational effects on Cannock Chase). Additional sites were added to the screening by considering possible longer distance

pathways e.g. river SACs downstream of Shropshire, and through consultation with Natural England and Natural Resources Wales.

- 2.4. All international sites identified for consideration in the LPR can be found on Map 1 in Appendix 1 of the Preferred Sites HRA Screening Report (2018) <https://shropshire.gov.uk/media/11409/habitats-regulations-assessment-report-appendix-1.pdf>

Collation of information on international sites

- 2.5. Details of the international sites, their reasons for designation, conservation objectives and vulnerabilities can be found in Appendix 2 of the Preferred Sites HRA Screening Report (2018) <https://shropshire.gov.uk/media/11332/habitat-regulations-assessment-report-preferred-sites.pdf> The SSSI's within the Midland Meres and Mosses Ramsar Phases 1 and 2 which are included in this assessment are also listed in Appendix 2 of that report. Conservation Objectives for the individual elements of the two Ramsar Sites are not available and Natural England has advised that Favourable Condition Tables for SSSI units may be used in their place.
- 2.6. Data on the international sites, including qualifying features were taken from the following sources:
- Natural England web site (<https://designatedsites.naturalengland.org.uk/SiteSearch.aspx>) including conservation objectives, site citations and Site Improvement Plans;
 - Joint Nature Conservation Committee website (www.jncc.gov.uk);
 - Verbal and written evidence from officers in Natural England and the Environment Agency;
 - A wide range of published and un-published reports as indicated in section 7 References;
 - Favourable Condition Tables for SSSI units published by Natural England.
 - HRA of Phase Two Revision of the West Midlands RSS – Screening note prepared for Government Office for the West Midlands by Treweek Environmental Consultants;
 - Background information on Ramsar designation and specific site descriptions from www.ramsar.wetlands.org/

Identifying possible mechanisms for significant effects (effect pathways)

- 2.7. Any sites allocated in the SAMDev Plan, which have not been developed, will be carried forward into the Local Plan Review. These sites, possible effect pathways and any required mitigation measures, have already been considered in the SAMDev Plan HRA (Ref No. 23, section 2.3). As a precautionary measure, these sites will be re-screened against any new information on international sites, if this has become available since the

adoption of the SAMDev Plan, and against any relevant policy wording changes proposed by the LPR. In general, it is likely that these sites and their mitigation measures will be carried over. At this stage of the LPR, only the locations of preferred and strategic Sites are known. This current HRA Screening Report will inform the drafting of policy wording which is to be published later in the plan making process.

- 2.8. The broad mechanisms by which the strategic sites might affect international sites were considered in previous HRA reports. These broad mechanisms may apply during construction or through long-term after-use of the development and include, but are not limited to those listed in Table 2 below.

Table 2: General effect pathways

General Effect pathway	Sub-categories
Air pollution	From increased traffic long term.
	Increased NOx gasses and nitrogen deposition.
	Increased sulphur dioxide.
	Increased acid deposition.
Hydrological impacts	Changes to groundwater quality and quantity.
	Changes to surface water quality and quantity.
	Overloading of waste water infrastructure.
	Pollution during flooding events.
	Increased run-off from hard surfaces.
	Increased silt from development, during and post construction, stirring up of sediment by boats, or other leisure activities.
Recreational impacts	Trampling and erosion of international site.
	Disturbance by people, dogs and other pets.
	Swimming by people and dogs.
	Increased hunting pressure from domestic animals.
	Eutrophication through dog faeces.
	Fishing and boat use.
	Damage from bikes and other vehicles.
	Interference with grazing and other management designed to maintain the features of the international sites.
	'Induced development' – development in some form required on international sites to counteract demand from visitors.
Biosecurity	Introduction or spreading of invasive species e.g. through vehicle movement or by boats, people or dogs, or introduction of fish or non-native plants.
Light pollution	Effects of lighting on wildlife.

- 2.9. More details of these effect pathways and the international sites that may be affected by them can be found in Appendix 3. of the Preferred Sites HRA Screening Report (2018)

<https://shropshire.gov.uk/media/11264/habitats-regulations-assessment-summary-preferred-sites.pdf>

3. Screening or assessment of potential effects

- 3.1. The strategic sites in the LPR consultation document have been screened for possible likely significant effects on international sites. A precautionary approach has been taken due to awaiting the results of commissioned research. Screening has taken place without considering mitigation measures. Avoidance and mitigation measures will be taken into account, once policy wording is available, in the Appropriate Assessment stage of the HRA process (Table 1 above).
- 3.2. The strategic sites have been screened for possible pathways to international sites, within a 15km distance. In addition, pathways which could stretch beyond 15km to international sites have also been considered. Where possible, recommendations for particular areas of investigation for the next iterations of the HRA are provided. The screening results are provided in this report's Appendix A (international sites) and in Appendix B (LPR strategic sites). They are summarised in the following sections. A colour coding has been used in these appendices:
- **Green** – no effect or no likely significant effect, alone or in combination with other preferred sites,
 - **Amber** – uncertainty remains and re-screening will take place in the next LPR HRA,
 - **Red** – avoidance or mitigation measures will be required and will be considered later in the LPR Appropriate Assessment stage.
- 3.3. Potential effect pathways identified in Table 2 above and Appendix 3 of the preferred sites HRA Screening Report (November 2018) <https://shropshire.gov.uk/media/11264/habitats-regulations-assessment-summary-preferred-sites.pdf> have been combined under four main headings for this updated screening, namely:
- Air pollution,
 - Water pathways
 - Recreation
 - Lighting.
- Biosecurity effects as a result of development are likely to be related to access by people or their pets and have been included under Recreation.

Air pollution

- 3.4. A wide range of pollutants can be airborne, but of key importance in the context of this HRA is nitrogen in the form of nitrogen oxides (NO_x gases) and ammonia (NH₃). Excess airborne nitrogen acts as a fertilizer when washed out of the air into soil or water. It may also cause direct damage to vegetation. Many designated habitats, and hence the species they support, rely on low levels of nitrogen in soil and water. Unlike other

airborne pollutants in the UK, there has been a recent reversal in the decline of ammonia emissions.

- 3.5. Other airborne pollutants generally a result from combustion or specific industrial processes.

Diffuse or regional air pollution

- 3.6. Diffuse air pollution is background pollution derived from a wide range of sources and activities that, individually, may have no obvious effect on the environment, but, at the regional scale can have a significant effect. Problems occur in both rural and urban environments.
- 3.7. In the case of our international sites, all are receiving levels of airborne nitrogen which exceed their critical loads, the point at which damage may occur. Clearly any additional pollutants could be important.
- 3.8. Development can contribute cumulatively to an overall change in background air quality across an entire region. It is considered reasonable to conclude that it must be the responsibility of higher-tier plans to set a policy framework for addressing the cumulative cross-border air quality impacts (over which individual authorities have little control). In Shropshire, emissions from additional housing will be reduced as far as possible through general policy wording relating to air quality and insulation and design of dwellings.

Local sources of air pollution

- 3.9. The most significant form of airborne pollution, derived from housing or employment allocations, is the result of increased traffic movements from cars, HGVs and other vehicles. According to the Design Manual for Roads and Bridges 2007, and as stated by Natural England in their consultation response (20th March 2017), the designated sites at risk from local air quality impacts are those which feature habitats that are vulnerable to nitrogen deposition/acidification and are within 200m of a road with increased traffic. For sites within 200m, if the number of traffic movements do not increase (in this case due to the LPR) by more than 1000 Annual Average Daily Traffic (AADT) movements by cars and 200 HGV AADT, either alone or in combination with other plans or projects, then they can be considered insignificant.
- 3.10. When looking at in-combination effects, we must not only consider AADTs generated by the new allocations, but also the AADTs generated by the Local Plans of surrounding counties. Where necessary these will need to be assessed using traffic projections followed by local air quality modelling.

- 3.11. The following international sites are **within** 200m of an A road or busy B road (the remainder were screened out, see section 3.11 of the Preferred Sites HRA Screening Report (November 2018)) :

Berwyn SPA
Berwyn and South Clwyd Mountain SAC
Cannock Chase SAC
Elenydd SAC
Fens Pools SAC
Johnstown newt sites SAC
Midland Meres & Mosses Ramsar Phase 1
Clarepool Moss
White Mere
Wybunbury Moss
Midland Meres & Mosses Ramsar Phase 2
Black Firs and Cranberry Bog
Hanmer Mere
Hencott Pool
Oakhanger Moss
Sweat Mere and Crose Mere
Montgomery Canal SAC
Rhos Goch SAC
River Clun SAC
River Dee & Bala Lake SAC
River Wye SAC
Tanat & Vrynwy Bat Sites SAC
West Midlands Mosses SAC
Clarepool Moss
Wybunbury Moss

- 3.12. Research has been commissioned to investigate whether or not there are likely to be significant effects, alone or in-combination, from air pollution derived from traffic as a result of the site allocations in the LPR. Where significant effects are likely, the relevant sites, and avoidance or mitigation measures, will need to be considered in the Appropriate Assessment of the LPR.
- 3.13. As a precautionary measure, all strategic sites have been shown amber in Appendix B for traffic related air pollution, until the findings of the research are available and allocations can be screened further.
- 3.14. The Local Plan Review does not make allocations specifically for large point sources of airborne pollution such as incinerators. However, it does allocate land for employment uses, most of which will not generate more air pollution, other than via traffic movements. However, it is possible that some could produce gaseous or particulate pollution, depending on project specific factors. Currently the Environment Agency are using a maximum screening distance of 5km for intensive livestock units and other emitters

of airborne pollution, when considering applications for Environmental Permits. None of the strategic sites are within 5km of an international site. For major emitters of airborne pollution such as incinerators a 10km buffer has been used in the past and is under review. Using this screening distance as a precautionary measure, the following international sites within 10km of strategic site employment land uses, have been identified:

Table 3: Potential airborne pollution from employment sites

International Site	Employment Land	Comment/Suggested Mitigation
Mottey Meadows SAC	RAF Cosford - 5.3km	Policy wording in LPR to cover airborne emissions at Project stage.
	Junction 3 of M54 - 6.6km	

- 3.15. Mitigation measures for air pollution from employment land may include;
- Policy wording to make clear the need for an HRA at the planning application stage, for any development likely to generate airborne pollution, for the above strategic site;
 - utilising industry best practice measures for reducing pollution at the project stage.
 - Retain SAMDev policy MD12 or a policy with similar wording relating to protection of international sites.

Water pathways

- 3.16. These can be divided into strategic and local. Strategic pathways include water abstraction from regional groundwater and the capacity of sewage treatment works to cope with the additional sewage before discharge into water courses. If insufficient water is available for new development in aquifers, or there is insufficient infrastructure to cope with the additional foul-water drainage, then damage could occur to international sites. The strategic sites fall only within the river Severn catchment, but they could theoretically affect any other international site reliant on the regional aquifer to maintain water levels.
- 3.17. The last Water Cycle Study was undertaken in 2014 to inform the SAMDev Plan. An updated Water Cycle Study is being commissioned, which should provide the necessary evidence against which to screen the identified strategic sites. Until this is available, all strategic sites have been screened as having a possible likely significant effect at a strategic level.
- 3.18. Local effects could be those that cause an increase in abstraction from surface water catchments/perched groundwater of international sites or result in increased numbers of package treatment plants/cesspits or other sources of pollution in surface water catchments.

- 3.19. International sites have been screened separately for local effects from housing and employment land on the strategic sites, on water quality and quantity, based largely on maps of surface water catchments. The surface water catchments of most of the Midland Meres and Mosses Ramsar sites have been mapped by Natural England. Shropshire Council has sought further information contained within the Environmental Consultancy University of Sheffield (ECUS) reports, which has allowed refinement of the surface water catchment areas. In addition, Natural England has published Impact Risk Zones (IRZ's) for SSSI's, which take surface water catchments into account.
- 3.20. According to Atkins (2012), consideration of water level data suggests that all of the meres and their respective groundwater catchments are perched above the deep regional groundwater system. The meres are therefore more strongly influenced by the functioning and character of the local aquifer systems of recent, post-glacial origin rather than conditions in the regional aquifer. As a result they are likely to strongly reflect activities in the landscape local to them and may be susceptible to land use changes in their respective catchments. Atkins concluded that in most cases the surface water catchment can be broadly taken as the groundwater catchment.
- 3.21. The above information has been used to update the screening process in the LPR HRA. The strategic sites have been screened out as having no local water quality or quantity effect pathways as none of them lie within the surface water catchments of international sites.
- 3.22. Existing Council policies already require development to avoid adverse impacts on water quality and levels. Policy CS18 Sustainable Water Management of the Core Strategy states that developments will integrate measures for sustainable water management to reduce flood risk, avoid an adverse impact on water quality and quantity within Shropshire, including groundwater resources and sets out detailed requirements of developments. Furthermore, Shropshire Council Sustainable Design (Part 1) SPD 2011 provides detailed guidance to developers on avoiding impacts on water quality and levels through water efficiency and SUDs schemes. As part of planning applications, detailed information necessary to assess impacts on Natura 2000 sites such as groundwater flow direction and levels, any proposed abstraction and so forth will be required from the applicant.

- 3.23. These policies would need to be brought forward and updated for the LPR. Hence, avoidance/mitigation measures may include;
- re-locating strategic sites to avoid impacts,
 - policy wording requiring phasing of development to allow upgrading of infrastructure,
 - policy wording requiring careful design of non-mains foul-water disposal systems and sustainable urban drainage schemes at the project stage.

Recreation pathways

- 3.24. Increased recreation pressure on international sites can cause damage to designated features, disturbance of wildlife by people and their pets, eutrophication of land and water, prevention or alteration to site management and introduction of invasive species or diseases. Natural England have advised that any international sites that do not have public access can generally be screened out for recreational effects. Additional checks have been made for sites without public access but with footpaths crossing the site. It is assumed that where private fishing or sailing clubs are operating on sites, that additional housing will not significantly increase these activities. All international sites are also Sites of Special Scientific Interest and such are protected under the Wildlife and Countryside Act 1981 (as amended) and potentially damaging operations are controlled by Natural England.
- 3.25. The following international sites have been screened out for recreation pathways on the basis that there is no public access, even by public footpath:

Midland Meres & Mosses Ramsar Phase 1

Clarepool Moss

Fenemere

Marton Pool (Chirbury)

Quoisley Mere

White Mere

Midland Meres & Mosses Ramsar Phase 2

Brownheath Moss

Chapel Mere

Hencott Pool

Llyn Bedydd

Morton Pool and Pasture

Vicarage Moss

River Severn SPA/SAC/Ramsar (77km downstream of Shropshire)

Tanat & Vrynwy Bat Sites SAC

West Midlands Mosses SAC

Clarepool Moss

- 3.26. The remaining sites are mostly privately owned, but have some form of public access, often limited to a public footpath either crossing or following the edge of the site:

Berwyn SPA
Berwyn and South Clwyd Mountain SAC
Brown Moss SAC
Cannock Chase SAC
Downton Gorge SAC
Elenydd SAC
Fenn's, Whixall, Bettisfield, Wem & Cadney Mosses SAC
Granllyn SAC
Johnstown newt sites SAC
Montgomery Canal SAC
Rhos Goch SAC
River Clun SAC
River Dee and Bala Lake SAC
River Wye SAC
The Stiperstones & the Hollies SAC
West Midlands Mosses SAC
Wybunbury Moss
Midland Meres & Mosses Ramsar Phase 1
Berrington Pool
Betley Mere
Bomere and Shomere Pools
Brown Moss
Wybunbury Moss
Midland Meres & Mosses Ramsar Phase 2
Aqualate Mere
Black Firs and Cranberry Bog
Cole Mere
Cop Mere
Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses
Hanmer Mere
Oakhanger Moss
Oss Mere
Sweat Mere and Crose Mere

- 3.27. For many international sites there is little or no information on informal or formal public access to sites. In these cases, Natural England's Accessible Natural Greenspace Guidance (2010) has been used in estimating how far people are likely to travel to natural green spaces. The research which fed into development of this guidance found that larger sites attracted visits from further away and also that a walking distance of approximately 5 minutes from home was defined as a threshold above which daily park visits decreased significantly. The so-called ANGSt,

Natural England's Accessible Natural Greenspace Standard, recommends that everyone should have an accessible natural greenspace:

- of at least 2 hectares in size, no more than 300 metres (5 minutes walk) from home;
- at least one accessible 20 hectare site within two kilometres of home;
- one accessible 100 hectare site within five kilometres of home; and
- one accessible 500 hectare site within ten kilometres of home;

3.28. The background research from which this standard was developed suggested that for sites of the following sizes, people were prepared to travel the following distances to accessible natural greenspace:

- at least 2ha in size, no more than 300m (5 minute walk)
- at least 20 ha in size, no more than 2km
- at least 100ha in size, no more than 5km
- at least 500ha in size, no more than 10km

3.29. The distance from the international site within which 75% of visitors travel can be described as the 'Zone of Influence' for the site. Where this is not known, the above distances have been used to screen international sites and the nearest housing allocations. Privately owned international sites where recreational impacts have not been raised as an issue for the designated features, and footpaths have a low level of use have also been screened out. For the largest sites, a screening distance of 10km has been used, or 15km if mountain bikes are an issue, as this is the distance considered to be the zone of influence of Cannock Chase, based on mountain bike use and evidenced by visitor surveys.

3.30. All international sites have been screened out for recreation effects due to their area and distance to preferred Strategic Sites.

3.31. As a precautionary measure, due to their large size, the RAF Cosford site and Junction 3 of the M54 will be researched further as they are around 19.7km and 20km and respectively from the Cannock Chase SAC

Light Pathways

3.32. No strategic sites are close enough to international sites to cause direct effects and they have been screened out.

