



Vesey House  
5 – 7 High Street  
Sutton Coldfield, B72 1XH  
office@cerda-planning.co.uk  
0121 748 1620

---

By email [localplans@sstaffs.gov.uk](mailto:localplans@sstaffs.gov.uk)  
Local Plans Section  
Planning Department  
South Staffordshire Council  
Council Offices  
Wolverhampton Road  
Codsall  
Staffordshire  
WV8 1PX

GP-PH/21.399/cg  
13 December 2021

Dear Sir/Madam

**South Staffordshire Local Plan Review (2018 – 2038): Preferred Options Consultation (November 2021)  
Land off Offoxey Road, Bishops Wood on behalf of Offoxey Road Limited**

**Introduction**

Cerda Planning Ltd. has been instructed by Offoxey Road Limited (hereafter Offoxey) to prepare these representations to the South Staffordshire Local Plan Review Preferred Options Consultation (Regulation 18). Offoxey has an interest in land off Offoxey Road, Bishops Wood, hereafter the Offoxey site (SHELAA 2021 Ref. 096), a site immediately adjacent to the south-western corner of the settlement boundary.

Whilst we acknowledge that the plan is at Regulation 18 stage, these representations are made in the context of the requirement for Local Plans to be legally compliant and sound. The tests of soundness are set out at paragraph 35 of the Framework. In brief, a plan will be sound if it is:

- positively prepared;
- justified;
- effective; and
- consistent with national policy

These representations raise concerns with the emerging plan's soundness. More specifically with the plan's strategy, both in terms of overall levels of housing growth proposed without an agreed strategy for meeting the wider HMA shortfall and the distribution of homes within the plan area. Concerns are also raised with the Council's evidence base prepared to date, specifically in the robustness and fairness of the site assessment work which has informed the decisions made on the draft allocations.

In raising these concerns, we submit that the Offoxey site represents a sustainable option to help address the identified deficiencies in the soundness of the plan through the delivery of around 80 new homes (including up to 30% affordable), plus other key benefits for the wider village in a highly sustainable location that both aligns strongly with the Council's aims of delivering sustainable housing growth and boosts the supply of housing that is deliverable within the early part of the plan.

To this end, these representations seek to propose a revision to the Bishops Wood settlement boundary as defined in the Preferred Options document to include all, or a proportion of, the site in question so as to allow its removal from the Green Belt and its development for residential purposes.

In terms of the format of these representations, these are split into various sections which consider the following main issues:

- Site location and context
- The overall housing need within the Black Country;
- Delivery from the proposed allocations;
- Wider spatial planning for the Greater Birmingham and Black Country Housing Market Area;
- The Site Assessments;
- Conclusion and case for allocation of the Offoxey site.

In addition, the following documents are attached as appendices to this representation:

- Transport Appraisal
- Ecological Assessment (Phase 1)
- Flood Risk and Drainage Strategy
- Concept Plans
- Utilities Statement

---

## **Executive Summary**

The significant issue of unmet need within the GBBCHMA, first formalised in 2017 through the adoption of the Birmingham City Plan, further compounded by the evidence coming out of the Black Country Plan review process and likely to be compounded further given the additional needs that will arise in Birmingham as an impending

consequence of the 35% uplift soon to be in force, poses a significant challenge for the HMA authorities. Only limited progress towards solving the issue has been made to date. Whilst the South Staffordshire Plan proposes a contribution based on a level of unmet need identified in 2018, we assert that this level no longer represents an appropriate one on which to base a contribution.

Rather, we contend that unmet over this plan period will be greater. The consequence of this is that South Staffordshire's contribution needs to grow proportionately at the very least.

There is, accordingly, a need for this plan to play its part in addressing this growing unmet need through the allocation of more homes, which for this predominately Green Belt authority, will mean the release of additional Green Belt sites to provide the certainty of delivery that is required.

The spatial strategy as presented acknowledges the suitability of Tier 4 settlements to accommodate housing growth but does not propose any allocations.

We assert that the Offoxey site, to the south of Bishops wood, which by the council's own evidence is the most suitable site within this settlement to deliver growth, can assist the council in proving a greater number of homes within the District through a proportionate extension on the southern edge of the village in a low performing Green Belt location. Beyond the new homes including those which are affordable, it can also deliver key benefits to the wider village, not least the infrastructure to make significant improvements to resolving existing surface water flooding issues to the north of the site and a new convenience store to improve the settlement's ability to sustain itself.

---

### **Site Location and Context**

As set out above, the Offoxey site lies immediately adjacent to the south-west edge of the defined settlement boundary of Bishops Wood. More specifically, it lies to the north-west of the junction of Offoxey Road and Ivetsy Bank Road, with the rear gardens of existing houses adjoining the northern and eastern boundaries of the site. In addition, St. John's C of E First school, with access from Whiteoaks Drive, adjoins the north-western corner of the site. A private dwellinghouse, adjoins the southern boundary of the site. The site area extends to approximately 4.14 hectares (10.23 acres) and can be seen on the attached plan at the rear of these representations.

The site comprises the eastern part of a large field which is currently in use for arable cultivation and is contained in the main by low hedgerows along the highway boundaries and to the rear of the domestic curtilages and to the primary school. The boundaries along those edges of the site are in the main, as a consequence, robust and defensible.

In addition, the Council will also be aware that part of the Offoxey site has already received a resolution to grant for 8no. affordable homes under 19/00952/FUL. It is by consequence a site which the Council finds entirely suitable for residential development.

---

## **Housing Needs**

Applying the standard method, South Staffordshire's housing need for the 2021-2038 period is set at 4,131 dwellings. Completions in the district since the start of the plan period (2018-2021) total 750 dwellings. In addition, a contribution of 4,000 dwellings is planned towards the unmet needs of the Greater Birmingham and Black Country Housing Market Area (GBBCHMA) within which South Staffordshire is located. The total number of dwellings proposed is therefore 8,881 over the plan period.

Inherent to the draft plan is an acknowledgement that one of its key roles is to assist in meeting the significant unmet needs of the GBBCHMA area (*our emphasis*). Principally, the unmet needs arise from Birmingham City and the combined Black Country Authorities.

The issue of unmet need in this HMA was crystallised through the examination and adoption of the Birmingham City Development Plan (BDP). Upon adoption in 2017, the BDP acknowledged that it would fall short of meeting its identified need by 37,900 homes (to 2031). Subsequent to BDP plan adoption, the various HMA authorities have produced collective 'position statements' to demonstrate how they have been working to address this unmet need. As part of this process, it has also become apparent that a significant unmet need is also arising in the Black Country authorities which, based on its recently published Regulation 18 plan, stands at 28,239 homes (to 2039).

In the meantime, based on the contributions set out in plans within the HMA which have either been submitted for examination, examined or adopted, the total contribution to unmet need arising from Birmingham to 2031 amounts to just some 8,600 dwellings (North Warwickshire – 3,790, Solihull - 2,105 and Stratford – 2,720). Evidently, almost 5 years on from the adoption of the BDP, less than a quarter of the total unmet need arising from Birmingham is 'locked into' a plan.

Combined with the unmet need (currently 28,239 homes) coming out of the Black Country, it is clear that the scale of the problem is significant.

Whilst we acknowledge that the most recent and third position statement (3PS) published in September 2020 on the matter of unmet need by the authorities that comprise the GBBCHMA asserts that the Birmingham shortfall has reduced significantly, chiefly through a large increase to Birmingham's supply, we assert that as an untested position, it cannot be relied upon for planning making purposes.

Accordingly, the scale of unmet need to 2031 and beyond remains in our view, substantial. Of greater significance is the fact that the scale of the problem is increasing, particularly as there is likely to be further unmet need arising out of Birmingham City when the cap on the application of the standard method is lifted from January 2022. It is of significance that Birmingham is subject to the 35% uplift as one of the largest 20 cities in England. Indeed, Birmingham City Council has announced that review of the plan will be undertaken.

Despite the unmet need growing across the GBBCHMA, we note that South Staffordshire's contribution has remained a constant since it was first identified in 2018. Accordingly, we assert that if the GBBCHMA authorities are to actually deal satisfactorily with the issue of unmet need to 2031 and beyond, then contributions need to increase across the board. South Staffordshire being no exception.

A 4,000 home contribution represents some 6.6% of the overall minimum unmet need of 60,855 dwellings to 2036 across the HMA as identified in the GL Hearn Strategic Growth Study, February 2018. We assert that by 2038 (which is when this plan period extends to) for the reasons given, unmet need in the HMA is likely to be in the region of 70,000 homes.

Accordingly, if South Staffordshire is to maintain the same proportion of contribution (6.6%), then an additional 620 homes needs to be planned for. That said, given the strong spatial connection that South Staffs has with the Black Country, we submit that a higher percentage contribution would be appropriate. 8% for example would result in an overall contribution of 5,600 homes towards meeting the HMA's unmet needs, 1,600 more than are currently planned for.

We submit therefore that for this plan to be justified and effective, there needs to be a greater contribution towards meeting the unmet needs arising within the GBBCHMA. Owing to the way in which existing settlements within South Staffordshire are constrained by the Green Belt, it follows that additional Green Belt land on the edge of settlements will need to be found to accommodate this additional and much needed housing growth.

---

## **Spatial Strategy**

Paras.4.14 to 4.20 inclusive refer to the Spatial Strategy for Housing and how the required levels of housing are to be accommodated within the district. Para.4.14 advises that the current strategy is based upon work carried out in the Spatial Housing Strategy and Infrastructure Delivery (SHSID) report, consultation upon which was undertaken in October 2019. The SHSID sought to look at how the proposed housing target could be distributed. It concluded that the preferred approach to the strategy for the delivery of homes in the Local Plan Review would be Housing 'Option G'.

Option G was one of seven options under consideration and would, in general terms, provide for the following: infrastructure-led development with a garden village area of search (along the A449 corridor) beyond the plan period. In addition, new housing delivered during the plan period would be focused in Tier 1 to 4 villages (60%) and urban extensions (to the north of the Black Country conurbation) and rural villages (40%).

The details of Option G in the report state that the option would meet the preferred housing target of 8,845 dwellings in the period 2018-2037 and which is now stated as a slightly higher figure of 8,881 dwellings in the published PO document (Table 7 on p.30). However, as has been indicated previously in these representations, due to an increase in the level of unmet need arising from the GBBCHMA, this figure will need to be reviewed which, of course, has implications for the overall spatial strategy in the Local Plan Review.

As is stated in the SHSID report, Option G proposed growth in the villages dispersed across the first four village tiers, with a larger proportion of housing growth being focused on the Tier 1 and 2 villages where more obvious opportunities to achieve infrastructure improvements through new development exist, having regard to other environmental constraints. It should also be noted that the diagram on p.43 of the SHSID report in relation to Option G clearly shows that, at that stage, there was the '*potential for limited growth*' in Bishops Wood within the emerging housing strategy for the Local Plan Review.

Growth would be attributed to the settlements in accordance with their level within the hierarchy, with larger levels of growth being attributed to the settlements which sit higher in the hierarchy and, conversely, lower levels of growth to those which sit lower. The settlement hierarchy within the District was originally determined in the Rural Services and Facilities Audit in 2019, which has been updated as part of the Local Plan Review in 2021. This establishes that there are five Tiers within the hierarchy and is based upon the settlement's access to a range of services and facilities relative to other settlements within the district.

Bishops Wood sits within Tier 4, along with six other villages, and villages within the tier are identified as being those with less facilities, typically with a small store or public house, access to public transport and sometimes with educational facilities (e.g. a primary school). The 2021 survey indicates that the accessibility to the various services and facilities across the seven villages within Tier 4 is broadly similar, with Bishops Wood having a pub; village hall; church and a first school. In addition, it has a 30 minute public transport service to a supermarket on weekdays, and a 40 minute service to a supermarket at weekends.

In September 2021, as part of the Local Plan Review, the Council published a Housing Site Selection Topic Paper which summarises the selected housing sites and the wider housing strategy and builds on the previous consultation undertaken in 2019. At para.1.5, it notes that a number of amendments to the site selection process have been made since the previous consultation and includes, amongst others, ensuring that sites in Tier 1-4 villages or urban edge locations which do not strictly conform to the preferred Spatial Option G of the 2019 consultation are not excluded from assessment.

Chapter 2 of the Topic Paper has regard to identifying and narrowing down sites for consideration as potential housing sites and refers to the various ‘call for sites’ consultations over the years and acknowledges that the Council’s Strategic Housing & Economic Land Availability Assessment (SHELAA) is used to identify a shortlist of sites. In order to do so, the SHELAA uses a series of classifications to categorise sites which are provided in a table in para.2.2 as follows:

<b>S1</b>	Sites currently suitable for housing and deliverable within 5 years
<b>S2</b>	Sites currently suitable for housing and developable between 5 and 10 years
<b>S3</b>	Sites currently suitable for housing and developable 10+ years
<b>NCD1</b>	Sites potentially suitable for housing but not currently developable because of a policy designation (eg Green Belt/Open Countryside/Employment Land/outside current Spatial Strategy/Safeguarded Land Policy)
<b>NCD2</b>	Sites potentially suitable for housing but not currently developable because of other constraints
<b>NS</b>	Sites which are unsuitable because of constraints which cannot be overcome.

The Offoxey site had previously been proposed as a housing site in an earlier ‘call for sites’ exercise and the SHELAA 2021 identifies the land as being within Locality 2, along with settlements such as Brewood, Coven and Wheaton Aston, along with other more isolated sites and sites adjacent to other settlements.

The site itself is designated as ‘*Site 096, Land off Offoxey Road and Ivetsey Bank Road*’, with a net site area for SHELAA assumptions of 2.48 hectares and a potential capacity using SHELAA assumptions of 79 units. The site is stated as being within the Green Belt and is not brownfield land. The land is shown as not being deliverable 2018-2023, nor developable 2023-2033. Nevertheless, the site is not shown to have any key constraints to development and it would appear that the Council has arrived at its conclusions on deliverability based solely on the site’s location within the Green Belt - ‘*potentially suitable but subject to policy constraints – Green Belt and Core Policy 1*’. This is also the same for the other two sites in the SHELAA assessment which adjoin Bishops Wood, sites 097 and 099.

However, what is interesting to note is the difference in the relevant SHELAA category that the Council has assessed each of the three sites in Bishops Wood by. Both sites 097 and 099 have been given the ‘NS’ rating which, referring to the table above, indicates that they are ‘*sites which are unsuitable because of constraints which cannot be overcome*’.

Site 096 however, has been given the rating of ‘NCD2’ being a ‘*site potentially suitable for housing but not currently available because of other constraints*’. In this instance, it has been assumed that these ‘other constraints’ relates to the current designation of site 096 within the Green Belt which, as will be acknowledged from the exercise undertaken previously in these representations, it is considered that its potential to create harm to the Green Belt is lower than initially reviewed. We submit therefore, that if the only constraint to the potential allocation of the site is its Green Belt location, the site should logically be moved into the *NCD1* category given that the *only* apparent imposition upon it being allocated is that land designation. Additional information provided in support of these

representations confirms that there are no other constraints that would prevent the allocation and subsequent development of the Offoxey site.

As para.2.3 of the Topic Paper states, the SHELAA will only consider the allocation of sites which are either suitable (i.e. S1,S2 and S3) or could be made suitable through the removal of a policy or physical constraint (i.e. NCD1 and NCD2). In this regard, we assert that subject to its removal from the Green Belt, the site represents an excellent opportunity to deliver sustainable development that will deliver much needed new homes as well as some key benefits to the wider settlement. Of equal significance is the fact that notwithstanding our critique of the Council's evidence base as set out, the Offoxey site is the only logical place to deliver any growth for Bishops Wood, with sites 097 and 099 discounted.

Chapter 5 of the Topic Paper reviews the site assessment findings for each settlement and urban edge locations in the District following the filtering process and the village of Bishops Wood is considered in greater detail at section 5.19. Para.15.19.1 acknowledges the place of the village as a Tier 4 settlement and that, at a strategic level, there will be limited levels of growth in the Tier 4 villages, however, it does acknowledge that such settlements may have a role in contributing to the requirement for 10% of new allocations on sites of 1 hectare or less and that limited development may help to support local infrastructure opportunities. Para.15.19.2 states that there are no existing planning permissions or allocations likely to deliver dwellings in the settlement post April 2018 at the beginning of the Plan period.

The summary for Bishops Wood in respect of additional Green Belt allocations for the village concludes at para.15.9.6 that two of the three sites that were proposed (097 and 099) are affected by constraints, principally highways related. Site 096 is not so conflicted. It goes on to note that, based on current monitoring evidence, the Council will be able to deliver 10% of its housing allocations on small sites in Tier 1-3 villages without requiring additional allocations in less sustainable Tier 4 settlements.

Finally, there is acknowledgement of the potential for part of site 096 coming forward as a rural exceptions site for affordable housing due to an existing planning application on the site, allowing it to remain within the Green Belt. At this time, planning application, No.19/00952/FUL, for 8No. affordable housing units remains undetermined, however, it is also noted that there is a resolution to grant approval for this proposal, subject to the signing of a S.106 Agreement, thus confirming the site's acceptability as a good location for housing development.

At para.4.16 of the PO document, the findings of the Housing Site Selection Topic Paper are made known and, amongst other things, at the fifth bullet point, this confirms removing the proposal to identify small site allocations in Tier 4 villages, as current monitoring information suggests these allocations are not required to meet the national requirement for 10% of housing growth to be delivered on sites of less than 1 hectare.



This feeds into Table 8 on page 32 of the PO which provides details of the Spatial Housing Strategy 2018-2038 for the various settlements and urban extensions across the District and confirms that the Tier 4 villages are only to receive 0.3% of the total proportion of housing delivery during the Plan period, and this is only made up of existing planning permissions and allocations and numbers only 30 units. This means that none of the Tier 4 villages, including Bishops Wood, is due to receive any allocations during the Plan period to 2038.

Table 8 provides that 'windfall' development on small sites will account for some 4.5%, or some 450 units, of the overall housing numbers during the Plan period. What is not clear, however, is whether this level of 'windfall' development is realistic particularly given the District's high percentage of Green Belt. We assert that there can be no guarantee that windfall sites will come forward in those numbers. Accordingly, it would be better for the proposed housing strategy to allocate further sites across the district, particularly in the lower tiers of the hierarchy where little to no development is proposed, as these would have a greater likelihood of being developed if there was certainty of them being able to come through the Local Plan Review process.

Moreover, if the housing need is increased to take account of the requirement to proportionately maintain the contribution to the GBBCHMA shortfall, then the total identified 'allocations' is short of the identified need by a minimum of 620 homes. As such, we would assert that this is too great a gap to be made up by windfall development and that further allocations will be required across the District. In order that a more equitable distribution of dwellings is made across the District, it is considered that further, appropriate locations can be made within those Tier 4 villages where there are no significant policy objections or constraints to development. It is contended that Bishops Wood is one such settlement that is appropriate to receive an allocation within a revised housing strategy in the Local Plan Review, and that site 096 is the most appropriate location to provide for that allocation having regard to all planning policy and technical considerations.

Accordingly, we would contend that **Policy DS3 – The Spatial Strategy to 2038** requires some redrafting to ensure that the delivery of the homes presently identified for allocation through the Local Plan review should be much closer to the identified minimum need having full regard to the requirement to increase the contribution towards the unmet needs arising from GBBCHMA overspill.

The housing strategy in the PO of the Local Plan Review places a significant and heavy reliance on significant reliance on major allocations coming through in the Tier 1 villages of Penkridge (1130 homes) and Codsall/Bilbrook (666), Wombourne (239) together with strategic urban extensions around the edge of the West Midlands conurbation (2,960) and these in total account for the vast majority of new homes coming through the Plan. This strategy is, of course, all well and good in delivering large numbers of homes, however, this leaves no head room in the plan or in terms of delivering those numbers if these sites fail to deliver.

By placing reliance upon a small number of large sites to deliver the vast majority of the new homes required within the Plan period, this strategy can only work if *all* of those sites come forward within the proposed timeframe. If there are delays in bringing just one of those large sites forward, it would prejudice the delivery of the overall housing

strategy within the Local Plan Review. As such, it is considered that the proposed housing strategy requires review so as to allow for more small sites to come through to take up the slack should there be any delay in bringing the large allocations forwards.

In relation to the reference to the Tier 4 settlements specifically within the policy, it is considered that the scope of any potential housing growth should not only be restricted to limited windfall development within Tier 4 villages, but should be expanded to allow for some allocations or safeguarding of land for the longer term where it can be determined that the development of such sites would not be detrimental to the overall strategy and where it is consistent with other policies in the development plan.

**Policy HC6** has regard to **Rural Exceptions Sites** and notes that there will be support for sites that lie adjacent to a village falling within Tiers 1-4 of the Settlement Hierarchy, and where there is need for affordable housing in the parish demonstrated by a robust, independent housing need survey, carried out in the last three years. Proposals should be of a suitable size, scale, design and character in relation to the existing village. The policy will also support the provision of a small amount of market housing in proposals outside the Green Belt where it would be essential to the viability of the scheme.

As far as it has been possible to ascertain, there has been no affordable housing needs survey undertaken within the parish in the last three years. An investigation of the Council's planning application records confirms that there have been approvals for only 4 other dwellings in the village in the past five years, whilst an application for a single dwelling is awaiting determination at this time. Other than the undetermined application 19/00952/FUL with a resolution to grant approval for 8 affordable homes on part of this site as a 'rural exceptions site', there have been no other applications submitted for affordable homes within the village during the same period.

Section 6 of the Strategic Housing Market Assessment May 2021 (HDH Planning & Development) prepared for the Local Plan Review has regard to, amongst other things, affordable housing need within the district where Table 6.1 suggests that there is a total need for some 128 affordable housing units per year in the Plan period, representing just over 28% of the annual planned growth in the District of 453 dwellings per year. The report recommends that the Council sets a target of at least 30% of all new housing as affordable on all new sites that meet the minimum dwelling threshold, which is the figure now stated in Policy HC3, Affordable Housing, in the PO (p.67).

On the basis of the above requirements, with the site having a potential capacity of up to 80 dwellings, with an allowance of 30% for affordable homes within the wider development, this would enable the site to secure the provision of 24 new, affordable homes as a 'rural exceptions site' under Policy HC6 as a boost towards addressing the Council's overall affordable housing needs within the Plan period and the only viable vehicle for delivering more affordable housing in Bishops Wood.

Section 6 of the PO has regard to Development Management Policies, and for the policies relating to Community Services, Facilities and Infrastructure, **Policy EC7** has regard to **Protecting Community Services and Facilities**, whilst supporting the retention of the existing approach from the adopted Core Strategy, support will also be given to the provision of new services and facilities.

---

## **Green Belt**

Section 4 of the Preferred Options Document has regard to the *Development Strategy* and the first part of the section has regard to the **Green Belt**.

At para.3.49 of the PO document, the Strategic Objectives of the Plan are outlined and, in respect of the Development Strategy, Strategic Objective 1 is stated as being to '*protect the Green Belt and Open Countryside as far as possible, ensuring that where Green Belt release is necessary that mechanisms are in place to secure compensatory improvements to the environmental quality and accessibility of the remaining Green Belt*'. As the Council has alluded to in this Strategic Objective for the Local Plan Review, it is, therefore, inevitable that in order to accommodate future housing growth, there must be some release of Green Belt land, not only to meet the needs arising from the Council's own housing requirements, but also to accommodate the unmet needs arising from the studies undertaken in the adjoining metropolitan area of the West Midlands as outlined in the Greater Birmingham and Black Country Housing Market Areas (GBBCHMA) study.

In July 2019, the Council published a Green Belt Study (undertaken by Land Use Consultants on the Council's behalf) which, as noted at para.2.27 of the main report, confirms that just under 80% of the administrative area of the village is designated as Green Belt, with a significant part of the remaining area lying within the open countryside in the north-western part of the District. As such, outside of the urban areas of the main towns and other villages, the potential for accommodating the future housing needs as set out in the development strategy for the Local Plan Review must be set and assessed against this restrictive policy background. The Green Belt Study is a major part of the background information supporting the preparation of the Local Plan Review.

Perhaps not unexpectedly, therefore, the settlement of Bishops Wood is itself inset within the Green Belt, with a development boundary drawn tightly around the existing built-up area of the village, encompassing all of the existing development with the exception of the primary school site adjoining the north-western corner of the site in question and a few outlying dwellings. As such, and as can be seen on the Inset Plan for the village, it is apparent that there are no opportunities for potential development sites within the settlement boundary, perhaps other than for the redevelopment of existing plots but only for one or two other dwellings. As such, for the village to accommodate any additional growth, it would inevitably need to be brought forward on land that is currently designated as Green Belt.

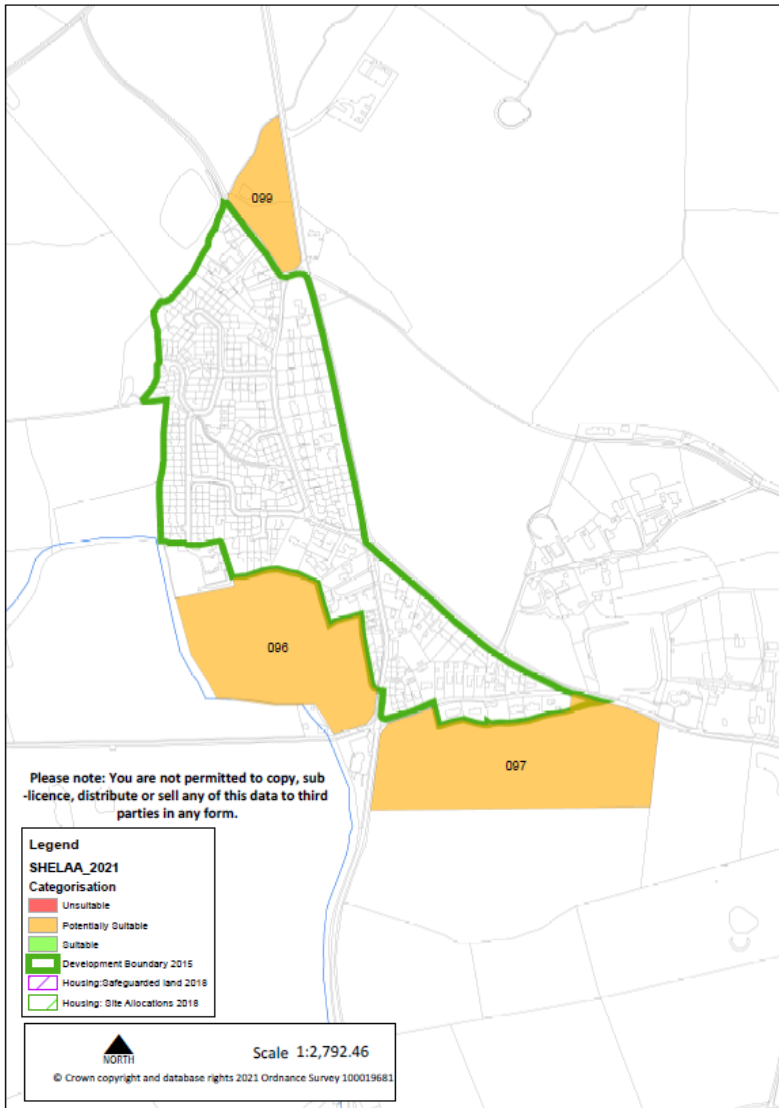
The village of Bishops Wood was included as part of the larger Parcel S32, being defined as a much larger parcel of land of the area between Wolverhampton and Stafford and covering some 7,308 hectares and considered in Appendix 2 (Stage 1 Contribution Assessments) of the Green Belt Study. In addition, a single site in Bishops Wood was also assessed at this stage, namely, Parcel S35 which related to the area comprising the St. Johns First School. The assessment of this site in respect of each purpose for including land within Green Belts (NPPF para.138) was as follows:

- 1<sup>st</sup> purpose : to check unrestricted sprawl of large built-up areas - *weak / no contribution*
- 2<sup>nd</sup> purpose : to prevent neighbouring towns from merging – *weak / no contribution*
- 3<sup>rd</sup> purpose : safeguarding the countryside from encroachment – *weak / no contribution*
- 4<sup>th</sup> purpose : to preserve the setting and special character of historic towns – *weak / no contribution*
- 5<sup>th</sup> purpose : to assist in urban regeneration – *strong*

The larger Parcel 32 area was broken down into a series of thirteen Sub-Parcels for further assessment in Appendix 3 (Stage 2 Harm Assessments) of the Green Belt Study and, of these, Sub-Parcel S32A relates to the area around the village of Bishops Wood, the description of the Sub-Parcel being *'farmland surrounding the inset village of Bishops Wood, together with low density dwellings and community amenities in the south-east of the sub-parcel'*. The area encompassed by Sub-Parcel 32A is some 111 hectares.

