



LAND SOUTH OF CHARFIELD

Environmental Statement

Volume 1 – Non-technical summary

July 2020

Land South of Charfield Volume 1: Environmental Statement (June 2020)

Non-Technical Summary

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1.0 Introduction and Methodology

- 1.1 This document sets out the findings of an Environmental Impact Assessment ('EIA') that has been undertaken to assess the potential impacts of proposals for a residential-led mixed-use development on land to the south of Charfield, hereafter referred to as ('the Site').
- 1.2 This document is a summary in non-technical language of an Environmental Statement ('ES') that has been prepared on behalf of CEG and the Charfield Landowners Consortium ('the Applicant').
- 1.3 On the basis that the proposed development represents an urban development project on a site exceeding 5ha and with over 150 dwellings, the proposed development falls within Part 10 (b) of Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) ('the EIA Regulations').
- 1.4 The EIA Regulations state that development falling within Schedule 2 is 'EIA Development' if it is likely to have significant effects on the environment due to its nature, size or location. It has been agreed with South Gloucestershire Council ('SGC') that the proposed development has the potential for significant effects due to the size of the development. As such, the proposed development is considered to be EIA Development.
- 1.5 This Non-Technical Summary ('NTS') considers the likely significant effects arising during the construction and operation of the scheme and the potential cumulative effects that may arise when the impacts of the scheme combine with other relevant nearby development proposals. Where significant adverse effects on the environment are identified, the assessment process identifies mitigation measures to prevent, reduce and, where possible, off-set the adverse effects. Monitoring measures necessary to monitor significant adverse effects on the environment of the proposed development have also been identified.
- 1.6 This document includes the following information:
- **Section 1.0** sets out the background to the assessment process and the scheme;
 - **Sections 2.0 to 3.0** provide a description of the site and the development proposals;
 - **Sections 4.0 to 10.0** provide a topic by topic review of the findings of the EIA;
 - **Section 11.0** reviews whether other direct or indirect effects may arise when the scheme is considered with other schemes in the area (the 'cumulative assessment');
 - **Section 12.0** outlines the proposed mitigation, monitoring and conclusions of the EIA;
 - **Section 13.0** provides details of how to obtain a full copy of the ES; and,
 - **Appendix 1** provides a copy of the Site Location Plan, the Parameter Plans, detailed Junction Drawings and the Illustrative Masterplan.

EIA Process

- 1.7 The ES sets out the findings of an EIA of the proposed development.
- 1.8 The EIA process aims to ensure that any significant effects arising from a development are systematically identified, assessed and presented to help a local planning authority, statutory consultees and other key stakeholders in their understanding of impacts arising from development. If measures are required to minimise or reduce effects then these are clearly identified.

- 1.9 For this development, EIA has been carried out to consider the likely significant effects that may arise during its construction and demolition and operation phases. It has been completed with regard to best practice and relevant legislation and has addressed the following matters to assess the impacts of the development:
- 1 Townscape and Visual;
 - 2 Ecology and Nature Conservation;
 - 3 Heritage;
 - 4 Archaeology;
 - 5 Socio Economic;
 - 6 Transport; and,
 - 7 Water Environment.

Background to the Scheme

- 1.10 An outline planning application for major residential led development on the Site was submitted to SGC in March 2019 to coincide with the start of the West of England Joint Spatial Plan (JSP) Examination (LPA Reference P19/2452/O).
- 1.11 The submission of the application was driven by the desire to show that development at the Site would be deliverable. It was anticipated that planning permission would be granted upon receipt of the JSP Inspectors' report, assuming a positive outcome with regards to the designation of Charfield as a "Strategic Development Location" ('SDL') for major growth within the JSP. However, following the Examination by an Inspector, the JSP was found to be flawed and it has since been withdrawn. This change in circumstance has resulted in a review of the planning strategy and the proposed scheme.
- 1.12 As a result, and following consultation feedback from SGC and others to the scheme that was originally submitted, the Applicant instructed consultants to amend the original planning application for residential-led development on land to the south of Charfield.
- 1.13 Due to the scale and nature of the changes it was agreed that a new EIA would be undertaken and the results presented in a new standalone ES. This NTS provides a summary of the findings of the new ES, which will be submitted alongside the revised planning application details.