Results of screening of international sites

3.33. Of the 23 international sites which have been identified for consideration in this screening report the following have been screened out, as they will not be affected, or there will be no significant effects alone or in combination, as a result of strategic site allocations without recourse to mitigation measures:

Brown Moss SAC
Downton Gorge SAC
Elenydd SAC
Fenn's etc SAC
Fens pool SAC
Granllyn SAC
Meres and Mosses Ramsar Phase 1 – Berrington Pool
Meres and Mosses Ramsar Phase 1 – Betley Mere
Meres and Mosses Ramsar Phase 1 – Bomere and Shomere Pools
Meres and Mosses Ramsar Phase 1 - Brown Moss
Meres and Mosses Ramsar Phase 1 – Fenemere
Meres and Mosses Ramsar Phase 1 – Marton Pool Chirbury
Meres and Mosses Ramsar Phase 1 – Quoisley Mere
Meres and Mosses Ramsar Phase 2 – Aqualate Mere
Meres and Mosses Ramsar Phase 2 – Brownheath Moss
Meres and Mosses Ramsar Phase 2 – Chapel Mere
Meres and Mosses Ramsar Phase 2 – Cole Mere
Meres and Mosses Ramsar Phase 2 – Cop Mere
Meres and Mosses Ramsar Phase 2 – Fenn's, Whixall, Bettisfield,
Cadney and Wem Mosses
Meres and Mosses Ramsar Phase 2 – Llyn Bedydd
Meres and Mosses Ramsar Phase 2 – Morton Pool and Pasture
Meres and Mosses Ramsar Phase 2 – Oss Mere
Meres and Mosses Ramsar Phase 2 – Vicarage Moss
Mottey Meadows SAC
Rhos Goch SAC
River Clun SAC

Screening of policy options

- 3.34. The LPR does not intend to revisit all policies in the Core Strategy and the SAMDev Plan. Many will be transferred directly to the new Local Plan. Core Strategy and SAMDev policies have already been subjected to the HRA process (Ref. Nos. 16 and 22), but as a precautionary approach, all policies in the final Local Plan whether modified, new or unaltered, will be re-screened in the light of any new information on international sites.
- 3.35. Two draft policies have been proposed in the Preferred Options: Scale and Distribution of Development document. These are criteria based policies to cover the management of development in Community Hubs and the management of development in Community Clusters. Policy wording will be re-assessed for the consultation document on policy wording.

Summary of the results of HRA screening

- 3.36. All the strategic sites in the LPR consultation document have been considered in the HRA Screening Report and recommendations made. However, none of the strategic sites have been screened out at this stage as final reports for key areas of investigation have yet to be submitted. Recommendations have been made for further information gathering and avoidance/mitigation measures for preferred strategic sites where potential significant effects on international sites have been identified. The majority of these recommendations are for policy wording to be considered whilst drafting policies for the next stage of the LPR.
- 3.37. Additional baseline information is expected e.g. an updated Water Cycle Study, investigations into air quality changes due to the proposed growth and consideration of possible recreation effects on Cannock Chase. When available this additional information will inform the next HRA and policy wording.
- 3.38. Of the international sites initially screened in to this assessment, 9 SACs and 17 component sites of the meres and Mosses Phase 1 and 2 Ramsar Sites have now been screened out. The remaining sites will be carried forward for consideration in subsequent Habitats Regulations Assessments of the LPR documents in relation to strategic sites and overall in-combination assessments.

4. In-combination effects

- 4.1. The Habitats Directive requires Local Authorities to assess 'in-combination' effects alongside direct effects. 'In-combination' effects occur when otherwise non-significant proposals combine and cumulatively lead to a significant effect. This interaction can occur from proposals within the LPR or between the LPR and other plans or projects. The absence of detailed policies at this stage of the LPR means that in-combination effects outside the LPR have not been considered in this HRA Screening Report.
- 4.2. Preferred site allocations and strategic sites have been screened individually and in-combination with each other. Policies will be screened alone and in-combination in later HRAs.
- 4.3. The LPR will also be screened against other Shropshire plans (e.g Shropshire Local Transport and Economic Growth Strategy) and the plans of all surrounding local authorities for adverse in-combination effects. Statutory Agencies including Natural England, National Resources Wales and the Environment Agency will also be consulted. Any significant in-combination effects must be avoided or sufficiently mitigated in the final Local Plan Review document.

5. Conclusions and recommendations

- 5.1. A total of 23 international sites have been identified for consideration in this strategic sites HRA Screening Report. Nine SACs and 17 component sites of the Meres and Mosses Phase 1 and 2 Ramsar Sites have now been screened out. The remaining sites will be considered for the HRA of subsequent LPR documents.
- 5.2. Possible pathways for significant adverse effects on these international sites as a result of the LPR have been identified and placed in four main categories of
 - air pollution,
 - water pathways,
 - recreation and
 - light pollution,for this round of HRA screening.
- 5.3. The strategic sites in the LPR consultation document have been considered in the HRA Screening Report and recommendations made. As a precautionary measure none of the strategic sites have been screened out at this stage as the results of commissioned research have still to be submitted.
- 5.4. Key areas for consideration in the next stages of LPR preparation are:
 - Taking into account the final results of an updated water cycle study, road traffic investigations and recreational assessment for possible impacts on Cannock Chase SAC. Dependant on the outcome of these studies, policy wording and avoidance of certain locations for strategic sites may be needed to ensure development will only start if sufficient resources, mitigation measures and infrastructure are in place.
 - Policy wording must avoid any likely significant adverse effects, or adverse effects on international site integrity, either alone or in-combination.
 - HRA Screening of proposed policy wording.
 - Screening for in-combination effects with other plans or projects.
- 5.5. The Habitats Regulations Assessment process will be carried out in parallel with the preparation of future Local Plan Review documents. This parallel preparation process will ensure that the results of the HRA will be fully considered in decisions on the Local Plan. It will also ensure Shropshire Council meets its duty with regard to the aims of the Habitats Directive.

6. Public consultation

- 6.1. The Shropshire Council Local Plan Review consultation on Strategic Sites lasts for 10 weeks, beginning on 1st July 2019 and finishing on 9th September 2019. This HRA Screening Report is published as a supporting document for the consultation and comments on it are welcomed. Responses and additional information will be analysed and where appropriate fed into the future stages of the Local Plan Review Habitats Regulations Assessment.
- 6.2. Comments should be sent to planning.policy@shropshire.gov.uk
- 6.3. Please ensure that the subject line in any email includes the phrase 'HRA'. It is also helpful if comments refer to the relevant paragraph, section or table number in this document.

7. References and abbreviations

The following documents have informed this report:

References

1. Article 6(3) and (4) of the European Communities (1992) Council Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora (the Habitats Directive)
2. Atkins for Environment Agency and Natural England (October 2014) River Clun SAC Nutrient Management Plan- FINAL
3. David Tyldesley and Associates for Countryside Council for Wales. (2012) Draft Guidance for Plan Making Authorities in Wales, The Appraisal of Plans Under the Habitats Regulations for Countryside Council for Wales CCW Bangor
4. Department for Communities and Local Government (2012) The National Planning Policy Framework
5. European Commission (2001) Assessment of plans and projects significantly affecting Natura 2000 sites
6. Highways Agency, (2007) Design Manual for Roads and Bridges HA207/07, Volume 11, Section 3, (2007), Environmental Assessment Techniques.
7. Montgomery Canal Partnership (2005) Montgomery Canal: A Conservation Management Strategy
8. ODPM Circular 06/2005: (Biodiversity and Geological Conservation – Statutory Obligations and their impact within the Planning System)
9. Scottish Natural Heritage (January 2015) Habitats Regulations Appraisal of Plans
10. Shropshire Council Local Development Framework Adopted Core Strategy March 2011
11. Shropshire Council Development within the River Clun Catchment Interim Guidance Note 12, 2013
12. Shropshire Council (2010) Outline Water Cycle Study Final Report
13. Shropshire Council (2014) Water Cycle Evidence for Shropshire Local Plan
14. The Conservation of Habitats and Species Regulations 2010 (the “Habitats Regulations”) (SI No. 2010/490).
15. White, J, Liley, D. & Underhill-Day, J. (2009). Cannock Chase Visitor Impact Mitigation Strategy. Footprint Ecology.

Previous Shropshire HRA documents

16. Core Strategy Development Plan Document: Habitats Regulation Assessment, Screening Report (March 2009)
17. Core Strategy Development Plan Document: Habitats Regulation Assessment, Stage 2 Report (February 2010)
18. Draft Mineral Allocations for the plan period 2012-2026 HRA Stage 3 Report (Specific Sites) June 2011

Local Plan Review Preferred Strategic Sites:
HRA Screening Report

19. Draft Stage 3 Habitats Regulation Assessment Reports of potential allocations was prepared in October 2011 for the Site Allocations and Management of Development DPD
20. SAMDev Draft Development Management Policies HRA January 2013
21. SamDev Pre-Submission Draft Habitats Regulation Assessment (draft March 2014)
22. Habitats Regulations Assessment of Mineral Allocations for the plan period 2012 – 2026 Report (draft March 2014)
23. Shropshire Council SAMDev Habitats Regulation Assessment (July 2014)
24. Shropshire Council (January 2017) Local Plan Review 2016 – 2036, Issues and Strategic Options Habitat Regulations Assessment Initial Screening Report.
25. Shropshire Council Local Plan Review Consultation on Preferred Scale and Distribution of Development (October 2017) HRA Screening Report.
26. Shropshire Council Local Plan Review Consultation on Preferred Sites (November 2018)
27. Shropshire Council Local Plan Review Consultation on Strategic Sites (July 2019)

Abbreviations and definitions

NE	Natural England
EA	Environment Agency
HRA	Habitats Regulations Assessment
SPA	Special Protection Area classified in accordance with Article 4 of the EC Birds Directive (1979)
SAC	Special Area of Conservation designated under the EC Habitats Directive.
Ramsar site	A site listed as a wetland of international importance under the provision of the Ramsar Convention. A Ramsar site is not a 'European site' as a matter of law but is given the same protection as SPA's and SAC's.
International site	One of the following designated sites: <ul style="list-style-type: none">• Special Area of Conservation (SAC),• candidate SAC (cSAC),• possible SAC (pSAC),• Special Protection Area (SPA),• potential SPA (pSPA),• proposed and listed Wetlands of International Importance (Ramsar Sites)
Natura 2000 Site	The Europe wide network of SPA's and SAC's
IRZ	Natural England Impact Risk Zone
LPR	Local Plan Review
SAMDev	Site Allocations & Management of Development Plan
SPD	Supplementary Planning Document

**8. Appendix A: Results of strategic sites screening:
international Sites**

Appendix A: Results of preferred/potential strategic sites screening: international sites

	no effect or no likely significant effect from strategic site proposals, alone or in-combination.
	uncertainty remains and re-screening will take place in the next LPR HRA
	avoidance or mitigation measures will be required and will be considered later in the LPR Appropriate Assessment stage
	Screened out from further consideration for strategic site proposals

SCREENING OUT										
International Sites	AIR		WATER		RECREATION AND BIOSECURITY		LIGHT	Screen OUT		
	Roads	Employment land	Regional Water	Local Water	No public access	Distance of strategic sites				
Berwyn SPA										
Berwyn and South Clwyd Mountain SAC										
Brown Moss SAC									Ternhill	10.3km
Cannock Chase SAC									J3 Ternhill Cosford Ironbridge	20km 33.9km 19.7km 34.1km
Downton Gorge SAC										
Elenydd SAC										
Fenn's etc SAC									Ternhill	14km
Fens Pools SAC	Embedded in urban Dudley.									
Granlyn SAC										
Johnstown newt sites SAC										
R1 Berrington Pool									Ironbridge	11.6km
R1 Betley Mere										
R1 Bomere and Shomere Pools									Ironbridge	13.7km
R1 Brown Moss										
R1 Clarepool Moss										
R1 Fenemere										
R1 Marton Pool, Chirbury										
R1 Quoisley Mere									Ternhill	16km
R1 White Mere										
R1 Wybunbury Moss										
R2 Aqualate Mere									Ternhill Junc 3 Cosford	15km 10km 13.7km
R2 Black Firs and Cranberry Bog										
R2 Brownheath Moss										
R2 Chapel Mere										
R2 Cole Mere										
R2 Cop Mere									Ternhill	14km
R2 Fenn's etc									Ternhill	14km
R2 Hanmer Mere										

9. Appendix B Results of strategic sites screening: LPR sites

Appendix B: Results of strategic sites screening: LPR sites

- no effect or no likely significant effect from Strategic Sites, alone or in-combination.
- uncertainty remains and re-screening will take place in the next LPR HRA
- avoidance or mitigation measures will be required and will be considered later in the LPR Appropriate Assessment stage

Strategic Site	Area (ha)	Housing Nos	Employment area, including windfall	SAC/Ramsar name/s	Effect pathways						FUTURE HRA
					AIR		WATER		RECREATION & BIOSECURITY	LIGHT	
As on SC website				Within 15km	Traffic emissions	Other	Water Cycle Study	Water (local)		Adverse effects of artificial lighting	
IRN001 Former Ironbridge Power Station	142ha	1000	6ha	*River Severn for all*** Berrington Pool Ramsar Phase 1, Bomere and Shomere Pools Ramsar Phase 1.		>10km from all international sites		Not in catchment	No international site less than 10km away. Cannock Chase >15km away.		
P28 & parts of P30 & P40 RAF Cosford	203	MOD uses	Area/type unknown	Aqualate Mere Ramsar Phase 2, Mottey Meadows SAC.		Mottey Meadows SAC >6.6km away Aqualate Mere Ramsar >10km		Not in catchment			
BNT002 Clive Barracks, Ternhill	50ha	450 by 2036 plus 300 after	5.75ha	Brown Moss SAC, Fenn's etc. SAC and Ramsar Phase 2, Aqualate Mere Ramsar Phase 1, Cop Mere Ramsar Phase 2, Oss Mere Ramsar Phase 2		>10km from all international sites		Not in catchment			
P26 Amended Junction 3 M54 (identified but not a preferred site)	not yet defined	c. 3000 plus local centre	c. 50ha	Mottey Meadows SAC, Aqualate Mere Ramsar Phase 1		Mottey Meadows 5.3km Aqualate 10km		Not in catchment	Mottey Meadows 5.3km		

Appendix EDP 3
Preliminary Habitats Regulations Assessment (HRA) report (report
reference C_edp4371_01_041217)

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Monarch's Way Project, Shropshire Preliminary Habitat Regulations Assessment C_EDP4371_01_041217

1.0 Introduction

- 1.1 EDP has been commissioned by Bidwells to complete a preliminary Habitat Regulations Assessment (HRA) of a project; known as the 'Monarch's Way Project' which proposes a new settlement in the eastern part of Shropshire which could potentially support up to 10,000 dwellings, together with associated supporting infrastructure.
- 1.2 The Project is being promoted for development through the Shropshire Council Local Plan Review (LPR) 2016 – 2036. As part of the LPR, a HRA Initial Screening Report (January 2017) has been produced by the Council with respect to an Issues and Strategic Options document which it published. Subsequently, and as part of the LPR, it produced a HRA Screening Report (October 2017) to inform its Preferred Options: Scale and Distribution of Development document. The findings of both Council's HRAs have been considered as part of this Assessment.

2.0 Preliminary Habitat Regulations Assessment of the Project

- 2.1 The aim of this assessment is to consider at an early stage whether the Monarch's Way Project is likely to have a significant effect 'alone' on the designated interests of any European Designations within the vicinity of the project. It is not possible at this stage to fully assess whether the project, in combination with other policies which will be reaffirmed/emerge as part of the LPR, is likely to have significant effect on the designated interest of European Sites within Shropshire and within 15km of its borders. In combination effects are not considered in either HRA produced by the Council as part of the LPR.
- 2.2 European Designations are those identified by the Habitat Regulations 2012; which transpose into UK law the EU Habitats and Birds Directive. These include Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar Sites. The Council's HRA has used a 15km buffer to identify European Sites potentially affected by the LPR. Hence a 15km buffer has also been used by this Assessment to identify those European Sites potentially affected by the Project.
- 2.3 Within 15km of the project there are two European Designations; namely:
- Mottey Meadows Special Area of Conservation (SAC): Which is located approximately 3.5km to the north east of the project measured as a straight-line distance from the closest part of the project to the closest part of the SAC. The SAC is designated for its Lowland Hay Meadow habitat and the habitat is dependent on maintaining a traditional management



practice, maintaining autumn/winter high water levels and reducing nutrient levels. The SAC is identified as being vulnerable to nutrient run-off from adjacent agricultural land and changes in surface and ground water levels. The site is owned and managed by Natural England.

- (In Part) The Midland Meres and Mosses Phase 2 Ramsar Site: Which is located approximately 10.8km to the north of the project when measured as a straight-line distance from the closest part of the project to the closest part of the Ramsar Site. The component part of the Ramsar Site within 15km of the project is known as Aqualate Mere. The Ramsar is designated for its peatland habitat and the species which this habitat supports both in terms of specific flora and fauna. The Ramsar Site is considered vulnerable to eutrophication, particularly from surrounding land uses, and recreational pressures.

2.4 These are the only pertinent European Designations which the Project has any potential to have a likely significant affect upon when considered alone.

Mottey Meadows SAC

2.5 With respect to Mottey Meadows SAC, likely significant effects on the designated interests of this SAC by the LPR have been screened out by both HRA documents produced by the Council, as detailed above. The Council states that:

“It is considered unlikely that the Shropshire Local Plan Review will have any additional, adverse or in combination effect on Mottey Meadows SAC since plans in Shropshire will not alter site management nor change the management of farm land surrounding the site. The site also has access restrictions which should remove potential for recreational impacts. Shropshire plans are also considered unlikely to have any effect on the ground or surface water levels on the site since the vast majority of Shropshire falls within the River Severn Catchment while Mottey Meadows does not fall within the catchment of the River Severn.”

2.6 The LPR review and the HRA work which has been undertaken by the Council to date has taken account of a small increase in residential development in this part of the County, however not yet the scale of residential development proposed by the Project.

2.7 The HRA work completed by the Council considers broadly that there are three generic ‘effect pathways’ likely to affect European Designations within and close to the County; namely:

- Air Pollution;
- Water Pathways; and
- Recreation.

2.8 Dealing with each in turn with respect to Mottey Meadows:



- Air Pollution: The source of this effect is typically increased traffic movements generated by new development. The HRA work completed by the Council to inform the LPR states that the effect is not considered significant, alone or in combination, unless the number of traffic movements within 200m of the designation increase by more than 1000 Annual Average Daily Traffic (AADT) movements by cars and 200 HGV AADT. In relation to Mottey Meadows, there are no significant roads within 200m of the SAC and therefore, even if the project, as is likely, increases traffic movements locally, they are considered highly unlikely to increase them within 200m of the SAC. Therefore, in relation to the Project, it is considered that Air Pollution effects generated by the Project can be scoped out as a source of likely significant effect on the designated interests of the SAC.
- Water Pathways: Water Pathway effects can be generated through changes in surface and groundwater pathways and through the necessary foul drainage of the project:
 - In relation to surface water, the Project lies outside the catchment of the SAC and with surface drainage falling southwards and away from the Project and the SAC. Likely significant effects as a result of surface water changes are therefore considered unlikely to have a significant effect on the designated interests of the SAC either alone or in combination;
 - With respect to groundwater, the likely effect on the Project on ground water, both in terms of replenishment and abstraction, are not known at this stage and will require further investigation with respect to likely significant effects on Mottey Meadow SAC. At this stage, it is considered that likely significant effects are unlikely however this does not provide sufficient certainty at this stage of the process; and
 - With respect to foul drainage, given that the Project lies in a different catchment to Mottey Meadows SAC and that any foul drainage of the Project is likely to be completed within the catchment of the Project, it is considered unlikely that the foul drainage of the site will have a likely significant effect on the designated interests of the SAC. However, this will be confirmed once the foul drainage of the site, together with the identified sewage treatment works which will receive this drainage for treatment and discharge, has been determined;
- Recreation: Despite the scale of the Project, it is considered that the recreational requirements of its new residents are unlikely to have a significant effect on the designated interests of the SAC by virtue of its distance from the Project and that the SAC is actively managed by Natural England and access is controlled. In addition, it is considered that a development of the scale proposed by this Project will deliver significant new areas of formal and informal natural greenspace as part of its Green Infrastructure design.