It is perhaps unsurprising, therefore, to note that the site which is the subject of these representations is situated in land designated as Green Belt within Sub-Parcel 32A, being all of the land outside the Settlement Boundary for the village and also the land extending into Shropshire to the west and south-west. In addition, of course, it also includes the land encompassing the other two sites promoted previously under the SHELAA (site refs. 097 and 099) as can be seen on the plan for the village below.

Bishops Wood SHELAA map



In terms of the assessment of the harm caused to the Green Belt in the light of the five purposes, the Study advised as in respect of Sub-Parcel 32A follows:

- 1<sup>st</sup> purpose : to check unrestricted sprawl of large built-up areas - *weak / no contribution*
- 2<sup>nd</sup> purpose : to prevent neighbouring towns from merging – *weak / no contribution*
- 3<sup>rd</sup> purpose : safeguarding the countryside from encroachment – *strong*
- 4<sup>th</sup> purpose : to preserve the setting and special character of historic towns – *weak / no contribution*
- 5<sup>th</sup> purpose : to assist in urban regeneration – *strong*

The Sub-Parcel is then broken down into two further parts, namely S32As1 & S32As2, where As2 relates to the southern part of SHEELA site 099 where the assessment considered that this site would have a ‘*moderate*’ impact upon harm to the Green Belt.

In terms of Sub-Parcel S32As1, relating to the *'release of any uncontained land within the sub-parcel'*, being all of the other land around the village within the Sub-Parcel with the exception of S32As2, and which includes the site that is the subject of these representations, the assessment of the harm that would be caused to the Green Belt was considered to be *'moderate – high'*.

That said, and it will be apparent from studying the diagram of Sub-Parcel 32A on page 448 of Appendix 3 to the Green Belt Study, that the area falling under the s1 designation is so large and encompasses a significant area around the village that to include it all within the same *'moderate – high'* harm rating without some consideration of the characteristics of individual sites against the harm that those sites may create harm to the Green Belt, is inappropriate.

The evidence base in the Green Belt Study that has been used as a tool for site assessment of the Green Belt around Bishops Wood is, in our opinion, flawed. The Council has indicated that *all* of the land around the village has the same rating but has also acknowledged that site 096 performs better than all other land around the settlement. In our own assessment of site 096 referred to previously in these representations, we consider that the site performs better in Green Belt terms than the Council's own evidence would suggest. As such, the Council must ensure that the assessment work carried out in support of the Local Plan Review is robust and correct and, in respect of site 096, it is not correct at this time. We would encourage the Council to review the assessment of this site again before the next stage of the Plan's preparation.

From Appendix 3 of the Green Belt Study in respect of site 096, it is not possible to understand how the potential harm that the site, or indeed the nearby 097, was assessed and the impact it might have upon the Green Belt around Bishops Wood, nor for the remaining, wider areas around the village for which no previous 'call for sites' submissions had been made. At the very least, it is considered that a fuller assessment of sites 096, 097 and 099 should have been undertaken and the results for Sub-Parcel S32A provided in Appendix 3.

In this regard, and in light of no formal and detailed assessment of the Offoxey site being available to establish the potential Green Belt harm that would arise as a consequence of the site's development, Cerda has undertaken its own site specific Green Belt assessment as follows. In applying the five purposes for including land with the Green Belt, and in the light of the assessment criteria stated in Section 6 (Stage 2 Methodology) of the Green Belt Study main report our own observations in relation to the assessment of the Harm that the development of the site 096 only would cause to the Green Belt are as follows.

1<sup>st</sup> Purpose (to check the unrestricted sprawl of urban areas): The Offoxey site is, of course, located on the edge of a village rather than an urban area per se. With the manner that the village has developed over time, with the extension of the built-up area out to the south-east of the main part of the village, the site in question is bordered by existing development on its northern and eastern boundaries and its development, in whole or in part, would provide a 'rounding off' of the built form in this part of the settlement, would represent a logical infill scenario and would not extend the settlement in an irregular or untidy way. The development of site 097 would extend the built-

up area of the village in a southerly direction into the open countryside. We contend, therefore, that as far as the site is concerned in relation to the harm that would be caused to the Green Belt, it would only have **low** harm in respect of this purpose.

2<sup>nd</sup> Purpose (*to prevent neighbouring towns from merging into one another*): For the reasons given in respect of the 1<sup>st</sup> purpose, the development of this site would not lead to the merging of any nearby town or even other settlement. Our assessment is, therefore, that site would only have **very low** harm in respect of this purpose. The nearest major settlement to the site is Albrighton in Shropshire, approximately 5 kms (3.1 miles) to the south-west.

3<sup>rd</sup> Purpose (*to assist in safeguarding the countryside from encroachment*): The development of almost all Green Belt land would inevitably result in countryside encroachment, however, as we have noted in respect of the 1<sup>st</sup> purpose above, the site is contained by existing built development to the north and east. The extent that the western edge of the site may extend into the open countryside could be contained by the 'rounding off' effect that the development of the site would have by not extending it beyond the western side of the existing village to the north. In this sense, we would assert that any 'encroachment' through the development of this site, either in whole or in part, would only result in the 'rounding off' of the settlement. As noted in respect of the 1<sup>st</sup> Purpose, the development of site 097 would extend the built-up area of the village in a southerly direction and encroach into the open countryside to a much greater extent than other parcels of land around the village. Therefore, we would contend that the site would have **moderate** harm against this purpose.

4<sup>th</sup> Purpose (*to preserve the setting and special character of historic towns*): the site in question is not located next to any historic town, although it is acknowledged that it does adjoin a property containing two statutorily listed buildings within the curtilage of the property along part of the southern boundary, as such, there would be **very low** harm to the Green Belt in relation to this purpose.

5<sup>th</sup> Purpose (*to assist in urban regeneration*): The Green Belt study acknowledges the extent of the Green Belt across the District and, in table 3.2, acknowledges that there are only 13.11 hectares of land on the Brownfield Register across the District. On balance, given this statistic, it is contended that this purpose should not perform part of the assessment criteria as, in all likelihood, a significant area of Green Belt land will be required to fulfil the Local Plan Review's housing requirements over the plan period. Nevertheless, for ease of assessment, it is considered that **low-moderate** harm would result to the Green Belt in respect of this purpose.

Section 7 of the Green Belt Study has regard to the Stage 2 Findings and, as noted previously, the rating for Sub-Parcel S32As1 is **moderately-high**, that is, '*where land makes a moderate contribution to one of the Green Belt purposes and a weak contribution to the others, but where its release would significantly weaken the adjacent Green Belt (for example by isolating an area of Green Belt that makes a stronger contribution)*'.

In applying our own assessment for the site in question, it our assertion that the overall score for the site should be **moderate** in terms of the level of harm upon the Green Belt, that is, *'where land makes a relatively weak contribution to two of the Green Belt purposes and a weak contribution to the others, but where its release would partially weaken the adjacent Green Belt (for example by increasing containment of adjacent open land, or by creating a less consistent boundary line)'*, would be attributed if all of the site in question were to be developed for housing. If only part of the site were to come forward, then it is considered that the overall score for the site would be **low-moderate**, *'where land makes a relatively strong contribution to one of the Green Belt purposes, but where its release would create a simplified, more consistent boundary and would not weaken the adjacent Green Belt.'*

On balance, and in the light of our own assessment of the harm that the development of the site in question only (096), and not including the remainder of Sub-Parcel S32A1, would have upon Green Belt, the scoring would equate to that given in the Green Belt Study for Sub-Parcel S32As, both having a **moderate** score if all of the site were to be developed, but a **low-moderate** score if only partly developed. In summary, therefore, we would request that the Council gives further consideration to a re-evaluation of site 096 in terms of the purposes for maintaining its designation within the Green Belt and for its release as a potential housing allocation, if not in whole then at least in part, in the next stage of the Plan's preparation.

---

## **Development Principles**

In support of these representations, some initial development proposals have been prepared to show how the Offoxey site could be developed if it were to be allocated for housing in the Local Plan Review. At this stage, the proposals are understandably only at the concept stage and a 'constraints/opportunities' plan together with an illustrative 'parameters' plan, both prepared by the project architects, Geoff Perry Associates, together with various technical reports, have been prepared to address certain matters as follows, which are appended to these representations:

**Highways** : A Transport Appraisal has been prepared by Hub Transport Planning Ltd., a summary of the findings of which are as follows:

### **Access**

Vehicular access to the development site is proposed off Ivetsey Bank Road with appropriate visibility splays to be provided at the access junction in line with the prevailing speed limit of 30mph; however, it is considered likely that the site access proposals will be complemented by some additional traffic-calming measures and revisions to existing junction layouts within the village.

As part of the access strategy, footways will connect to the existing provision in the village, whilst there will also be a new pedestrian entrance to the village school along with a drop-off area.



The site access junction will be designed to accommodate all vehicles that will require access, including large refuse vehicles.

### Local Highway Network Capacity

Observations carried out during peak periods on the local highway network have indicated that the junctions across the village operate well within capacity, with minimal queues and delays during the morning and evening peak periods.

The proposed residential development will have a low trip generation of less than one vehicle per minute during the peak periods, and it is considered that the site access junction will operate well within capacity at all times.

Further afield, the impact across the wider highway network is expected to be minimal but would be assessed in due course once the scope of assessment has been agreed with the Local Highway Authority.

### Sustainable Travel Options

The proposed development site is close to local services and facilities, which include a first school, the village hall, public houses and places of worship. All of these are within acceptable walking or cycling distance from the site and access is available via the existing footway and highway network in the vicinity of the site.

The proposed development will also deliver a village shop to meet the day-to-day needs of both existing and future residents.

There are no dedicated national cycling network routes in the immediate vicinity of the site, however the local roads are considered safe and suitable for cycle trips across the area.

Existing bus stops are located within an easy walking distance and provide connectivity to Stafford and Wolverhampton, including the morning and evening peak hours for commuting.

A Travel Plan will also support the development site and will seek to promote sustainable travel from the development, including the provision of public transport vouchers for residents.

**Ecology** : A Preliminary Ecological Appraisal of the site has been undertaken by Greenscape Environmental Ltd., an executive summary of the findings of which are provided at section 1 of their report and are re-stated here as follows:

#### Purpose of the Report

The survey report has these principal aims:

- To provide an initial assessment of the ecological value of the site in local context.
- To provide details supporting further surveys that may be required.
- To identify potential ecological constraints relating to the proposed development of the site, and recommend measures to avoid, reduce or manage negative effects, and to provide a net ecological gain.

### Methodology

The ecological appraisal included a desktop study, reviews of other surveys previously conducted in the area by Greenscape Environmental, and a site visit undertaken at the site, OS grid reference SJ83540936 on 17th November 2021.

### Key Impacts and Mitigation Measures

The desktop study included a search for nearby designated sites and previously recorded protected species. It was considered that the site could provide potential habitat for ground-nesting birds, and the boundaries may provide commuting habitat for bats and newts, and these should be the main focus of the ecological appraisal.

The site comprises approximately 5.3 ha of arable land, surrounded on three sides by formal hedgerow and fence boundaries. The site is of low ecological value, and a rotating crop does not allow the development of a sward that may be suitable for ground nesting birds.

There are five bodies of water within 500m which have been taken into consideration. Two were assessed in 2020 and found to be of negligible value for great crested newts. The other three were on private land and were not assessable during this survey, but the low terrestrial value of site means the risk of an offence is extremely low.

The site has no features of roosting value for bats, and the proposed enhancements on site will vastly improve the value for local bat species. Similarly, the new planting regime will provide significantly more nesting potential for local birds.

### Conclusion

It is understood that the site plans will include a woodland walk and attenuation pond, both of which will provide a significant ecological enhancement over the site. In addition, the provision of artificial bat roosting and bird nesting habitat will be incorporated into any housing plan to provide further enhancement.

The method statements provided in sections 6.2.2, 6.3.2, 6.5.2, 6.6.2 of the report will be followed, and work will be conducted at a suitable time of year to minimise potential impacts.

There would be no other ecological constraints to the proposed development of the site.

**Drainage** : A Flood Risk, drainage and water supply statement supports these representations. In simple terms, enquires made to Severn Trent confirm the ability for the site to be connected to the existing mains sewage which has sufficient capacity for the quantum of development proposed. Similarly, adequate water supplies are available to serve the development.

As far as surface water drainage is concerned, the development will incorporate SUDs principles in order to provide appropriate attenuation. It is proposed that discharge from the attenuation feature (at the north west corner of the

site) will be controlled to greenfield run off rates, with the attenuation sized to store the surface water from all events up to and including the 1 in 100 year event plus 40% allowance for climate change.

The discharge from the attenuation will enter into a new ditch system along the west edge of Bishops Wood. This new ditch starts to restore the original ditch network that was partially destroyed by the adjacent housing development in the 1970's.

The ditch will join with the current watercourse to the north of the Parish Council Play area.

**Flooding** - Of greater significance however is the role that the development will play in solving existing surface water flooding issues that persist in relation to the wider village, particularly the housing development to the immediate north of the site. The proposed ditch system to the west of the existing settlement, delivered as a direct consequence of this development will address the overland surface flows from the north and west of the village. The existing limitations of the current drainage system mean that it is very quickly overwhelmed resulting in flooding. The SUDs solution that this site will deliver is predicted to eliminate a large proportion of these overland flows delivering tangible improvements to existing residents of the village. It is to be noted that this proposed solution has been discussed with Andrew Brett, Flood Risk Management Team at the Staffordshire County Council and has his support in principle.

**Utilities** : A preliminary investigation into the existing utilities infrastructure around the site has been undertaken by ECS Energy and they have advised as follows:

#### Electricity

- Application has been made to Western Power Distribution for a new point of connection serving the proposed development site and early indications are that a new point of connection will be provided, potentially from the high voltage main running past the northern side of the land.
- This point of connection would likely require a new, 1MVA substation, with 800kVA of potential demand coming from the estate at any given time.
- ECS have every expectation that adequate power will be available to serve the entirety of demand arising from the proposed development.

#### Gas

- Whilst applications have been made with Cadent (the local network provider) which have revealed that connection is possible, we consider that there are more sustainable ways of providing heat to new homes on this site.

### Water

- Applications are underway with the network and independent connections providers for a new point of connection serving the proposed development site.
- There are currently no known issues with connecting to the local water infrastructure, with mains water already provided to properties immediately adjacent to the site.

### Telecoms

- Openreach have confirmed that they will deliver FTTP product free of charge. The site therefore has the ability to be served by high speed broadband.

---

### **Key Benefits**

The allocation and subsequent development of this site will help to support and grow the existing settlement and bring key community benefits. It would be the intention to provide space for the establishment of a convenience store within the site which the village does not currently possess.

In addition, the provision could be made for a 'drop-off' area to the rear of the adjoining school site to alleviate existing pressures on the roads around the school at present. Preliminary discussions with the school confirm support for this proposal.

As set out above, the development of this site will also deliver significant, tangible improvements to the existing drainage network and infrastructure which is known to be a significant issue within the village.

In summary, it is submitted that there are no substantive technical or other reasons why this site could not be developed in line with the principles and the above information provided in support of these representations. In fact, the Offoxey site proposals offer the opportunity to provide significant infrastructure benefits to the Bishops Wood village, improving its ability to sustain itself through new community facilities and affordable housing, plus through the delivery of the only viable option to solve existing surface water flooding issues that persist to the north of the development site.

---

### **Conclusions**

It is acknowledged that Bishops Wood is one of seven Tier 4 settlements within the District's Settlement Hierarchy and, in line with the Council's current development strategy within the Preferred Options document is not currently proposed to receive any direct allocations under the Local Plan Review at this stage. However, as has been demonstrated in these representations, there is significant unmet need within the GBBCHMA which this plan needs

to make a greater contribution towards addressing. By consequence, the plan needs to make provision for further housing allocations.

At present, the Tier 4 settlements play no strategic role in meeting future housing needs. We contend that the provision of homes within these settlements should be part of this plan's spatial strategy.

In this regard, land off Offoxey Road in Bishops Wood, previously submitted as site 096, can assist the Council in delivering the greater number of homes required and should be allocated accordingly. The Council recognises that land needs to be released from the Green Bet to deliver homes within the district and accordingly there are no substantive planning reasons why the Offoxey site could not come forward in whole or in part for housing development. We assert that the settlement boundary for Bishops Wood should be redrawn accordingly and an allocation made on site 096 for housing development.

We look forward to the next stage in the preparation of the Local Plan Review and, should you have any further questions with regard to these present representations, please do not hesitate to contact us.

Yours faithfully,

**PAUL HARRIS BSc (Hons) MASP MRTPI**

**Planning Director**

**paul.harris@cerda-planning.co.uk**

**GRAHAM PARKES BSc (Hons) Dip TP MRTPI**

**Principal Planner**

**graham.parkes@cerda-planning.co.uk**

A1 SHEET SIZE 841 x 594 mm



SCHOOL LAND

EXISTING TREES AND HEDGEROWS TO BE RETAINED WHERE POSSIBLE

EXISTING PUB

LOW POINT

ATTENUATION FOR ALL EVENTS UP TO AND INCLUDING THE 1:100 + 40% APPROXIMATELY 2000m<sup>3</sup> OF STORAGE

RELATIONSHIP BETWEEN EXISTING DEVELOPMENTS

DEVELOPABLE AREA - 3.15 Ha, 75% IMPERMEABLE ASSUMED AT 4.2L/SEC/HA GREENFIELD RUN OFF RATES. MAX SITE DISCHARGE OF 13 L/SEC

PROPOSED SITE ACCESS

RELATIONSHIP BETWEEN EXISTING DEVELOPMENTS

OFFOXY ROAD

NOISE

The Contractor is to check and verify all building and site dimensions, levels and sewer level levels at connection points before work starts. The Contractor is to comply in all respects with current Building Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided. This drawing is not intended to show details of foundations, ground conditions or ground contours. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor. A suitable method of foundation should be provided allowing for existing ground conditions. Any suspect or flint ground, contamination on or within the ground, should be further investigated by a suitable expert. Any earthwork construction shown indicate typical slopes for guidance only it should be further investigated by a suitable expert. Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. All trees are to be planted so as to ensure they are a minimum of 5 metres from buildings and 2 metres from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. Geoff Perry Associates Limited do not accept any responsibility for any losses (financial or otherwise) to any Client or third party arising out of the Client's (or its Developer or Contractor) but not limited thereto) non-compliance with above mentioned provisions. © This drawing is the property of Geoff Perry Associates Limited and may not be copied or used for any purpose other than that for which it is supplied without the express written authority of Geoff Perry Associates Limited.

Rev:	Description:	Initials:	Date:
X/X			

**Geoff Perry Associates Limited**  
 The Shrubbery,  
 28 Erington Road,  
 Aintree,  
 Walsal,  
 WSS 8UH  
 T: 01922 744 900  
 E: enquiries@geoffperryassoc.co.uk

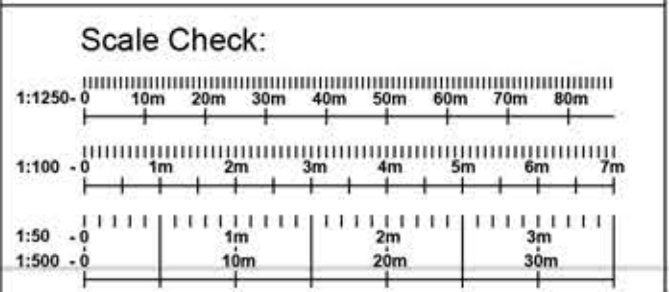
Client: Cranford Developments

Project: Land off Offoxy Road, Bishops Wood

Title: Constraints Plan

Date: DEC 2021 Scale: 1:500 @ A1  
 Drawn by: GSW Checked by: -

Job No. Drg No. Rev.  
 A 968 03 ~



This drawing illustrates a sketch proposal only and as such is subject to detailed site investigation including ground conditions / contaminants, drainage, design and planning / density negotiations. The layout may be based upon an enlargement of an o.s. sheet or other small scale plans and its accuracy will need to be verified by survey. Full risk assessment under CDM Regulations has not been undertaken.

nb. No account has been taken of any services laid on or around the boundaries of the site.

nb. This layout takes no account of any trees on or around the boundaries of the site.

# Constraints Plan



**NOTES:**

1. This drawing is a sketch proposal only and as such is subject to detailed site investigation including ground conditions / contaminants, drainage, design and planning / density negotiations. The layout may be based upon an enlargement of an o.s. sheet or other small scale plans and its accuracy will need to be verified by survey. Full risk assessment under CDM Regulations has not been undertaken.
2. No account has been taken of any services laid on or around the boundaries of the site.
3. This layout takes no account of any trees on or around the boundaries of the site.

The Contractor is to check and verify all building and site dimensions, levels and sewer level levels at connection points before work starts. The Contractor is to comply in all respects with current Building Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided. This drawing is not intended to show details of foundations, ground conditions or ground contours. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor. A suitable method of foundation should be provided allowing for existing ground conditions. Any suspect or flat ground, contiguously on or within the ground, should be further investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert. Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. All trees are to be planted so as to ensure they are a minimum of 5 metres from buildings and 2 metres from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. Geoff Perry Associates Limited do not accept any responsibility for any losses (financial or otherwise) to any Client or third party arising out of the Clients (or its Developer or Contractor) but not limited thereto) non-compliance with above mentioned provisions. © This drawing is the property of Geoff Perry Associates Limited and may not be copied or used for any purpose other than that for which it is supplied without the express written authority of Geoff Perry Associates Limited.

Rev:	Description:	Initials:	Date:
------	--------------	-----------	-------

**Geoff Perry Associates Limited**

The Shrubbery,  
28 Erdington Road,  
Aldridge,  
Walsal,  
WS9 8JH

T: 01922 744 900  
E: enquiries@geoffperryassoc.co.uk

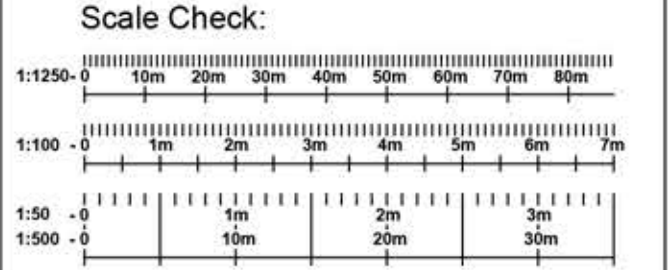
**Client:**  
Cranford Developments

**Project:**  
Land off Offoxey Road,  
Bishops Wood

**Title:**  
Land Use Plan

**Date:** DEC 2021      **Scale:** 1:2000 @ A1  
**Drawn by:** GSW      **Checked by:** -

Job No.	Drg No.	Rev.
A 968	02	

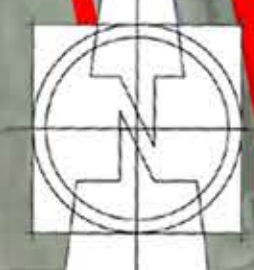


This drawing illustrates a sketch proposal only and as such is subject to detailed site investigation including ground conditions / contaminants, drainage, design and planning / density negotiations. The layout may be based upon an enlargement of an o.s. sheet or other small scale plans and its accuracy will need to be verified by survey. Full risk assessment under CDM Regulations has not been undertaken.

nb. No account has been taken of any services laid on or around the boundaries of the site.

nb. This layout takes no account of any trees on or around the boundaries of the site.

# Land Use Plan



The Contractor is to check and verify all building and site dimensions, levels and sewer level levels at connection points before work starts. The Contractor is to comply in all respects with current Building Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided. This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor. A suitable method of foundation should be provided allowing for existing ground conditions. Any suspect or fluid ground, contamination on or within the ground, should be further investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only it should be further investigated by a suitable expert. Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. All trees are to be planted so as to ensure they are a minimum of 5 metres from buildings and 2 metres from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. Geoff Perry Associates Limited do not accept any responsibility for any losses (financial or otherwise) to any Client or third party arising out of the Client's (be it Developer or Contractor) but not limited thereto) non-compliance with above mentioned provisions. © This drawing is the property of Geoff Perry Associates Limited and may not be copied or used for any purpose other than that for which it is supplied without the express written authority of Geoff Perry Associates Limited.

Rev:	Description:	Initials:	Date:
------	--------------	-----------	-------

**Geoff Perry Associates Limited**

The Shrubbery,  
28 Erington Road,  
Aldridge,  
Walsall,  
WS9 8JH

T: 01922 744 900  
E: enquiries@geoffperryassoc.co.uk

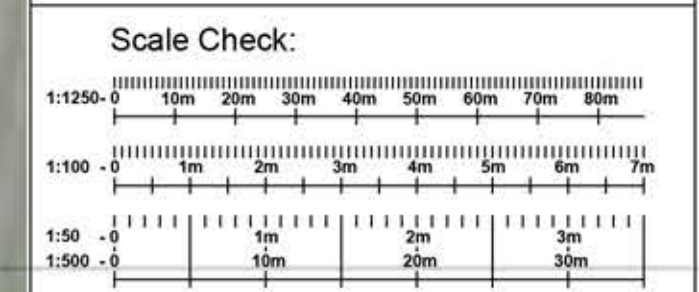
**Client:**  
Cranford Developments

**Project:**  
Land off Offoxey Road,  
Bishops Wood

**Title:**  
Land Use Plan

**Date:** DEC 2021      **Scale:** 1:500 @ A1  
**Drawn by:** GSW      **Checked by:** -

Job No.	Drg No.	Rev.
A 968	02	



This drawing illustrates a sketch proposal only and as such is subject to detailed site investigation including ground conditions / contaminants, drainage, design and planning / density negotiations. The layout may be based upon an enlargement of an o.s. sheet or other small scale plans and its accuracy will need to be verified by survey. Full risk assessment under CDM Regulations has not been undertaken.

nb. No account has been taken of any services laid on or around the boundaries of the site.

nb. This layout takes no account of any trees on or around the boundaries of the site.