Site and Surroundings

2.0

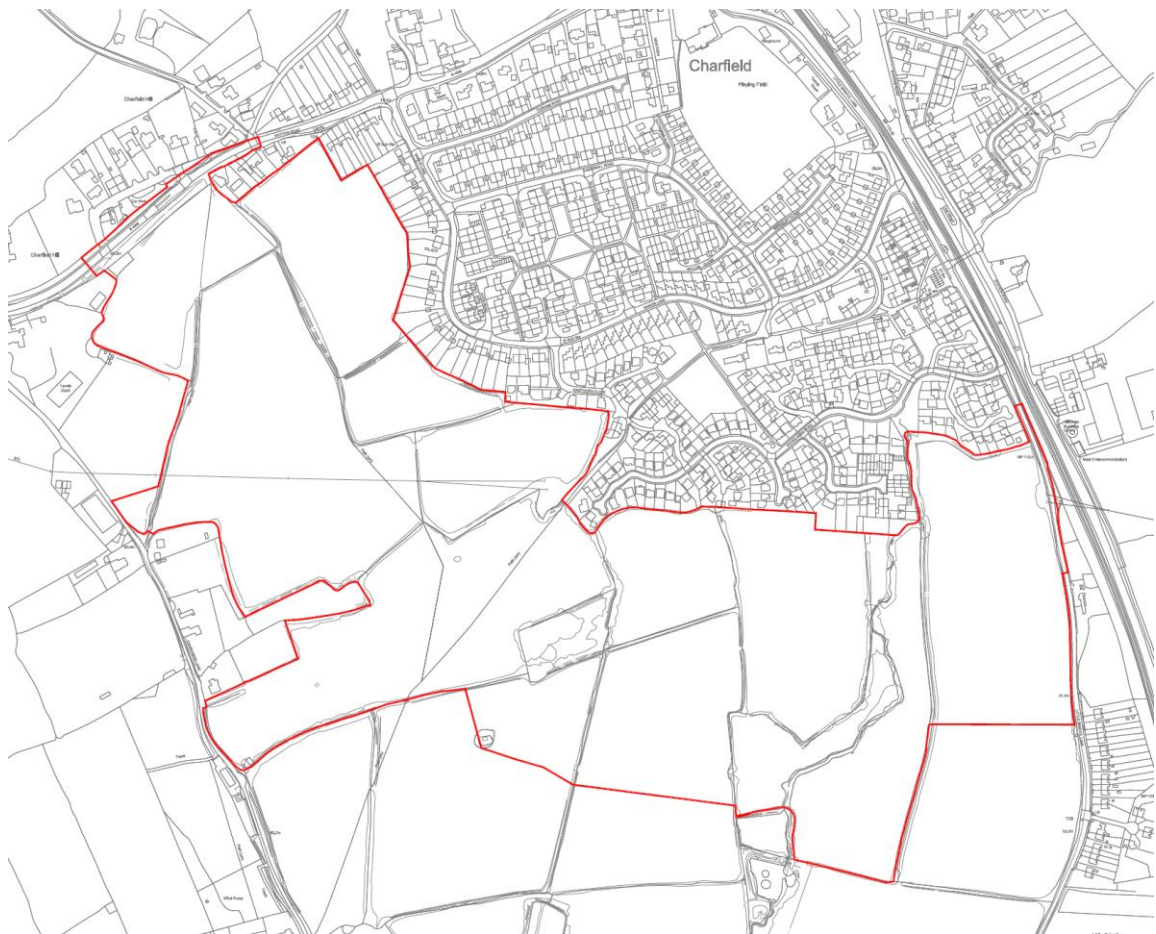
The Site

- 2.1 The site, shown on Figure 2.1 below, comprises 41.23 hectares of agricultural land separated and edged by hedgerows, woodland and mature trees. A watercourse runs through the south-eastern part of the site in a roughly north-south direction, forming a pond that is known to provide periodic habitat for Great Crested Newts ('GCN').
- 2.2 The site level undulates between 40m and 80m Above Ordnance Datum ('AOD'). The site forms part of the wider valley of the Little Avon River, with the western part of the site rising from around 45m AOD at the centre of the site to around 80m AOD at the ridge that runs along Churchend Lane. The eastern part of the site rises from 45m AOD to 65m AOD at the south-east of Devil's Lane.
- 2.3 A number of Public Rights of Way ('PRoW') cross the site and provide good links through the site, into and through Charfield. There is limited provision for cycling, with no formal cycle
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tracks in the immediate vicinity of the site. National Cycle Route ('NCR') 410 is, however, accessible at the village of Cromhall, approximately 3.5km to the south of Charfield

- 2.4 There are no heritage assets (listed buildings or conservation areas) within the site and there are no nationally designated sites of biodiversity importance. A locally designated Site of Nature Conservation Interest ('SNCI') runs alongside the watercourse, although this has been degraded as a result of cattle grazing.
- 2.5 The site lies wholly within Flood Zone 1, which indicates that it is at little or no risk of coastal or tidal flooding.