2.9 Therefore, with respect to Mottey Meadows SAC and subject to clarification of the ground water effects and the foul drainage design of the project, it is considered unlikely that the Project will have any likely significant effects on the designated interest of Mottey Meadows SAC. In addition,



the risk of likely significant effects of the Project when considered in combination with other policies of the LPR are low based on the conclusions of the HRA work completed by the Council to date on the LPR.

The Midland Meres and Mosses Phase 2 Ramsar Site – Aqualate Mere

- 2.10 As per Mottey Meadows, the LPR review and the HRA work which has been undertaken by the Council to date has taken into account a small increase in residential development in this part of the County, however not yet the scale of residential development proposed by the Project.
- 2.11 The HRA work completed by the Council considers broadly that there are three generic 'effect pathways' likely to affect European Designations within and close to the County; namely:
- Air Pollution;
 - Water Pathways; and
 - Recreation.
- 2.12 Due to the spatial separation of the Project from the Ramsar Site, approximately 10.8km measures as a straight-line distance, it is considered unlikely that the Project was likely to have a significant effect on the designated interest of the Ramsar Site when considered alone; irrespective of the scale of the Project.
- Air Pollution: The Ramsar Site is in excess of 200m from the nearest major road and therefore it is unlikely that the Project will contribute to an in-combination effect on the designated interest of the Ramsar Site due to a potential for a contributory effect from increased traffic generation;
 - Water Pathways: It is unlikely that the Project will affect any of the water pathways which underpin the designated interests of the Ramsar Site. These include, surface, ground and foul water drainage. This is again by virtue of the spatial separation of the Project from the Ramsar Site. Given the likely lack of effect, the opportunity for an in-combination effect is considered negligible; and
 - Recreation: An in-combination effect from recreation will have to be reviewed once the Council has produced its next iteration of the HRA; which will apparently be informed by a recreational impact study.
- 2.13 Therefore, with respect to the Midland Meres and Mosses Phase 2 Ramsar Site – Aqualate Mer and subject to the findings of the Council's recreational impact study which will be prepared to inform the next stage of the LPR, it is considered unlikely that the Project will have any likely significant effects, either alone or in combination, on the designated interest of the Ramsar Site.



3.0 Conclusion

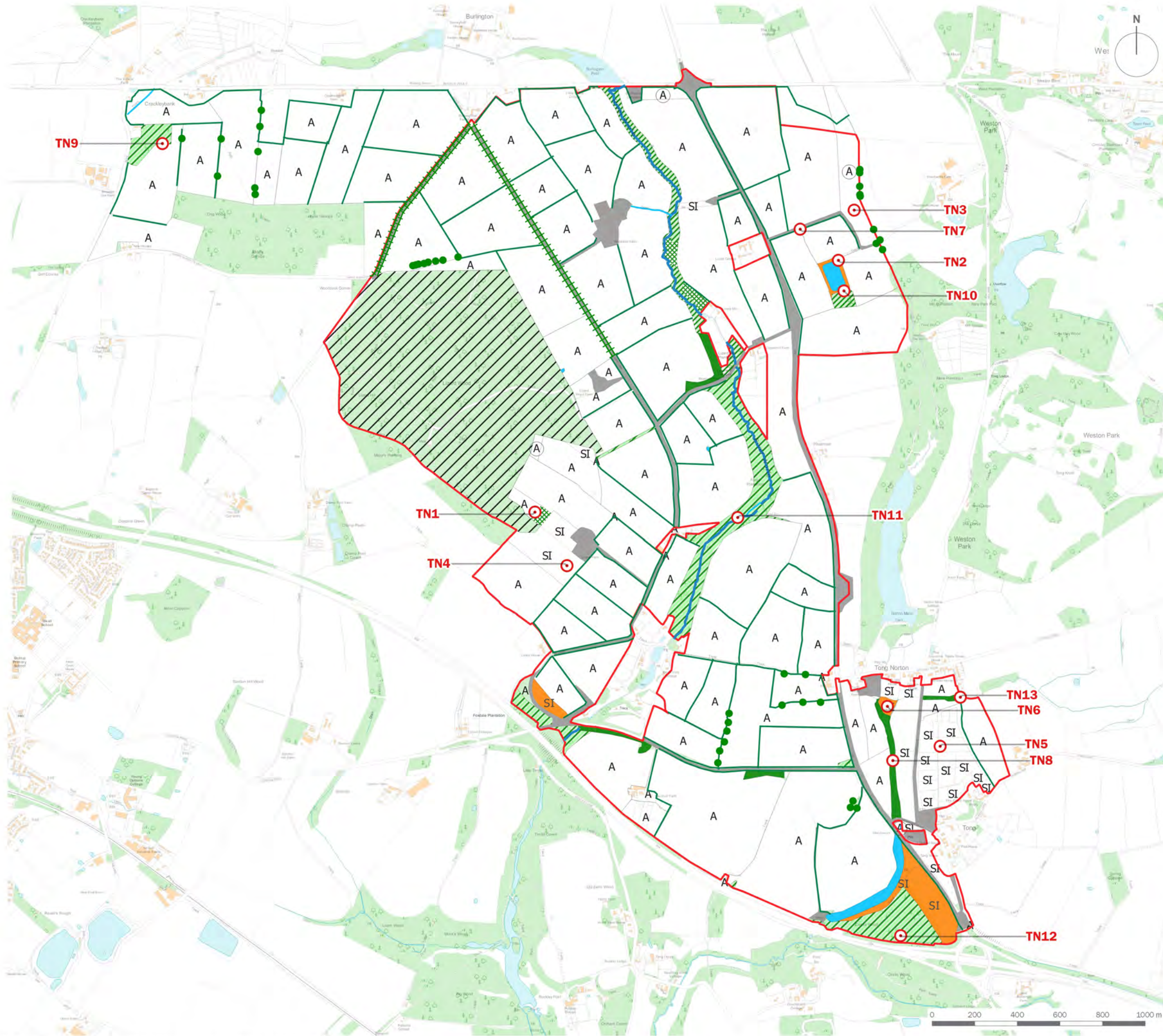
- 3.1 There are only two European Designations within 15km of the Project, namely Mottey Meadows SAC and part of the Midland Meres and Mosses Phase 2 Ramsar Site; a part called Aqualate Mere.
- 3.2 With respect to Mottey Meadows SAC, the Council have already screened out any likely significant effect of the LPR on the designated interests of the SAC both alone and in combination with other policies of the LPR. However, the Council's preliminary HRA work does not consider the Project or development of this scale in this part of the County. It is considered likely that the conclusion of the Council's initial work is, however, sound. However, this can be confirmed subject to clarification in due course of the ground water effects and the foul drainage design of the project.
- 3.3 In relation to the Midland Meres and Mosses Phase 2 Ramsar Site – Aqualate Mere, it is considered reasonable at this stage that, subject to the findings of the Council's recreational impact study which will be prepared to inform the next stage of the LPR, it is considered unlikely that the Project will have any likely significant effects, either alone or in combination, on the designated interest of the Ramsar Site.
- 3.4 Therefore, in conclusion and subject to the above, there are no 'in principle' issues to the project being brought forward for development as it relates to European Designations and consideration of the Habitat Regulations 2012 as it relates to plans and projects such as this.

Plan

Plan EDP 1

Extended Phase 1 Habitat Plan
(edp4371_d004b 05 September 2019 RB/JG/GY)

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- Site Boundary
- Broadleaved Semi-natural Woodland
- Broad-leaved Plantation Woodland
- Dense Continuous Scrub
- Plantation Mixed Woodland
- Coniferous Plantation Woodland
- SI Poor Semi-improved Grassland
- SI Semi-improved Neutral Grassland
- Standing Water
- A Arable Grassland
- A Arable Grassland - Set Aside
- Hardstanding
- Scattered Trees (Broad-leaved)
- Intact Species-poor Hedgerow
- Intact Species-poor Hedgerow and Trees
- Wet Ditch
- Running Water
- Target Note

client
Bradford Rural Estates Ltd

project title
Land North of Junction 3 of the M54, Shropshire

drawing title
EDP Plan 1: Extended Phase 1 Habitat Plan

date	05 SEPTEMBER 2019	drawn by	RB
drawing number	edp4371_d004b	checked	JG
scale	Refer to scale bar	QA	GY



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APPENDIX 8 : TRANSPORT STRATEGY - VECTOS, SEPTEMBER 2019

Bradford Rural Estates Ltd

**Land at Junction 3
Shropshire**

Transport Strategy

September 2019

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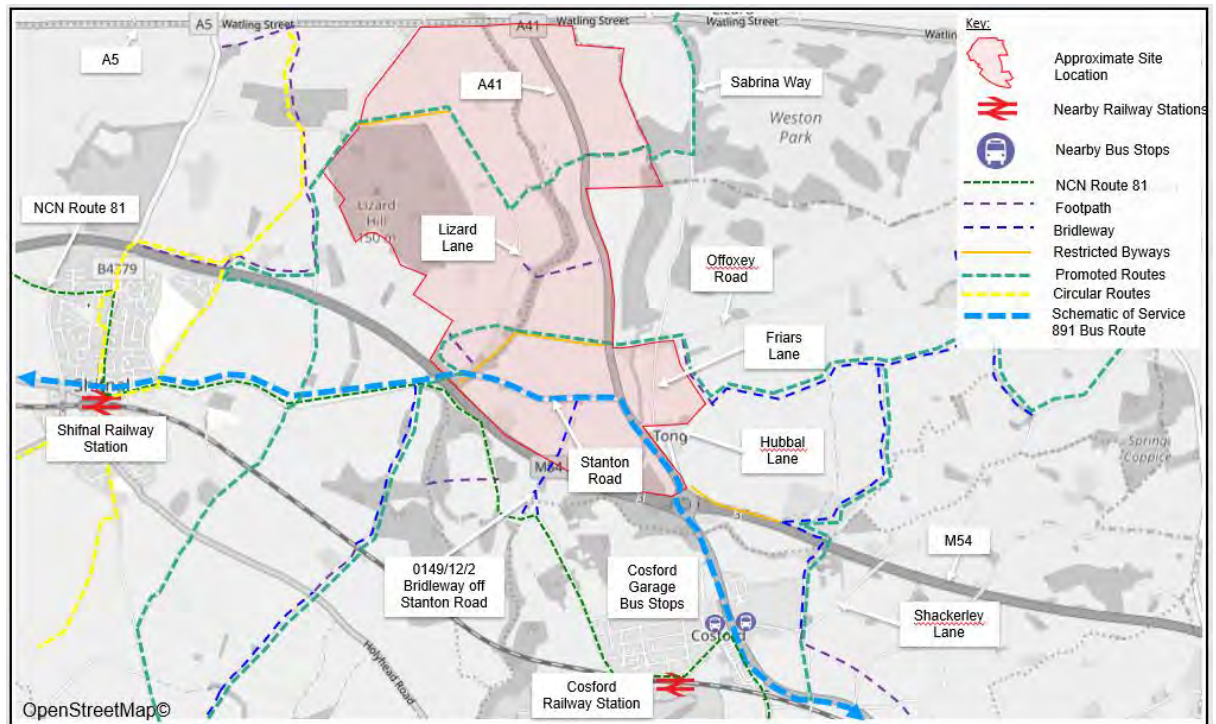
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- Appendix A - Illustrative Masterplan
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EXECUTIVE SUMMARY

1. Vectos have been appointed by Bradford Rural Estates Ltd to provide transport and highways advice on the potential strategic development site at Land to the north of Junction 3 of the M54, Shropshire.
2. The site totals 700 hectares and lies to the immediate north of the M54, adjacent to Junction 3.
3. The development proposals include circa 3,000 residential units within four development parcels or neighbourhoods and an area of strategic employment which will span approximately 50 hectares. The Strategic Employment Area (SEA) will focus on high end technology companies and engineering companies as occupiers. Therefore, a key theme for the SEA will be the sustainable transport offering. The SEA will aim to provide a wide range of opportunities to travel sustainably both internally and externally from the SEA. Due to timescale of the proposed development and the future occupiers of the SEA it is likely emerging technologies can be implemented offering a real alternative to single occupancy vehicle movements and future proofing the proposed development.
4. **Figure 1.1** shows the existing transport connections. A review of the existing characteristics of the site indicates that it is situated within an area accessible by a variety of different transport modes, although it is recognised that significant improvements would be required to support the new settlement/employment area.

Figure 1.1: Existing Transport Connections



5. The sustainable transport strategy for the proposed development can summarised as follows:

- Access strategy:
 - New roundabout to the north of the M54 Junction 3 providing access to both the SEA and residential neighbourhoods;
 - A new Link Road will be provided from the new roundabout on Newport Road (A41) providing access to the SEA and residential neighbourhoods;
 - A series of junction improvements across Offoxey Road, Stanton Road and Lizard Lane;
- Public transport strategy:
 - Improved frequency of the 891-bus route including a diversion of the service to within the proposed development;
 - Potential extension to bus route 10 and X4 to include the proposed development;

- Potential new routes leading from the development site to key surrounding locations;
- Improve sustainable connections to Cosford Railway Station including pedestrian links, cycling links, bus links and potentially connected and automated vehicle links;
- Walking and cycling strategy:
 - As shown in **Figure 1.2** the proposed development should include a network of green routes and active travel corridors which permeate out into the surrounding areas providing key connections;

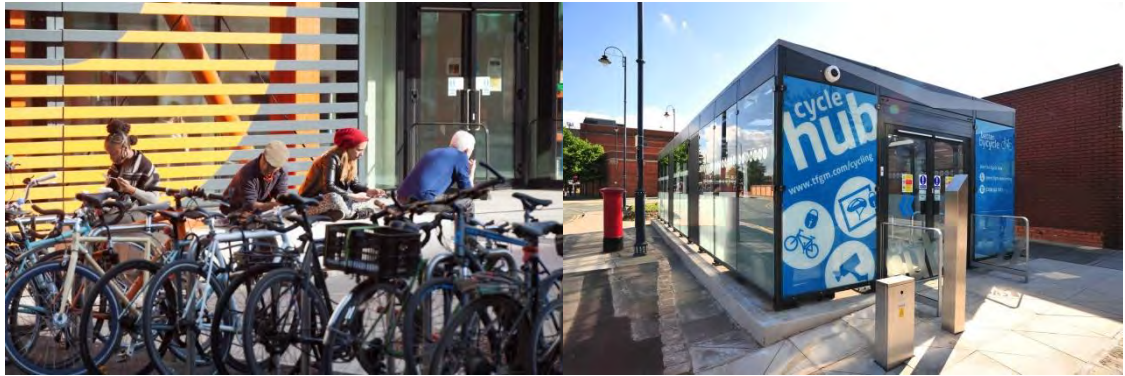
Figure 1.2: Green Routes/Active Travel Corridors



Source: Sustrans

- There is the opportunity to link to NCN Route 81 which will enable to proposed development to be connected to Cosford Railway Station, Shifnal, Codsall and Telford;
- There is the opportunity with the new cycle links to Cosford Railway Station to provide cycle storage, both long stay (cycle hub as shown in **Figure 1.3**) and short stay (Sheffield stands as shown in **Figure 1.3**)

Figure 1.3: Examples of Cycle Storage and Cycle Hire



- Emerging technologies and concepts:
 - The development should allow for a range of emerging technologies to maximise the development sustainability and reduce the need for single occupancy vehicle movements.
 - For the proposed development the emerging technologies that should be considered are as follows:
 - Electric pod/automated shuttles between the SEA, residential development, Cosford railway station and the surrounding towns;
 - The implementation of mobility hubs and transportation hub, as shown in **Figure 1.4**, in the centre of both the residential element and the SEA as well as at key locations surrounding the development;

Figure 1.4: Example Mobility/Transportation Hub



Source: <http://www.qixxit.de/blog/die-mobilitaetsstation-mobilitaet-vor-ort/>

- The micro-consolidation of deliveries which are redistributed to the workplace or residential dwellings via automatic bots; and
 - Implementation of superfast broadband and flexible working practices to reduce demand on the transport network during peak hours.
6. The masterplanning for the site will create an environment where accessibility to day to day services and other facilities is easy and a choice of transport modes is available. This will enable residents and employees to choose the more socially inclusive and sustainable methods of travel. The design should be such that this can happen from close to first occupation, when habits start to form.
7. There will be an approximate balance between residents of working age, circa 5,600, and jobs, circa 10,000 full time equivalent (FTE) on site jobs, with a further 1,300 FTE jobs linked to the residential element of the development. This will greatly assist in achieving strong self-containment of trips of approximately 20-50%. This will develop a sustainable community in its own right and this point will be emphasised throughout the sustainable transport strategy and will inform the masterplanning process ensuring a mixed-use

development comes forward. This alongside the implementation of superfast broadband and flexible working practices will reduce demand on the transport network during peak hours.

8. The facilities within this mixed-use development will bring benefit to the wider area of Tong and Tong Norton, Shifnal Cosford and Albrighton, providing greater choice and better social inclusion for the wider community.
9. A review has been undertaken of the relevant local and national policy, it is considered the transport strategy set out above complies with both the national and local policy and guidance on transport planning, particularly when compared to the transport tests set in the NPPF; i.e.
 - The opportunities for sustainable transport modes have been taken up;
 - Safe and suitable access can be achieved for all people; and
 - As a result, the proposed development is considered to comply with local and national policy objectives.

1 INTRODUCTION

- 1.1 Vectos have been appointed by Bradford Rural Estates Ltd to provide transport and highways advice on the potential strategic development site at Land to the north of Junction 3 of the M54, Shropshire ("Land at J3").
- 1.2 Land at J3 is currently proposed as a potential strategic site in the Strategic Sites Consultation (July 2019) of the Shropshire Local Plan Review.
- 1.3 The emerging illustrative masterplan, shown in **Appendix A**, proposes circa 3,000 dwellings and circa 50 hectares of strategic employment land which will serve approximately 10,000 employees.