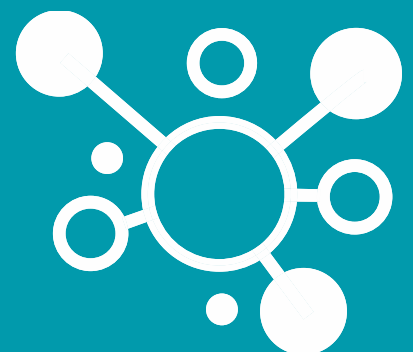
Client:  
**Offoxey Road Limited**

Project:  
**Land off Offoxey Road  
Bishop's Wood**

Project No:  
**T21514**  
Report Title:  
**Transport Appraisal**

Prepared by: JP  
Authorised by: GM  
Rev: A  
Date: 13/12/2021

**Hub Transport Planning Ltd**  
Radclyffe House  
66/68 Hagley Road  
Edgbaston  
Birmingham  
West Midlands B16 8PF  
T. 0121 454 5530



---

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b>	<b>1</b>
<b>2.0</b>	<b>BASELINE CONDITIONS</b>	<b>2</b>
<b>3.0</b>	<b>LOCAL FACILITIES AND SUSTAINABLE TRANSPORT</b>	<b>3</b>
<b>4.0</b>	<b>DEVELOPMENT PROPOSALS</b>	<b>5</b>
<b>5.0</b>	<b>TRAFFIC GENERATION, ASSIGNMENT AND IMPACT</b>	<b>6</b>
<b>6.0</b>	<b>SUMMARY</b>	<b>8</b>

### FIGURES

<b>1.1</b>	<b>Site Location Plan</b>
------------	---------------------------

### APPENDICES

<b>Appendix A</b>	<b>Crashmap Data</b>
<b>Appendix B</b>	<b>TRICS Output</b>
<b>Appendix C</b>	<b>Census 2011 Journey to Work Data</b>

# 1.0 Introduction

## Background

- 1.1 Hub Transport Planning Ltd has been commissioned by Offoxey Road Limited to provide transport advice for a proposed residential development at Land of Offoxey Road, Bishop's Wood.
- 1.2 It is intended that the site will provide up to 80 dwellings, along with a new local shop for the village and a drop-off area for the primary school; the site location is shown on **Figure 1.1**.

## Structure of the Report

- 1.3 This report has been prepared to support the promotion of the site and provide advice regarding the access strategy for the site, whilst also considering other highway considerations to deliver a development of this scale in this location, including sustainability.

## Limitations of the Report

- 1.4 This report has been undertaken at the request of Offoxey Road Limited, thus should not be entrusted to any third party without written permission from Hub Transport Planning Ltd. However, should any information contained within this report be used by any unauthorised third party, it is done so entirely at their own risk and shall not be the responsibility of Hub Transport Planning Ltd.
- 1.5 This report has been compiled using data from a number of external sources (such as TRICS and public transport information); these sources are considered to be trustworthy and therefore the data provided is considered to be accurate and relevant at the time of preparing this report.

## 2.0 Baseline Conditions

### Site Location

- 2.1 The site is located to the southwest of Bishop's Wood village and c.5km west of Brewood.
- 2.2 The site is bounded by Ivetsey Bank Road to the east, Offoxey Road to the south, agricultural land to the west, and existing residential development to the north.

### Local Highway Network

- 2.3 Ivetsey Bank Road runs through the centre of the village and connects to the primary local distributor road for the area, the A5, approximately 1.4km north of the site; the A5 provides access east and west between Telford and M6 Junction 12 (and onwards to the east towards Cannock, Brownhills and Tamworth).
- 2.4 It is a single carriageway rural lane of some 5.5 to 6.0m width and is subject to the national speed limit to both the north and south of the village, with the prevailing limit through the village being 30mph.
- 2.5 Offoxey Road is a local rural access road connecting the village to the A41 Newport Road, which itself provides access to the M54 at Junction 3. The M54 provides access westwards to Telford and Shrewsbury.
- 2.6 Offoxey Road is a single carriageway rural lane and is subject to the national speed limit along most of its length, from a point c.60m west of Ivetsey Bank Road to a point c.600m east of the A41 Newport Road.
- 2.7 To the east of the site, Kiddemore Green Road is a single carriageway rural lane that is subject to a 40mph speed limit in the vicinity of the village and the national speed limit further east; it connects Bishop's Wood with Brewood.
- 2.8 A footway is provided along the western side of Ivetsey Bank Road throughout the village, with additional intermittent provision on the eastern side; the footway varies in width but is generally between 1.5 and 2.0m.

### Accident Data

- 2.9 An initial review of Personal Injury Accident (PIA) data has been undertaken using the Crashmap.co.uk website.
- 2.10 This indicates that there has only been a single PIA within the village of Bishop's Wood in the latest five-year period.
- 2.11 This was a slight injury accident in the vicinity of the Ivetsey Bank Road crossroads junction with Offoxey Road and Tong Road in November 2016, involving a single vehicle.
- 2.12 The data is provided as **Appendix A**.
- 2.13 Whilst the initial review does not raise any immediate concerns, further analysis will be undertaken at the appropriate time utilising more detailed PIA data to be obtained from the Local Highway Authority (LHA), to determine if there are any specific highway safety issues across the village that could be addressed by the proposed development.
- 2.14 In addition, the highway safety assessment may be widened further subject to the agreed scope of the overall transport assessment with the LHA.

## 3.0 Local Facilities and Sustainable Transport

### Local Facilities

- 3.1 It is generally accepted that walking and cycling provide important alternatives to the car and should also be encouraged to form part of longer trips via public transport. Indeed, it is noteworthy that the Institute of highways and Transportation (IHT) has prepared several guidance documents that provide advice with respect to the provision of sustainable travel in conjunction with new developments. The suggested walking distances to common facilities is presented in **Table 1** below.

**Table 1 – Suggested Walking Distances (IHT Guidelines)**

	Town Centre (m)	Commuting/Schools/ Sightseeing (m)	Elsewhere
Desirable	200	500	400
Acceptable	400	1000	800
Preferred Maximum	800	2000	1200

- 3.2 In addition to the IHT guidance, Manual for Streets (MfS) states that 'walkable neighbourhoods' are typically characterised by having a range of facilities within 10 minutes (up to about 800m) walking distance of residential areas which residents may access comfortably on foot.
- 3.3 The National Travel Survey (NTS) 2020, highlights the average cycle trip for 2019 was 23 minutes, this relates to a distance of 6.1km (assuming a 16kph average cycle speed).
- 3.4 MfS also states that the 800m walking distance is not an upper limit and references the former PPG13 guidance in respect of walking replacing short car trips, particularly those under 2km.
- 3.5 In addition to the above, it is pertinent to note that the NTS (published in August 2020), which provides a summary of results of travel survey data for 2019, reports that the average walk trip distance is 1.36km.
- 3.6 As such, it is reasonable to assume that the average person will walk between 800m and 2.0km to a defined destination (such as local facilities), but also being mindful of the 1.36km average walk distance.
- 3.7 A list of facilities and their distances from the centre of the site are provided in **Table 2** below.

**Table 2 – Local Facilities**

Facility	Distance from Site
St John's C of E First School (via proposed link)	165m
Bishop's Wood Village Hall	235m
Royal Oak PH	255m
St John's Church	660m
Bishop's Wood Play Area	865m
Country Kids Day Nursery	1.1km

BP Garage	1.75km
The Bradford Arms	1.75km

3.8 **Table 2** demonstrates that there are a number of local facilities within walking and cycling distance of the site, with facilities falling within the 2km upper walking limit and 5km upper cycling limit outlined within the former PPG13 guidance.

**Accessibility by Foot**

3.9 The development will provide pedestrian linkages to/from the site that tie into the existing pedestrian infrastructure in the vicinity of the site along Ivetsey Bank Road and will also include a new pedestrian connection into the rear of the first school to the north of the site.

3.10 It would be expected that some improvement works to the existing footway network will form part of the eventual development proposal in due course.

3.11 There are public rights of way (PRoW) connecting the village with the surrounding area, in addition to the existing footway network in the village; it is noted that some roads have no footways, however traffic flows along these lanes are not significant (such as Tong Road) and existing residents walk within the carriageway safely.

**Accessibility by Cycle**

3.12 Ivetsey Bank Road is subject to a 30mph speed limit along the site frontage before changing to the national speed limit both north and south of the village; this and the surrounding roads are considered appropriate for on-road cycling.

3.13 The nearest National Cycle Network (NCN) Route is NCN 81 at a distance of c.6.0km southwest of the site at Cosford and can be accessed via the rural road network.

**Accessibility by Bus**

3.14 The closest bus stops to the site are located at the junction of Ivetsey Bank Road with Old Coach Road c.390m northeast of the site; the stop takes the form of a shelter with seating.

3.15 Bus services 877 and 878 run from these stops and provide morning and evening services between Stafford and Wolverhampton, via Bishop’s Wood; this includes morning and evening peak hour services.

**Accessibility by Rail**

3.16 Cosford Rail Station is located c.6.2km southwest of the site.

3.17 The station benefits from 12 sheltered cycle parking spaces and c.8 car parking spaces; these are located directly adjacent to the station building.

3.18 Services run from this station every hour to Shrewsbury (via Telford) and every hour to Birmingham New Street (via Wolverhampton), with half hourly provision during the morning and evening peak.

3.19 The first outbound service to Birmingham is just before 6:00am, and to Shrewsbury just before 6:30am; return services arrive into Cosford after midnight.

## 4.0 Development Proposals

### Access Strategy

- 4.1 It is proposed to take access from Ivetsey Bank Road at the southeast corner of the site; the indicative access location is provided on the land use plan prepared by Geoff Perry Associates and included within the submission documents for the site.
- 4.2 Further detailed discussions will be undertaken with the local highway authority in due course; however, the proposed access is in the same location as that previously accepted by the highway authority for application 19/00952/FUL.
- 4.3 It is expected that the proposed development will deliver some additional traffic-calming along Ivetsey Bank Road to complement and strengthen the existing entry feature at the southern end of the village; such a scheme will be discussed in detail with the local highway authority in due course.
- 4.4 Pedestrian connectivity will be provided throughout the site, linking to the existing provision on Ivetsey Bank Road.

### Internal Layout

- 4.5 The internal layout of the proposed development will be designed in accordance with the guidelines of Manual for Streets (MfS) and MfS2.
- 4.6 Sufficient parking for the site will be provided through on-plot parking for each dwelling along with visitor parking provision, where appropriate; in addition, policy compliant levels of EV parking will be delivered.
- 4.7 On-plot cycle parking will also be provided for each dwelling of the development, this will be sheltered and secure, and in the form of appropriately sized private garages, or sheds where appropriate.

### Junction Analysis

- 4.8 Whilst capacity analysis will be undertaken for the morning and evening peak hours for the proposed access junction, should an application be submitted in due course; at this stage we do not envisage there being any capacity issues at the access junction in either peak period.

## 5.0 Traffic Generation, Assignment and Impact

### Traffic Generation

- 5.1 The proposed development is for c.80 residential dwellings.
- 5.2 The traffic generation for the proposed development has been derived using the TRICS database 7.8.3 and has been carried out in accordance with the TRICS Good Practice Guide 2021.
- 5.3 The following parameters have been used within the TRICS assessment.
- Land Use – Residential, Houses Privately Owned
  - Regions – United Kingdom (excl. Greater London and Northern Ireland)
  - Dwellings Range – 8 to 150
  - Date Range – 01/01/2011 to 08/06/2021
  - Some sites removed due to very low (or zero) peak trips rates, or due to survey being undertaken during Covid lockdown period.
- 5.4 On the basis that the proposed development is in a rural village, we have calculated the 85<sup>th</sup> percentile trip rates and consider that these represent a fair reflection of the site location; the TRICS output is provided as **Appendix B** and is summarised in **Table 3** below.

**Table 3 – Vehicle Trip Rates – Residential (80 Dwellings)**

Peak Period	Trip Rate (per dwelling)		Vehicle Trips (80 dwellings)		Total
	In	Out	In	Out	
AM	0.163	0.490	13	39	<b>52</b>
PM	0.333	0.273	27	22	<b>49</b>

- 5.5 The traffic generation detailed in **Table 3** above indicates that the proposed development is forecast to generate 52 two-way vehicle trips in the AM peak, and 49 two-way vehicle trips in the PM peak.
- 5.6 This equates to less than one additional vehicle on the highway network every minute, in either direction, during each peak hour period.

### Traffic Distribution and Assignment

- 5.7 The forecast residential development traffic has been distributed across the highway network based on 2011 Census Origin/Destination Travel to Work data (using Bishop's Wood as the place of residence, MSOA area – South Staffordshire 003); full details are provided as **Appendix C**.
- 5.8 Traffic has been assigned to the network using appropriate online mapping tools and knowledge of the existing area.



## T21514

### Land off Offoxey Road, Bishop's Wood

5.9 The resulting assignment are as follows:

- Ivetsey Bank Road (N) = 46.4%
- Offoxey Road (S) = 40.8%
- Offoxey Road (W) = 12.8%

5.10 In terms of vehicle movements, this will result in a maximum of 24 vehicle trips travelling to/from the north of the site, 21 vehicle trips to/from the south of the site, and 7 vehicle trips to/from the west of the site during any peak hour.

#### Traffic Impact

- 5.11 It is expected that the development traffic would have a minimal impact at just a few local junctions during the morning and evening peak hours.
- 5.12 Observations of the operation of the existing highway network indicate that the junctions within the village operate with negligible queues and delays during peak periods.
- 5.13 There is a slightly higher level of queues and delays observed to the north of the village at the junction with the A5; however, it remains modest throughout the peak periods and, as such, the impact of less than one additional vehicle every two minutes will be minimal.
- 5.14 Agreement on the technical scope of any subsequent Transport Assessment will be sought from Staffordshire County Council (SCC) as Local Highway Authority.

## 6.0 Summary

- 6.1 Hub Transport Planning Ltd has been commissioned by Offoxey Road Limited to provide transport advice for a proposed residential development of c.80 dwellings in Bishop's Wood, Staffordshire.
- 6.2 The development site will deliver vehicular access from the southeast corner of the site and appropriate pedestrian and cycle connectivity alongside the vehicular access, including a new pedestrian route into the first school.
- 6.3 A review of accident data in the vicinity of the site does not suggest there are any specific highway safety issues that would need to be addressed; however, further consideration of accidents will be examined as part of any subsequent planning application.
- 6.4 The site benefits from local facilities within a comfortable walking and/or cycling distance; these include the first school, the village hall, public houses, places of worship and a BP garage (with shop). The development site will also provide a local village shop alongside the residential dwellings.
- 6.5 The closest bus stops to the site are located at the junction of Ivetsey Bank Road with Old Coach Road c.390m northeast of the site; the stop takes the form of a shelter with seating.
- 6.6 Bus services 877 and 878 run from these stops and provide morning and evening services between Stafford and Wolverhampton, via Bishop's Wood; this includes morning and evening peak hour services.
- 6.7 The proposed development is forecast to generate less than one additional vehicle every minute during the AM and PM peak hours; the impact of this traffic on the adjacent highway network will be considered as part of any future application, the scope of which will be agreed with the LHA in due course.
- 6.8 The National Planning Policy Framework (NPPF), July 2021, states at paragraph 110 (b) that it should be ensured that *“safe and suitable access to the site can be achieved for all users”*.
- 6.9 NPPF paragraph 111 subsequently states that *“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.”*
- 6.10 It is considered that safe and suitable vehicular access can be delivered from the southeast corner of the site, in the same location as that agreed for a recent application, with detailed access arrangements to be provided in due course.
- 6.11 In respect of the wider highway network impacts, it is not expected that there will be any capacity issues and, as such, the residual cumulative impacts would be acceptable.

**T21514**  
Land off Offoxey Road, Bishop's Wood



---

## Figures



Reproduced by permission of Ordnance Survey on behalf of HMSO.  
 © Crown copyright and database right 2021.  
 All rights reserved. Ordnance Survey Licence number 100046404.



hub  
 TRANSPORT PLANNING LTD

Not to Scale  
 Bishop's Wood  
**Figure 1.1**  
 Site Location Plan

**T21514**  
Land off Offoxey Road, Bishop's Wood



---

## Appendix A

### Crashmap Data

crashmap.co.uk      CrashMap Data: Great Britain 1999 - 2020 (verified)      Home      CrashMap Pro      FAQ      Contact us      Log In

Map      Satellite

**Incident Severity**

Slight   Serious   Fatal

1 results found

**Hide**

**Location:**      bishop's wood

**Years**

5 of 22 years selected

**Severity**

Fatal	<input checked="" type="checkbox"/>
Serious	<input checked="" type="checkbox"/>
Slight	<input checked="" type="checkbox"/>

**Casualty Types:**

All Casualty Types

**Vehicles Involved:**

Source: Crashmap.co.uk; Google maps; DfT

**T21514**  
Land off Offoxey Road, Bishop's Wood



---

## Appendix B

### TRICS Output

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
Category : A - HOUSES PRIVATELY OWNED  
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	3 days
	EX ESSEX	1 days
	HC HAMPSHIRE	2 days
	KC KENT	2 days
	SC SURREY	1 days
	WS WEST SUSSEX	2 days
03	SOUTH WEST	
	DC DORSET	1 days
	SM SOMERSET	3 days
04	EAST ANGLIA	
	NF NORFOLK	6 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	LE LEICESTERSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	1 days
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	2 days
	GM GREATER MANCHESTER	2 days
	LC LANCASHIRE	1 days
09	NORTH	
	DH DURHAM	2 days
	TW TYNE & WEAR	1 days
10	WALES	
	VG VALE OF GLAMORGAN	1 days

*This section displays the number of survey days per TRICS® sub-region in the selected set*

Primary Filtering selection:

*This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.*

Parameter: No of Dwellings  
Actual Range: 8 to 150 (units: )  
Range Selected by User: 5 to 150 (units: )

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 08/06/21

*This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.*

Selected survey days:

Monday	7 days
Tuesday	5 days
Wednesday	11 days
Thursday	7 days
Friday	9 days

*This data displays the number of selected surveys by day of the week.*

Selected survey types:

Manual count	36 days
Directional ATC Count	3 days

*This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding*



*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

Selected Location Sub Categories:

Residential Zone	32
Village	7

*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*

Secondary Filtering selection:

Use Class:

C3	39 days
----	---------

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS@.*

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,000 or Less	2 days
1,001 to 5,000	10 days
5,001 to 10,000	8 days
10,001 to 15,000	6 days
15,001 to 20,000	7 days
20,001 to 25,000	2 days
25,001 to 50,000	3 days
50,001 to 100,000	1 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*

Population within 5 miles:

5,001 to 25,000	4 days
25,001 to 50,000	7 days
50,001 to 75,000	4 days
75,001 to 100,000	7 days
100,001 to 125,000	1 days
125,001 to 250,000	9 days
250,001 to 500,000	5 days
500,001 or More	2 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*

Car ownership within 5 miles:

0.6 to 1.0	10 days
1.1 to 1.5	27 days
1.6 to 2.0	2 days

*This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.*

Travel Plan:

Yes	9 days
No	30 days

*This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.*

PTAL Rating:

No PTAL Present	38 days
2 Poor	1 days

*This data displays the number of selected surveys with PTAL Ratings.*

LIST OF SITES relevant to selection parameters

1	CH-03-A-09 GREYSTOKE ROAD MACCLESFIELD HURDSFIELD Edge of Town Residential Zone Total No of Dwellings: 24 <i>Survey date: MONDAY 24/11/14</i>	TERRACED HOUSES	CHESHIRE	<i>Survey Type: MANUAL</i>
2	CH-03-A-10 MEADOW DRIVE NORTHWICH BARNTON Edge of Town Residential Zone Total No of Dwellings: 40 <i>Survey date: TUESDAY 04/06/19</i>	SEMI-DETACHED & TERRACED	CHESHIRE	<i>Survey Type: MANUAL</i>
3	DC-03-A-08 HURSTDENE ROAD BOURNEMOUTH CASTLE LANE WEST Edge of Town Residential Zone Total No of Dwellings: 28 <i>Survey date: MONDAY 24/03/14</i>	BUNGALOWS	DORSET	<i>Survey Type: MANUAL</i>
4	DH-03-A-02 LEAZES LANE BISHOP AUCKLAND ST HELEN AUCKLAND Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings: 125 <i>Survey date: MONDAY 27/03/17</i>	MIXED HOUSES	DURHAM	<i>Survey Type: MANUAL</i>
5	DH-03-A-03 PILGRIMS WAY DURHAM  Edge of Town Residential Zone Total No of Dwellings: 57 <i>Survey date: FRIDAY 19/10/18</i>	SEMI-DETACHED & TERRACED	DURHAM	<i>Survey Type: MANUAL</i>
6	ES-03-A-02 SOUTH COAST ROAD PEACEHAVEN  Edge of Town Residential Zone Total No of Dwellings: 37 <i>Survey date: FRIDAY 18/11/11</i>	PRIVATE HOUSING	EAST SUSSEX	<i>Survey Type: MANUAL</i>
7	ES-03-A-04 NEW LYDD ROAD CAMBER  Edge of Town Residential Zone Total No of Dwellings: 134 <i>Survey date: FRIDAY 15/07/16</i>	MIXED HOUSES & FLATS	EAST SUSSEX	<i>Survey Type: MANUAL</i>
8	ES-03-A-05 RATTLE ROAD NEAR EASTBOURNE STONE CROSS Edge of Town Residential Zone Total No of Dwellings: 99 <i>Survey date: WEDNESDAY 05/06/19</i>	MIXED HOUSES & FLATS	EAST SUSSEX	<i>Survey Type: MANUAL</i>
9	EX-03-A-02 MANOR ROAD CHIGWELL GRANGE HILL Edge of Town Residential Zone Total No of Dwellings: 97 <i>Survey date: MONDAY 27/11/17</i>	DETACHED & SEMI-DETACHED	ESSEX	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

10	GM-03-A-10 BUTT HILL DRIVE MANCHESTER PRESTWICH Edge of Town Residential Zone Total No of Dwellings: 29 <i>Survey date: WEDNESDAY 12/10/11</i>	DETACHED/SEMI	GREATER MANCHESTER	<i>Survey Type: MANUAL</i>
11	GM-03-A-11 RUSHFORD STREET MANCHESTER LEVENSHULME Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings: 37 <i>Survey date: MONDAY 26/09/16</i>	TERRACED & SEMI -DETACHED	GREATER MANCHESTER	<i>Survey Type: MANUAL</i>
12	HC-03-A-21 PRIESTLEY ROAD BASINGSTOKE HOUNDMILLS Edge of Town Residential Zone Total No of Dwellings: 39 <i>Survey date: TUESDAY 13/11/18</i>	TERRACED & SEMI -DETACHED	HAMPSHIRE	<i>Survey Type: MANUAL</i>
13	HC-03-A-22 BOW LAKE GARDENS NEAR EASTLEIGH BISHOPSTOKE Edge of Town Residential Zone Total No of Dwellings: 40 <i>Survey date: WEDNESDAY 31/10/18</i>	MIXED HOUSES	HAMPSHIRE	<i>Survey Type: MANUAL</i>
14	KC-03-A-04 KILN BARN ROAD AYLESFORD DITTON Edge of Town Residential Zone Total No of Dwellings: 110 <i>Survey date: FRIDAY 22/09/17</i>	SEMI -DETACHED & TERRACED	KENT	<i>Survey Type: MANUAL</i>
15	KC-03-A-05 ROCHESTER ROAD NEAR CHATHAM BURHAM Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 8 <i>Survey date: FRIDAY 22/09/17</i>	DETACHED & SEMI -DETACHED	KENT	<i>Survey Type: MANUAL</i>
16	LC-03-A-31 GREENSIDE PRESTON COTTAM Edge of Town Residential Zone Total No of Dwellings: 32 <i>Survey date: FRIDAY 17/11/17</i>	DETACHED HOUSES	LANCASHIRE	<i>Survey Type: MANUAL</i>
17	LE-03-A-02 MELBOURNE ROAD IBSTOCK  Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 85 <i>Survey date: THURSDAY 28/06/18</i>	DETACHED & OTHERS	LEICESTERSHIRE	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

18	NF-03-A-03 HALING WAY THETFORD	DETACHED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		10	
	<i>Survey date: WEDNESDAY</i>		<i>16/09/15</i>	<i>Survey Type: MANUAL</i>
19	NF-03-A-04 NORTH WALSHAM ROAD NORTH WALSHAM	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		70	
	<i>Survey date: WEDNESDAY</i>		<i>18/09/19</i>	<i>Survey Type: MANUAL</i>
20	NF-03-A-05 HEATH DRIVE HOLT	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		40	
	<i>Survey date: THURSDAY</i>		<i>19/09/19</i>	<i>Survey Type: MANUAL</i>
21	NF-03-A-10 HUNSTANTON ROAD HUNSTANTON	MIXED HOUSES & FLATS		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		17	
	<i>Survey date: WEDNESDAY</i>		<i>12/09/18</i>	<i>Survey Type: DIRECTIONAL ATC COUNT</i>
22	NF-03-A-14 BEAUFORT WAY GREAT YARMOUTH BRADWELL	MIXED HOUSES		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		150	
	<i>Survey date: THURSDAY</i>		<i>05/10/17</i>	<i>Survey Type: DIRECTIONAL ATC COUNT</i>
23	NF-03-A-16 NORWICH COMMON WYMONDHAM	MIXED HOUSES & FLATS		NORFOLK
	Edge of Town Residential Zone Total No of Dwellings:		138	
	<i>Survey date: TUESDAY</i>		<i>20/10/15</i>	<i>Survey Type: DIRECTIONAL ATC COUNT</i>
24	NY-03-A-11 HORSEFAIR BOROUGHBRIDGE	PRIVATE HOUSING		NORTH YORKSHIRE
	Edge of Town Residential Zone Total No of Dwellings:		23	
	<i>Survey date: WEDNESDAY</i>		<i>18/09/13</i>	<i>Survey Type: MANUAL</i>
25	SC-03-A-04 HIGH ROAD BYFLEET	DETACHED & TERRACED		SURREY
	Edge of Town Residential Zone Total No of Dwellings:		71	
	<i>Survey date: THURSDAY</i>		<i>23/01/14</i>	<i>Survey Type: MANUAL</i>
26	SF-03-A-05 VALE LANE BURY ST EDMUNDS	DETACHED HOUSES		SUFFOLK
	Edge of Town Residential Zone Total No of Dwellings:		18	
	<i>Survey date: WEDNESDAY</i>		<i>09/09/15</i>	<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

27	SF-03-A-06 BURY ROAD KENTFORD	DETACHED & SEMI -DETACHED	SUFFOLK
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 38 <i>Survey date: FRIDAY 22/09/17</i>		
28	SH-03-A-05 SANDCROFT TELFORD SUTTON HILL	SEMI -DETACHED/TERRACED	SHROPSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 54 <i>Survey date: THURSDAY 24/10/13</i>		
29	SM-03-A-01 WEMBDON ROAD BRIDGWATER NORTHFIELD	DETACHED & SEMI	SOMERSET
	Edge of Town Residential Zone Total No of Dwellings: 33 <i>Survey date: THURSDAY 24/09/15</i>		
30	SM-03-A-02 HYDE LANE NEAR TAUNTON CREECH SAINT MICHAEL	MIXED HOUSES	SOMERSET
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 42 <i>Survey date: TUESDAY 25/09/18</i>		
31	SM-03-A-03 HYDE LANE NEAR TAUNTON CREECH ST MICHAEL	MIXED HOUSES	SOMERSET
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 41 <i>Survey date: TUESDAY 25/09/18</i>		
32	ST-03-A-08 SILKMORE CRESCENT STAFFORD MEADOWCROFT PARK	DETACHED HOUSES	STAFFORDSHIRE
	Edge of Town Residential Zone Total No of Dwellings: 26 <i>Survey date: WEDNESDAY 22/11/17</i>		
33	TW-03-A-03 STATION ROAD NEAR NEWCASTLE BACKWORTH	MIXED HOUSES	TYNE & WEAR
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 33 <i>Survey date: FRIDAY 13/11/15</i>		
34	VG-03-A-01 ARTHUR STREET BARRY	SEMI -DETACHED & TERRACED	VALE OF GLAMORGAN
	Edge of Town Residential Zone Total No of Dwellings: 12 <i>Survey date: MONDAY 08/05/17</i>		

LIST OF SITES relevant to selection parameters (Cont.)

35	WK-03-A-04 DALEHOUSE LANE KENILWORTH	DETACHED HOUSES		WARWICKSHIRE
	Edge of Town Residential Zone			
	Total No of Dwellings:	49		
	Survey date: FRIDAY	27/09/19		Survey Type: MANUAL
36	WM-03-A-04 OSBORNE ROAD COVENTRY EARLSDON	TERRACED HOUSES		WEST MIDLANDS
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone			
	Total No of Dwellings:	39		
	Survey date: MONDAY	21/11/16		Survey Type: MANUAL
37	WS-03-A-07 EMMS LANE NEAR HORSHAM BROOKS GREEN	BUNGALOWS		WEST SUSSEX
	Neighbourhood Centre (PPS6 Local Centre) Village			
	Total No of Dwellings:	57		
	Survey date: THURSDAY	19/10/17		Survey Type: MANUAL
38	WS-03-A-10 TODDINGTON LANE LITTLEHAMPTON WICK	MIXED HOUSES		WEST SUSSEX
	Edge of Town Residential Zone			
	Total No of Dwellings:	79		
	Survey date: WEDNESDAY	07/11/18		Survey Type: MANUAL
39	WY-03-A-01 SPRING VALLEY CRESCENT LEEDS BRAMLEY	MIXED HOUSING		WEST YORKSHIRE
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone			
	Total No of Dwellings:	46		
	Survey date: WEDNESDAY	21/09/16		Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BD-03-A-03	Covid
CA-03-A-07	Covid
HF-03-A-04	Covid
NR-03-A-02	Covid
NR-03-A-03	Covid
SC-03-A-06	Covid
SF-03-A-08	Covid
SH-03-A-06	very low peak trips
SY-03-A-02	Covid
SY-03-A-03	Covid
WK-03-A-02	very low peak trips
WO-03-A-07	Covid

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED  
TOTAL VEHICLES

Ranking Type: TOTALS Time Range: 08:00-09:00  
15th Percentile = No. 33 NF-03-A-10 Tot: 0.235  
85th Percentile = No. 7 WK-03-A-04 Tot: 0.653

Median Values

Arrivals: 0.175  
Departures: 0.325  
Totals: 0.500

Mean Values

Arrivals: 0.134  
Departures: 0.329  
Totals: 0.463

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces Per Dwelling
								Arrivals	Departures	Totals	
1	VG-03-A-01	SEMI-DETACHED	BARRY	VALE OF GLAMORGAN	12	Mon	08/05/17	0.250	0.667	0.917	2.33
2	GM-03-A-10	DETACHED/SEMI	MANCHESTER	GREATER MANCHESTER	29	Wed	12/10/11	0.138	0.759	0.897	2.79
3	SM-03-A-02	MIXED HOUSES	NEAR TAUNTON	SOMERSET	42	Tue	25/09/18	0.286	0.500	0.786	3.38
4	TW-03-A-03	MIXED HOUSES	NEAR NEWCASTLE	TYNE & WEAR	33	Fri	13/11/15	0.212	0.545	0.757	4.00
5	CH-03-A-09	TERRACED HOUSE	MACCLESFIELD	CHESHIRE	24	Mon	24/11/14	0.250	0.417	0.667	1.33
6	NF-03-A-16	MIXED HOUSES &	WYMONDHAM	NORFOLK	138	Tue	20/10/15	0.210	0.449	0.659	2.01
7	WK-03-A-04	DETACHED HOUSE	KENILWORTH	WARWICKSHIRE	49	Fri	27/09/19	0.163	0.490	0.653	2.80
8	ES-03-A-05	MIXED HOUSES &	NEAR EASTBOURNE	EAST SUSSEX	99	Wed	05/06/19	0.131	0.495	0.626	1.99
9	NF-03-A-14	MIXED HOUSES	GREAT YARMOUTH	NORFOLK	150	Thu	05/10/17	0.227	0.387	0.614	1.83
10	NF-03-A-05	MIXED HOUSES	HOLT	NORFOLK	40	Thu	19/09/19	0.300	0.300	0.600	2.50
11	KC-03-A-04	SEMI-DETACHED	AYLESFORD	KENT	110	Fri	22/09/17	0.127	0.473	0.600	1.77
12	LE-03-A-02	DETACHED & OTH	IBSTOCK	LEICESTERSHIRE	85	Thu	28/06/18	0.212	0.353	0.565	4.27
13	NY-03-A-11	PRIVATE HOUSIN	BOROUGHBRIDGE	NORTH YORKSHIRE	23	Wed	18/09/13	0.000	0.565	0.565	6.26
14	SM-03-A-03	MIXED HOUSES	NEAR TAUNTON	SOMERSET	41	Tue	25/09/18	0.171	0.390	0.561	2.88
15	DH-03-A-03	SEMI-DETACHED	DURHAM	DURHAM	57	Fri	19/10/18	0.211	0.333	0.544	3.33
16	LC-03-A-31	DETACHED HOUSE	PRESTON	LANCASHIRE	32	Fri	17/11/17	0.156	0.375	0.531	2.41
17	SM-03-A-01	DETACHED & SEM	BRIDGWATER	SOMERSET	33	Thu	24/09/15	0.182	0.333	0.515	3.97
18	HC-03-A-21	TERRACED & SEM	BASINGSTOKE	HAMPSHIRE	39	Tue	13/11/18	0.103	0.410	0.513	2.51
19	WY-03-A-01	MIXED HOUSING	LEEDS	WEST YORKSHIRE	46	Wed	21/09/16	0.217	0.283	0.500	1.26
20	CH-03-A-10	SEMI-DETACHED	NORTHWICH	CHESHIRE	40	Tue	04/06/19	0.175	0.325	0.500	1.85
21	SH-03-A-05	SEMI-DETACHED/	TELFORD	SHROPSHIRE	54	Thu	24/10/13	0.130	0.370	0.500	1.17
22	SC-03-A-04	DETACHED & TER	BYFLEET	SURREY	71	Thu	23/01/14	0.141	0.352	0.493	2.49
23	ES-03-A-02	PRIVATE HOUSIN	PEACEHAVEN	EAST SUSSEX	37	Fri	18/11/11	0.081	0.405	0.486	1.59
24	HC-03-A-22	MIXED HOUSES	NEAR EASTLEIGH	HAMPSHIRE	40	Wed	31/10/18	0.075	0.325	0.400	2.52
25	WM-03-A-04	TERRACED HOUSE	COVENTRY	WEST MIDLANDS	39	Mon	21/11/16	0.128	0.256	0.384	1.15
26	WS-03-A-10	MIXED HOUSES	LITTLEHAMPTON	WEST SUSSEX	79	Wed	07/11/18	0.089	0.241	0.330	2.41
27	DC-03-A-08	BUNGALOWS	BOURNEMOUTH	DORSET	28	Mon	24/03/14	0.179	0.143	0.322	4.68
28	ST-03-A-08	DETACHED HOUSE	STAFFORD	STAFFORDSHIRE	26	Wed	22/11/17	0.000	0.308	0.308	3.42
29	SF-03-A-06	DETACHED & SEM	KENTFORD	SUFFOLK	38	Fri	22/09/17	0.053	0.237	0.290	0.92
30	NF-03-A-04	MIXED HOUSES	NORTH WALSHAM	NORFOLK	70	Wed	18/09/19	0.071	0.214	0.285	2.36
31	WS-03-A-07	BUNGALOWS	NEAR HORSHAM	WEST SUSSEX	57	Thu	19/10/17	0.140	0.140	0.280	1.89
32	EX-03-A-02	DETACHED & SEM	CHIGWELL	ESSEX	97	Mon	27/11/17	0.103	0.155	0.258	0.87
33	NF-03-A-10	MIXED HOUSES &	HUNSTANTON	NORFOLK	17	Wed	12/09/18	0.059	0.176	0.235	3.35
34	SF-03-A-05	DETACHED HOUSE	BURY ST EDMUNDS	SUFFOLK	18	Wed	09/09/15	0.000	0.222	0.222	4.17
35	NF-03-A-03	DETACHED HOUSE	THETFORD	NORFOLK	10	Wed	16/09/15	0.100	0.100	0.200	3.70
36	ES-03-A-04	MIXED HOUSES &	CAMBER	EAST SUSSEX	134	Fri	15/07/16	0.052	0.134	0.186	1.91
37	GM-03-A-11	TERRACED & SEM	MANCHESTER	GREATER MANCHESTER	37	Mon	26/09/16	0.054	0.108	0.162	1.08
38	DH-03-A-02	MIXED HOUSES	BISHOP AUCKLAND	DURHAM	125	Mon	27/03/17	0.032	0.104	0.136	0.99
39	KC-03-A-05	DETACHED & SEM	NEAR CHATHAM	KENT	8	Fri	22/09/17	0.000	0.000	0.000	2.00

*This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).*

*The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m<sup>2</sup> GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.*



RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED  
TOTAL VEHICLES

Ranking Type: TOTALS Time Range: 17:00-18:00  
15th Percentile = No. 33 GM-03-A-11 Tot: 0.216  
85th Percentile = No. 7 TW-03-A-03 Tot: 0.606

Median Values

Arrivals: 0.366  
Departures: 0.099  
Totals: 0.465

Mean Values

Arrivals: 0.299  
Departures: 0.142  
Totals: 0.441

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces Per Dwelling
								Arrivals	Departures	Totals	
1	WK-03-A-04	DETACHED HOUSE	KENILWORTH	WARWICKSHIRE	49	Fri	27/09/19	0.429	0.367	0.796	2.80
2	CH-03-A-09	TERRACED HOUSE	MACCLESFIELD	CHESHIRE	24	Mon	24/11/14	0.500	0.250	0.750	1.33
3	NY-03-A-11	PRIVATE HOUSIN	BOROUGHBRIDGE	NORTH YORKSHIRE	23	Wed	18/09/13	0.609	0.130	0.739	6.26
4	NF-03-A-16	MIXED HOUSES &	WYMONDHAM	NORFOLK	138	Tue	20/10/15	0.435	0.275	0.710	2.01
5	SM-03-A-03	MIXED HOUSES	NEAR TAUNTON	SOMERSET	41	Tue	25/09/18	0.537	0.146	0.683	2.88
6	SM-03-A-02	MIXED HOUSES	NEAR TAUNTON	SOMERSET	42	Tue	25/09/18	0.452	0.190	0.642	3.38
7	TW-03-A-03	MIXED HOUSES	NEAR NEWCASTLE	TYNE & WEAR	33	Fri	13/11/15	0.333	0.273	0.606	4.00
8	HC-03-A-22	MIXED HOUSES	NEAR EASTLEIGH	HAMPSHIRE	40	Wed	31/10/18	0.425	0.175	0.600	2.52
9	VG-03-A-01	SEMI-DETACHED	BARRY	VALE OF GLAMORGAN	12	Mon	08/05/17	0.333	0.250	0.583	2.33
10	SF-03-A-05	DETACHED HOUSE	BURY ST EDMUNDS	SUFFOLK	18	Wed	09/09/15	0.389	0.167	0.556	4.17
11	GM-03-A-10	DETACHED/SEMI	MANCHESTER	GREATER MANCHESTER	29	Wed	12/10/11	0.448	0.103	0.551	2.79
12	LE-03-A-02	DETACHED & OTH	IBSTOCK	LEICESTERSHIRE	85	Thu	28/06/18	0.329	0.212	0.541	4.27
13	LC-03-A-31	DETACHED HOUSE	PRESTON	LANCASHIRE	32	Fri	17/11/17	0.438	0.094	0.532	2.41
14	ES-03-A-05	MIXED HOUSES &	NEAR EASTBOURNE	EAST SUSSEX	99	Wed	05/06/19	0.384	0.131	0.515	1.99
15	NF-03-A-14	MIXED HOUSES	GREAT YARMOUTH	NORFOLK	150	Thu	05/10/17	0.360	0.153	0.513	1.83
16	HC-03-A-21	TERRACED & SEM	BASINGSTOKE	HAMPSHIRE	39	Tue	13/11/18	0.308	0.205	0.513	2.51
17	SM-03-A-01	DETACHED & SEM	BRIDGWATER	SOMERSET	33	Thu	24/09/15	0.333	0.152	0.485	3.97
18	NF-03-A-05	MIXED HOUSES	HOLT	NORFOLK	40	Thu	19/09/19	0.300	0.175	0.475	2.50
19	NF-03-A-10	MIXED HOUSES &	HUNSTANTON	NORFOLK	17	Wed	12/09/18	0.294	0.176	0.470	3.35
20	SC-03-A-04	DETACHED & TER	BYFLEET	SURREY	71	Thu	23/01/14	0.366	0.099	0.465	2.49
21	ST-03-A-08	DETACHED HOUSE	STAFFORD	STAFFORDSHIRE	26	Wed	22/11/17	0.269	0.192	0.461	3.42
22	WS-03-A-10	MIXED HOUSES	LITTLEHAMPTON	WEST SUSSEX	79	Wed	07/11/18	0.266	0.152	0.418	2.41
23	NF-03-A-04	MIXED HOUSES	NORTH WALSHAM	NORFOLK	70	Wed	18/09/19	0.271	0.143	0.414	2.36
24	DH-03-A-03	SEMI-DETACHED	DURHAM	DURHAM	57	Fri	19/10/18	0.193	0.211	0.404	3.33
25	NF-03-A-03	DETACHED HOUSE	THETFORD	NORFOLK	10	Wed	16/09/15	0.400	0.000	0.400	3.70
26	SH-03-A-05	SEMI-DETACHED/	TELFORD	SHROPSHIRE	54	Thu	24/10/13	0.241	0.130	0.371	1.17
27	ES-03-A-02	PRIVATE HOUSIN	PEACEHAVEN	EAST SUSSEX	37	Fri	18/11/11	0.351	0.000	0.351	1.59
28	SF-03-A-06	DETACHED & SEM	KENTFORD	SUFFOLK	38	Fri	22/09/17	0.263	0.079	0.342	0.92
29	KC-03-A-04	SEMI-DETACHED	AYLESFORD	KENT	110	Fri	22/09/17	0.273	0.064	0.337	1.77
30	CH-03-A-10	SEMI-DETACHED	NORTHWICH	CHESHIRE	40	Tue	04/06/19	0.250	0.075	0.325	1.85
31	DC-03-A-08	BUNGALOWS	BOURNEMOUTH	DORSET	28	Mon	24/03/14	0.107	0.179	0.286	4.68
32	ES-03-A-04	MIXED HOUSES &	CAMBER	EAST SUSSEX	134	Fri	15/07/16	0.157	0.112	0.269	1.91
33	GM-03-A-11	TERRACED & SEM	MANCHESTER	GREATER MANCHESTER	37	Mon	26/09/16	0.108	0.108	0.216	1.08
34	WM-03-A-04	TERRACED HOUSE	COVENTRY	WEST MIDLANDS	39	Mon	21/11/16	0.103	0.103	0.206	1.15
35	EX-03-A-02	DETACHED & SEM	CHIGWELL	ESSEX	97	Mon	27/11/17	0.103	0.062	0.165	0.87
36	WS-03-A-07	BUNGALOWS	NEAR HORSHAM	WEST SUSSEX	57	Thu	19/10/17	0.088	0.070	0.158	1.89
37	WY-03-A-01	MIXED HOUSING	LEEDS	WEST YORKSHIRE	46	Wed	21/09/16	0.043	0.109	0.152	1.26
38	KC-03-A-05	DETACHED & SEM	NEAR CHATHAM	KENT	8	Fri	22/09/17	0.125	0.000	0.125	2.00
39	DH-03-A-02	MIXED HOUSES	BISHOP AUCKLAND	DURHAM	125	Mon	27/03/17	0.064	0.016	0.080	0.99

*This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).*

*The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m<sup>2</sup> GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.*

**T21514**

**Land off Offoxey Road, Bishop's Wood**



---

## **Appendix C**

### **Census 2011 Journey to Work Data**

**WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)**

ONS Crown Copyright Reserved [from Nomis on 29 November 2021]

population All usual residents aged 16 and over in employment the week before the census  
 units Persons  
 date 2011  
 usual residence E02006176 : South Staffordshire 003 (2011 super output area - middle layer)

place of work : 2011 census merged local authority district	All categories: Method of travel to work (2001 specification)	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi	Motorcycle, scooter or moped	Driving a car or van	Passenger in a car or van	Bicycle	On foot	Assignment			
Wolverhampton	631	0	5	23	0	5	562	31	3	2	100% Offoxey Road (S)	Ivetsey Bank Road (N)	1019	46.4%
South Staffordshire	733	0	3	9	0	4	545	46	25	100	50% Ivetsey Bank Rd (N)/50% Offoxey Road (S)	Offoxey Road (S)	894.5	40.8%
Telford and Wrekin	251	0	1	1	0	0	238	11	0	0	100% Offoxey Road (W)	Offoxey Road (W)	281.5	12.8%
Walsall	145	0	1	1	0	1	134	7	1	0	100% Ivetsey Bank Road (N)			
Stafford	146	0	2	1	0	0	130	1	2	10	100% Ivetsey Bank Road (N)			
Cannock Chase	130	0	1	1	0	1	118	5	2	2	100% Ivetsey Bank Road (N)			
Shropshire	97	0	2	0	0	0	87	5	2	1	50% Ivetsey Bank Rd (N)/50% Offoxey Road (W)			
Birmingham	134	1	43	2	0	1	85	2	0	0	100% Ivetsey Bank Road (N)			
Sandwell	93	1	0	0	1	0	81	9	0	0	100% Ivetsey Bank Road (N)			
Dudley	56	0	0	1	0	2	51	2	0	0	100% Offoxey Road (S)			
Lichfield	42	0	1	1	0	0	39	1	0	0	100% Ivetsey Bank Road (N)			
Stoke-on-Trent	27	0	0	1	0	0	26	0	0	0	100% Ivetsey Bank Road (N)			
Tamworth	16	0	0	0	0	0	15	1	0	0	100% Ivetsey Bank Road (N)			
East Staffordshire	14	0	0	0	0	0	14	0	0	0	100% Ivetsey Bank Road (N)			
Coventry	11	0	1	0	0	0	10	0	0	0	100% Ivetsey Bank Road (N)			
Solihull	11	0	1	0	0	0	10	0	0	0	100% Ivetsey Bank Road (N)			
North Warwickshire	9	0	0	0	0	0	9	0	0	0	100% Ivetsey Bank Road (N)			
Wyre Forest	9	0	0	0	0	0	9	0	0	0	100% Offoxey Road (S)			
North West Leicestershire	7	0	0	0	0	0	7	0	0	0	100% Ivetsey Bank Road (N)			
Manchester	7	0	1	0	0	0	6	0	0	0	100% Ivetsey Bank Road (N)			
Cheshire East	6	0	1	0	0	0	5	0	0	0	100% Ivetsey Bank Road (N)			
Calderdale	5	0	0	0	0	0	5	0	0	0	100% Ivetsey Bank Road (N)			
Newcastle-under-Lyme	6	0	0	0	0	0	5	1	0	0	100% Ivetsey Bank Road (N)			
Leicester	4	0	0	0	0	0	4	0	0	0	100% Ivetsey Bank Road (N)			

2,195

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.



**Report Type: Ecological Appraisal**

**Client Name: Offoxey Road Ltd**

**Site Address: Land north of Offoxey Rd  
Bishops Wood  
Staffordshire  
ST19 9AF**

**Report Reference: PEA 21-11 348.1**

**Date of Issue: 30<sup>th</sup> November 2021**



**Author: Logan Maggs BSc (hons)  
[logan@greenscape.pm](mailto:logan@greenscape.pm) 07519 105793**





Report Details	
<b>Classification</b>	Ecological Appraisal
<b>Status</b>	Final
<b>Reference</b>	PEA 21-11 348.1

Version History	
<b>Report Reference</b>	<b>Date of Revision</b>
PEA 21-11 348.1	30 <sup>th</sup> November 2021

Quality Assurance			
	Name	Signature	Date
<b>Author:</b>	L. Maggs BSc(hons) <b>Lead Consultant</b>		30 <sup>th</sup> November 2021
<b>Reviewed by:</b>	B. Jones BSc(hons) MSc <b>Lead Consultant</b>		30 <sup>th</sup> November 2021

Greenscape Environmental Ltd.  
Registered Office: Long Acres, Lyth Bank, Shrewsbury, Shropshire, SY3 0BW  
Company Reg number: 5364283

This report is the copyright of Greenscape Environmental Ltd. Any unauthorised reproduction or usage by any person without the specific authority of Greenscape is prohibited.

The report should be read in its entirety.

Questions arising from the survey report should be directed to the author of the report who will be pleased to clarify any technical issues raised.

Whilst the surveyors make every reasonable effort, Greenscape Environmental Ltd cannot guarantee that all protected species have been identified and survey results are definitive. Many species are cryptic and transitional in habit.

Reports are considered valid for one year for planning purposes, after which time further survey information may be required.

Greenscape Environmental Ltd can provide advice and support for recommendations and planning conditions.

The use of this report or survey data for any form of formal submission to an NGO or other authority implicitly implies acceptance of the terms and conditions.



## Table of Contents

<b>1 EXECUTIVE SUMMARY.....</b>	<b>1</b>
1.1 Purpose of the Report .....	1
1.2 Methodology .....	1
1.3 Key Impacts and Mitigation Measures.....	1
1.4 Conclusion .....	1
<b>2 INTRODUCTION .....</b>	<b>2</b>
2.1 Project Background .....	2
2.2 Purpose of the Report .....	2
2.3 Site Context and Location .....	2
<b>3 METHODOLOGY.....</b>	<b>3</b>
3.1 Desk Study .....	3
3.2 Field Survey.....	3
3.3 Species Survey.....	3
3.4 Constraints of the Survey .....	3
<b>4 BASELINE ECOLOGICAL CONDITIONS.....</b>	<b>4</b>
4.1 Nearby Features of Importance .....	4
4.2 Habitats on Site.....	5
4.3 Bats.....	9
4.4 Other Mammals.....	9
4.5 Birds .....	10
4.6 Amphibians.....	11
4.7 Reptiles.....	13
4.8 Invertebrates .....	13
4.9 Invasive Species.....	13
<b>5 DESCRIPTION OF PROPOSED DEVELOPMENT.....</b>	<b>14</b>
<b>6 IMPACTS, ENHANCEMENTS AND MITIGATION .....</b>	<b>15</b>
6.1 Nearby Features of Importance .....	15
6.2 Habitats on Site.....	15
6.3 Bats.....	18
6.4 Other Mammals.....	20
6.5 Birds .....	20
6.6 Amphibians.....	21
6.7 Reptiles.....	23
6.8 Invertebrates .....	24
6.9 Invasive Species.....	24
<b>7 CONCLUDING REMARKS.....</b>	<b>25</b>
<b>APPENDIX A – SURVEYOR DETAILS.....</b>	<b>26</b>
<b>APPENDIX B – METHODOLOGY .....</b>	<b>27</b>
<b>APPENDIX C – POLICY .....</b>	<b>31</b>
<b>APPENDIX D – BIBLIOGRAPHY .....</b>	<b>35</b>



## Table of Figures

Figure 4.1. Identifying any designated areas near site, a 1km buffer is shown .....	4
Figure 4.2. Identifying any previous EPS licences near site, a 2km buffer is shown.....	4
Figure 4.3. A map showing the UK Habs classification codes for the site.....	5
Figure 4.4. Representative view of the arable stubble .....	6
Figure 4.5. Field margin and southern hedge (H1) .....	6
Figure 4.6. Residential hedge (H2) .....	7
Figure 4.7. Hedgerows in southeastern corner (H3 right and H4 to rear).....	7
Figure 4.8. Hedgerow H6 .....	8
Figure 4.9. Residential hedgerows to north.....	8
Figure 4.10. Looking north up the western boundary .....	9
Figure 4.11. OS Map showing a 500m buffer around site, highlighting ponds .....	11
Figure 4.12. Pond 1 in 2019 .....	12
Figure 4.13. Pond 2 in 2019 .....	12
Figure 4.14. Ponds 3 and 4 from the roadside.....	12
Figure 4.15. Land between ponds 3 and 4 and the site .....	13
Figure 6.1. Pond Design (Taken from the Million Pond Project).....	15
Figure 6.2. Example integral bat box .....	18
Figure 6.3. Raised timber cladding creating bat access between wall and timber .....	19
Figure 6.4. Example external down light design .....	19
Figure 6.5. Bird boxes .....	21
Figure 6.6. Hibernacula design from Froglife © .....	23
Figure 6.7. Invertebrate brick and bug house .....	24

## Table of Tables

Table 3.1. Survey conditions .....	3
Table 4.1. UK Habitat codes .....	5
Table 6.1. New hedge planting scheme .....	16
Table 6.2. Fruiting plant enhancement.....	16
Table 6.3. Trees proposed for enhancement .....	17
Table A.1. Details of surveyors' experience and licences held.....	26
Table B.1. Data sources .....	27
Table B.2. Criteria of ecological values.....	28
Table B.3. Categorisation of trees for bats.....	29





## **1 Executive Summary**

### **1.1 Purpose of the Report**

Greenscape Environmental Ltd was commissioned by Offoxey Road Ltd, to undertake a preliminary ecological appraisal of the land north of Offoxey road at Bishops Wood, to provide supporting information for a planning application for a new housing estate and community areas.