Site Overview

- 1.4 The proposed development site, which comprises approximately 700 hectares, lies immediately to the north of the M54, adjacent to Junction 3 of the M54. The site boundary and location in its local context is shown in **Figure 1** with the sites strategic context shown in **Figure 2**.
- 1.5 The development proposals include circa 3,000 residential units within four development parcels or neighbourhoods and an area of strategic employment which will span approximately 50 hectares. The Strategic Employment Area (SEA) will focus on high end technology companies and engineering companies as occupiers. Therefore, a key theme for the SEA will be the sustainable transport offering. The SEA will aim to provide a wide range of opportunities to travel sustainably both internally and externally from the SEA. Due to timescale of the proposed development and the future occupiers of the SEA it is likely emerging technologies can be implemented offering a real alternative to single occupancy vehicle movements and future proofing the proposed development.

Report Structure

- 1.6 This document sets out the transport vision and strategy for Land at J3. This strategy document explains the principle of transport related to urban design and access to the site that supports the development.
- 1.7 The remainder of this report is set out as follows:

- **Section 2:** Policy Context – A brief description on how the development proposals meet the current transport planning policies;
- **Section 3:** Existing Transport Conditions – A brief description of the surrounding transport network;
- **Section 4:** Transport Strategy – Sets out the proposed transport strategy in terms of both highways and sustainable modes of travel;
- **Section 5:** Summary and Conclusion - provides and summary of the report and key conclusions.

2 POLICY CONTEXT

2.1 This section of the report outlines the current national and local planning policy in relation to transport.

National Policy

National Planning Policy Framework (NPPF, February 2019)

2.2 The National Planning Policy Framework (NPPF) was updated in February 2019 but the overarching theme in terms of transport has remained similar. The key points are as follows:

“Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) The potential impacts of development on transport networks can be addressed;*
- b) Opportunities from existing or proposed transport infrastructure, and change transport technology and usage are realised – for example in relation to the scale, location or density of development that can be accommodated;*
- c) Opportunities to promote walking, cycling and public transport use are identified and pursued;*
- d) The environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects and for net environmental gains; and*
- e) Patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places.”*

2.3 In terms of significant developments, the NPPF states:

- “Significant development should be focused on location which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.”*

2.4 With regard to the above themes the NPPF states that developments should:

- a) *“Give priority first to pedestrians and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services and appropriate facilities that encourage public transport use;*
- b) *Address the needs of people with disabilities and reduce mobility in relation to all modes of transport;*
- c) *Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter and respond to local character and design standards;*
- d) *Allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- e) *Be designed to enable charging of plug- in and other ultra-low emissions vehicles in safe, accessible and convenient locations.”*

2.5 The NPPF states that *“In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*

- a) *Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- b) *Safe and suitable access to the site can be achieved for all users; and*
- c) *Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.”*

2.6 Finally, the documents states: *“development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”*

DfT Future of Mobility: Urban Strategy (Guidance)

2.7 The DfT published the Future of Mobility: Urban Strategy document in March 2019. The document recognises that transport is changing, in part through cleaner transport and new modes of travel because of advances in technology. As such, throughout the document,

there are references to transport approaches that form part of the sustainable transport strategy of this proposed development.

2.8 Firstly, the paper mentions definitions that relate to concepts and approaches referred to in this report:

***“Micromobility:** The use of small mobility devices, designed to carry one or two people, or ‘last mile’ deliveries. E-scooters, e-bikes and electric shuttles are examples.*

***Car clubs (sometimes known as car-sharing):** Car clubs use electronic systems to provide customers unattended access to cars for short-term rental, often by the hour. Business models can be categorised into round-trips, where the vehicle must be returned to its home station, and flexible, which allows one-way trips. Vehicles may be owned by individuals and lent out on a peer-to-peer basis via an intermediary platform, or form part of a fleet owned by a single organisation.*

***Ride-sharing (sometimes known as car-pooling):** Formal or informal sharing of rides between unlicensed drivers and passengers with a common or similar journey route. Ride-sharing platforms charge a fee for bringing together drivers and passengers. Drivers share trip costs with passengers rather than making a profit.*

***Shared mobility:** Transport services and resources that are shared among users, either concurrently or one after another. Public transport, or mass transit, as well as newer models such as car-sharing, bike-sharing and ride-sharing, are all types of shared mobility.”*

2.9 The document then goes on to state the following changes in transport that are currently occurring:

- Data and connectivity are transforming journeys;
- Transport is becoming increasingly automated;
- Transport is becoming cleaner;
- New modes are emerging;
- Travel demand is rising overall, but falling at an individual level;
- The population is ageing and travel choices show clear generational differences;
- Consumer attitudes are changing;
- New digitally enabled business models are emerging; and
- Shared mobility is becoming more prevalent.

- 2.10 With regards to transport becoming cleaner, paragraph 3.13, page 20, refers to the growth of E-bikes: *“On the roads, improved batteries and motors are facilitating the introduction of new forms of micromobility, providing ever more options for the movement of people and goods. These include electric scooters, electrically assisted pedal cycles (e-bikes) and e-cargo bikes.”* The graph on the top of page 21 demonstrates this growth, showing how sales have risen to over 1.6 million units in Europe in a decade from under 300,000 units in 2006.
- 2.11 For shared mobility, the DfT make reference to the growth of car clubs, stating that *“The number of car club members across the UK increased almost eight-fold between 2007 and 2017, to nearly 250,000 members. Whilst around three-quarters of these are in London, there is growth in many parts of the UK. This is evident in Scotland, where there was membership growth of 29% between 2016 and 2017.”*
- 2.12 Further on in the document, page 28, the DfT make reference to a form of on-demand public transport, ArrivaClick, which is mentioned later on in this report within the sustainable transport strategy. The DfT reference that ArrivaClick launched its first UK city service in Liverpool in August 2018 where it rolled out an app-based on-demand public transport service allowing passengers to ‘order’ and track a vehicle that provides them with a guaranteed fare with no fixed routes or journeys. This is therefore determined by where passengers want to go, with computer algorithms matching passengers traveling in the same direction and dynamically routing vehicles in real time to find the optimal route for their trip.
- 2.13 Paragraph 3.20 refers to consumer attitudes changing, stating that *“The proportion of 18-75-year olds owning or having access to a smartphone increased from 52% in 2012 to 87% in 2018. Nearly 9 in 10 smartphone users (87%) use their phones for travel purposes, with navigation and route planning being the most popular uses”.*

Regional Policy

Shropshire Local Development Framework (adopted March 2011)

- 2.14 Policy CS7 Communication and Transport sets out Shropshire’s aims for transport during the plan period. The plan aims to *“provide a range of opportunities for communication and transport which meet social, economic and environmental objectives by improving accessibility, managing the need to travel, offering options for different travel needs and reducing the impact of transport”.*

2.15 The policy sets out key ways this will be achieved which includes:

- *“Promoting greater awareness of travel behaviour to encourage more informed choices about communication, the need to travel and alternative travel options;*
- *Promoting the use of information and communication technologies to reduce the impacts of individual travel decisions at work, at home and for leisure; [...]*
- *Protecting and enhancing strategic and local cycling, footpath, bridleway and canal networks as local transport routes and for recreation and leisure use;*
- *Enabling the provision of accessible, affordable, and demand responsive passenger transport services including bus, Park & Ride, rail, coach, taxi, community transport services and car sharing initiatives; [...]*”

Shropshire Local Transport Plan (2011 – 2026)

2.16 The Shropshire Local Transport Plan (LTP) sets out 10 objectives it aims to achieve through a series of policies. The key objective and policies relating to transport and the transport strategy for the proposed development at the Land at Junction 3 are discussed in the following section.

- *“Economy and growth;*
- *Improve connectivity and access, particularly by sustainable transport modes;*
- *Support growth and ensure new housing and employment areas encourage more sustainable travel behaviour”;*
- *“Carbon reduction and environment;*
- *Reduce transport related carbon emissions;*
- *Minimise the impacts of transport on our local environment and communities”;*
- *“Healthy, safe and confident people and communities;*
- *Encourage more travel by active modes of foot and cycle”;*

2.17 Paragraph 4.6.8 discusses transport policy with regard to sustainable development. Under Policy E11: Location and design of new development it states:

“We [Shropshire] will ensure that new development is located, designed and severed by transport in ways that enhance accessibility and reduce car dependency. This will be achieved by:

- *[...] the identification of new land for development in appropriate and sustainable locations and through the careful planning, design and servicing of new development;*
- *Requirement for transport assessments and the development of travel plans for significant new developments;*
- *Producing design guidance to promote best practice in the layout and design of new developments;*
- *Requiring promoters of new developments to either provide or financially contribute to the provision of necessary transport infrastructure and services, through site specific agreements or payments of a community infrastructure levy."*

2.18 Policy C5: Encouraging more sustainable travel choices within the plan states that the council will:

"use promotional techniques to proactively encourage more sustainable travel habits. These include:

- *Supporting and promoting technologies, initiatives and services which reduce the need to travel e.g. communication technologies and broadband infrastructure, tele-conferencing, homeworking, local and remote provision of services";*

2.19 Policy A9: Cycle infrastructure states that the council will *"improve conditions for cycling in ways which will encourage more people to choose to cycle for local journeys. This will be achieved by: design of new developments, including residential, business and retail areas in ways which prioritise access by cycle and foot"*.

2.20 Policy A11: Pedestrian infrastructure stated that the council will ensure *"design of new residential areas in ways which prioritise permeability by cycle and foot and enable pedestrians to follow desire lines"*.

Summary

2.21 A key aim of local and national transport policy is to integrate land use planning and transport for new development and to promote accessibility by non-car modes of transport wherever possible.

- 2.22 Transport planning guidance is beginning to reflect the changes occurring within the transport industry and its importance in development planning. The DfT paper sets out the importance of these new technologies and modes.
- 2.23 The proposed development will be well served by sustainable transport modes (discussed in **Section 4**) including an extensive pedestrian network, local cycle routes and a strategic bus route linking the site to Telford and Wolverhampton.
- 2.24 As a result, the proposed development is considered to comply with local and national policy objectives.

3 EXISTING TRANSPORT CONDITIONS

Site Location

- 3.1 The proposed development site lies west of Tong Norton, Shropshire. It is located generally in a rural environment. The development site totals 700 hectares and lies to the immediate north of the M54, adjacent to Junction 3 of the M54. It is located to the east of Telford and north west of Wolverhampton. The proposed development location in a local and strategic context are shown in **Figures 1 and 2** respectively. The sites existing transport connections are shown in **Figure 3**.

Walking

Newport Road (A41)

- 3.2 To the north of the M54 there is a footway adjacent to the eastern edge of Newport Road which terminates at the southern access junction into Tong. Between the two accesses for Tong no footway is provided on Newport Road. However, pedestrians' routes are provided throughout Tong. From the northern access onwards, a footway is again provided on Newport Road until the junction with Offoxey Road. After this point no further footway is provided on Newport Road.
- 3.3 There are narrow footways around Junction 3 of the M54, with uncontrolled pedestrian crossing points on each access road / slip road where the footway along the eastern edge of Newport Road can be joined. To the south of Junction 3 of the M54 a footway is provided until Worcester Road which links with the National Cycle Network (NCN) Route 81. There are traffic signal-controlled toucan crossing facilities at Newport Road / Worcester Road / Sydnal Lane Junction.

Stanton Road

- 3.4 To the south of the M54 and from Aston Road to the junction of Lamledge Lane there is a footway adjacent to the western edge of Stanton Road. This is a narrow footway running alongside the road. It is equipped with raised kerbs and street lightening. There are pedestrian crossing points at this end of the road together with dropped kerbs and tactile paving, however, these are not controlled. Pedestrian facilities are limited on the remainder of this road.

- 3.5 Approximately 315m from the junction of Stanton Road and Newport Road is a single-track bridleway (0149/12/2). The bridleway provides an existing footbridge over the M54. The bridleway can be used to link with the NCN Route 81 south of the M54. The NCN Route 81 can be used to travel to Cosford Railway Station.

Offoxey Road

- 3.6 Offoxey Road runs through residential and rural environments. In the western point of the road, where residential plots are located there are pavements available for pedestrian usage. However, these vary in length and are not consistent throughout the road. However, it is expected that the route is quietly trafficked and it is assumed pedestrians would travel within the carriageway.

Lizard Lane

- 3.7 Lizard Lane is a rural route, which consists of a single track. There are no pedestrian facilities on the route.

Friars Lane

- 3.8 This is a rural route. There are no footways present on Friars Lane.

Hubbal Lane

- 3.9 This is a rural route with residential dwellings along the road. At the eastern entrance of this lane (near Tong Norton Farm), pavements are situated. However, these are the only pedestrian facilities on this lane. The lane is likely lightly trafficked and pedestrians are likely to travel within the carriageway.

Shackerley Lane

- 3.10 This is a rural route. There are no footways present on Shackerley Lane.

Public Rights of Way

- 3.11 The Shropshire County Council Definitive Map identifies several Public Rights of Way (PROW) with varying designations running through the development site. In addition, the map demonstrates there are several additional PROWs which lead towards Shifnal, Cosford and Lizard Wood.

3.12 The PROWs contained within the site boundary are listed below and shown in **Figure 3**:

- 0149/12/2 – Bridleway;
- 0149/12/1 – Footpath;
- 0149/16/1 – Footpath;
- 0149/7/1 – Footpath;
- 0149/14/1 – Footpath;
- 0141/14/1 – Footpath;
- 0149/15/2 – Restricted Byway;
- 0149/15/4 – Restricted Byway;
- 0149/15/3 – Restricted Byway;
- 0149/15/6 – Restricted Byway;
- 0141/16/2 – Restricted Byway; and
- 0141/17/1 – Restricted Byway.

3.13 The PROWs which connect the development site to the wider area are listed below and also shown in **Figure 3**:

- 0149/19/1 – Bridleway
- 0149/19/2 – Bridleway
- 0149/19/3 - Bridleway
- 0149/19/4 – Bridleway
- 0149/3/3 – Bridleway
- 0149/3/2 – Bridleway
- 0141/UN1/1 – Bridleway;
- 0141/4/2 – Bridleway;
- 0112/1/1 – Footpath;
- 0141/2/1 – Footpath;
- 0141/3/1 – Footpath;
- 0149/13/1 – Footpath; and
- 0149/5/2 – Restricted Byway.

3.14 Further to these designated PROWs there are several 'Promoted Routes' set out on the definitive map. These route use mainly the designated PROW but provide example links to provide an entire route to and from certain locations. These are particularly aimed at horse

riders and cyclists; however, walkers are also able to travel along sections of the route. Two of these circular routes travel through the development site. These include:

- The Sabrina Way – a 72.58km long distance walking route heading towards Shifnal; and
- Monarch Way – a 41km long distance walking route travelling through the majority of the Shropshire countryside.

3.15 To the west of the development there are several circular routes which circumnavigate Shifnal. One of note is the Shifnal P3 which can be accessed from the development site via The Sabrina Way.

Cycling

3.16 There is limited cycle infrastructure provision in the vicinity of the proposed development, and few recommended routes due to its rural nature. However, several of the country roads surrounding the development would be suitable for cycling, but cyclists would be expected to travel on road.

3.17 As shown on **Figure 3**, NCN Route 81 travels to the south of the development site and connects to Cosford and Telford. Route 81 is primarily an on-road route. NCN Route 81 can be accessed from the proposed development via the bridleway (0149/12/2) which is accessed from Stanton Road and provides an existing footbridge connection over the M54.

3.18 Strategically, NCN Route 81 connects to NCN Route 55 in Telford. In addition, there are two Shropshire County Council 'Promoted Routes' which travel through the development site which are suitable for cycling. The Sabina Way links with circular cycle routes which circumnavigate Shifnal. These routes provide a convenient cycle routes from the development site to the nearby Shifnal.

Local Facilities

3.19 One of the primary factors to be considered when determining the suitability of a new development is its proximity, accessibility in relation to key local facilities by various modes.

3.20 Some of the key local facilities within the surrounding areas such as Cosford, Albrighton and Shifnal are detailed in **Table 3.1**.

Table 3.1: Local Facilities

Local Facilities	Location	Name	Distance (m)	Walking Time (mins)	Cycling Time (mins)
Primary School	Curriers Lane, Shifnal	Shifnal Primary School	3,700	45	15
Local Centre	Newport Road, Cosford	Newport Road, Cosford	2,900	35	12
Bus Stops	Newport Road, Cosford	Cosford Garage Bus Stops	2,650	32	11
Railway Station	Worcester/Sydnal Road, Cosford	Cosford Railway Station	3560	42	14
	Aston Street, Shifnal	Shifnal Railway Station	3950	47	15
	Station Road, Albrighton	Albrighton Railway Station	5000	60	20
Public House	Newport Road, Tong	Bell Tong	Within Site Boundary		
Leisure/Sport	Cross Road, Albrighton	Albrighton Sports and Social Club	6,120	72	24
GP Surgery	The Broadway/ Shrewsbury Road, Shifnal	Sutton Hill Medical Practice and Shifnal & Priorslee Medical Practice	4,100	48	16
Secondary School	Coppice Green, Shifnal	Idsall School	3,880	46	15

A walking speed of 1.4m/s and a cycling speed of 4.2m/s has been used. Distances have been measured from the centre of Stanton Road.

- 3.21 It is evident from **Table 3.1** that the development site is located within an accessible location with local facilities within a cyclable distance. It should be noted the majority of the facilities listed within **Table 3.1** will be included within the development proposals. Within the proposed development a network of pedestrian and cycle routes will be provided to link to all of the proposed facilities on the site. These routes would be a combination of segregated facilities or on shared routes which are not dominated by vehicles.

Public Transport

Bus Services

- 3.22 There is one principal bus service (Service 891) operating in the vicinity of the development site providing connections to nearby local areas such as Albrighton, Cosford and Shifnal, and the key towns of Telford and Wolverhampton.

- 3.23 Banga Travel operate Service 891, a schematic of the route is shown in **Figure 3**. The route operates between Wolverhampton and Telford. This provides a service at an hourly frequency with a 30-minute journey time to Wolverhampton and Telford respectively.
- 3.24 The bus service 891 stops approximately 665m walking distance from Cosford Railway Station, which is approximately an 8-minute walk from the station.
- 3.25 Bus Stops are located on nearby roads to the site. The nearest bus stop is ‘Cosford Garage’, approximately 1.5km from the development site and adjacent to the eastern edge of RAF Cosford. The current facilities provided at ‘Cosford Garage’ and ‘Cosford Opp Garage’ include shelters and timetable information.
- 3.26 A summary of the bus services which operate from ‘Cosford Garage’ is provided in **Table 3.2**.