The survey report has these principal aims:

- To provide an initial assessment of the ecological value of the site in local context.
- To provide details supporting further surveys that may be required.
- To identify potential ecological constraints relating to the development, and recommend measures to avoid, reduce or manage negative effects, and to provide a net ecological gain.

### **1.2 Methodology**

The appraisal included a desktop study, reviews of other surveys previously conducted in the area by Greenscape Environmental, and a site visit undertaken at the site, OS grid reference SJ83540936 on 17<sup>th</sup> November 2021 by Logan Maggs.

### **1.3 Key Impacts and Mitigation Measures**

The desktop study included a search for nearby designated sites and previously recorded protected species. It was considered that the site could provide potential habitat for ground-nesting birds, and the boundaries may provide commuting habitat for bats and newts and these should be the main focus of the ecological appraisal.

The site comprises approximately 5.3 ha of arable land, surrounded on three sides by formal hedgerow and fence boundaries. The site is of low ecological value, and a rotating crop does not allow the development of a sward that may be suitable for ground nesting birds.

There are five bodies of water within 500m which have been taken into consideration. Two were assessed in 2020 and found to be of negligible value for great crested newts. The other three were on private land and were not assessable during this survey, but the low terrestrial value of site means the risk of an offence is extremely low.

The site has no features of roosting value for bats, and the proposed enhancements on site will vastly improve the value for local bat species. Similarly the new planting regime will provide significantly more nesting potential for local birds.

### **1.4 Conclusion**

It is understood that the site plans will include a woodland walk and attenuation pond, both of which will provide a significant ecological enhancement over the site as it is currently. Provision of artificial bat roosting and bird nesting habitat will be incorporated into the housing plan to provide further enhancement.

The method statements provided in sections 6.2.2, 6.3.2, 6.5.2, 6.6.2 of this report will be followed, and work will be conducted at a suitable time of year to minimise potential impacts.

There are no other ecological constraints to the development as currently proposed.



## 2 Introduction

This report has been compiled by Logan Maggs BSc (hons) who has over 10 years' experience conducting ecological appraisals. It has been reviewed in line with Greenscape's Quality Management System.

For full details of surveyors and licences please see Appendix A.

### 2.1 Project Background

Greenscape Environmental Ltd was commissioned by Offoxey Road Ltd to conduct a survey to determine the presence of protected species and potential for the damage or destruction of habitats of value. This forms part of the planning application for the development of housing and amenity public space (exact details to be confirmed) on the land adjacent to Offoxey Road in Bishops Wood, Staffordshire.

### 2.2 Purpose of the Report

This report aims to:

- Identify the key ecological constraints to the proposed development.
- Inform planning to allow significant ecological effects to be minimised or avoided where possible.
- Allow any necessary mitigation or compensation measures to be developed following the mitigation hierarchy.
- Identify any additional surveys that may be required to inform the assessment.
- Identify the opportunities offered by a project to deliver ecological enhancement under NPPF Section 15.

The Local Planning Authority will require further information regarding bats, nesting birds, small mammals, great crested newts, and reptiles because of the loss of a substantial amount of land.

### 2.3 Site Context and Location

The site is located to the south of Bishops Wood village in Staffordshire, OS grid reference SJ83540936. It is set in a rural environment surrounded by village housing to the north and east, and open farmland to the south and west. There is moderate connectivity to surrounding countryside via hedgerows. There are two woodland areas (Tong Rough and Scilly Grove) 500m west of site. Two ponds exist 80-90m south of site, separated from site by Offoxey Road. The surrounds provide potential foraging, resting, and commuting opportunities for bats, nesting birds, badgers, amphibians and reptiles.



### 3 Methodology

Broad methodologies for data collection and interpretation were informed by guidance outlined in CIEEM (2017) – Guidelines for Preliminary Ecological Appraisals. Full details can be found in Appendix B.

#### 3.1 Desk Study

The desk study provides contextual information such as the site's proximity to designated areas and known records of protected or notable species.

#### 3.2 Field Survey

##### 3.2.1 Date and Survey Conditions

**Table 3.1. Survey conditions**

Date	Time Start	Equipment Used	Weather
17/11/2021	10:00	Camera, net	Overcast, dry underfoot
Comments	One surveyor used: Logan Maggs		

##### 3.2.2 Habitats

The level of survey is aimed to identify field signs of, or habitats with the potential to support protected species and therefore assist in the determination of site value. An assessment of habitats was conducted following the UK Habitat Classifications.

##### 3.2.3 Hedgerows

The aim of the assessment is to ascertain whether the hedgerow could be classified as important according to the definitions listed in the Hedgerow Regulations (1997).

#### 3.3 Species Survey

Features on site were assessed for potential for bat roosts, foraging and commuting

Badger surveys were conducted using guidance from Scottish Natural Heritage commissioned Report No. 096 (2003).

Features on site were assessed for potential for nesting birds.

The assessment of aquatic habitat for great crested newts is based on the Habitat Suitability Index.

The terrestrial habitats at the application site were surveyed and assessed with respect to suitability and potential value for great crested newts.

#### 3.4 Constraints of the Survey

All areas were accessible for this survey. It was conducted at a sub-optimal time of year for the assessment of bats and nesting birds but this was not considered a constraint because evidence and potential for them can be seen year round.

The HSI assessment is based on ponds as they would be during the aquatic phase of a great crested newt, between March and the end of September. Some of the factors involved in the assessment cannot be accurately determined outside of this time period; such as macrophyte cover and water quality assessments. These values are given an educated guess based on the appearance of the pond in conjunction with any local knowledge.



## 4 Baseline Ecological Conditions

### 4.1 Nearby Features of Importance

#### 4.1.1 Designated Sites

The map from Natural England presented in Figure 4.1 indicated that the site is not within 1km of any designated areas.

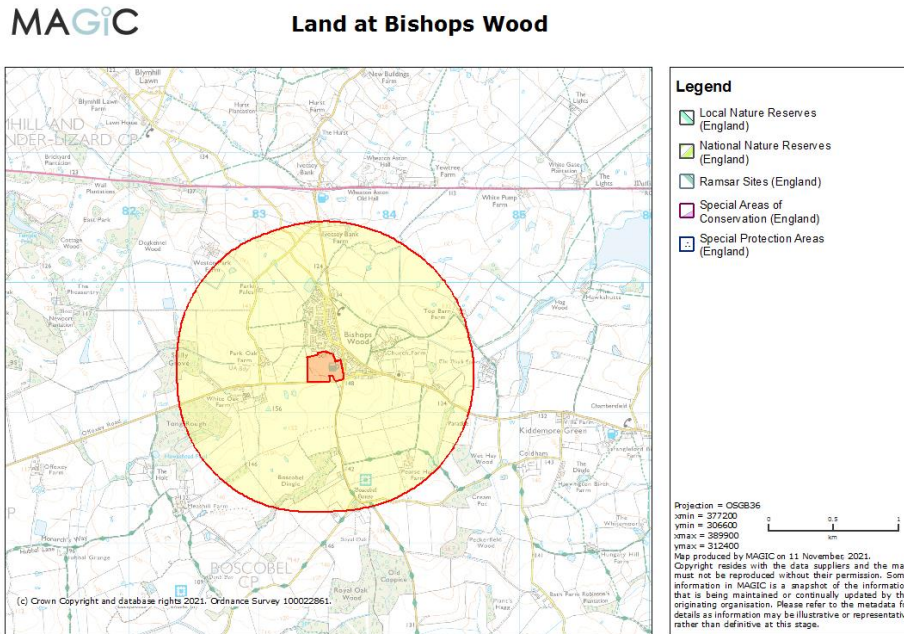


Figure 4.1. Identifying any designated areas near site, a 1km buffer is shown

#### 4.1.2 Nearby European Protected Species Licences

The site is not within 2km of any licences and there are no Great Crested Newt Class Licence returns within 2km/

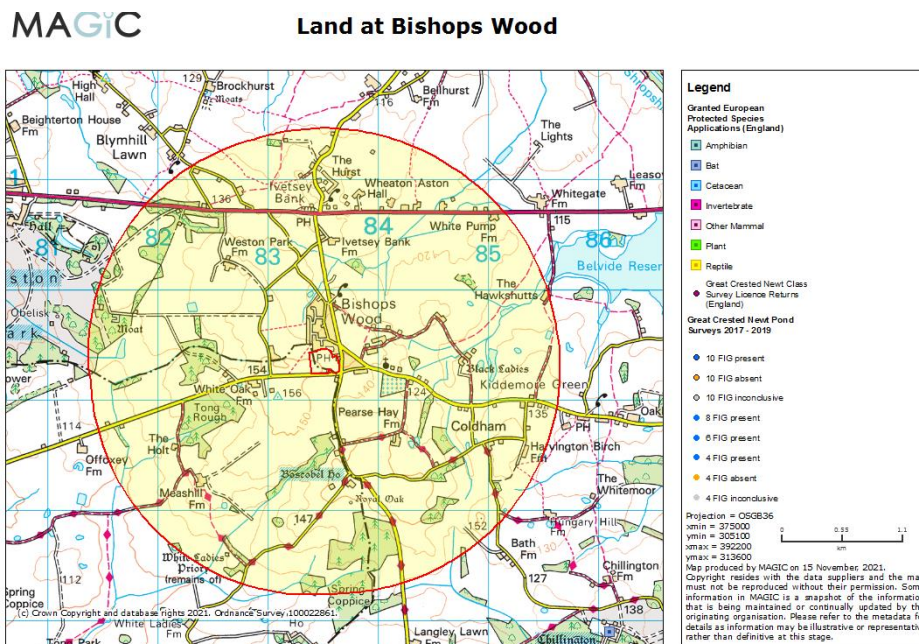
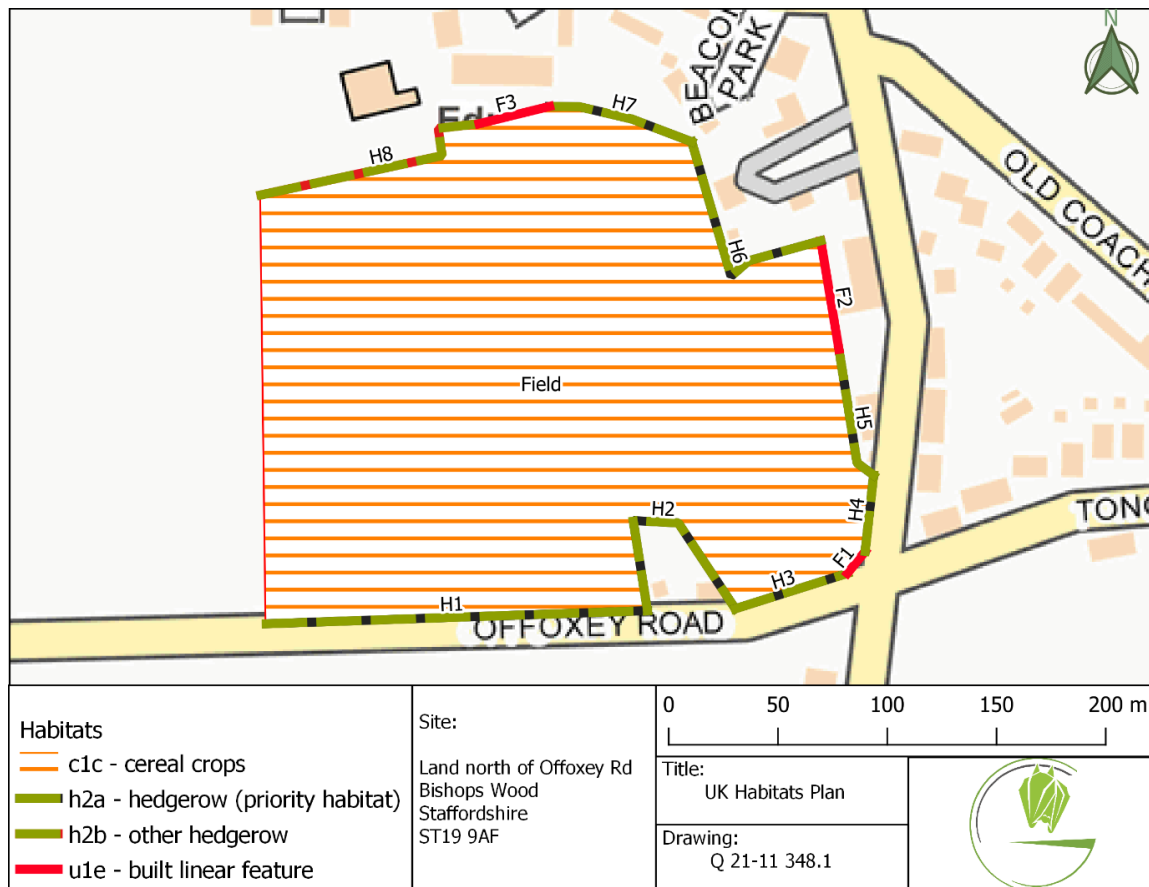


Figure 4.2. Identifying any previous EPS licences near site, a 2km buffer is shown



## 4.2 Habitats on Site

The site comprises of an arable field with hedgerows forming the majority of the boundaries, the field has narrow margins of less than 1m.



**Figure 4.3. A map showing the UK Habs classification codes for the site**

**Table 4.1. UK Habitat codes**

Label	Description	UK Habs
Field	Arable field with narrow (<1m) margins	c1c 17 75 1012
H1	Species poor intact hedgerow Blackthorn ( <i>Prunus spinosa</i> ), hawthorn ( <i>Crataegus monogyna</i> ), holly ( <i>Ilex aquifolium</i> ), sycamore ( <i>Acer pseudoplatanus</i> )	h2a 47 75 81 1180
H2	Residential hedgerow with mature trees Blackthorn, hawthorn, sycamore, holly	h2a 47 76 1171 1180
H3	Species poor intact hedgerow Holly, hawthorn, blackthorn	h2a 47 75 81 1180
H4	Species poor intact hedgerow Holly, hawthorn, blackthorn	h2a 47 75 81 1180
H5	Residential hedgerow Blackthorn, sycamore, hazel ( <i>Corylus avellana</i> )	h2a 47 75 1180
H6	Residential hedgerow Holly with mature holly	h2a 47 75 1170 1180
H7	Residential hedgerow Holly, hawthorn, yew ( <i>Taxus baccata</i> ), leylandii ( <i>Leylandii x Cupressus</i> )	h2a 47 75 1170 1180
H8	Residential hedgerow Privet ( <i>Ligustrum ovalifolium</i> ), cherry laurel ( <i>Prunus laurocerasus</i> )	h2b 48 75 1170 1180
F1	Metal rail fencing and gateway	u1e 69
F2	Garden fencing	u1e 69
F3	Garden fencing	u1e 69



The site is covered by an arable field with margins of only 1m. This is typically a monoculture, though the winter stubble present at the time of survey was beginning to weed over prior to topping and ploughing.



**Figure 4.4. Representative view of the arable stubble**

The roadside hedge to the south (H1) is a short 1m high hedge of hawthorn, interspersed with blackthorn, sycamore and holly.



**Figure 4.5. Field margin and southern hedge (H1)**



The southern boundary has a section that separates the site from a dwelling on Offoxey Road (H2), and this boundary has the same species range as H1 but with much taller trees.



**Figure 4.6. Residential hedge (H2)**

The boundary of the southeastern corner of site (H3 & H4) is made up of well-managed species poor hedgerow similar to H1.



**Figure 4.7. Hedgerows in southeastern corner (H3 right and H4 to rear)**



H5 is a residential boundary hedgerow including sycamore, blackthorn and hazel.

H6 is a boundary around the northeastern area of the field and is a residential hedgerow dominated by mature holly. H7 joins H6 and includes a greater species diversity, including yew and leylandii.



**Figure 4.8. Hedgerow H6**



**Figure 4.9. Residential hedgerows to north**





There is no formal boundary to the west, as the development area bisects a larger field.



**Figure 4.10. Looking north up the western boundary**

## **4.3 Bats**

### **4.3.1 Records**

Records of bats within 2km include Daubenton's bat (*Myotis daubentonii*), whiskered bat (*Myotis mystacinus*), Natterer's bat (*Myotis nattereri*), noctule bat (*Nyctalus noctula*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*P. pygmaeus*), and brown long eared bat (*Plecotus auritus*). All were recorded most recently in 2015, 850m southeast of site at Pearse Hay Farm.

### **4.3.2 Field Observations**

The site had no suitable features for roosting bats. The trees in the boundaries had no visible roost features from ground level, and the development is likely to retain the commuting and foraging value currently present along hedgerows.

## **4.4 Other Mammals**

### **4.4.1 Records**

Records of other mammals within 2km include European water vole (*Arvicola amphibius*) in 2007, European otter (*Lutra lutra*) in 2009, and Eurasian badger (*Meles meles*) in 2017. All records are provided with a 4 figure grid reference.

### **4.4.2 Field Observations**

The site was checked for evidence of non-bat mammals such as badger and none was seen. No latrines, snuffle holes, prints, trackways or sett entrances were identified on or around the site.



## **4.5 Birds**

### **4.5.1 Records**

Records of birds within 2km include Black tern (*Chlidonias niger*), red kite (*Milvus milvus*), lapwing (*Vanellus vanellus*) and green sandpiper (*Tringa ochropus*) in 2016, Hobby (*Falco subbuteo*) in 2014, redwing (*Turdus iliacus*) and fieldfare (*Turdus pilaris*) in 2010 and barn owl (*Tyto alba*) most recently seen in 2009, but owl pellets recorded at Pearse Hay Farm in 2015. Most records are given with 4-digit grid accuracy, making it difficult to define exact locations.

### **4.5.2 Field Observations**

The site itself had low-value features for ground-nesting birds such as lapwing and redwing, but no evidence was seen. The margins of the field are narrow and are not considered sufficient to provide enough growth to cover ground-nests. The cereal crops may provide shelter when grown, however.

The hedgerows and trees around site are likely to provide suitable nesting habitat at the appropriate time of year.



## 4.6 Amphibians

### 4.6.1 Records

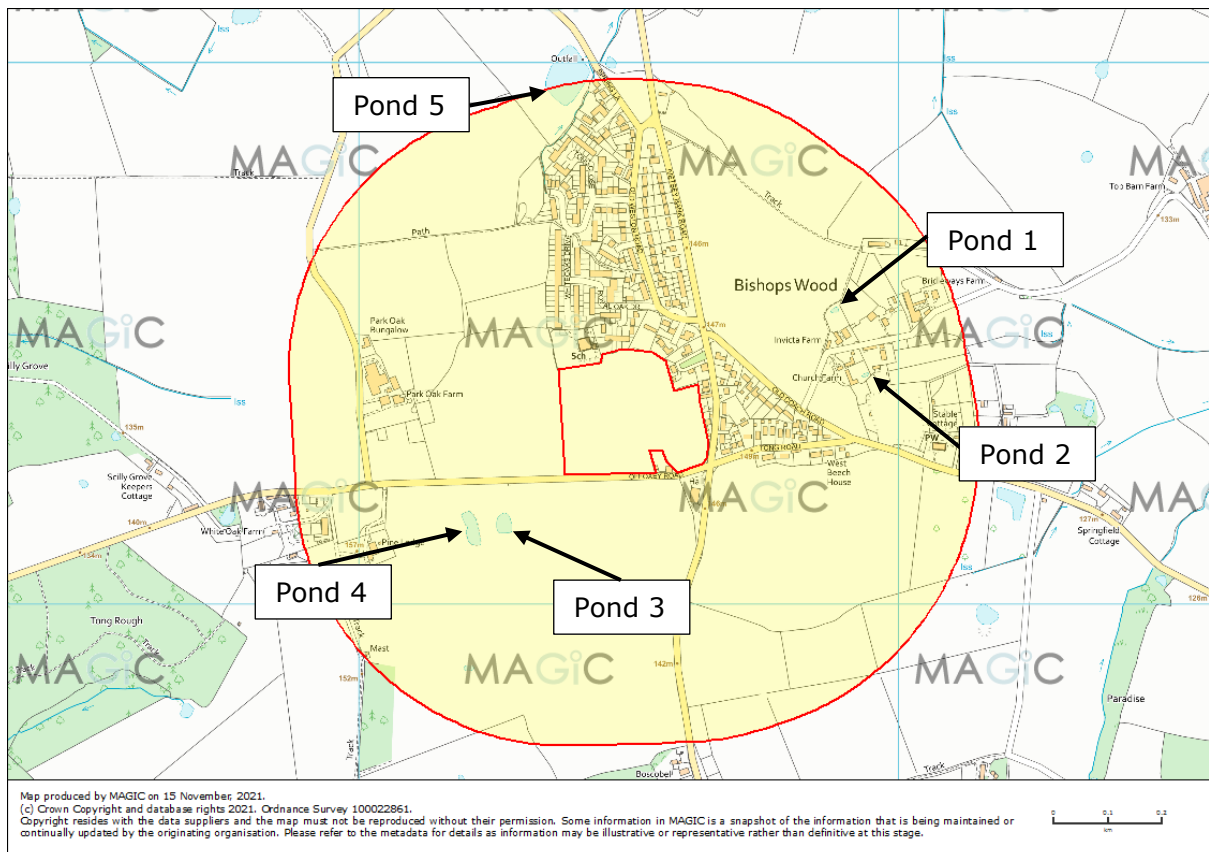
There are no records of amphibians within 2km

### 4.6.2 Field Observations

The field is of no value for amphibians in their terrestrial phase.

There are five ponds shown on OS maps within 500m. Two of these were surveyed in 2019 by Greenscape Environmental for another development to the east – pond 1 was choked with moss and weeds, and pond 2 is a koi pond of no value to newts. These were not reassessed in 2021.

Ponds 3, 4 and 5 are within arable fields, the owners of which were not known and so permission was not available to view up close. Ponds 3 and 4 were visible from the roadside, but pond 5 was obscured from all public vantage points.



**Figure 4.11. OS Map showing a 500m buffer around site, highlighting ponds**



**Figure 4.12. Pond 1 in 2019**



**Figure 4.13. Pond 2 in 2019**



**Figure 4.14. Ponds 3 and 4 from the roadside**



**Figure 4.15. Land between ponds 3 and 4 and the site**

## **4.7 Reptiles**

### **4.7.1 Records**

There are no records of reptiles within 2km.

### **4.7.2 Field Observations**

The site had no features suitable for reptiles.

## **4.8 Invertebrates**

### **4.8.1 Records**

Records of invertebrates within 2km include a number of species recorded as Biodiversity Action Plan (BAP) species, including many species of bee. Records exist across the 2km buffer, predominantly in gardens and the most records are dated in 2015.

### **4.8.2 Field Observations**

There was no notable habitat on site suitable for invertebrates. The crop may be suitable for some species depending on what crop is planted, but no permanent habitat of value that would be lost by development.

## **4.9 Invasive Species**

### **4.9.1 Records**

Japanese knotweed (*Fallopia japonica*), and rhododendron (*Rhododendron ponticum*) have been listed in the composite species list for the area in 2012, and 1999 respectively, but no locations have been given.

### **4.9.2 Field Observations**

No evidence of invasive species was found on or around the site.



## **5 Description of Proposed Development**

The current plans are for a residential development of 70+ houses, and will include an attenuation pond and a woodland walk. The pond will be designed to support wildlife and potentially be a feature for use by the local school for wild lessons.

No plans have been drawn at the time of writing.



## 6 Impacts, Enhancements and Mitigation

### 6.1 Nearby Features of Importance

Figure 4.1 shows that there are no nearby sites or features of importance within 1km, therefore, no negative impact is anticipated.

### 6.2 Habitats on Site

#### 6.2.1 Impacts

H1, H3 and H4 are the only hedgerows that might be covered by the Hedgerows Regulations as the remaining hedgerows all form the boundaries of residential properties and are not covered by the regulations. However, as only four different woody species were recorded in any given 30m length, the hedge is not classified as Important under the Hedgerow Regulations.

All hedges are listed as habitats of principal importance in Section 41 of the NERC Act (2006), however. It is uncertain if any hedge will require removal as the plans are not finalised, but there is ample opportunity to replace any lost hedgerow, and enhance with more.

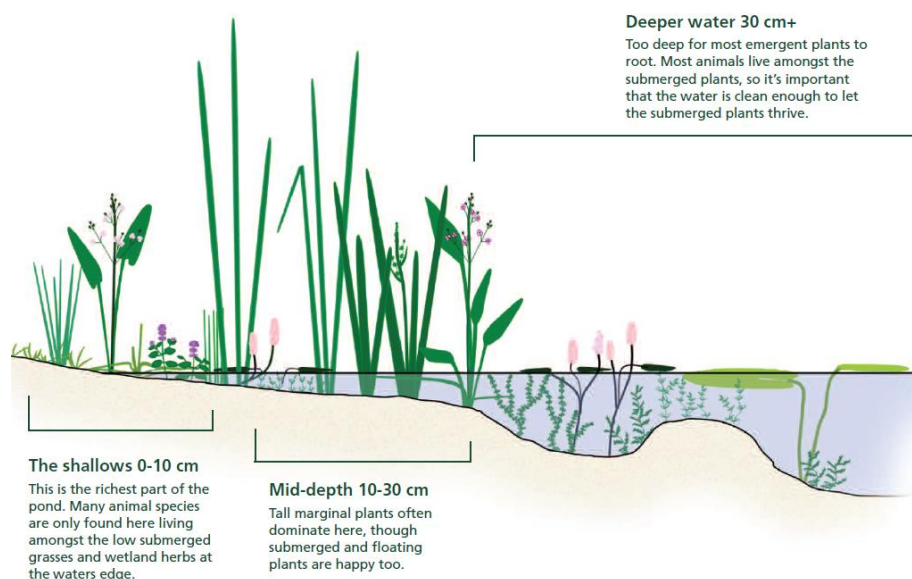
#### 6.2.2 Mitigation and Enhancements

In order to obtain an ecological net gain for the site, the remaining green spaces and site boundaries will require enhancement for local wildlife.

#### Attenuation Pond

The plans include a SuDS scheme, which will result in an attenuation pond. This can be designed in an ecologically beneficial way, with staging and planting that will provide an excellent enhancement both for aquatic species and land-based species that might use the pond as a foraging area.

- The profile of the pond will be stepped down around the edges, allowing different habitats to develop within the same pond.



**Figure 6.1. Pond Design (Taken from the Million Pond Project)**



- The pond will be planted with locally sourced native species to begin with. These will be planted at a minimum of five plants per m<sup>2</sup>.

Reed mace (*Typha angustifolia*) will be planted near the border of the pond. These are staple plants in any SuDS pond and will help with water filtration.

As the pond is near a housing development, visual amenity is just as important as functionality, and so flowering species such as yellow flag iris (*Iris pseudacorus*), water mint (*Mentha aquatica*) and marsh marigold (*Caltha palustris*) can be planted.

Water forget-me-not (*Myosotis scorpioides*) is a favoured plant species for amphibian species such as great crested newts to use as egg-laying substrate. Planting this will provide a relatively quick enhancement for the species in the area.

These plants will form a baseline biodiversity interest which will then be added to by natural colonisation of local native plants. Local plants often colonise new ponds within a short timescale.

### Hedgerows

It is recommended that the landscaping around the site will include some hedge planting to enhance the area for biodiversity. This would include formalising the western boundary with a new hedge to delineate the site from the rest of the arable field.

Plants to use for landscaping and gapping-up of existing boundaries will include locally sourced native species. These will be planted in accordance with BS3936 (part 1, 1992, Nursery Stock, Specifications for trees and shrubs). Planting will occur between November and April depending on the timing of the development.

**Table 6.1. New hedge planting scheme**

Common Name	Latin Name	Distribution (%)
Hawthorn	<i>Crataegus monogyna</i>	35%
Blackthorn	<i>Prunus spinosa</i>	35%
Hazel	<i>Corylus avellana</i>	10%
Holly	<i>Ilex aquifolium</i>	10%
Wild Service Tree	<i>Sorbus torminalis</i>	10%

**Table 6.2. Fruiting plant enhancement**

Common Name	Latin Name
Crab Apple	<i>Malus sylvestris</i>
Wild Cherry	<i>Prunus avium</i>
Wild Pear	<i>Pyrus communis</i>





## Trees

Trees to be used should be from the list below. These should also be native species, locally sourced where possible. Oak should particularly be encouraged because it supports a large diversity of invertebrates.

**Table 6.3. Trees proposed for enhancement**

<b>Common Name</b>	<b>Latin Name</b>
English Oak	<i>Quercus robur</i>
Sessile Oak	<i>Quercus petraea</i>
Lime	<i>Tilia cordata</i>
Rowan	<i>Sorbus aucuparia</i>
Silver Birch	<i>Betula pendula</i>

### 6.2.3 Monitoring

All habitat enhancements will be monitored post-development and any failing plants or features will be addressed as appropriate to maintain the value of the enhancement.



## 6.3 Bats

### 6.3.1 Impacts

Without consideration there is unlikely to be any loss or damage of roosts, nor the potential for death or damage of individual bats. The trees along the site boundaries, notably to the north and northeast are likely to be used by foraging and commuting bats. This habitat is to be retained, and will be protected with a lighting scheme to retain any value. As the proposed location for the woodland walk is as yet unclear, following the northern boundary would create an excellent enhancement for bats that may use the existing trees.

### 6.3.2 Mitigation

Work can be conducted immediately once planning permission has been granted.

### 6.3.3 Compensation & Enhancements

It is recommended that permanent provision be made for roosting opportunities for bats with the inclusion of an integral bat box in at least 10% of the new dwellings. These will be erected at a height of 3-4 m and in a southerly, westerly or easterly facing direction.

#### Enclosed Bat Box (B and C)

- Designed specifically for the pipistrelle bat
- Available in all brick types
- Discrete home for bats
- Various sizes
- Several roosting zones are created inside the box
- Bats are contained within the bat box itself
- Maintenance free with entrance at the base
- Ideal for new build & conservation work



Bat Box B



Bat Box C

Eco Habitats for Bats	Sizes (mm)	Durability
Bat Box Type A	215 x 65	F2 S2 – Fully Frost Resistant
Bat Box Type B	215 x 215 or 215 x 290	F2 S2 – Fully Frost Resistant

**Figure 6.2. Example integral bat box**



If timber cladding is proposed on any of the new buildings, it is recommended that one of the horizontal boards be artificially raised by 15-25mm. This will create access into the cavity between the cladding and the wall behind. Any membrane lining beneath the raised boarding will be bitumen hessian type 1F or TLX Batsafe breather membrane in order to prevent bats coming into contact with modern non-bitumastic breathable membrane.



**Figure 6.3. Raised timber cladding creating bat access between wall and timber**

### **Lighting**

Lighting needs to be designed to have minimal impact on bats and their commuting and foraging areas. This results in the recommended use of downlights and the horizontal spread of lighting to be kept to a minimum.

Where it is not possible to reduce the horizontal spread of light, a 2700°K to 3000°K LED light bulb is recommended, which will provide a warm white light. This range has the least impact on bats and invertebrates.

1. A lighting scheme will be drawn up in line with ILP and BCT Guidance Note 08/18.
2. All newly proposed external lighting will be directed away from any vegetated boundary features to retain dark corridors for commuting bats.
3. There will be no direct illumination of any enhancement features erected for bats.
4. All domestic lighting will be below 10 lux, orientated towards the ground and controlled by PIR (Passive Infra-red), set on a short timer.



**Figure 6.4. Example external down light design**

### **6.3.4 Monitoring**

Failing boxes or enhancements will be replaced at the cost of the developer if deterioration or damage is noted within five years post-development.



## **6.4 Other Mammals**

### **6.4.1 Impacts**

Even without consideration there is unlikely to be any negative impact on local non-bat mammals.

### **6.4.2 Enhancements**

Fences within and around the development will include holes at the base to allow hedgehogs to move freely.

The holes will measure 13x13cm. Hedgehog Highway signs will be installed above the holes to highlight their purpose, these can be purchased from <https://ptes.org/shop/just-in/hedgehog-highway/>.

The new homeowners welcome pack will include details of hedgehog friendly features.

## **6.5 Birds**

### **6.5.1 Impacts**

Should the work necessitate the removal of any areas of hedgerow, there would be potential risk of disturbing nesting birds if conducted during the nesting season.

### **6.5.2 Mitigation and Enhancements**

1. Any tree or hedge removal will be done outside of the bird nesting season, which is March to August inclusive. If this is not possible, a suitably experienced ecologist will conduct a check within the 24 hours prior to work commencement to ensure no nesting birds will be affected.
2. Should a nesting bird be found, a 4m buffer will be left around the nest, and no further disturbance conducted until the young have fledged.
3. Once work has commenced on the building and it is confirmed that there are no nesting birds present, the building will be sealed to prevent birds gaining access during works and potentially causing further delay.
4. It is recommended that a range of woodcrete boxes are erected around the site to provide an enhancement for passerine birds, and a selection of the following would be appropriate.
  - a. Sparrow Terraces should be erected under the eaves of a building at a minimum height of 3m, in a westerly, northerly or easterly aspect.
  - b. 26/32mm hole nest boxes (e.g. Schwegler 1b) should be installed at a minimum height of 3m in a westerly, northerly or easterly aspect.
  - c. Robin boxes should be installed inside vegetation such as a hedge or shrub, ideally at a height of over 2m.



Cedarwood Sparrow Terrace



Schwegler 1b Bird Box



Schwegler 2H Robin Box

Offoxey Road Ltd

**Figure 6.5. Bird boxes**

### 6.5.3 Monitoring

Failing boxes or enhancements will be replaced at the cost of the developer if deterioration or damage is noted within five years post-development.

## 6.6 Amphibians

### 6.6.1 Impacts

The site is of no value for newts in their terrestrial phase. There are no records of newts in the area, and two of the ponds previously assessed were of no value to amphibians.

A precautionary method statement will ensure no negative impacts. This is required due to the uncertainty raised by the lack of presence/absence surveys on the nearby ponds. As the site is of low value already, this method statement will ensure no negative impacts and allow the development to proceed without risk of injury to individual newts.

The proposed enhancements on site – the woodland walk and the attenuation/wildlife pond – will provide excellent enhancements for amphibians in the area, and the total value of site is likely to significantly increase post-development when these features are established.

### 6.6.2 Mitigation and Enhancements

#### Precautionary Working Method Statement

##### Pre-Construction

1. The site will be kept under current management prior to construction. This will reduce the potential for newts to cross the land and reduce the potential for the terrestrial features to improve. All non-crop plants will be kept short (<10cm) to ensure there is no shelter for great crested newts on the site

##### Site Setup

2. A consultant will be employed as the ECoW to provide expert advice throughout the development.
3. The ECoW will provide contractors with a toolbox talk prior to work commencing. This will include information about the legal status of newts and responsibilities of the construction company to ensure no offence is committed. A document to assist with the identification of newts will be left on site.



4. Any hedgerows to be removed for new access will be checked thoroughly by the ECoW prior to construction commencing. This will confirm there are no newts present.
5. Soil and vegetation will be stripped prior to setting up the site compound to ensure the compound contains no vegetation which could potentially attract great crested newts
6. All cabins and equipment will be located on firm compacted ground, preferably a stone or concrete base.
7. Contractors are advised not to handle newts at any time.

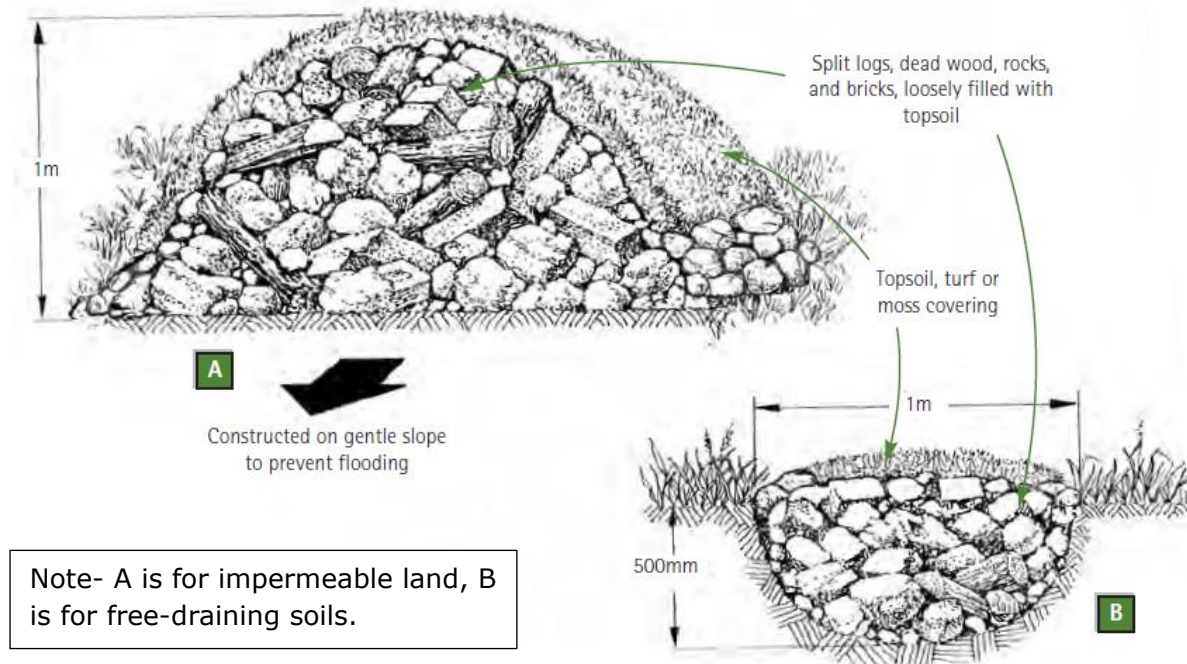
### **Construction Phase**

8. The site foreman will be responsible for ensuring all contractors are aware of the potential to find newts, and that they are familiar with the appearance of newts. If in doubt the ECoW will be contacted.
9. Contractors are advised to avoid handling newts at any time.
10. Stored subsoil must not be tipped onto any tall vegetation.
11. Any plants around the site will be kept short to stop the development of an area of terrestrial habitat more suitable for newts.
12. All groundwork will be conducted during daylight hours as newts are least likely to move during this time.
13. Trenches will be dug and filled in on the day created or will be covered over with close-fitting boards at the end of each working day.
14. If it is not possible to cover the trench, a ramp will be placed from the edge of the trench to the base to allow newts and small mammals to escape.
15. Open or covered trenches will be checked the following morning. This is particularly important when newts are most active, between March and November.
16. If a newt is found, then work will stop immediately and the ECoW contacted for advice.
17. Any heavy machinery will be stored on an area of hardstanding to avoid refugia being created.
18. Stored material will be raised on pallets to reduce the potential they might act as a temporary resting place. This reduces the potential for damage or destruction of individual newts.
19. All waste will be placed straight into skips to reduce the potential of creating refugia.
20. Great crested newts will not be handled or moved without express permission from Natural England as this would constitute an offence.
21. It is recommended that regular site visits are carried out by the ECoW to ensure compliance with the legislation and the Method Statement. A record of these visits will be made as part of the audit trail.



## Enhancements for Newts

1. The landscaping features previously discussed will be provide an excellent enhancement for newts.
2. At least one hibernaculum will be constructed on the site boundary. This is a generic term describing a place specifically designed to provide refuge for local fauna, in this case amphibians.



**Figure 6.6. Hibernacula design from Froglife ©**

### 6.6.3 Monitoring

The hibernaculum will be monitored, and more material added when notable decomposition is seen.

### 6.7 Reptiles

No negative impact on reptiles is anticipated and no further consideration is required.



## 6.8 Invertebrates

### 6.8.1 Impacts

No negative impact is expected on local invertebrate populations.

### 6.8.2 Enhancements

Invertebrate bricks and bug houses will be erected in around site and in some buildings to enhance the area for nesting bees. More specific locations can be recommended once a site plan is drawn up.



Figure 6.7. Invertebrate brick and bug house

## 6.9 Invasive Species

As there was no evidence of any invasive species on site, there is no potential for the development to cause the spread of these species. No further consideration is required.





## **7 Concluding Remarks**

The survey has focussed on the potential habitats or protected species to be damaged or destroyed as part of this development.

The site comprises an arable field with a mixture of residential and non-residential hedgerow boundaries. None of the hedgerows are considered protected by the Hedgerow Regulations, as they are either residential or too species-poor to be classed as important. It is unclear if any hedgerows will require removal for the development as proposed, but any removal must pay due consideration to nesting birds which may find value in even species-poor hedgerows.

There is no potential roosting habitat for bats on site, but the trees and hedgerows may provide good commuting or foraging habitat for bats in the area.

There are five ponds within 500m of site, most of which are on private land and were not able to be assessed. A precautionary method statement is provided to ensure no negative impact on amphibians in the area. The proposed landscaping enhancements on site such as the woodland walk and attenuation/wildlife ponds will provide excellent habitat for amphibians in the area once implemented.

The site will be enhanced for roosting bats and nesting birds by erecting and installing artificial roost and nest boxes around site. Invertebrate bricks and bug houses will also be included throughout site to enhance the area for local invertebrates.

The development can proceed without the loss of habitat of significant value, and without the loss of the favourable conservation status of any protected species. As there is no evidence of protected species within and around the development site, there is no requirement to address the three tests under Regulation 55 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

The method statements provided in sections 6.2.2, 6.3.2, 6.5.2, 6.6.2 of this report will be followed and works will be done at a suitable time of year. Other than those listed above, there are no ecological constraints to the development as currently proposed.



## Appendix A – Surveyor Details

**Table A.1. Details of surveyors’ experience and licences held**

Name	Membership of associations/ experience	Licenses
Logan Maggs BSc(hons)	<p>Lead Consultant Logan has a degree in Conservation and Land Management. He has over 10 years’ experience conducting environmental appraisals and phase 2 surveys for bats and newts in England and Wales.</p>	<p>Holder of survey licenses for bats and newts in England and Wales.</p> <p><u>England:</u> Bats - 2016-24901-CLS-CLS GCN - 2017-29218-CLS-CLS</p> <p><u>Wales:</u> Bats – S086874/1 Newts - 79665:OTH:SA:2018</p>
Ben Jones BSc(hons) MSc	<p>Lead Consultant Ben has a degree in Marine and Freshwater biology and a Master’s degree in “Managing the Environment”. He has 6 years’ experience conducting environmental appraisals and phase 2 surveys for bats and newts in England and Wales.</p>	<p>Holder of survey licenses for bats and newts in England and Wales.</p> <p><u>England:</u> Bats - 2017-29112-CLS-CLS GCN - 2016-25209-CLS-CLS</p> <p><u>Wales:</u> Bats – S088669-2 GCN – S087992-1</p>



## Appendix B – Methodology

### Desk Study

**Table B.1. Data sources**

Organisation/Resource	Information Assessed
Staffordshire Ecological Record	Protected/UK BAP Species records (2km)
MAGIC website	International statutory designations (1km) <ul style="list-style-type: none"> <li>• Special Protection areas (SPA)</li> <li>• Special Areas of Conservation (SAC)</li> <li>• RAMSAR sites</li> </ul> National statutory designations (1km) <ul style="list-style-type: none"> <li>• Sites of Special Scientific Interest (SSSI)</li> <li>• National Nature Reserves (NNR)</li> </ul> EPS Licenses for protected species (2km)

A data search was purchased from the Staffordshire ecological record centre on the 17<sup>th</sup> November 2021.

A search on Multi Agency Geographic Information for the Countryside (Magic Maps) determined nearby designated areas. The map is presented in Section 4.1.

A review of other surveys conducted in the area by Greenscape Environmental was also conducted, including a survey elsewhere in Bishops Wood in 2019, report number 20-05 105.2R.

### Field Survey

An assessment of habitats was conducted broadly following the UK Habitat Classifications.

Metadata	Information
Scope and purpose of survey	Preliminary ecological appraisal
Area surveyed	~5.3ha
Edition of UKHAb used	UKHAb-Professional
Minimum Mapping Unit	400m <sup>2</sup>
UKHAb Primary Hierarchy used	Level 5
Secondary groups recorded	All secondary Codes
Year of survey	2021
Organisation and individual undertaking survey	Greenscape Environmental Ltd Logan Maggs

The level of survey is aimed to identify field signs of or habitats with the potential to support protected species and therefore assist in the determination for detailed phase 2 surveys.

Determination of Ecological Value is based on the general criteria provided by IEEM (IEEM 2006).

**Table B.2. Criteria of ecological values**

<b>Ecological Value</b>	<b>Description and Examples</b>
High	Habitats or features that have high importance for nature conservation, such as statutory designated nature conservation sites of international or national importance or sites maintaining viable populations of species of international or national importance (e.g. Red Data Book species; European protected species).
Medium	Sites designated at a county or district level, e.g. Local Wildlife Site (LWS), ancient woodland site, ecologically 'important' hedgerows or ecological features that are notable within the context of a region, county or district (e.g. a viable area of a Priority Habitat on the county BAP or a site that supports a viable population of a county BAP species).
Low	Sites of nature conservation value within the context of a parish or neighbourhood, low-grade common habitats, such as arable fields and improved grasslands and sites supporting common, widespread species.

### **Hedgerows**

The aim of the assessment is to ascertain whether the hedgerow could be classified as important according to the definitions listed in the Hedgerow Regulations 1997.

The hedgerow is measured and gaps within a hedge included in the total length as long as the gaps are 20m or less in length.

The total number of woody species present was recorded in the following manner:

- Where the length of the hedgerow did not exceed 30m the total number of woody species present in the hedgerow was recorded
- Where the hedgerow was between 30m and 100m the number of woody species present in the central 30m was recorded
- Where the length was between 100m and 200m the number of woody species in the central 30m stretches of 2 halves of the hedgerow were counted and the mean of the 2 halves calculated
- Where the length of the hedge was over 200m the hedge was divided into thirds and the central 30m of each section counted and the mean calculated

The hedgerow height, width, integrity, structure and management history was recorded.

Notes were made of the following in accordance to the criteria outlined in Schedule 1 of the Hedgerow Regulations 1997:

- Evidence of certain species of birds, animals or plants listed in Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended)
- Number of woody species on average in a 30m length
- Presence of rare tree species such as Black Poplar, Large Leaved lime, Small leaved Lime, Wild Service tree
- Number of standard trees within each 50m length
- Percentage of gaps in the hedge
- Presence of ditches, banks or walls
- Numbers of connections with other hedgerows, ponds or woodland
- Presence of parallel hedgerow within 15m of the hedge
- Presence of bridleways, footpaths, byways of public paths

Non-woody ground flora species listed in Schedule 2 of the Hedgerow Regulations were recorded.



## Species Surveys

### Bats

Methodology used is in accordance with recommendations by BCT, Bat Surveys for Professional Ecologists: Good Practice Guidelines 3<sup>rd</sup> edition, Collins (2016).

Features on site were assessed for potential for bat roosts, foraging and commuting.

All trees were assessed from ground level. All trees examined were categorised on their potential roost features (PRF). These features include cracks, splits in limbs, cavities, loose bark and thick stemmed ivy. Where appropriate and accessible these features were assessed using binoculars and/or endoscopes.

**Table B.3. Categorisation of trees for bats**

<b>Value for Bats</b>	<b>Example Features</b>
Negligible	A tree that lacks the requisite features to support roosting bats
Low	A tree that contains a feature or features that clearly offer little roosting habitat for bats
Moderate/High	A tree that provides one or more potentially suitable roosting features for bats
Confirmed roost	Bat presence has been confirmed

Daytime surveys were conducted with the aid of a strong torch and a 12x55 monocular. Bat species may leave little evidence of their presence.

Evidence for the presence of bats includes:

- Holes, cracks and rot holes used as roosts, marked by streaks of urine and faeces.
- Smoothed, darkened edges where bats have rubbed and left natural body oils when entering and exiting a space.
- Faeces under a well-used feeding point or a resting spot.
- Feeding signs such as discarded insect wings under a feeding point.
- Presence of droppings in a cobweb.
- Presence of roosting or dead bats in or behind any object.

### Badgers

Surveys were conducted using guidance from Scottish Natural Heritage commissioned Report No 096 (2003).

Daytime surveys for badgers involved looking for:

- Scrapings where badgers have dug for food or used as latrines.
- Signs of a sett, including signs of use such as presence of badger hair.
- Tracks and prints.

### Birds

Searching for evidence of nesting birds, including barn owls, involved looking for:

- Presence of nests
- Collections of droppings and/or feathers
- Highly distinctive droppings or splats under roosting points.
- Presence of owl pellets/feathers
- Listening for bird song
- Recording bird activity



## **Amphibians and Reptiles**

The terrestrial habitats at the application site were surveyed and assessed for their suitability and potential value for the support of GCN. The general topography, ground conditions and presence or absence of vegetation were recorded. A refugia search was conducted for amphibians and reptiles by looking under any logs, large stones and other debris.



## **Appendix C – Policy**

The following areas of policy and legislation are of relevance to ecology and provide context to the surveys conducted. Findings presented in this report are in line with the following:

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – as listed in:

- Schedule 2. European protected species of animals
- Schedule 5. European protected species of plants

The Wildlife and Countryside Act (1981) – as listed in:

- Schedule 1. Birds protected by special penalties at all times
- Schedule 5. Protected animals
- Schedule 8. Protected plants

Countryside and Rights of Way Act (2000)

Hedgerow Regulations (1997)

The Protection of Badgers Act (1992)

Natural Environment and Rurally Communities (NERC) Act (2006)

National Planning Policy Framework (2018)

Policy 15 – Conserving and Enhancing the Natural Environment

Biodiversity 2020 – A strategy for England’s wildlife and ecosystem services (2011)

ODPM Circular 06/2005: Biodiversity and Geological Conservation

South Staffordshire Local Plan Core Strategy: policy EQ1 – Protecting, Enhancing and Expanding Natural Assets

### **Hedgerows**

All hedgerows are potentially protected by the Hedgerow Regulations 1997. Under these regulations it is against the law to remove or destroy certain hedgerows without permission from the LPA. These Regulations do not apply to any hedgerow within the curtilage of or marking the boundary of a dwelling house.

Permission is required before removing hedges that are least 20m in length and over 30 years old. Permission is gained by submitting a Hedgerow Removal Notice to the LPA as set out in Schedule 4 of the Regulations.

Permission is not required in the following instances:

- To make a new opening in substitute for an existing one which gives access to land.
- To obtain temporary access to any land in order to give assistance in an emergency.
- To gain access to land where another means of access is not available or is available at a disproportionate cost.
- For National Defence purposes.
- Where planning permission has been authorised except where permission has been granted by the Town and Country Planning General Permitted Development Order 1995.
- To carry out work for the purposes of flood defence or land drainage.
- To prevent spread of or ensure eradication of a plant or tree pest.



- For work undertaken by the Secretary of State in respect of any highway for which he is the highway authority or in relation to which he has the same powers as the Local Highway Authority.
- To prevent obstruction of or interference with electric lines and plant or prevent danger under the Electricity Act 1989.
- For the proper management of the hedgerow.

Hedgerows in areas covered by Historic Landscape Characterisation are often protected on the basis of historical importance and their wildlife value.

Hedgerows are listed as a habitat of principal importance under section 41 of the NERC Act (2004). This draws on the UK Biodiversity Action Plan (BAP) definition of priority habitats. Under the 2007 UK BAP, hedgerow priority habitat includes all hedgerows with at least 80% cover of at least one woody UK Native species (BRIG 2011).

## **Bats**

All bat species are protected under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 which implements the EC Directive 92/43/EEC in the United Kingdom. It is an offence, with certain exceptions, to:

- Deliberately capture or kill any wild animal of a European Protected Species.
- Deliberately disturb any such animal.
- Damage or destroy a breeding site or resting place of such a wild animal.
- Keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal or plant of a European Protected Species, or any part of, or anything derived from such a wild animal or plant.

A person found guilty of an offence is liable on summary conviction to imprisonment for a term not exceeding six months or to an unlimited fine or to both.

Seven bat species are on the UK Biodiversity Action Plan and are listed as Species of Principal Importance under the provisions of the Natural Environment and Rural Communities (NERC) Act 2006. The National Planning Policy Framework (NPPF) states that to minimise impacts on biodiversity and geodiversity, "*planning policies should... promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations*".

## **Badgers**

Badgers and their setts are specifically protected under the Protection of Badgers Act 1992. The act was primarily brought into force to prevent the deliberate injury to or death of badgers. Some aspects of the act affect developers. It is important that developers are aware of any badger setts located on the land they intend to develop.

All personnel working on sites where there are badgers should be aware of the Protection of Badgers Act 1992. Under this legislation it is an offence to:

- Damage a badger sett or any part of it.
- Destroy a badger sett.
- Obstruct access to, or any entrance of a badger sett.
- Causing a dog to enter a badger sett.
- Disturbing a badger when it is occupying a badger sett.





## **Birds**

Under Section 1 of the Wildlife and Countryside Act 1981 (as amended), birds, their nests and young are all protected from damage, particularly during the breeding season. The Act allows for fines or prison sentences for every bird, egg or nest destroyed. It makes it an offence to:

- Intentionally kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird whilst it is in use or being built.
- Take damage or destroy the egg of any wild bird.
- To have in one's possession or control any wild bird, dead or alive or egg or any part of a wild bird or egg.

Some bird species are included in the UK and local BAPS and are recognised as species of principal importance for nature conservation in accordance with section 41 of the NERC Act 2006. Such species and their habitats receive protection through the provisions of the NPPF.

## **Amphibians and Reptiles**

All species of amphibians receive a measure of protection under legislation.