Table 3.2: Bus Services Summary

Service	Route	First Bus	Last Bus	Frequency		
				Mon-Fri	Sat	Sun
891	Wolverhampton – Albrighton – Shifnal-Strafford Park – Telford	06:42	17:44	Hourly	2 hourly	n/a
	Telford – Stafford Park – Shifnal – Albrighton - Wolverhampton	07:45	18:33	Hourly	2 hourly	n/a

- 3.27 Therefore, the development site is served by a bus route which travels between the surrounding key locations providing access for future residents.
- 3.28 Arriva Midlands also operate throughout the surrounding area including nearby town such as Wolverhampton and Telford. **Figure 4** shows approximate routes for Arriva Midlands Service 10 and X4 which operate in close proximity to the development site. These services are considered in further detail in **Section 4** of this report.

Rail Services

- 3.29 Cosford Railway Station is located 2.07km south of Junction 3 of the M54. It is located on the line which operates between Telford, Shrewsbury, Wolverhampton and Birmingham New

Street. The rail station is served by West Midlands Railway. A summary of the rail services operating from Cosford Rail Station is provided in **Table 3.3**.

Table 3.3: Rail Service Summary

Destination	Route	Journey Time	Frequency	Direct
Telford	Cosford – Shifnal – Telford Central	10mins	Hourly	Yes
Wolverhampton	Cosford – Albrighton – Codsall – Billbrook – Wolverhampton	18mins	Hourly	Yes
Shrewsbury	Shifnal – Telford Central – Oakengates – Wellington (Shropshire)	32mins	Hourly	Yes
Birmingham New Street	Albrighton – Codsall – Billbrook – Wolverhampton – Sandwell & Dudley	37mins	Hourly	Yes
London Euston	Cosford - Wolverhampton and Wolverhampton - London Euston	140mins	Hourly	1 change

- 3.30 There is currently one main road route from the development site to Cosford Railway Station via Newport Road (the A41). The journey is able to be made by pedestrians, cyclists and vehicles.
- 3.31 It is possible to access Cosford Railway Station from the development site via the bridleway (0149/12/2), which travels from Stanton Road and connects with NCN Route 81 which directly links to Cosford Railway Station.
- 3.32 There is a total of 12 cycling parking spaces at Cosford Railway Station. There are limited car parking facilities and currently no bus services directly serve the station.
- 3.33 Shifnal and Albrighton Railway Stations are located approximately 3.95km and 5km walking/cycling distance from the development site. Both of these railway stations are located within cycling distance of the development site with approximate journey times of 15-minutes and 20-minutes respectively. They are both served by the Shrewsbury to Wolverhampton railway line similarly to Cosford Railway Station.

Local Highway Network

- 3.34 There are five key highway links in the vicinity of the development site:

- Newport Road (A41);
- Offoxey Road;
- Stanton Road;
- The M54; and
- The A5.

3.35 There are also a number of rural lanes running through and connecting to the development site including Lizard Lane.

Newport Road (A41)

3.36 Newport Road provides a north-south connection between Tong Norton & Cosford, and forms the eastern edge of the developable part of the site. It provides access from the development site to Cosford, Cosford Railway Station, RAF Cosford, RAF Cosford Museum, the M54 and the A5. It is single carriageway road subject to the national speed limit in the vicinity of the development site.

Stanton Road

3.37 Stanton Road provides a connection to Telford in the west. It is single carriageway and subject to the national speed limit. Stanton Road is predominately a rural route with no pedestrian facilities provided on either side of the carriageway.

Offoxey Road

3.38 To the east of the proposed development, Offoxey Road has the character of a rural route and provides a connection between Tong Norton and Bishop's Wood to the east. Offoxey Road is single carriageway and provides a connection between Bishop's Wood and Codsall. Offoxey Road is generally subject to the national speed limit, with a 30mph section within Tong Norton.

M54

3.39 The development site is located to the immediate north-west of Junction 3 of the M54. The M54 provides a connection between Telford and Wolverhampton, connecting to the M6 and Birmingham to the east and the A5 and Shrewsbury to the west.

A5

- 3.40 The development site is located to the immediate south of the A5. The A5 is a dual carriageway in the proximity of the development site. It connects to Telford to the west and to the M6 to the east. The development site can be accessed via the roundabout between the A5 and Newport Road (the A41).

Lizard Lane

- 3.41 The western parcel of the development is bordered by Lizard Lane which meets Stanton Road with a T-junction. The road is a rural route with only a single carriageway provided. Currently vehicles greater than 7.5 tonnes are not able to use the route except for access. Furthermore, no pedestrian facilities are provided on either side of the carriageway.

Summary

- 3.42 A review of the existing characteristics of the site indicates that it is situated within an area accessible by a variety of different transport modes, although it is recognised that significant improvements would be required to support the new settlement/employment area.
- 3.43 A principal bus service operates approximately 1.5km distance from the development which provides onward connectivity to local towns and railway stations.
- 3.44 There are pedestrian and cyclist provision surrounding the site. There is an opportunity to significantly enhance both the pedestrian and cycle network to make existing routes more attractive and to create new links for the site.
- 3.45 Proposals for the development will be supported through a multimodal accessibility strategy, details of which are provided in **Section 4** of this document.

4 TRANSPORT STRATEGY

4.1 This chapter sets out the proposed transport strategy for Land at J3. The development of a sustainable transport strategy forms an integral part of the proposals for the site.

Masterplanning

4.2 In terms of creating a sustainable community there are three facets that need to be considered in detail as follows:

- Design;
- Choice; and
- Management.

Design

4.3 Design is a key concept in achieving a sustainable transport strategy. The masterplan for Land at J3 will be designed to provide a vibrant, active and healthy community which is built around green routes, footways and cycleways to encourage sustainable and active travel. This will be achieved by ensuring walking and cycling are a priority at the design stage so that the majority of the development is reachable by active modes. Walkable neighbourhoods will be created whereby people can access daily facilities on foot.

4.4 Sustainable transport will be proposed to be at the heart of the development through the provision of a mixed-use community. The proposals include both a strategic employment area and residential dwellings. Within the residential element of the development, local centres will be provided that will supply a greater level of everyday facilities such as employment, education, retail and recreation all within the site. The provision of a mixed-use development will encourage internal self-sufficiency which in turn helps to reduce the need to travel as well as encouraging sustainable and active travel within the site.

Internal Self Sufficiency

4.5 There will be an approximate balance between residents of working age, circa 5,600, and jobs, circa 10,000 new full time equivalent (FTE) on-site jobs, with a further 1,300 FTE linked with the residential element of the development. This will greatly assist in achieving strong self-containment. This will develop a sustainable community in its own right which will aim of

a high level of internalisation of approximately 20-50%. This point will be emphasised throughout the sustainable transport strategy and masterplanning process.

- 4.6 We have undertaken research into a sample of towns of a similar size and the containment of employment trips. Levels of internalisation for employment trips vary from 14% to 40% with an average of 26%. The proportion will depend on a number of factors but clearly of key importance will be the quantum of employment space and the match between the working population and the jobs available which as described above has been and should continue to be considered carefully.
- 4.7 In addition to employment trips, education trips represent approximately 30-40% of trips in the morning peak and, therefore, it should be possible for the majority of these to be contained within the site with the provision of education facilities.
- 4.8 On other sites we are acting on we are considering containment of trips covering all purposes at a level of between 20% to 50% depending on the circumstances. Therefore, a key strategy for the masterplanning process is the self-containment trips through the mix and design of the proposed development.
- 4.9 The inclusion of high-speed broadband (enabling the ability to work remotely) and potentially communal work hubs that provide work space, meeting areas and support facilities would encourage more community-based working and less demand and reliance on the wider transport network, particularly during peak times.

Summary

- 4.10 The masterplan will be designed in accordance with these goals with a central hub of employment, a local centre plus education, recreation and social facilities.

Choice

- 4.11 Creating choice is a fundamental feature in encouraging people to make use of sustainable modes of transport and to make information available regarding these choices is essential. A range of choices will be provided both within and to and from the site. A key aspect will be to enable people to make informed choices regarding modes of transport. This includes infrastructure and facilities that supports virtual mobility and emerging technologies and transport concepts.

- 4.12 Virtual mobility involves the use of technology and practices that remove the need to travel in certain circumstances. Due to the timescale of this development the balance of mobility will shift away from driving cars as the majority of the populations automatic choice for travel and instead moves towards mobility through technology as an alternative, particularly as technology progresses at its unprecedented rate. This is supported through policy at both national and local levels.
- 4.13 By providing working, shopping and social interaction at a local level and making use of modern technology, it can positively contribute to reducing peak period travel and the need to travel.
- 4.14 As technology continues to progress the transport industry has experienced significant change in how people travel. The rise of mobile phone applications which provide mobility at the click of a button have encouraged the decline in car ownership and an increase in sustainable travel options. Moreover, the provision of electric shuttle pods, connected and automated vehicles and the rise of e-scooter and e-bike is transforming the way we travel. The proposed development will ensure these modes of travel are available to both the SEA and the residential neighbourhoods to provide an alternative to single occupancy vehicle movements.

Management (Travel Planning)

- 4.15 A key method of managing travel with a new community is to create a robust Travel Plan which is effective and creates the management tools to enable sustainable travel behaviour over a longer period of time.
- 4.16 The Travel Plan will be well funded, with transparent monitoring, reporting and comparison of achievement against targets. It is proposed that a Transport Review Group would be created, comprising key stakeholders including the site promoters and the Local Planning Authority; Shropshire County Council. They will meet periodically to monitor and review the achievements of the Travel Plan, its evolving objectives and targets.
- 4.17 A key element of the continued management of the sites travel needs will be the provision of a Mobility Hub (discussed at Section 4 Paragraphs 4.54 – 4.56). The Mobility Hub will be located within the centre of the development within a prominent location and will provide a focal point for the range of mobility services provided across the site. The Mobility Hub

should be delivered under the first phase of development to ensure sustainable transport behaviours are ingrained from the outset.

4.18 The Mobility Hub should be seen as:

- Hub for shared mobility including car club, bicycle, and electric bicycle hire and management;
- Focal point for the associated transport IT platforms and information disseminations;
- Café/workspace to increase awareness and footfall;
- Include conventional bus and Demand Responsive bus stops and waiting facilities; and
- Provide cycle maintenance, servicing and retail facilities.

4.19 An integral part of the Travel Plan will be the inclusion of a Community Concierge. The Community Concierge will provide personal mobility services to residents, businesses within the local area, and not be restricted to just the development itself. These services will include bespoke travel advice, bike repair, administration of car sharing schemes, organised walks and rides, liaison with transport operators, bike or electric bike hire, a drop off point for internet deliveries, and more.

Access Strategy

4.20 This section provides details of the highway strategy in terms of access points and links for the proposed development, a summary is provided in **Figure 5**. **Figure 5** also demonstrates a high-level internal network which will consist of an internal spine road linking the access points.

Strategic Employment Land Site Access

4.21 To serve the SEA and the rest of the site, it is proposed to provide a new roundabout approximately 200m to the north of Junction 3 of the M54. The proposed arrangement of the junction is show in **Drawing 173470/A/02** at **Appendix B**.

4.22 The proposed improvements will seek to dual the A41 from Junction 3 to the proposed roundabout. A segregated left-turn will also be provided, which will allow vehicles to access the SEA without delay thus mitigating the potential for queuing at the junction back to Junction 3.

- 4.23 To further prevent blocking back onto the mainline of the M54 a splitter island will be introduced at the priority T junction to prevent northbound vehicles being able to turn right into Tong Norton. Vehicles wishing to enter the village will be required to travel past the roundabout and use the priority T junction located 600m further north.
- 4.24 The proposed roundabout will provide access to a link road, which will extend northwards parallel to the A41. This link road will be the main spine road through the site linking the SEA to the residential neighbourhoods to the north.

Newport Road (A41)

- 4.25 There is also opportunity to upgrade the existing junction between Newport Road/Stanton Road to a roundabout. A roundabout will offer the potential to provide access to the development parcels to the west of Newport Road and access to the open space being retained to the east, with minimal delays and queuing for the through traffic on Newport Road. Further north of Stanton and Offoxey Road there are the opportunities to provide a further roundabout to serve access to the residential parcels, via neighbourhood one, and a new priority junction to serve access to the residential parcels, via neighbourhood four. This can be seen within the illustrative masterplan contained at **Appendix A** and within **Figure 5**.

Offoxey Road

- 4.26 The development proposals would seek to retain the rural characteristics of this route to ensure it is not used as a rat run to Bishop's Wood, Brewood and the M6 when the M54 is congested. Offoxey Road is a reasonably narrow, straight, hedge lined rural route and not conducive to carrying high volumes of traffic. Retaining these characteristics should prevent the route from becoming a rat run to and from the development site.
- 4.27 However, as the development proceeds and the demand and traffic flow along Newport Road increases traffic signals could be implemented to ensure vehicles are able to turn right onto Offoxey Road, into the pub and petrol filling station. The junction is currently a priority T-junction with separate accesses to the pub and petrol filling station.

Stanton Road

- 4.28 There is potential to serve the development from the west via Stanton Road. This would provide a link to the new development from the surrounding residential areas such as Shifnal and Telford. Stanton Road is currently a narrow country lane which is lined by trees with the

national speed limit in place. The road would not be conducive with carrying high traffic flows or heavy-duty vehicles to the SEA without improvements.

- 4.29 T-junctions are proposed along the existing Stanton Road linking with the newly proposed internal road network to the SEA and residential neighbourhoods. Traffic will be able to access the wider network from the junction between Stanton Road/Newport Road. As described above Newport Road/Stanton Road junction would need upgrading to improve capacity.

Lizard Lane

- 4.30 Lizard Lane is rural in nature with a narrow carriageway lined by mature hedgerows; thus, unsuited for large increases in development traffic. As such, it is proposed that Lizard Lane is retained in its current character. Whilst Lizard Lane is likely to serve a minor number of residential dwellings, which will be accessed towards the southern end of the lane. It is proposed that Lizard Lane is encouraged as a sustainable transport link, encouraging walking and cycling and providing part of an excellent link to Shifnal and south to Cosford.

Walking and Cycling Strategy

- 4.31 Within the proposed development a network of pedestrian and cycle routes would be provided to link to all the proposed facilities on site. These routes within the development site would be a combination of segregated facilities or shared routes which are not dominated by vehicles.
- 4.32 Cycle parking will be provided at the facilities within the development and all new homes would have cycle storage facilities.
- 4.33 The pedestrian and cycle routes will permeate out into the surrounding area with connections to the existing network of PROW and key locations such as Tong, Cosford (including the railway station), Albrighton (including the railway station), Shifnal (including the railway station) and more strategically to Telford.
- 4.34 In terms of improving pedestrian/cycling connectivity there are several options which are discussed below, are shown in **Figure 6** and include the following:
- Links to bridleway 0149/12/2; and
 - Links to NCN Route 81

- 4.35 The bridleway (0149/12/2), which connects to Stanton Road, approximately 315m from the junction with Newport Road provides an existing connection over the M54. This route could be upgraded under the development proposals to provide a good quality connection throughout the site connecting both the residential neighbourhoods and the SEA. Furthermore, it will provide a connection from the development site to the south of the M54.
- 4.36 To south of the M54 the existing bridleway connects with NCN Route 81. From here NCN Route 81 can be used to access Cosford Railway Station. Therefore, by upgrading this bridleway (0149/12/2) a cycle link between the residential neighbourhoods, the SEA and Cosford Railway Station can be achieved.
- 4.37 Connecting the NCN Route 81 would provide benefits for both the future residents of the development and the existing community. Further options for linking to NCN Route 81 in addition to the link via the bridleway (0149/12/2) off Stanton Road include:
- Upgrade the existing footway on Newport Road between the development site and Sydnal Lane to a shared footway and cycleway.
 - Make Neachley Lane and Lizard Lane a 'Quiet Lane';
 - Upgrade Stanton Road to a shared footway and cycleway. This would enable cyclists to join NCN Route 81 at the junction between Stanton Road and Neachley Lane and either continue towards Cosford or Shifnal.

Summary

- 4.38 In terms of walking and cycling, the proposed development should provide a network of green routes and active travel corridors through the development which permeate out to the surrounding network of PROW.
- 4.39 There is the potential to connect the development site to NCN Route 81 via a bridleway (0149/12/2) which provides an existing crossing point on the M54. This will allow a strategic cycle link between the residential neighbourhoods, the SEA and Cosford Railway Station to be provided. Furthermore, cyclists using this route will be able to access Shifnal, Codsall and Telford from this cycle link.

Public Transport Strategy

- 4.40 A high quality and frequent public transport service will be essential to enable future residents and employees of the proposed development to access and egress the site sustainably.

Bus Services

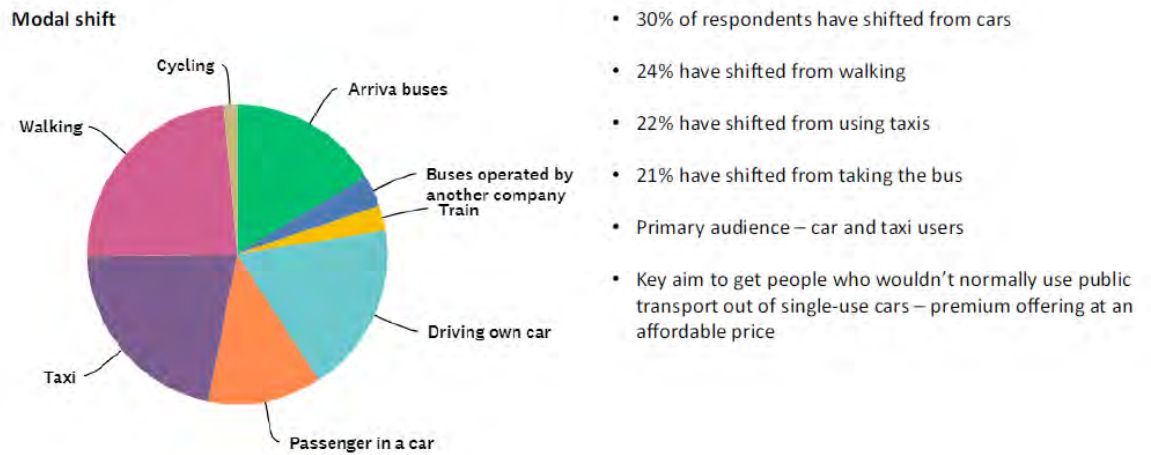
- 4.41 As described in **Section 3** there is one principal bus service (Service 891) operating in the vicinity of the development site providing connections to nearby local areas such as Albrighton, Cosford and Shifnal, and the key towns of Telford and Wolverhampton.
- 4.42 It is generally accepted that a bus service becomes viable at circa 500 residential units. Therefore, the proposed development of circa 3,000 units will be able to support a range of services. The viability will be further enhanced by the employment element which will, therefore, provide two-way flows on the buses (i.e. residential trips out in the morning peak but employment trips in). Options for improved and proposed bus services are set out below.
- 4.43 Service 891 is operated by Banga Travel. As the development comes forward, we would seek to engage with Banga Travel to understand the feasibility of extending or providing a subdivision of the 891 service which travels through the development site. There would also be the option for either the existing route or the subdivision to stop at Cosford Railway Station. As shown in **Figure 3** which shows a schematic of the route the bus service already stops in close proximity to Cosford Railway Station (approximately 665m, an 8-minute walk) and therefore a small diversion could be implemented (as shown in **Figure 6**). It should be noted as described in **Section 3**, no bus facilities are provided at Cosford Railway Station and therefore upgrades would need to be provided to allow buses to stop and passengers to be picked up and alight the service.
- 4.44 Arriva Midlands also operate throughout the surrounding area including nearby town such as Wolverhampton and Telford. As shown in **Figure 4**, Arriva Midlands Service 10 and X4 operate in close proximity to the development site and there would be the potential for these routes to be extended. With the implementation of the development Arriva Midlands can be engaged with to understand the potential of implementing a new bus route or extending the existing routes to serve the development.