The Wildlife and Countryside Act 1981 has been amended by the Countryside and Rights of Way Act (CRoW) 2000. This applies to England and Wales only. The key relevant fact is:

- Section 9(4) is amended to create an additional offence of reckless damage to, destruction of, or obstruction of access to, any structure or place used for shelter or protection; and reckless disturbance while occupying such a structure or place.

## **Great Crested Newts**

Great crested newts are protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 which implements the EC Directive 92/43/EEC in the United Kingdom. It is an offence, with certain exceptions, to:

- Deliberately capture or kill any wild animal of a European Protected Species.
- Deliberately disturb any such animal.
- Deliberately take or destroy eggs of any such wild animal.
- Damage or destroy a breeding site or resting place of such a wild animal.
- Keep (possess), transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal or plant of a European Protected Species, or any part of, or anything derived from such a wild animal or plant.

Great crested newts are listed as a priority species on the UK BAP and Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. The National Planning Policy Framework (NPPF) states that to minimise impacts on biodiversity and geodiversity, "*planning policies should... promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations*".

A person found guilty of an offence is liable on summary conviction to imprisonment for a term not exceeding six months or to an unlimited fine, or to both.

Work can be conducted under derogation licence from Natural England providing suitable compensation and mitigation is provided and the "three tests" can be met. These are:



- Regulation 55(2)(e) states: a licence can be granted for the purposes of “preserving public health or public safety” or other imperative reason of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.
- Regulation 55(9)(a) States: the appropriate authority (Natural England) shall not grant a licence unless they are satisfied “that there is no satisfactory alternative”
- Regulation 55(9)(b) states that the appropriate authority shall not grant a licence unless they are satisfied “that the action licensed will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in its natural range.”

## **Invertebrates**

There are three invertebrate species that are European protected species (EPS) in the UK. They are:

- Large blue butterflies (eggs, caterpillars, chrysalises and adults)
- Fisher’s estuarine moths (eggs, caterpillars, chrysalises and adults)
- Little ramshorn whirlpool snails

It is an offence to:

- capture, kill, disturb or injure, on purpose or by not taking enough care, an EPS species
- damage or destroy a breeding or resting place (even accidentally)
- obstruct access to their resting or sheltering places (on purpose or by not taking enough care)
- possess, sell, control or transport live or dead EPS invertebrates, or parts of them

A person found guilty of an offence is liable on summary conviction to imprisonment for a term not exceeding six months or to an unlimited fine or to both.

## **Invasive Species**

### **Japanese Knotweed**

The management of Japanese knotweed (*Fallopia japonica*) is regulated by several pieces of legislation:

- The Wildlife and Countryside Act (as amended) 1981
- The Environment Protection Act 1990
- The Waste (England & Wales) Regulations 2011
- Third party litigation where damages may be sought for allowing Japanese knotweed to spread onto other properties.

Japanese Knotweed is listed in Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to plant, cause the plant, or allow the plant to grow in the wild.

### **Rhododendron**

Rhododendron is an invasive species introduced to the UK as an ornamental plant. The species is listed under Schedule 9 and Schedule 14 of the Wildlife and Countryside Act 1981. It is illegal to plant or otherwise cause Rhododendron to grow in the wild in the UK.

It is notable that the developer should take all reasonable steps and exercised all due diligence to avoid committing the offence as evidence of this can form a defence.



## Appendix D – Bibliography

- Chartered Institute of Ecology and Environmental Management (CIEEM), (2006). *EcIA Guidance (Terrestrial, Freshwater and Coastal 2006)*.
- Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> edn). Bat Conservation Trust
- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019: <https://www.legislation.gov.uk/ukdsi/2019/9780111176573>
- English Nature (2001) *Great crested newt mitigation guidelines* - English Nature
- Joint Nature Conservation Committee (2010) – Handbook for Phase 1 habitat survey.
- HMSO (2000) *Countryside and Rights of Way Act 2000* - HMSO, London  
<http://www.legislation.gov.uk/ukpga/2000/37/contents>
- HMSO (1981) *Wildlife and Countryside Act 1981* - HMSO, London  
<http://www.legislation.gov.uk/ukpga/1981/69>
- HMSO (1992) *The Protection of Badgers Act* - HMSO, London  
<http://www.legislation.gov.uk/ukpga/1992/51/contents>
- ILP (2018) *Guidance Note 08/18 Bats and artificial lighting in the UK*, The Institute of Lighting Professionals
- Mitchell-Jones A.J. (2004) *Bat Mitigation guidelines*, English Nature
- National Planning Policy Framework 2018:  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/728643/Revised\\_NPPF\\_2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728643/Revised_NPPF_2018.pdf)
- Natural England – *Nature on the Map, Magic Maps*. Copyright Natural England, containing Ordnance Survey data, crown copyright and database right 2018:  
<http://magic.defra.gov.uk/magicmap.aspx>
- Natural Environment and Rural Communities Act 2006:  
<http://www.legislation.gov.uk/ukpga/2006/16/contents>

ISSUE 1 – DECEMBER 2021

REF 21-002

# Pre-application statement on flood risk, drainage and water supply

LAND OFF OFFOXEY ROAD, BISHOPS WOOD – PREPARED FOR  
OFFOXEY ROAD LIMITED

BY PCS CONSULTING ENGINEERS LTD

## **CONTENTS:**

- 1. INTRODUCTION**
- 2. THE PROPOSED DEVELOPMENT**
- 3. WATER SUPPLY**
- 4. FOUL WATER DRAINAGE**
- 5. SURFACE WATER DRAINAGE**
- 6. FLOODING**
- 7. CONCLUSIONS**

- Appendix A      Geoff Perry Associates Drawings A968 02 and 03
- Appendix B      Severn Trent Water response on clean water provision
- Appendix C      Severn Trent Water response on foul drainage provision
- Appendix D      Greenfield run-off rate calculations
- Appendix E      PCS drawing 900 schematic drainage proposals

## **1. Introduction**

PCS Consulting Engineers Ltd have been commissioned by Offoxey Road Limited to prepare a statement on the provision of foul and surface water drainage for a potential residential development at land to the south of Bishops Wood Village in Staffordshire.

We have also been asked to provide information in relation to flood risk, drainage and water supply, in so far as it applies to the planning process.

## **2. The Proposed Development**

At this stage the proposal relates to the principal of residential on the subject site. The basis proposals are outlined on Geoff Perry Associates Drawings A968 02 and 03 within Appendix A.

## **3. Water Supply**

A pre-application enquiry has been made to Severn Trent Water. Their response is included with Appendix B, together with their water supply network plans. The conclusion is that adequate water supplies are available for the proposed development and in particular that the development can be supplied from existing 250mm PE main in Ivetsey Bank Road.

## **4. Foul Water Drainage**

A pre-application enquiry has been made to Severn Trent Water. Their response is included with Appendix C, together with their sewer network plans. The conclusion is that adequate foul water drainage provision is available for the proposed development. Severn Trent Water state 'The nearest foul water sewer is in the highway to the east m/h 6302. The 150mm foul water sewer should be able to receive the approx. flows of 1.25l/s @2 x dwf., A gravity foul connection should be able to be accommodated from your proposed site into this sewer'.

## **5. Surface Water Drainage**

A pre-application enquiry has been made to Severn Trent Water. Their response is included with Appendix C, together with their sewer network plans. There are no formal records of any Severn Trent Water surface water sewers within the vicinity of the site.

Irrespective of public records we are aware that parts of Bishops Wood do have an historical network of both private and highway surface water drains. These are linked in part to the historical natural ditch system that still partially exists along the west boundary of Bishops Wood. This

historical ditch, has over the years, been culverted, restricted and in some parts sections have been removed.

The known bedrock geology for the proposed development area is impermeable clays of the Mercia Mudstone Group. It is therefore considered unlikely that a surface water drainage scheme based on infiltration techniques will be feasible.

The current greenfield run off rates have been calculated using the ICP Suds methodology, as 4.2l/sec/Ha for the 1 in 1 year event, 9.9l/sec/Ha for the 1 in 30 year event and 13l/sec/Ha for the 1 in 100 year event. Greenfield run off calculations are included within Appendix D.

It is proposed to limit run off from the development to 4.2l/sec/Ha irrespective of the return event. This will provide a betterment on the existing greenfield run off rates for any events in excess of the 1 in 1 year return period.

The development area is circa 3.16 Ha and assuming 75% impermeable area gives a maximum permitted flow off the site of 10l/sec for all return events.

Attenuation will be provided by a pond/lagoon in the north west corner of the site. This is the natural low point on the site and it is envisaged that the surface water drainage system will flow by gravity to this attenuation facility.

The discharge from the attenuation will be controlled to greenfield run off rates, with attenuation sized to store the surface water from all events up to and including the 1 in 100 year event plus 40% allowance for climate change. The approximate volume of attenuation required across the site to attenuate flows is 2000m<sup>3</sup>.

The discharge from the attenuation will enter into a new ditch system along the west edge of Bishops Wood. This new ditch starts to restore the original ditch network that was partially destroyed by the adjacent housing development in the 1970's.

The ditch will join with the current watercourse to the north of the Parish Council Play area.

A schematic of drainage proposal is shown on PCS drawing 900 within Appendix E.

## **6. Flooding**

The development site is entirely within Flood Zone 1, the lowest risk of flooding. With climate change allowance taken into account the developments site remains within Flood Zone 1, the lowest risk of flooding.

The risks of flooding from surface water drainage both on plot and downstream are managed by the adoption of 1 in 1 year greenfield run off rates applied to storms of all return periods including the 1 in 100 year event including 40% climate change allowance.

There is a history of surface water flooding within the housing development to the north of the proposed development. This is associated in part with overland surface flows from the south east and west of Bishops Wood. With the existing limitations of the current drainage systems on the west edge of Bishops Wood this can very quickly overwhelm the current capacity of the existing ditch and drainage system and cause flooding.

The proposal to restore an adequately sized ditch along the west edge of Bishops Wood, will intercept a large proportion of the overland flows from the west and divert them to the north of Bishops Wood. This will reduce the risk of flooding within Bishops Wood Itself. Offoxey Road Limited do have contractual control of the land required to instal the ditch to the west of Bishops Wood.

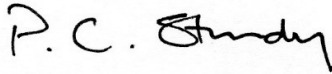
## **7. Conclusions**

In conclusion Severn Trent Water have confirmed that the development can be provided by clean water from the 250mm dia water main in Ivetsey Bank Road. They have also confirmed that the development can connect into the existing 150mm dia foul sewer in Offoxey Road.

With regard to surface water drainage, it is feasible to drain the development using SUDs techniques and at greenfield run-off rates.

The site is within flood zone 1 (the lowest risk of flooding) and the proposals will provide betterment to the wider Bishops Wood area in reducing flood risk.

Prepared by

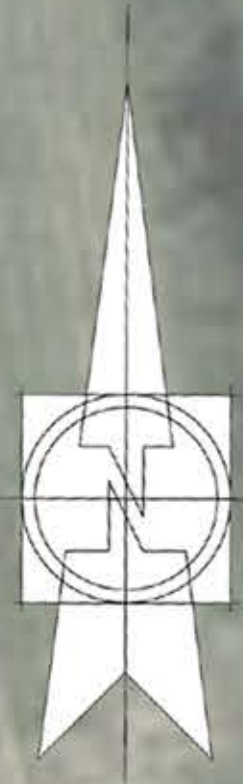
A handwritten signature in black ink that reads "P. C. Sturdy". The signature is written in a cursive style with a large initial "P" and "S".

Peter Sturdy BSc, CEng, MICE

Director



Appendix A Geoff Perry Associates Drawings A968 02 and 03



The Contractor is to check and verify all building and site dimensions, levels and sewer level levels at connection points before work starts. The Contractor is to comply in all respects with current Building Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided. This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor. A suitable method of foundation should be provided allowing for existing ground conditions. Any suspect or flint ground, contamination on or within the ground, should be further investigated by a suitable expert. Any earthwork constructions shown indicate typical slopes for guidance only & should be further investigated by a suitable expert. Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. All trees are to be planted so as to ensure they are a minimum of 5 metres from buildings and 2 metres from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. Geoff Perry Associates Limited do not accept any responsibility for any losses (financial or otherwise) to any Client or third party arising out of the Client's (or its Developer or Contractor) but not limited thereto) non-compliance with above mentioned provisions. © This drawing is the property of Geoff Perry Associates Limited and may not be copied or used for any purpose other than that for which it is supplied without the express written authority of Geoff Perry Associates Limited.

Rev:	Description:	Initials:	Date:
------	--------------	-----------	-------

**Geoff Perry Associates Limited**  
 The Shrubbery,  
 28 Erdington Road,  
 Aldridge,  
 Walsall,  
 W59 8JH  
 T: 01922 744 900  
 E: enquiries@geoffperryassoc.co.uk

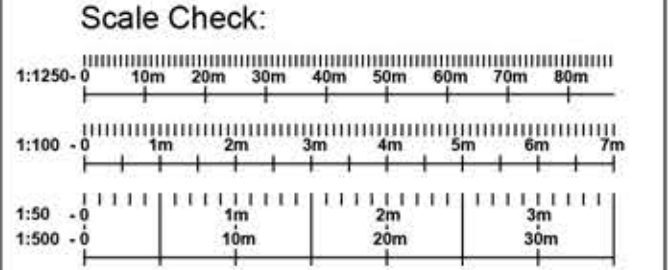
**Client:**  
Offoxey Road Limited

**Project:**  
Land off Offoxey Road,  
Bishops Wood

**Title:**  
Land Use Plan

**Date:** DEC 2021      **Scale:** 1:500 @ A1  
**Drawn by:** GSW      **Checked by:** -

Job No.	Drg No.	Rev.
A 968	02	



This drawing illustrates a sketch proposal only and as such is subject to detailed site investigation including ground conditions / contaminants, drainage, design and planning / density negotiations. The layout may be based upon an enlargement of an o.s. sheet or other small scale plans and its accuracy will need to be verified by survey. Full risk assessment under CDM Regulations has not been undertaken.

nb. No account has been taken of any services laid on or around the boundaries of the site.  
 nb. This layout takes no account of any trees on or around the boundaries of the site.

# Land Use Plan

A1 SHEET SIZE 841 x 594 mm



SCHOOL LAND

LOW POINT

EXISTING TREES AND HEDGEROWS TO BE RETAINED WHERE POSSIBLE

EXISTING PUB

RELATIONSHIP BETWEEN EXISTING DEVELOPMENTS

RELATIONSHIP BETWEEN EXISTING DEVELOPMENTS

PROPOSED SITE ACCESS

OFFOXEY ROAD

NOISE

# Constraints Plan

The Contractor is to check and verify all building and site dimensions, levels and sewer level levels at connection points before work starts. The Contractor is to comply in all respects with current Building Legislation, British Standard Specifications, Building Regulations, Construction (Design & Management) Regulations, Party Wall Act, etc. whether or not specifically stated on this drawing. This drawing must be read with and checked against any structural, geotechnical or other specialist documentation provided. This drawing is not intended to show details of foundations, ground conditions or ground contaminants. Each area of ground relied upon to support any structure depicted (including drainage) must be investigated by the Contractor. A suitable method of foundation should be provided allowing for existing ground conditions. Any suspect or flint ground, contamination on or within the ground, should be further investigated by a suitable expert. Any earthwork construction shown indicate typical slopes for guidance only & should be further investigated by a suitable expert. Where existing trees are to be retained they should be subject to a full Arboricultural inspection for safety. All trees are to be planted so as to ensure they are a minimum of 5 metres from buildings and 2 metres from drainage and services. A suitable method of foundation is to be provided to accommodate the proposed tree planting. Geoff Perry Associates Limited do not accept any responsibility for any losses (financial or otherwise) to any Client or third party arising out of the Client's (or its Developer or Contractor) but not limited thereto) non-compliance with above mentioned provisions. © This drawing is the property of Geoff Perry Associates Limited and may not be copied or used for any purpose other than that for which it is supplied without the express written authority of Geoff Perry Associates Limited.

Rev: Description: Initials: Date:

**Geoff Perry Associates Limited**  
 The Shrubbery, 29 Erington Road, Ayr, WSS 9JH  
 01922 744 900  
 enquiries@geoffperryassoc.co.uk

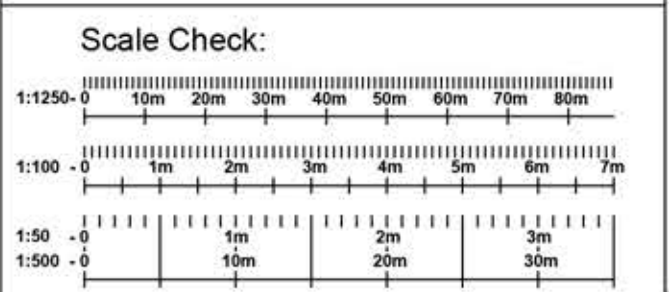
Client: Offoxey Road Limited

Project: Land off Offoxey Road, Bishops Wood

Title: Constraints Plan

Date: DEC 2021 Scale: 1:500 @ A1  
 Drawn by: GSW Checked by: -

Job No. Drg No. Rev.  
 A 968 03 ~



This drawing illustrates a sketch proposal only and as such is subject to detailed site investigation including ground conditions / contaminants, drainage, design and planning / density negotiations. The layout may be based upon an enlargement of an o.s. sheet or other small scale plans and its accuracy will need to be verified by survey. Full risk assessment under CDM Regulations has not been undertaken.

nb. No account has been taken of any services laid on or around the boundaries of the site.

nb. This layout takes no account of any trees on or around the boundaries of the site.

Appendix B Severn Trent Water response on clean water provision

PETER COLIN STURDY  
PCS CONSULTING ENGINEERS LTD  
62 RESERVOIR ROAD  
SOLIHULL  
B92 8AN

Severn Trent  
PO Box 5311  
Coventry  
CV3 9FL  
[stwater.co.uk](http://stwater.co.uk)  
0800 7076 600

**Reference no: 1016712**

**We're here if you need us:**

Name: Ryan Sly

Telephone: 07702 543 997

Email: [waterdesign@severntrent.co.uk](mailto:waterdesign@severntrent.co.uk)

08 September 2021

**Clean water development enquiry for land at the junction of Ivetsey Bank Road and Offoxey Road, Bishopswood, ST19 9AP**

Dear Peter,

Thank you for your development enquiry regarding the above site. Please find enclosed a copy of our records which show the approximate position of our existing water mains. The water mains shown would normally be laid to a cover of 900mm and our services (which aren't shown on the plan are normally laid at right angles to the main) must be laid to a minimum of 750mm. When excavating, care should be taken to accurately locate our mains and services, as they may be found at shallower or deeper depths than indicated. There may also be private pipework crossing the site that will not be shown on these records.

**Assessment summary**

Based on the details provided in your application, I am pleased to confirm that we can supply your proposed development of 80 x domestic plots from our existing 250mm PE main in Ivetsey Bank Road.

As you have not requested any fire fighting flows, these have not been assessed for as part of your enquiry.

Please note there is an existing 6" CI main that runs on the site boundary in Ivetsey Bank Road and may require a diversion. Before any construction for the site starts the development, proposals will need to be assessed, in detail, to confirm any diversionary requirements. No permanent structures are to be built within the protective easement of the existing main and there will be restrictions on tree planting/hedgelaying (please see the attached 'General Conditions' leaflet for further information).

**Protective pipework**

Please note that it is now Severn Trent's policy that all sites that will have new water mains installed must be assessed for contamination, prior to approving the use of MDPE pipework. Barrier pipework must also be installed within 50m of any potential contamination such as petrol stations, factories etc, both existing and new.

Any extended lengths of main installed outside of the site boundary, when applicable, will be assessed separately to your onsite ground investigation report. This will be determined based on the local area contamination events, buildings and existing pipework at draft level. Results will then be determined and finalised on these lengths by STW at construction stage with trial hole investigation. If there is deemed to be a risk with offsite extensions these will be designed in barrier.

As no ground investigation report has been included in your submission for assessment, the evaluation and costs estimates under this application have been under the assumption that all pipework will be in barrier material. Please ensure a full ground investigation report is included when making your formal application so we can confirm what pipework is required on your site.

## Supply proposals

Based on the proposals, new distribution mains will be required to supply the properties on this site.

It has been assumed that your site will be built as a single development/phase due to its size. A phase can consist of numerous visits with a construction break of no more than 6 months between sections. If you did wish to discuss options of phasing please provide proposals alongside your formal application for assessment and comment.

If you wish to split the scheme and construction into phases your initial application should include a masterplan and overview of the full site proposals. This is to ensure that the future phases are considered as part of the design and construction of your new mains, where loading will follow the same connection point(s). Phases should be designed on schemes that will have a construction break of more than 6 months between sections, or is recommended on larger developments that may be subject to changes throughout the parcel flow during the construction period.

Developers have two options available to them for mainslaying, requisition and self-lay. When mains are requisitioned, Severn Trent will complete the required work, which will vary depending on which mains laying option you choose. This charge will also vary depending on which mains laying option you choose and will need to be paid before we'll carry out any work. When mains are requisitioned, Severn Trent will complete the mains construction and connection(s) on either a lay only or open cut basis. The developer or their contractors will not be permitted to install any water mains.

If you choose to requisition under a lay only agreement, you'll need to excavate the trench ahead of mains installation for any works within the site boundary. We'll then lay the water main in the excavated trench and you'll be responsible for the backfill and reinstatement. Severn Trent will complete the mainslaying outside of the site boundary on an excavate, lay and backfill basis unless otherwise agreed. If you choose to requisition under an open cut agreement, we'll excavate the trench, lay the water main and backfill the trench both within and outside the site boundary, and reinstate when needed. All backfill will be with the same material unless otherwise agreed.

When mains are progressed as self-lay a developer can choose a Water Industry Regulation Scheme (WIRS) accredited installer operating as a self-lay provider (SLP) to lay the water mains and/or service connections. With this option the developer employs a SLP to complete the **contestable** works. Severn Trent will provide the charges for completing any works defined as **non-contestable** for information, along with any contestable

works that the SLP as us to do. Please note that should you choose a self-lay provider (SLP), the charges will always be on an excavate and lay basis and charges will be issued for all contestable work to be completed by the SLP unless otherwise agreed.

## Cost Estimates

Please note that the following is a **budget estimate only** based on a desktop assessment of your site and the information you've provided. These costs will be subject to change upon receipt, assessment and design of your formal application.

Following a change in our charges process from April 2020 income offset is now against the service connection charges, so all new water mains are at full cost for construction. Further information on our charges can be found in our latest [Charging Arrangement Document](#) and if you'd like to find out more about the mains processes, please take a look on our [website](#).

The **budget** cost (exclusive of VAT) for Severn Trent constructing the new water main(s) under the options available for requisition and self-lay is:

Description of charge	Charge
New water mains - Lay Only	£99,000.00
New water mains - Open Cut	£124,000.00
New water mains Self-Lay (Source of water to site boundary only)	£12,000.00

Service connection charges are not included in the cost of mains laying or your agreement and would be issued under separate cover once your mains terms have been accepted. The charges will vary depending on the work being carried out for each connection.

In recognition of the future income that companies will benefit from as a result of newly connected properties, a reduction will be applied to the charges for the majority of new connections. This amount was previously applied to the cost of a new mains requisition but is now instead applied against the plot connection charges. Please note that if we've used a multiplier to calculate your infrastructure charge then the income offset will also be calculated using the same method. This charge can also only be applied to connections that are additional demand on the network. If billed services are transferred or infrastructure credits awarded this will affect the income offset charges applied.

The following estimate has been provided based on the number of domestic properties on your site and the estimated infrastructure charges that they could incur. This estimate doesn't take into account any infrastructure credits or environmental discounts that may be applicable.

Type of charge	Description of charge	Quantity	Unit rate	Total charge (net of VAT)
Charges	Water infrastructure charge (capped)	80	£402.15	£32,172.00
	Sewerage infrastructure charge	80	£320.74	£25,659.20
Income offset	Water income offset	80	-£527.03	-£42,162.40
	Sewerage income offset	80	-£81.00	-£6,480.00
<b>TOTAL</b>	<b>Total Amount for Infrastructure charges with income offset deducted</b>			<b>£9,188.80</b>

In addition to these base charges, a connection cost will apply for each new plot connection. The following table includes the standard charges involved in new 25/32mm onsite service connections to allow you to calculate estimates on your potential service charge costs. Please note that shared trenches or manifolds will alter your cost estimates and there may be additional charges for variables such as traffic management (offsite connections) barrier pipework or larger connections (50mm and above) where required.

A water for construction charge will also apply to each new connection as standard. If you're building new properties on a development site you'll often need water for construction, e.g. to mix concrete, plaster, washing down, etc. Unless you have a temporary metered supply (i.e. a hired standpipe) or are utilising an existing metered supply, we'll charge you a fixed charge for water for construction. VAT is payable.

Water for construction is charged per property when:

1. The water service connection is a 25mm-32mm for any newly built household property.
2. The water service connection is a large diameter connection for a newly built household property.
3. The water service connection is on any non-household property with a 25mm+ connection.

Description of charge	Charge per Plot
Water Connection laid up to 5m – No excavation by STW	£360.19
Water Connection laid between 5m-12m – No excavation by STW	£425.05
Water Connection laid up to 5m – STW to excavate, lay and backfill	£1,139.91
Water Connection laid between 5m-12m – STW to excavate, lay and backfill	£1,640.88
Water for Construction	£85.03

For further details on any of these charges or any potential variables please refer to our latest [Charging Arrangement Document](#) which can be found on our [website](#).

### What happens next?

If you wish to proceed with obtaining water infrastructure for the development, you'll need to submit a formal water mains application form for the design and quotation. Should you wish to progress with a self-lay mains on this site, your chosen SLP will be required to submit a self-lay application form with a water mains design by a WIRS accredited company.

If you require a temporary building supply ahead of mains construction, a separate standard application will need to be submitted. Alternatively, a standpipe can be hired from Aquam, further details are available on our website if required.

Our application forms can be completed and submitted online, downloaded from our website ([www.stwater.co.uk/developers](http://www.stwater.co.uk/developers)), or can be emailed or posted upon request. Please contact our general enquiries line below for these to be sent.

If you wish to discuss this scheme further prior to submitting your application, please contact myself on the details provided at the head of this letter.

Yours sincerely,

Ryan Sly  
Design Technician  
Developer Services



# WONDERFUL ON TAP

SEVERN

TRENT

## Useful numbers:

- For general enquiries about new connections and development applications please call our Customer Demand Team on 0800 707 6600.
- For all emergencies, such as a leak or sewer flooding, please call our 24/7 Operations department on 0800 783 4444.



**LEGEND**

<ul style="list-style-type: none"> <li>--- Discharge Pipe</li> <li>— Distribution Main</li> <li>— Intermediate Trunk</li> <li>— Local Trunk</li> <li>— Water Internal Site Pipe</li> <li>— Water Siphon</li> <li>— Water Tap Pipe</li> <li>— Service Pipe</li> <li>— Company Service Pipe</li> <li>--- Domestic Customer Service Pipe</li> <li>--- Fire Main</li> <li>— Fire Supply Main</li> <li>--- Fire Sprinkler System</li> <li>— Non-Domestic Customer Service Pipe</li> <li>— Transmission Pipe</li> <li>— Resource Main</li> <li>— Strategic Trunk</li> <li>— Flow Control</li> <li>■ Float Valve</li> <li>○ Closed Water Isolation Valve</li> <li>— Fully Opened Water Isolation Valve</li> <li>○ Partially Closed Water Isolation Valve</li> <li>▲ Water Non Return Valve</li> <li>▲ Flow Regulating Water Regulating Valve</li> <li>▲ Pressure Reducing Water Regulating Valve</li> <li>▲ Pressure Sustaining Water Regulating Valve</li> </ul>	<ul style="list-style-type: none"> <li>— Fitting</li> <li>— Bend / Elbow</li> <li>— Coupler</li> <li>— Cross Piece</li> <li>— End Cap</li> <li>— Flange Adapter Plate</li> <li>— Reducer / Taper</li> <li>— Stepped Coupling</li> <li>— Tee Piece</li> <li>— Y Branch</li> <li>— Hydrant</li> <li>○ Wash Out</li> <li>● Hydrant</li> <li>— Meter</li> <li>■ Data Logger</li> <li>■ Flow Meter</li> <li>◆ Insertion Flow Meter</li> <li>◆ Revenue Meter</li> <li>— Pipe Connection</li> <li>— Air Bleed Tap</li> <li>— Discharge</li> <li>— Facility Connector</li> <li>— Motive Water Point</li> <li>— Pressure Tapping</li> <li>— Quality Sample Point</li> <li>— Strainer</li> <li>— Water Air Valve</li> </ul>	<ul style="list-style-type: none"> <li>— Water Chemical Injection point</li> <li>■ Water Hatch Box</li> <li>— Water Open Pipe</li> <li>— ServicePoints</li> <li>■ Boundary Box</li> <li>■ Manifold</li> <li>x Stop Tap</li> <li>— Abandoned Water Pipe</li> <li>— Company Service Pipe</li> <li>— Conduit</li> <li>— Discharge Pipe</li> <li>— Distribution Main</li> <li>— Domestic Customer Service Pipe</li> <li>— Duct</li> <li>— Fire Main</li> <li>— Fire Sprinkler System</li> <li>— Fire Supply Main</li> <li>— Intermediate Trunk</li> <li>— Local Trunk</li> <li>— Non-Domestic Customer Service Pipe</li> <li>— Resource Main</li> <li>— Strategic Trunk</li> <li>— Tunnel</li> <li>— Water Internal Site Pipe</li> <li>— Water Siphon</li> <li>— Water Tap Pipe</li> <li>● Abandoned Water Point</li> </ul>	<ul style="list-style-type: none"> <li>— Print200mLine</li> </ul>
--	---	---	---

**MATERIALS**

AC	- ASBESTOS CEMENT
AK	- ALKATHENE
C	- CONCRETE
CI	- CAST IRON
CU	- COPPER
DI	- DUCTILE IRON
GF	- GLASS FIBRE
GR	- GLASS REINFORCED CONCRETE
GRP	- GLASS REINFORCED PLASTIC
HDPE	- HIGH DENSITY POLY
HPPE	- HIGH PERFORMANCE POLY
LDPE	- LOW DESITY POLY
MDPE	- MEDIUM DENSITY POLY
O	- OTHER
PC	- PRE-STRESSED CONCRETE
PF	- PITCH FIBRE
PP	- POLY PROPYLENE
PSC	- PLASTIC STEEL COMPOSITE
PVC	- POLY VINYL CHLORIDE
RPM	- REINFORCED PLASTIC MATRIX
SI	- SPUN IRON
SST	- STAINLESS STEEL
ST	- STEEL
UPVC	- UNPLASTICISED PVC

**LINING**

BI	- BITUMEN
CL	- CEMENT
PL	- PLASTIC
RL	- FLAP VALVE
O	- OTHER



Severn Trent Water Limited  
Asset Data Management  
PO Box 5344  
Coventry  
CV3 9FT  
Telephone: 0345 601 6616

**WATER MAINS RECORD**

<b>O/S Map Scale:</b> 1:2,500	<b>This map is centred upon:</b>
<b>Date of Issue:</b> 08-09-21	<b>X:</b> 383451.85 <b>Y:</b> 309344.55

**Disclaimer Statement:**

- 1 Do not scale off this Map.
- 2 This plan and any information supplied with it is furnished as a general guide, is only valid at the date of issue and no warranty as to its correctness is given or implied. In particular this plan and any information shown on it must not be relied upon in the event of any development or works (including but not limited to excavations) in the vicinity of SEVERN TRENT WATER assets or for the purposes of determining the suitability of a point of connection to the sewerage or distribution systems.
- 3 Reproduction by permission of Ordnance Survey on behalf of HMSO. Crown Copyright and database right 2004. All rights reserved.
- 4 Ordnance Survey licence number **100031673**
- 5 Document users other than SEVERN TRENT WATER business users are advised that this document is provided for reference purpose only and is subject to copyright, therefore, no further copies should be made from it.

Appendix C Severn Trent Water response on foul drainage provision

# WONDERFUL ON TAP



**Severn Trent Water Ltd**  
Regis Road  
Wolverhampton  
WV6 8RU

Tel: 0345 2667930  
www.stwater.co.uk  
net.dev.west@severntrent.co.uk

Contact: Michael Taylor

Your ref:  
Our ref: 1016729

PCS Consulting Engineers Ltd  
62, Reservoir Road,  
Solihull,  
B92 8AN

25<sup>th</sup> August 2021

Dear Sirs

## **Proposed Redevelopment at : Land off. Offoxey Road Bishops Wood**

I refer to your 'Development Enquiry Request' in respect of the above site for 80 properties. Please find enclosed the sewer records that are included in the fee together with the Supplementary Guidance Notes which refer to surface water disposal from development sites.

### **Public Sewers in Site – Required Protection**

Due to a change in legislation on 1 October 2011, there may be former private sewers on the site which have transferred to the responsibility of Severn Trent Water Ltd, which are not shown on the statutory sewer records, but are located in your client's land. These sewers would also have protective strips that we will not allow to be built over. If such sewers are identified to be present on the site, please contact us for further guidance..

### **Foul Water Drainage**

The nearest foul water sewer is in the highway to the east m/h 6302. The 150mm foul water sewer should be able to receive the approx. flows of 1.25l/s @2 x dwf., A gravity foul connection should be able to be accommodated from your proposed site into this sewer. Please be advised that a new / indirect connection to this sewer would be allowed subject to a formal S.106 sewer connection approval (see later)

### **Surface Water Drainage**

Under the terms of Section H of the Building Regulations 2010, the disposal of surface water by means of soak ways should be considered as the primary method. If soakaways are proven not

# WONDERFUL ON TAP

SEVERN

TRENT

possible then other means of surface water disposal must be investigated, possible local ditches and highway drainage should be explored. We cannot accept any surface water into the foul sewers, due to the local treatment works.

If following testing, it is demonstrated that soakaways would not be possible on the site; satisfactory evidence will need to be submitted. The evidence should be either percolation test results or a statement from the SI consultant (extract or a supplementary letter). This would satisfy SGN1 (enclosed), in accordance with Gloucestershire Council's SUDS Policy as the Lead Local Flood Authority (LLFA) for the area and statutory consultee in the planning process. Please see the guidance notes attached for further information.

## New Connections

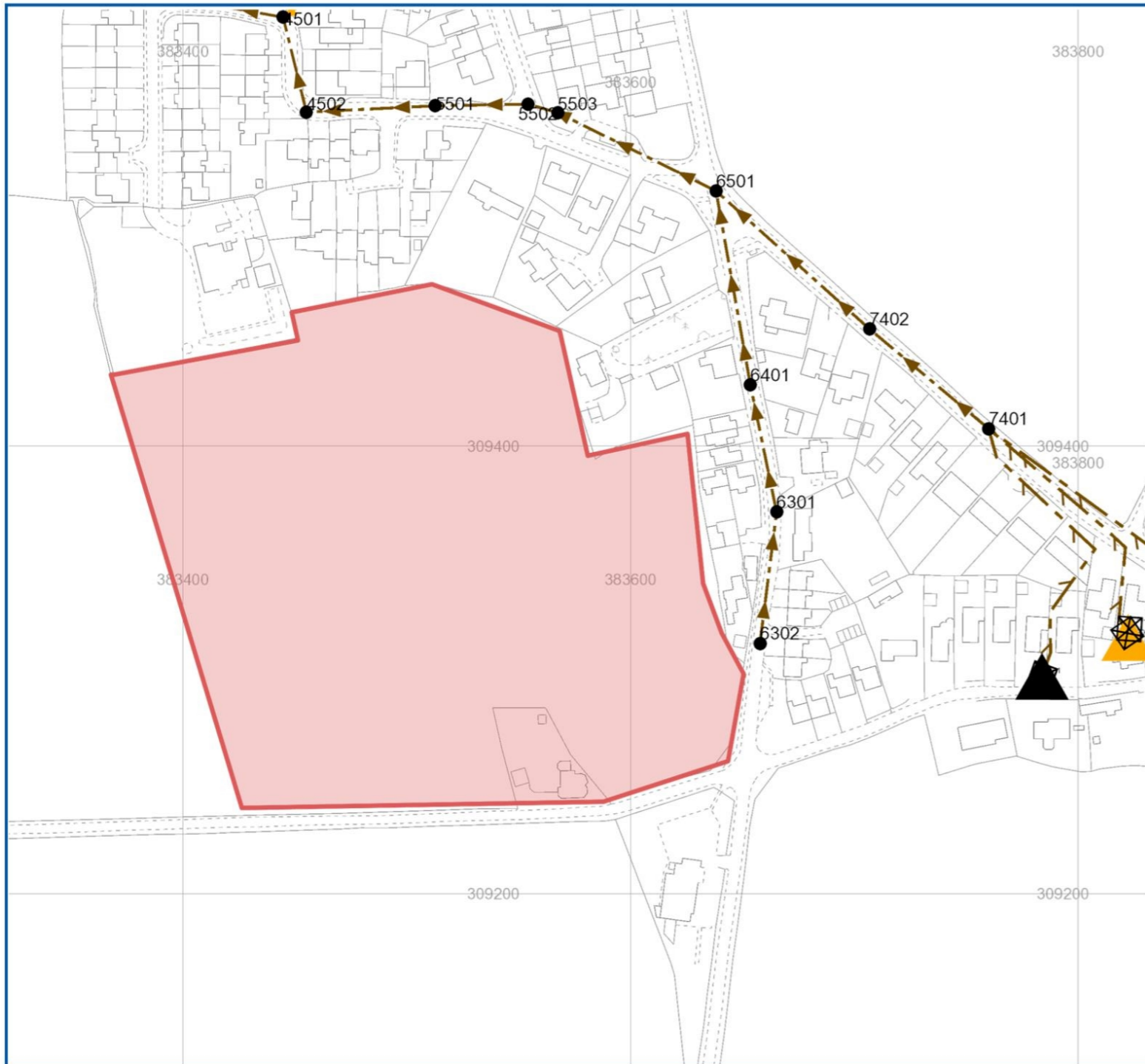
For any new connections (including the re-use of existing connections) to the public sewerage system, the developer will need to submit Section 106 application forms. Our New Connections department are responsible for handling all such enquiries and applications. To contact them for an application form and associated guidance notes please call 0800 7076600 or download from [www.stwater.co.uk](http://www.stwater.co.uk).

Please quote 1016729 in any future correspondence (including e-mails) with STW Limited. Please note that 'Development Enquiry' responses are only valid for 6 months from the date of this letter.

Yours sincerely



Michael Taylor  
Asset Protection (Waste Water) West



Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
SJ83094501	139.8	138.18	135.44	F	VC	C	<UNK>	<UNK>	22.12	31/12/1899 00:00:00
SJ83094502	141.54	139.75	138.2	F	VC	C	<UNK>	<UNK>	28.39	31/12/1899 00:00:00
SJ83097401	148.91	147.19	145.96	F	VC	C	<UNK>	<UNK>	57.15	31/12/1899 00:00:00
SJ83096501	147.0399	144.44	142.81	F	VC	C	150	<UNK>	49.66	31/12/1899 00:00:00
SJ83095502	143.79	142.37	141.27	F	VC	C	<UNK>	<UNK>	38.18	31/12/1899 00:00:00
SJ83095503	144.43	142.81	142.37	F	VC	C	<UNK>	<UNK>	30.91	31/12/1899 00:00:00
SJ83095501	143.11	141.27	139.77	F	VC	C	<UNK>	<UNK>	38.59	31/12/1899 00:00:00
SJ83096401	149.22	146.23	144.44	F	VC	C	150	<UNK>	48.68	31/12/1899 00:00:00
SJ83096302	149.88	146.76	146.27	F	VC	C	150	<UNK>	123.29	31/12/1899 00:00:00
SJ83097402	148.18	145.96	144.44	F	VC	C	150	<UNK>	60.16	31/12/1899 00:00:00
SJ83096301	150.21	146.27	146.23	F	VC	C	150	<UNK>	1402.25	31/12/1899 00:00:00

**LEGEND**

<p><b>Ancillary</b></p> <ul style="list-style-type: none"> <li>Balancing Lagoon</li> <li>Grease Trap</li> <li>Interceptor</li> <li>Screen</li> <li>Chamber</li> <li>Flushing Chamber</li> <li>Scatway</li> <li>Overflow</li> <li>Fitting</li> <li>Blind Shaft</li> <li>Facility Connector</li> <li>Head Node</li> <li>Lamphole</li> <li>Sewerage Air Valve</li> <li>Sewerage Chemical Injection Point</li> <li>Sewerage Hatch Box</li> <li>Sewerage Pressure Washout</li> <li>Vent Column</li> <li>Waste Water Outfall</li> <li>Control Valve</li> <li>Hydroblock</li> <li>Penstock</li> </ul>	<p><b>Manhole</b></p> <ul style="list-style-type: none"> <li>Foul Bifurcation Manhole</li> <li>Combined Bifurcation Manhole</li> <li>Surface Water Bifurcation Manhole</li> <li>Dual Manhole</li> <li>Foul Single Manhole</li> <li>Combined Single Manhole</li> <li>Surface Water Single Manhole</li> <li>Twin Manhole</li> <li>Foul Adopted Manhole</li> <li>Combined Adopted Manhole</li> <li>Surface Adopted Manhole</li> <li>Transfered Manhole</li> <li>Unsurveyed Manhole</li> </ul>	<p><b>Storage</b></p> <ul style="list-style-type: none"> <li>Disposal Site</li> <li>Off-Line Waste Water Storage</li> <li>On-Line Waste Water Storage</li> <li>Wet Well</li> <li>Waste Water Process Structure</li> <li>Sludge Treatment Point</li> <li>Sludge Treatment Structure</li> </ul>	<p><b>Gravty Sewer Pipe</b></p> <ul style="list-style-type: none"> <li>Foul Gravity Sewer</li> <li>Combined Gravity Sewer</li> <li>Surface Water Gravity Sewer</li> <li>S104 Surface Water Gravity Sewer</li> <li>S104 Combined Gravity Sewer</li> <li>S104 Foul Gravity Sewer</li> <li>Private Surface Water Gravity Sewer</li> <li>Private Combined Gravity Sewer</li> </ul>	<p><b>Pressure Sewer Pipe</b></p> <ul style="list-style-type: none"> <li>Surface Water Pressure Sewer</li> <li>Combined Pressure Sewer</li> <li>Foul Pressure Sewer</li> <li>S104 Surface Water Pressure Sewer</li> <li>S104 Combined Pressure Sewer</li> <li>S104 Foul Pressure Sewer</li> <li>Private Surface Water Pressure Sewer</li> <li>Private Combined Pressure Sewer</li> <li>Private Foul Pressure Sewer</li> </ul>	<p><b>Service Pipe</b></p> <ul style="list-style-type: none"> <li>Private Foul Gravity Sewer</li> <li>Surface Water Unserved Pipe</li> <li>Combined Unserved Pipe</li> <li>Foul Unserved Pipe</li> <li>Transfered Surface Water Sewer</li> <li>Transfered Combined Sewer</li> <li>Transfered Foul Sewer</li> <li>Disposal Pipe</li> <li>Overflow Pipe</li> <li>Waste Internal Site Pipe</li> <li>Sewer Service Connection</li> <li>Gravty Sewer Others</li> <li>Surface Water Vacuum Sewer</li> <li>Foul Vacuum Sewer</li> <li>Combined Vacuum Sewer</li> <li>S104 Surface Water Vacuum Sewer</li> <li>S104 Combined Vacuum Sewer</li> <li>S104 Foul Vacuum Sewer</li> <li>Private Surface Water Vacuum Sewer</li> <li>Private Combined Vacuum Sewer</li> <li>Private Foul Vacuum Sewer</li> <li>Surface Water Siphon</li> <li>Combined Siphon</li> <li>Foul Siphon</li> <li>Private Surface Water Siphon</li> <li>Private Combined Siphon</li> <li>Private Foul Siphon</li> <li>S104 Surface Water Siphon</li> <li>S104 Combined Siphon</li> <li>S104 Foul Siphon</li> <li>Surface Water Unserved Pipe</li> <li>Combined Unserved Pipe</li> <li>Foul Unserved Pipe</li> <li>Disposal Pipe</li> </ul>	<p><b>Surface Water Lateral Drain</b></p> <ul style="list-style-type: none"> <li>Combined Lateral Drain</li> <li>Foul Lateral Drain</li> <li>S104 Surface Water Lateral Drain</li> <li>S104 Combined Lateral Drain</li> <li>S104 Foul Lateral Drain</li> <li>Private Surface Water Lateral Drain</li> <li>Private Combined Lateral Drain</li> <li>Private Foul Lateral Drain</li> <li>Transfered Surface Water Lateral Drain</li> <li>Transfered Combined Lateral Drain</li> <li>Transfered Foul Lateral Drain</li> </ul>
--	--	---	--	---	---	---

**MATERIALS**

- NONE
- AC - ASBESTOS CEME
- BR - BRICK
- CC - CONCRETE BOX CULVERT
- CI - CAST IRON
- CO - CONCRETE
- CSB - CONCRETE SEGMENTS (BOLTED)
- CSU - CONCRETE SEGMENTS (UNBOLTED)
- DI - DUCTILE IRON
- GRP - GLASS REINFORCED PLASTIC
- MAC - MASONRY IN REGULAR COURSES
- MAR - MASONRY RANDOMLY COURSED
- PE - POLYETHYLENE
- PF - PITCH
- PP - POLYPROPYLENE
- PSC - PLASTIC STEEL COMPOSITE
- PVC - POLYVINYL CHLORIDE
- RPM - REINFORCED PLASTIC MATRIX
- SI - SPUN (GREY) IRON
- ST - STEEL
- U - UNKNOWN
- VC - VITRIFIED CLAY
- XXX - OTHER

**CATEGORIES**

- W - WEIR
- C - CASCADE
- DB - DAMBOARD
- SE - SIDE ENTRY
- FV - FLAP VALVE
- BD - BACK DROP
- S - SIPHON
- D - HIGHWAY DRAIN
- S104 - SECTION 104

**SHAPE**

- C - CIRCULAR
- E - EGG SHAPED
- O - OTHER
- R - RECTANGLE
- S - SQUARE
- T - TRAPEZOIDAL
- U - UNKNOWN

**PURPOSE**

- C - COMBINED
- E - FINAL EFFLUENT
- F - FOUL
- L - SLUDGE
- S - SURFACE WATER



Severn Trent Water Limited  
 Asset Data Management  
 PO Box 5344  
 Coventry  
 CV3 9FT  
 Telephone: 0345 601 6616

**SEWER RECORD (Tabular)**


O/S Map Scale: 1:2,500  
 This map is centred upon:  
 Date of Issue: 25-08-21  
 X: 383576.46 Y: 309359.40

**Disclaimer Statement**

- Do not scale off this Map.
- This plan and any information supplied with it is furnished as a general guide, is only valid at the date of issue and no warranty as to its correctness is given or implied. In particular this plan and any information shown on it must not be relied upon in the event of any development or works (including but not limited to excavations) in the vicinity of SEVERN TRENT WATER assets or for the purposes of determining the suitability of a point of connection to the sewerage or distribution systems.
- On 1 October 2011 most private sewers and private lateral drains in Severn Trent Water's sewerage area, which were connected to a public sewer as at 1 July 2011, transferred to the ownership of Severn Trent Water and became public sewers and public lateral drains. A further transfer takes place on 1 October 2012. Private pumping stations, which form part of these sewers or lateral drains, will transfer to ownership of Severn Trent Water on or before 1 October 2016. Severn Trent Water does not possess complete records of these assets. These assets may not be displayed on the map.
- Reproduction by permission of Ordnance Survey on behalf of HMSO. Crown Copyright and database right 2004. All rights reserved.
- Ordnance Survey licence number: 100031673
- Document users other than SEVERN TRENT WATER business users are advised that this document is provided for reference purpose only and is subject to copyright, therefore, no further copies should be made from it.



Appendix D Greenfield run-off rate calculations

PCS Consulting Engineers		Page 1
62 Reservoir Road Solihull West Midlands B92 8AN	offoxey road, Bishops Wood Green Field Run Off Rates	
Date 09/12/2021 15:25 File	Designed by pcs Checked by	
Micro Drainage	Source Control 2018.1	

ICP SUDS Mean Annual Flood

Input

Return Period (years)    2    SAAR (mm)    790    Urban    0.000  
Area (ha) 1.000    Soil 0.450    Region Number    Region 4

**Results    1/s**

QBAR Rural    5.1  
QBAR Urban    5.1

Q2 years    4.5

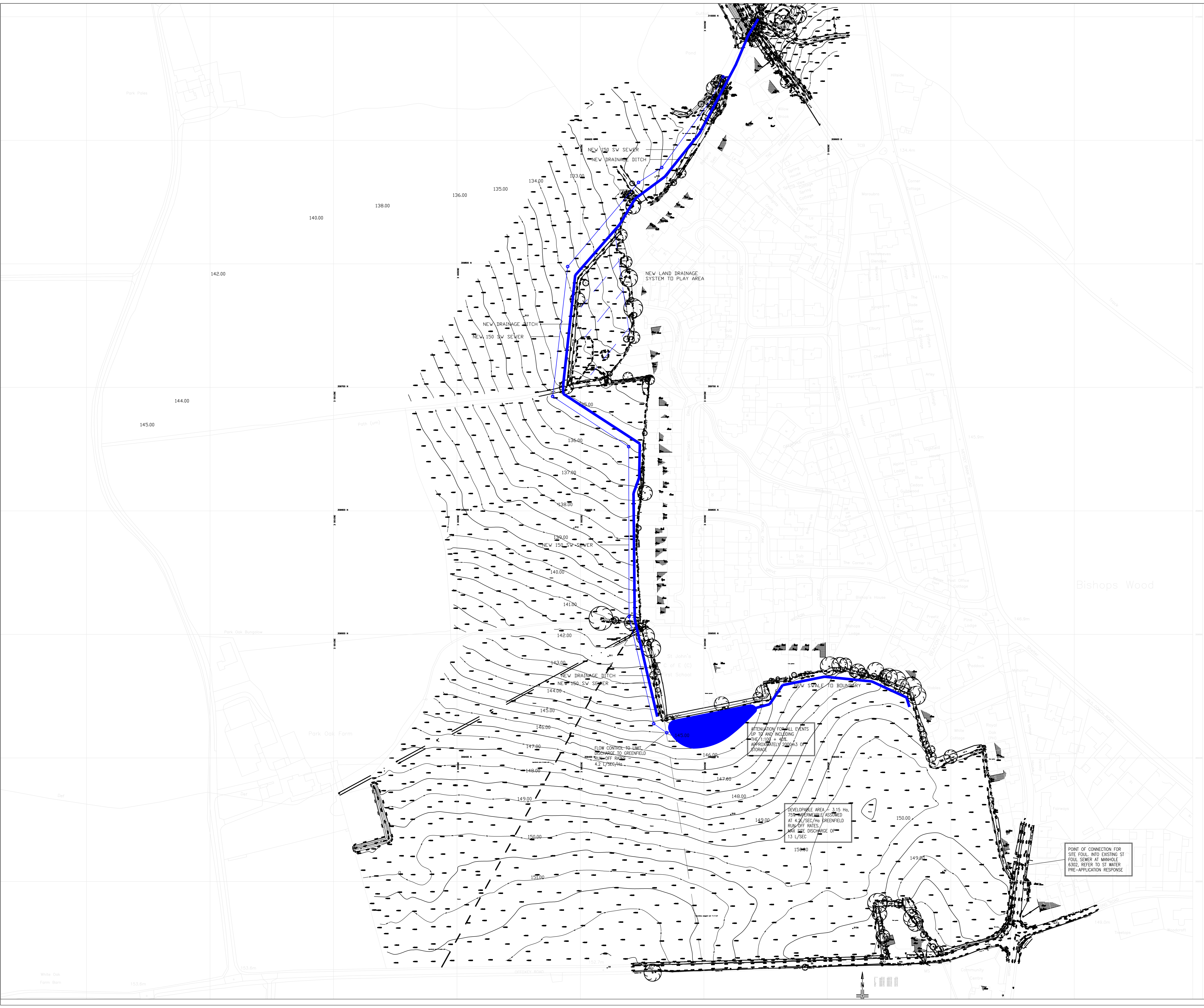
Q1 year    4.2  
Q30 years    9.9  
Q100 years    13.0



Appendix E PCS drawing 900 schematic drainage proposals

**NOTES:**

1. THIS DRAWING IS NOT TO BE SCALED.
2. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE. PRIOR TO COMMENCING WORKS & REPORT ANY ANY DISCREPANCIES TO THE ENGINEER
3. "AS-BUILT" DRAWINGS ARE TO BE PROVIDED TO THE ENGINEER FOR COMMENT UPON COMPLETION IN ACCORDANCE WITH CONSTRUCTION (DESIGN & MANAGEMENT). 2007.
4. SHOULD ANY SURPLUS EXCAVATED MATERIAL REQUIRE DISPOSAL OFFSITE IT SHOULD BE TAKEN TO A SUITABLY LICENSED LANDFILL SITE.
5. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE SITE INVESTIGATION REPORT. THE CONTRACTOR MUST REFER TO THE SITE INVESTIGATION REPORT AND TAKE DUE COGNISANCE AND ALLOWANCE FOR ITS CONTENTS.



rev.	date	description	chk.

**PCS**  
Consulting Engineers

ASH HOUSE, LYDIATE BUSINESS PARK  
60 HALESOWEN ROAD, BROMSGROVE B61 0DL  
TEL: (+44) 0121 453 5150

client:  
**OFFOXEY ROAD LIMITED**

job title:  
**LAND OFF OFFOXEY ROAD  
BISHOPS WOOD**

drawing title:  
**STRATEGIC DRAINAGE CONCEPTS**

scale: 1:1000    date: DEC 2021    drawn by: PCS    checked by:

job number: <b>21-002</b>	drawing number: <b>900</b>	revision:
------------------------------	-------------------------------	-----------