- 4.45 **Figure 7**, shows an indicative bus route throughout the proposed development. The route travels directly from Cosford Railway Station throughout the SEA and the residential neighbourhoods via the internal spine road and back to Cosford Train Station along the A41. The route will travel through the key areas within the development site ensuring all residents are within 400m of the service. The indicative route will be discussed with local bus companies and is subject to change to ensure it covers all the required areas within the development site.
- 4.46 In the long term, additional express services could be provided between the development site, Telford and Wolverhampton, picking up the key employment destinations of Cosford, i54 and T54.
- 4.47 Importantly, improvements like these to local bus services will assist existing residents and not just residents of the new development, and help foster and develop sustainable travel habits in the local area.

Demand Responsive Transport

- 4.48 The rise of transport related mobile applications has led to the development of demand responsive transport where users are able to call on waiting vehicles to pick them up and drop them off at the click of a button. Public Transport Companies and other transport investors (i.e. Arriva, Uber and Google) are beginning to bring these mobile applications into the public transport sector to encourage more economical and a greater sustainable use of transport.
- 4.49 As the industry becomes more readily available the technology can be implemented within new residential and commercial developments. Of particular note is the potential for demand responsive bus services. Large bus companies such as Arriva and smaller start-ups are already investing within this technology. Arriva have carried out several trials across the UK in both rural and urban environments which have been a success.
- 4.50 ArrivaClick carried out a trial in Sittingbourne, Kent. The service launched in March 2017 and the application had approximately 9,500 downloads and 55,000 completed journeys by July 2018. In the area the average waiting time was 10 minutes for a service. Statistics on the take up of the service are shown in **Figure 4.1**. A survey of users identified that 82% of people swapped from modes of transport other than a traditional bus. Therefore, increasing the mode share for public transport. A typical ArrivaClick vehicle is shown in **Figure 4.2**

Figure 4.1: ArrivaClick Usage Statistics



Source: Arriva A DB Company

Figure 4.2: ArrivaClick Vehicle



4.51 These bus services generally encompass a wider area than a traditional bus as it is flexible and does not have a restricted route. Passengers are able to call on a service and are directed to a pick up location within walking distance where the vehicle can meet them. Users are grouped together using software that counterbalances the customer experience against aggregation of rides, ensuring rides are delivered within a reasonable time.

4.52 Demand responsive transport offers a real alternative to single occupancy vehicle movements in the private car, particularly if the area includes key locations such as town centres, railway stations and supermarkets.

Rail Services

- 4.53 To encourage the use of Cosford Railway Station improvements will be needed to the connectivity from the site to the station. There are several options to link the development site to Cosford Railway Station, these are set out in **Figure 6** and include the following:
- A link via bridleway (0149/12/2) off Stanton Road;
 - Improved facilities on Newport Road (the A41); and
 - Implementing 'Quiet Lanes' on Nechley Lane and Lizard Lane connected via Stanton Road.
- 4.54 As described previously an existing bridleway (0149/12/2) from Stanton Road, approximately 315m from the junction with Newport Road (the A41) could be upgraded to provide a walking and cycling connection between the SEA and residential neighbourhoods with the NCN Route 81 and in turn Cosford Railway Station.
- 4.55 The footway along Newport Road would need upgrading as it is currently a narrow, paved route. To encourage cycling, the improvements to Newport Road could include upgrading the footway to a shared footway / cycleway. This could then connect into the existing provision from Worcester Road to Cosford Railway Station. These improvements are demonstrated within **Figure 6**. These works would be more significant, but from an initial review appear feasible.
- 4.56 There is also scope to create 'Quiet Lanes' on Neachley Lane, which extends south from Stanton Road (NCN Route 81) to Cosford Railway Station. This route would also link directly into Lizard Lane, which will also be designated a 'Quiet Lane'.
- 4.57 Any improvements to, or creation of new bus routes, could include a connection to Cosford Railway Station. There are currently no buses serving Cosford Railway Station and bus waiting and boarding facilities would need to be created at the station forecourt or on the highway close to the station. As described previously the bus service 891 already stops in close proximity to the Cosford Railway Station, a small extension could be implemented to allow access to the railway station.
- 4.58 There is also the potential to introduce links between the development site and Cosford Railway Station via connected and automated vehicles. This is discussed in detail under Emerging Technologies and Concepts below.

Summary

4.59 A strong public transport strategy will be key to the success of a sustainable transport strategy for the proposed development. This strategy should include:

- Increased bus services and frequencies;
- The introduction of demand responsive bus services;
- Improved walking and cycling connections to Cosford Railway Station;
- Finally, connections to Cosford Railway Stations via connected and automated vehicles should be considered.

Emerging Technologies and Concepts

4.60 Given the timescale of the development, the proposed development would be able to benefit from a range of emerging technology in the transport industry. The development of Mobility as a Service (MaaS), an integrated means of providing multimodal mobility through a centralised platform, will provide the opportunity for a reduction in car ownership and allow future residents and employees of the development a more diverse range of transport options that can be flexible to meet their needs. This section of the report will consider key opportunities for the proposed development to improve its sustainability through these technologies. This section will cover:

- **Flexible working and Superfast Broadband** – using technology to work remotely or travel at different times to reduce demand during the traditional peak hours;
- **Mobility hubs/stations** – central locations within developments which provide services to meet the residents and employee needs; and
- **Connected and Automated vehicles** – providing shared mobility options for strategic links to nearby towns and key locations for the future residents and employees.

Flexible Working and Superfast Broadband

Flexible Working

4.61 Flexible working should form a key element of the development proposals for Land at J3. The inclusion of co working accommodation which will enable future residents the opportunity to live and work on the site reducing the need to travel.

- 4.62 Co working is defined as “the use of an office or other working environment by people who are self-employed or working for different employers, typically so as to share equipment ideas and knowledge”. Originally, favoured by tech start up and entrepreneurs as a flexible and collaborative working solution, but with more than one million businesses being registered each year co working spaces are witnessing unprecedented demand.
- 4.63 The advances in computer power, the internet and mobile technologies, has driven the increase in the “working from home” culture yet, companies and their employees are increasingly seeing the value of being part of a collaborative environment and are realising the benefits of face to face interaction, something which is at the core of co working.
- 4.64 Co-working space within the residential element of the will enable a proportion of future residents who are employed offsite to routinely work within the site, reducing the need to travel, particularly during peak periods.

Superfast Broadband

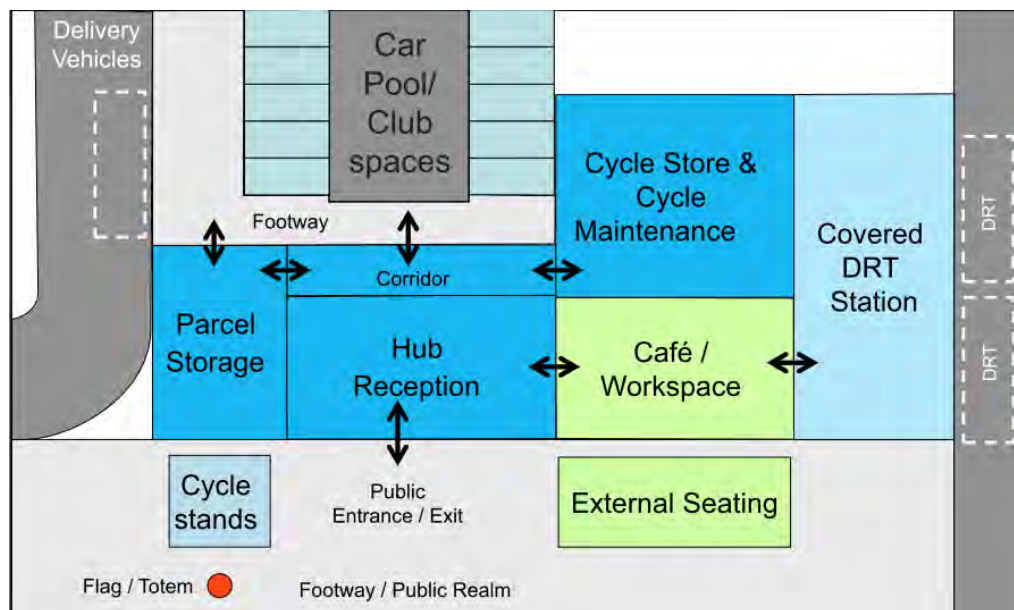
- 4.65 Superfast Broadband internet access reduces the need to travel by facilitating the ability to work from home encourage co-working and providing access to travel planning websites. In order to facilitate this in the future occupiers of the development will be encouraged to subscribe to broadband internet service provision.
- 4.66 Central government and local councils are aiming to stimulate growth through making gigabit full fibre broadband more commercially viable and to meet the increasing demand for connectivity. Therefore, several local councils and central government have introduced a scheme to help get residents and business owners connected. Within Shropshire this is coined “Connecting Shropshire”. The aim of the programme is to bring faster broadband to the parts of the county of Shropshire where it is not economically viable for commercial companies to provide it.

Mobility Hubs/Stations

- 4.67 As described above (Section 4 Paragraphs 4.18 to 4.19) within the masterplanning process and throughout the continued management of the site Travel Plan there is the potential to implement a Mobility Hub with smaller transportation hubs at key locations throughout the site and surrounding areas.

4.68 Mobility hubs have formed a key part of development proposals in recent years. Their aim is to help support the Travel Plan and create a behaviour change leading to a shift in travel patterns away from single occupancy vehicle movements and towards sustainable means. A Mobility Hub will provide a focal point for the administration of the Travel Plan and the shared transport offering including Car Clubs, cycle and electric cycle hire, community concierge, micro-consolidation of deliveries and public transport interchanges. The typical layout of a mobility hub is shown in **Figure 4.3**.

Figure 4.3: Typical layout of a Mobility Hub



4.69 Smaller transportation hubs will be located at neighbourhood centres, railway stations, bus interchanges and town centres. The hubs would provide areas to interchange between mobility modes ideally providing a sustainable method of travel to make last mile journeys.

4.70 In particular for the proposed development a central Mobility hub could be located at the centre of both the residential and employment land uses. This would offer as describe above the core services of the Mobility hub i.e. demand responsive transport pick up location, cycle hire/repair, community concierge and micro-consolidation of deliveries. These should be provided in prominent shop front locations to increase residents and employee's awareness of the Mobility hub.

4.71 Additional transportation hubs located at key locations and interchanges to allow residents and employees to interchange modes of travel. For example, within Shifnal where residents

and employees would be able to drop or pick up hired cycles or connected and automated vehicles to make the last mile journey from these locations to the proposed development.

Connected and Automated Vehicles

- 4.72 There is also the opportunity given the timescales for the development for funding to assist with the implementation of the next generation autonomous driverless shuttle or electric pods capable of using active travel corridors to make last mile journeys, deliver food and goods or provide sustainable links to the surrounding areas. Several initiatives have been developed in recent year which could be implemented at the site which are described below.

ESPRIT

- 4.73 An example of a driverless pod and/or shuttle includes the ‘Easily Distributed Personal Rapid Transport’ (ESPRIT). ESPRIT is a purpose built, light weight electric vehicle that can be stacked together, similar to trollies. People are able to pick up ESPRIT vehicles and drop them off at designated parking places across specific areas, towns and cities. Their lightweight nature allows them to be easily distributed around development site to enable residents and employees to access them for several locations. A typical ESPRIT vehicle is shown in **Figure 4.4**.

Figure 4.4: ESPRIT Vehicle



- 4.74 Within the development proposals at the Land at Junction 3 ESPRIT pods could be used to link the SEA and the residential element of the development via the green routes and active travel corridors to reduce the use of vehicles inside the development.

- 4.75 Furthermore, they could be used to link the SEA and the residential development to Cosford Railway Station. ESPRIT vehicles are able to travel on active travel corridors, therefore if improvements to Newport Road are carried out to make the footway a shared footway/cycleway the ESPRIT vehicles could also travel along this route.

Collective Transport

- 4.76 Within Milton Park Business Park, Oxford, a business park with a similar set of commercial land uses as proposed for the SEA, driverless shuttles trials have been implemented this year. The Collective Transport Shuttle offer first and last mile solutions connecting Didcot Parkway with the Business Park. A similar solution could be achieved, as described above between Cosford Railway Station to the SEA and the residential development.
- 4.77 At Milton Park, the Collective Transport shuttle has been tested public roads, therefore they would not be confined to active travel corridors like ESPRIT pods. This would offer the opportunity to link to nearby towns such Shifnal, RAF Cosford, Codsall and Albrighton using public roads. Smaller transportation hubs would be required in these locations for residents/employees to drop off/ or pick up their shuttles.

Figure 4.5: Collective Transport Vehicle



Starship Bot

- 4.78 With the implementation of a Mobility Hub which will provide a micro-consolidation centre for parcel deliveries new innovative ways for the distribution of parcels within the confined

of the development can be investigated. This will reduce residents need to travel and remove larger goods/delivery vehicles from the development residential roads.

- 4.79 Within Milton Keynes and other locations including London, Berlin, Washington and San Francisco automatous robots deliver parcels or food from central depots or restaurants to the home. These are called Starship Bots and are shown in **Figure 4.6**.

Figure 4.6: Starship Bots



- 4.80 Starship Bots are cheaper than delivery vans and have zero emissions providing a real alternative to delivery vehicle movements throughout the proposed development. Cameras, sensors and other technology help navigate their way through the streets, avoid obstacles and cross roads safely. The bots are monitored by human operators who are able to intervene if required.
- 4.81 Within the proposed development Starship Bots could be used to deliver parcels to both the residential dwellings and the commercial land uses within the SEA.

Summary

- 4.82 The development should include a range of emerging technologies to maximise the developments sustainability and reduce the need for single occupancy vehicle movements. For the proposed development the emerging technologies that should be considered are as follows:

- Electric pod/automated shuttles between the SEA, residential development, Cosford Railway Station and the surrounding towns;

- The implementation of mobility hubs and transportation hub in the centre of both the residential element and the SEA as well as at key locations surrounding the development;
- The micro-consolidation of deliveries which are redistributed to the workplace or residential dwellings via automatous bots; and
- Implementation of superfast broadband and flexible working practices to reduce demand on the transport network during peak hours.

5 SUMMARY AND CONCLUSIONS

5.1 This Transport Strategy has been prepared by Vectos on behalf of Bradford Rural Estates Ltd. The document sets out a strategy to support a proposed mixed-use development comprising circa 50 hectares of strategic employment land and approximately 3,000 residential dwellings.

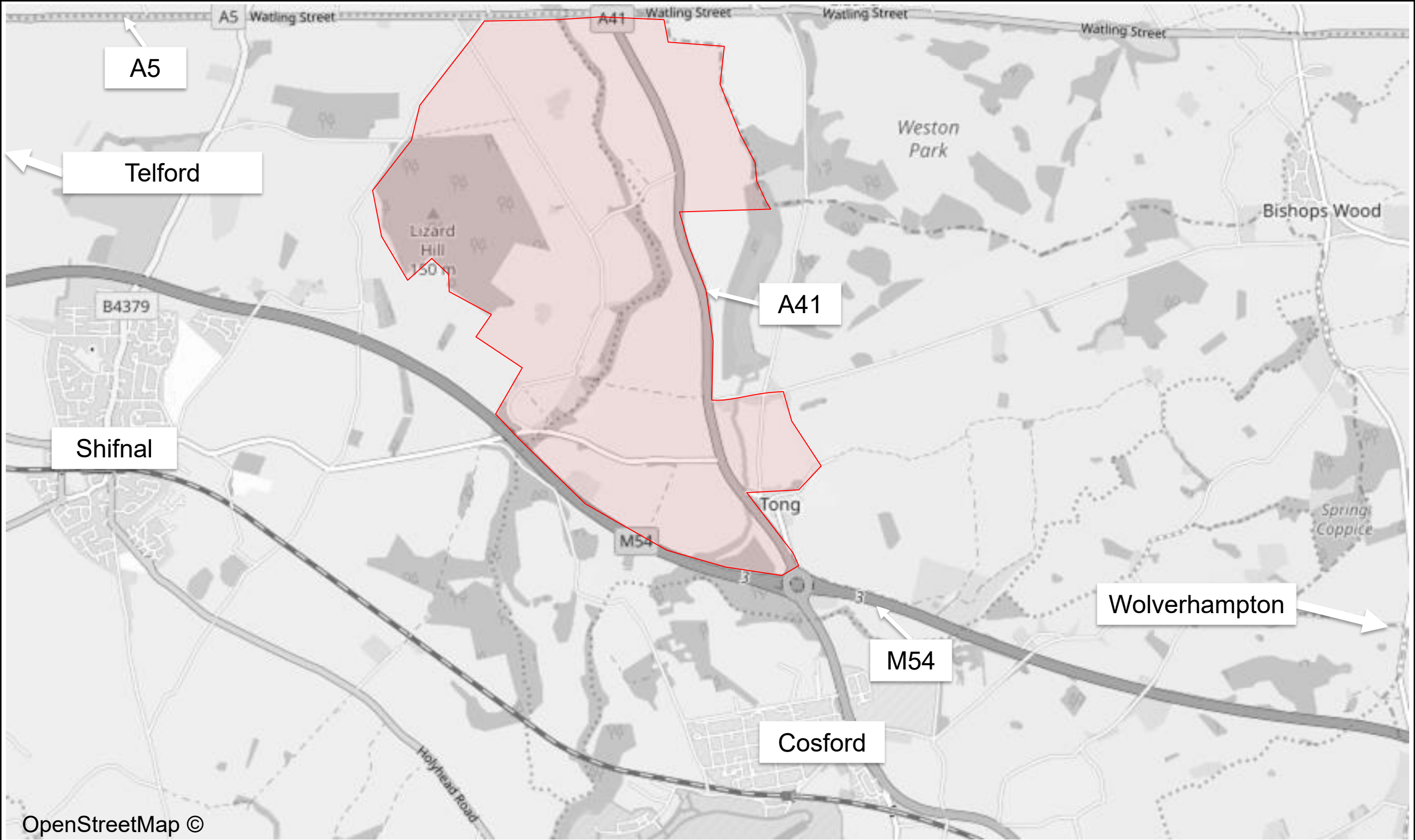
5.2 The report has provided the current multimodal accessibility to the site before detailing the proposed mobility strategy which includes the following elements:

- A new roundabout on Newport Road providing access to the SEA and the residential neighbourhoods;
- A new Link Road will be provided from the new roundabout on Newport Road (A41) providing access to the SEA and residential neighbourhoods;
- A series of junction improvements across Offoxey Road, Stanton Road and Lizard Lane;
- The provision of a network of green routes which permeate out to the wider PROW network. These will include connections via the existing bridleway off of Stanton Road; the upgrade of Newport Road and potential 'Quiet Lanes' on Nechley Lane and Lizard Lane;
- The potential for the provision of new/diverted bus routes which will provide connections to Shifnal (including the railway station), Cosford (including the railway station) and Albrighton (including the railway station);
- The potential inclusion, given the timescales of the development, of emerging transport technologies including; mobility hubs, demand responsive transport, connected and automated vehicles, micro-consolidation and the introduction of flexible working practices; and
- The provision of a comprehensive Travel Plan which supports multimodal accessibility to the site.

5.3 This Transport Strategy, including the proposed infrastructure improvements and master planning principles are considered to be sufficient to accommodate the transport demands arising from the development site and would deliver a number of transport related improvements compared to existing circumstances.

- 5.4 The facilities within this mixed-use development will bring benefit to the wider area of Tong and Tong Norton, Shifnal Cosford and Albrighton, providing greater choice and better social inclusion for the wider community.
- 5.5 A review has been undertaken of the relevant local and national policy, it is considered the transport strategy set out above complies with both the national and local policy and guidance on transport planning, particularly when compared to the transport tests set in the NPPF; i.e.
- The opportunities for sustainable transport modes have been taken up;
 - Safe and suitable access can be achieved for all people; and
 - As a result, the proposed development is considered to comply with local and national policy objectives.

FIGURES



Key:



Approximate Site Location

Land at Junction 3

Bradford Rural Estates Ltd

Site Location (Local)



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CHECKED:

AW

DATE:

07/08/2019



SCALES:

NTS


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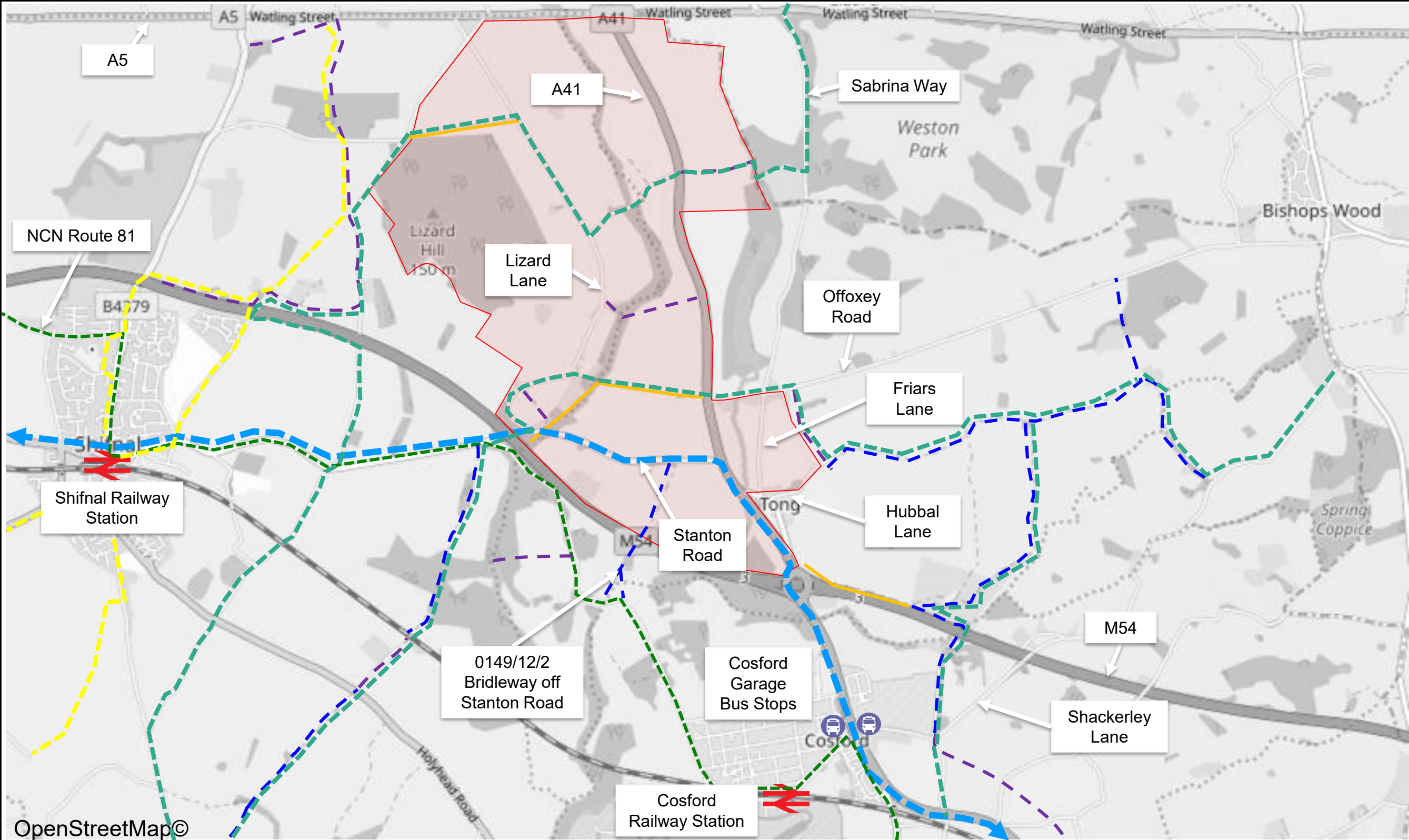
Figure 1



Key:	
	Approximate Site Location
	Nearby Railway Stations

Land at Junction 3	
Site Location (Strategic)	
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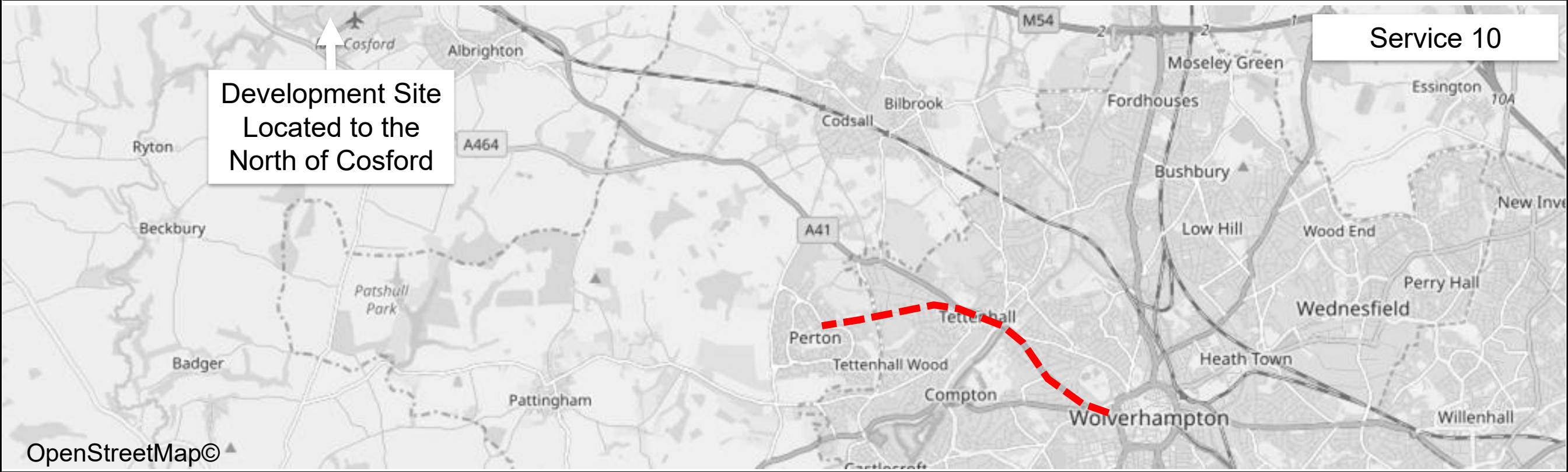
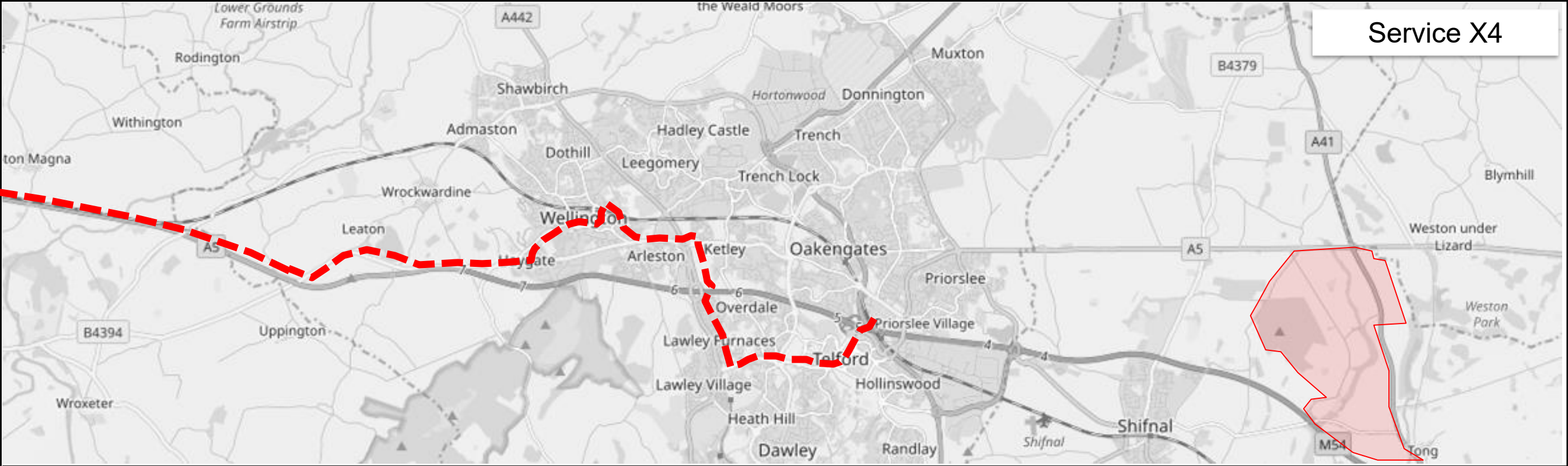
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DRAWING REFERENCE: Figure 2




Key:	
	Approximate Site Location
	Nearby Railway Stations
	Nearby Bus Stops
	NCN Route 81
	Footpath
	Bridleway
	Restricted Byways
	Promoted Routes
	Circular Routes
	Schematic of Service 891 Bus Route


Land at Junction 3			
Existing Transport Connections			
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DRAWING REFERENCE: Figure 3



Key:

 Approximate Site Location

 Schematics of Arriva Midlands Bus Routes

Land at Junction 3

Arriva Midlands Bus Routes

Bradford Rural Estates Ltd

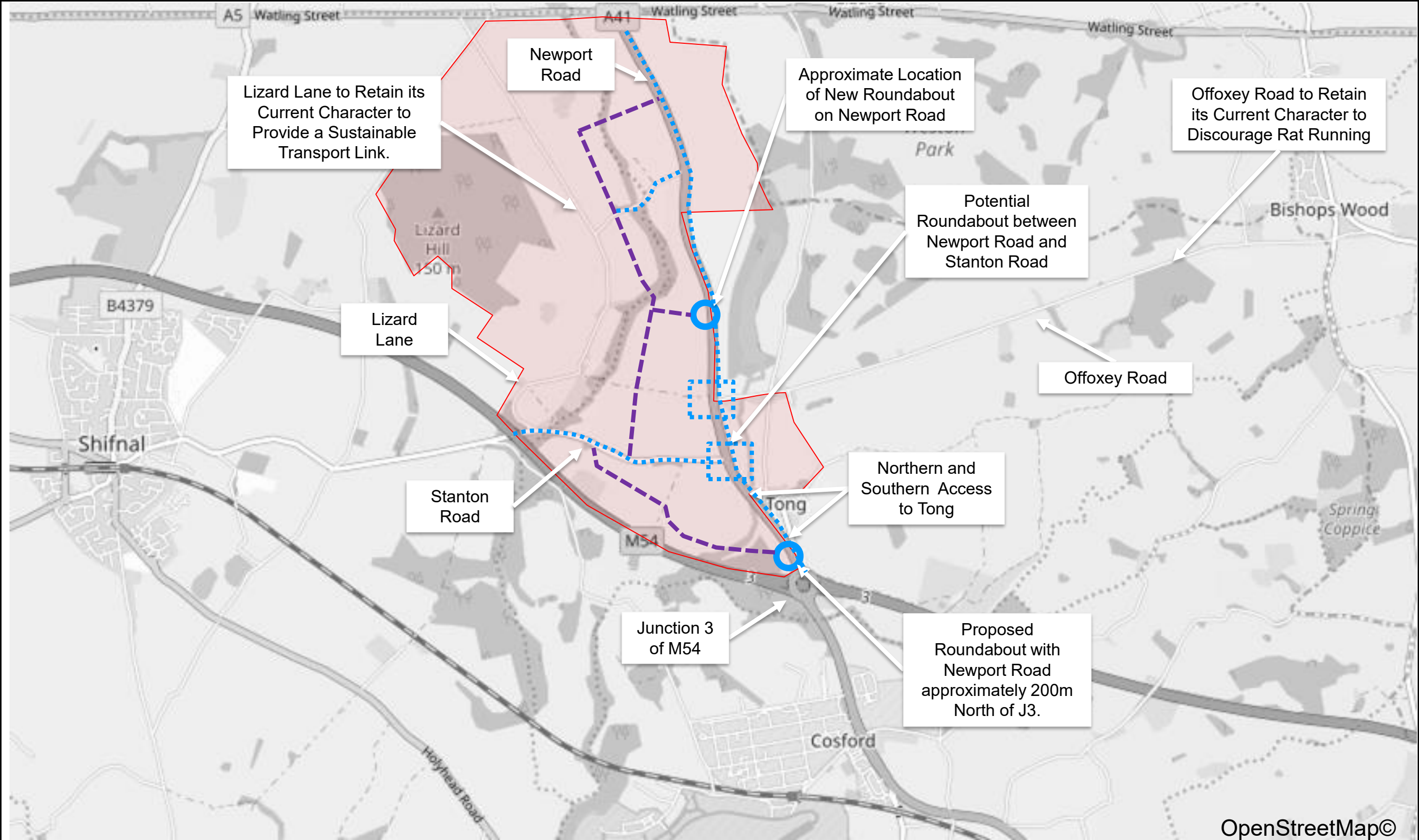


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Please Note: Route 10 is indicative due to the route map being unavailable.

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DRAWING REFERENCE: **Figure 4**



OpenStreetMap©

Key:	
	Approximate Site Location
	Indicative Internal Spine Road and its Connections to the Existing Network
	Potential Junction Improvements
	Potential Existing Corridor Improvements including Minor Junction Improvements
	Proposed Roundabout

Land at Junction 3

Proposed Highways Strategy

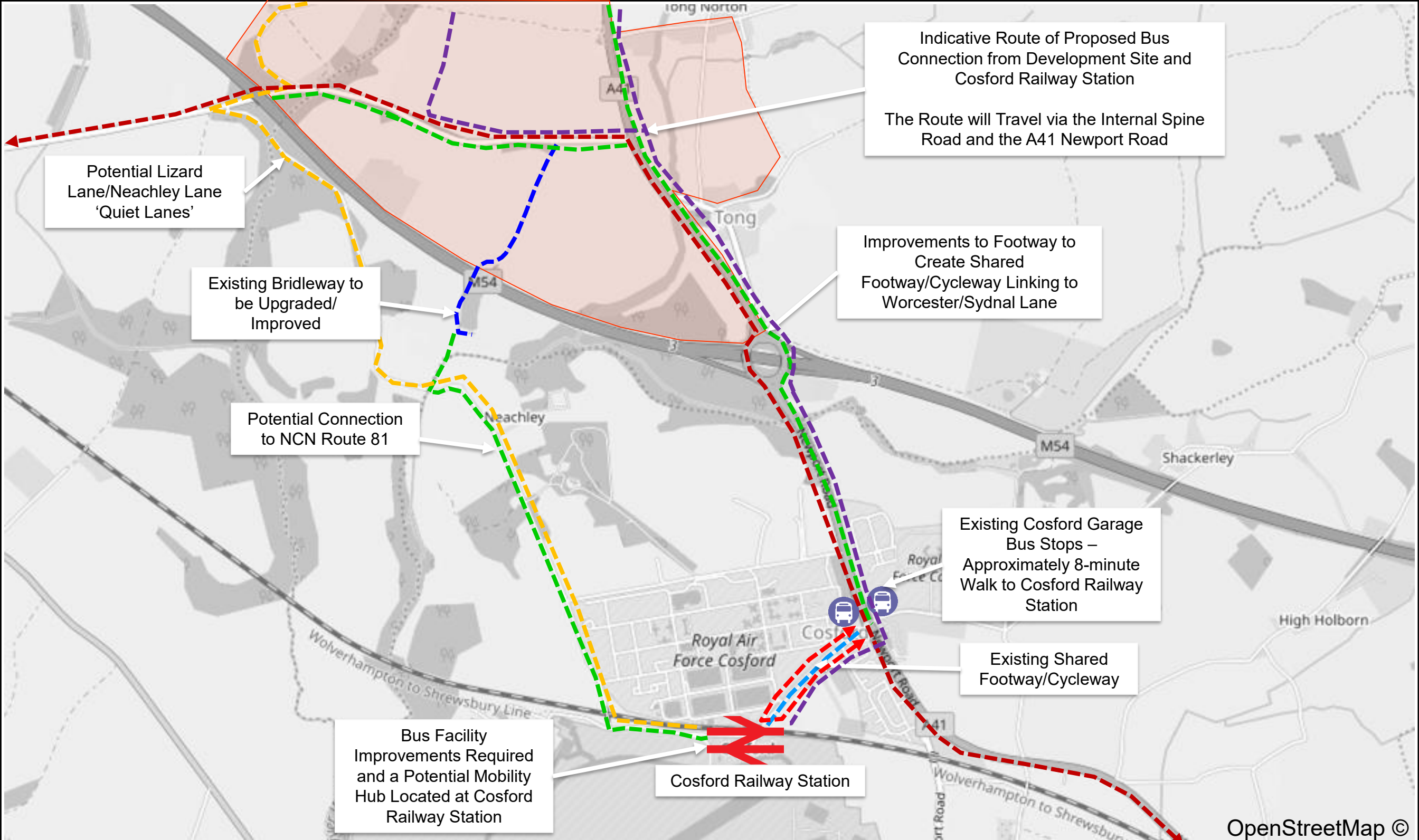
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DRAWING REFERENCE: **Figure 5**



Key:	
	Potential Quiet Lanes
	Existing Bridleway
	Potential Pedestrian/Cyclist Corridor Improvement
	Schematic of Service 891
	Potential Additional Station Loop of Service 891
	Indicative Proposed Bus Routes
	Existing Shared Footway/Cycleway
	Approximate Site Location

Land at Junction 3

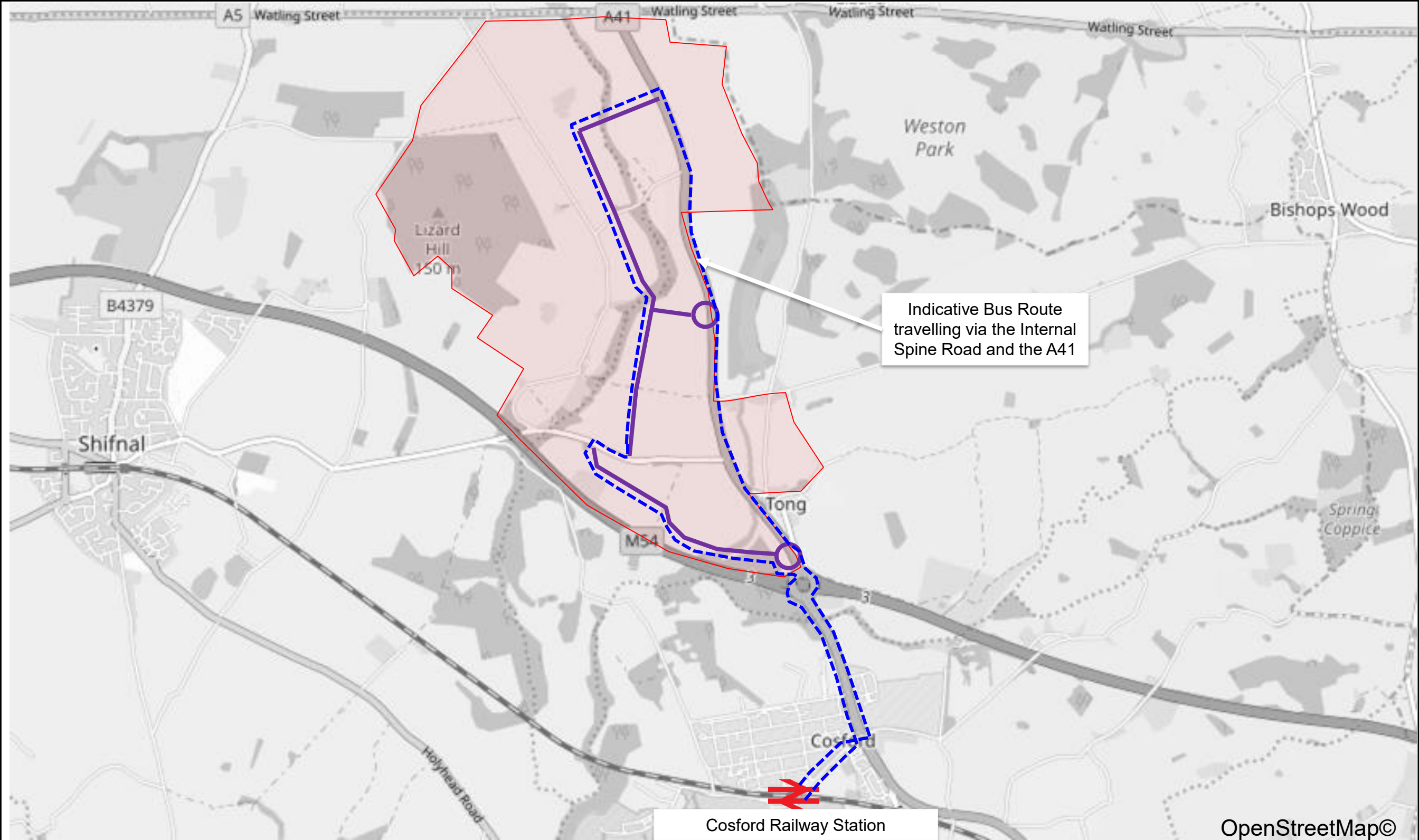
Proposed Sustainable Transport Improvements/Connections

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Figure 6






Indicative Bus Route travelling via the Internal Spine Road and the A41

Cosford Railway Station

OpenStreetMap©

Key:

-  Approximate Site Location
-  Indicative Highways Improvements
-  Indicative Bus Route via the Development Site

Land at Junction 3

Bradford Rural Estates Ltd

Indicative Bus Route via the Development Site

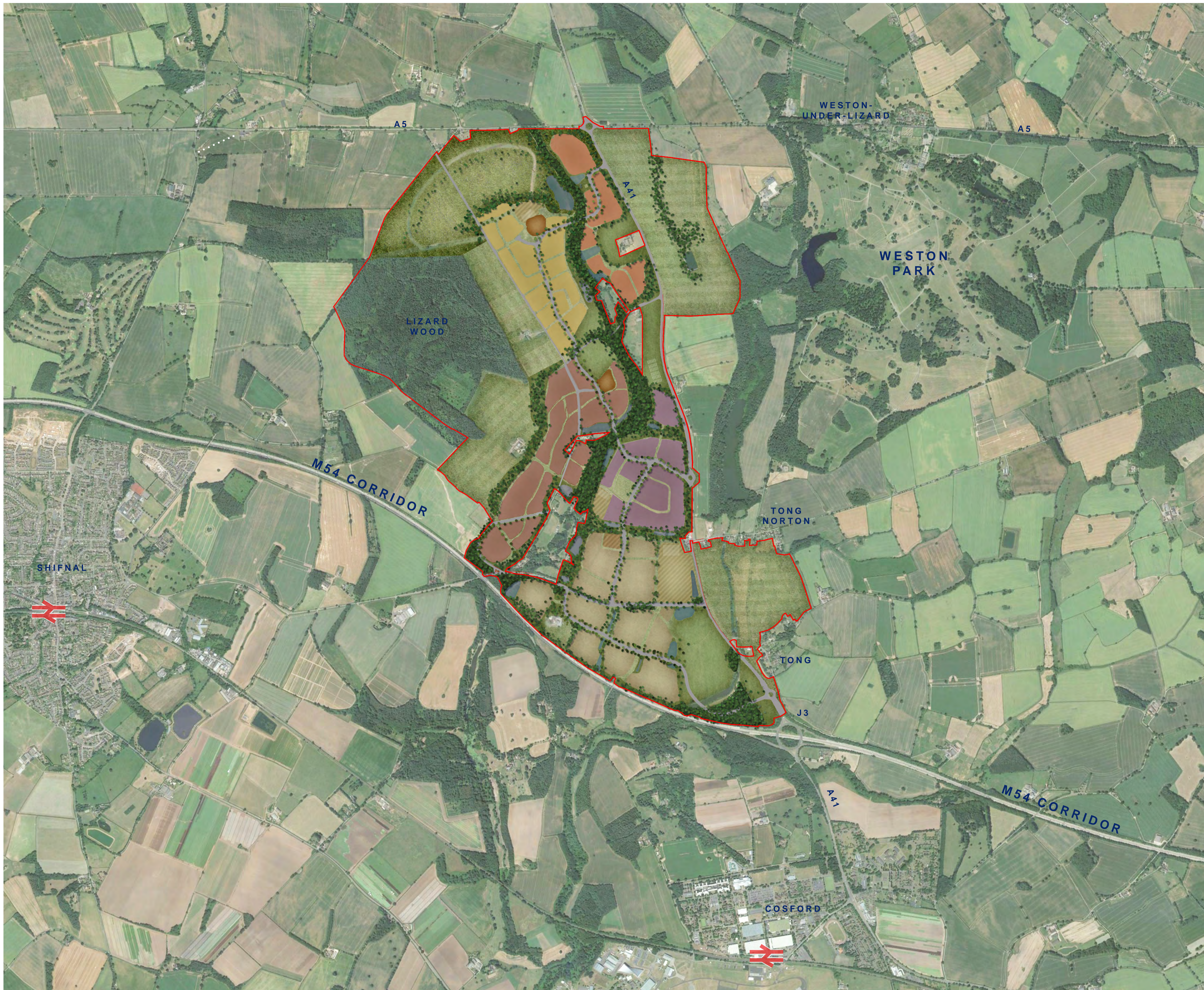


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DRAWING REFERENCE: Figure 7

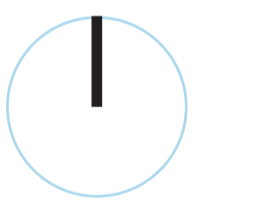
APPENDIX A



- KEY**
-  Site Boundary
 -  Retained Agricultural Land Use
 -  Proposed Country Park
 -  Proposed / Reinforced Woodland Belt
 -  Proposed Public Park
 -  Existing + Proposed Water Bodies
 -  Proposed Tree-lined Main Roads
 -  Strategic Employment Area
 -  Neighbourhood 1
 -  Neighbourhood 2
 -  Neighbourhood 3
 -  Neighbourhood 4
 -  Supermarket
 -  School
 -  Local Centre
 -  Cosford Railway Station

C	22.08.2019	Employment Area Changes
Rev.	Date.	Details.

GENERAL
 Do not scale from this drawing.
 All dimensions to be checked on site.
 This plan is to be read with all
 accompanying documentation.
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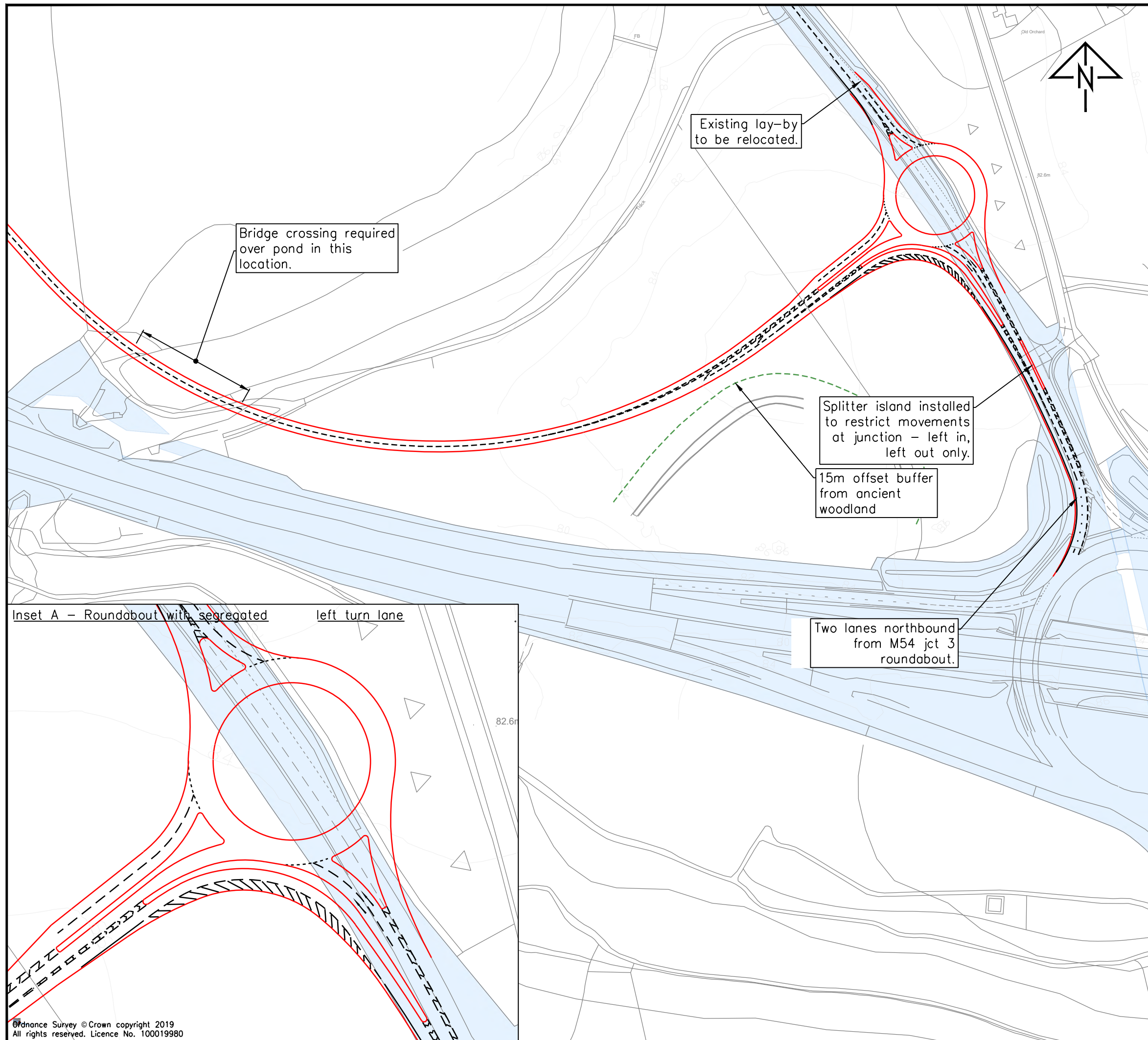


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JUNCTION 3: M54
ILLUSTRATIVE MASTER PLAN

Job Code: 44025 OS License Number: 100017734
 Drawing Scale: NTS Date: 02.08.2019 Drawn By: JG Checked By: DP
 Drawing Number: UDS44025-A1-0201 Revision Number: C

APPENDIX B



Notes:
 1. This is not a construction drawing and is intended for illustrative purposes only.
 2. White lining is indicative only.

Key:
 Highways England Registered Land

DRAFT

FOR INFORMATION ONLY

REV.	DETAILS	DRAWN	CHECKED	DATE
B	Client details updated.	JM	HA	09.09.2019
A	Project and client details updated.	TF	AW	04.09.2019

CLIENT:
Bradford Rural Estates Ltd

PROJECT:
Land at Junction 3

DRAWING TITLE:
Southern Access Layout

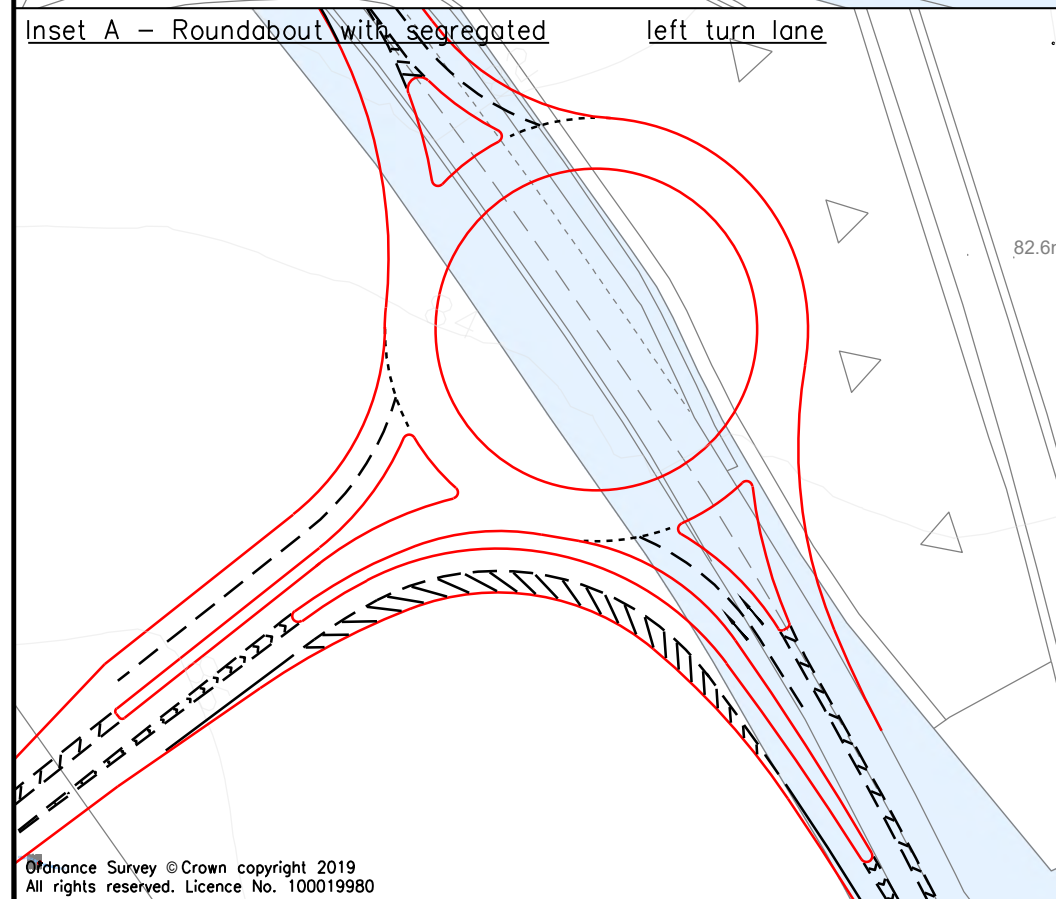
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