Figure 2.1 The Site (outlined in red)



Site Surroundings

- 2.6 The site is located to the south and west of the established settlement of Charfield. It is outside of the Bath and Bristol Green Belt and is generally bounded by residential properties to the east and agricultural fields to the west, with Wotton Road (B4058) forming a boundary to the north, Churchend Lane forming the bounding the site to the west, Little Bristol Lane to the east and agricultural fields to the south. A railway line runs almost parallel to the east of Little Bristol Lane.
- 2.7 Charfield is a sustainable settlement that is unconstrained by the Bristol and Bath Green Belt. It benefits from a number of facilities including three pubs, a petrol filling station (including small retail outlet), a convenience store, post office, two places of worship, a community hall, playing

fields with equipped areas of play and a primary school with a pre-school unit and out of school club.

- 2.8 There is no secondary school in Charfield which is not unusual for a settlement of its size as there are two locally which can be accessed by dedicated school buses that serve the village. These are The Castle School in Thornbury, which can be accessed using the 968 bus, and Katherine Lady Berkeley School to the east of Charfield, which can be accessed using the X6 bus.
- 2.9 There are also a number of employment opportunities within and in close proximity to Charfield, including Renishaw Ltd, which is a leading engineering and scientific technology company with over 1,200 employees spread across its three local sites including one in Charfield. As discussed in the cumulative assessment, Renishaw Ltd has submitted a planning application for an extension and a large car parking area, which will provide further jobs nearby. Other employment opportunities include Charfield Barns Office Park and Charfield Mills Industrial Estate. Leyhill Prison and Tortworth Court Four Pillars Hotel are located approximately 2km northwest of Charfield and also offer employment opportunities.
- 2.10 There are existing bus stops at Charfield Post Office (approximately 250m from the site), Little Bristol Lane (approximately 150m from the site) and the western and eastern extents of Manor Lane (approximately 300 and 370m from the site respectively) which are within convenient walking distance from the site and provide access to a range of facilities/services including secondary schools and Renishaw. The closest rail stations are at Yate (approximately 13km south) and Cam & Dursley (approximately 14 km north) which are served by hourly trains between Bristol and Gloucester and can be accessed from Charfield via bus services.
- 2.11 There is a longstanding commitment to deliver a new railway station at Charfield, with land having been safeguarded through South Gloucestershire Council's Local Plan (2006) and Core Strategy (2013). The Gloucester County Council Rail Study Report (September 2015) also confirms that *"the high level of housing growth in the area may enable a sound case to be developed for a station at this location"* and the Joint Local Transport Plan 3 includes Charfield as a 'possible new station' on the 'Vision for West of England Rail Network' plan.

3.0 Description of Development

- 3.1 The description of development is as follows:

Outline permission with all matters reserved (other than accesses) for a mixed use residential-led development including:

- 1 preparatory works;
- 2 Up to 525 residential units (Use Class C3, including affordable homes and Use Class C2/C3 housing suitable for the elderly) with provision of a reserve site for a new 3 form entry primary school with playing fields (Use Class D1);
- 3 up to 1ha of land for a neighbourhood centre, comprising 0.7ha with provision for 1,800 sq.m of commercial floorspace (up to 500 sq. m A1, 500 sq. m A1/A2/A3/A5/B1¹ and 800 sq. m D1 community uses) and up to 0.3 ha additional employment provision. The neighbourhood centre may also incorporate residential uses (Use Class C3).

¹ Use Class Definitions: A1: Shops; A2: Financial & Professional Services; A3: Restaurants & Cafes; A5: Hot Food Takeaways; B1: Business; D1: Non-Residential Institutions; C3: Dwellinghouses.

- 4 provision of green infrastructure including: 3 playing pitches (1x senior pitch and 2x junior pitches), open space, parks, natural and semi natural green space, amenity green spaces and facilities for children and young people;
- 5 provision of associated infrastructure including footpaths/cycleways and vehicular accesses; and
- 6 provision of associated engineering and landscaping works including SUDs.

- 3.2 A series of Parameter Plans are submitted for approval that allow the detailed design to be reserved for subsequent approval, whilst defining the key principles of the development in enough detail to allow the likely significant environmental effects of the development to be assessed. All detailed matters will be reserved for subsequent approval but will be subject to the Parameters Plans and other matters set out in planning conditions and/or s106 obligations.
- 3.3 The Development Extents and Land Use Parameter Plan (Drawing Reference AC31350-09-004 Revision D) shows how each of the land uses and open space will be distributed across the site and their extent. This is supported by the Landscape Infrastructure Parameter Plan (Drawing Reference AC31350-09-008 Revision F) that identifies the key landscape features that are to be retained and provided.
- 3.4 The Access Parameter Plan (Drawing Reference AC31350-08-007 Revision D) identifies the main pedestrian, cycle and access routes across the site. This is supported by detailed drawings for access points into the site from Wotton Road and Little Bristol Lane (Drawing References 105518-GA-P2 Revision B and 105518-11-GA-P1 Revision A).
- 3.5 The Building Heights Parameters Plan (Drawing Reference AC31350-09-005 Revision D) identifies how built development heights will vary across the site to address level changes and ensure the protection of nearby heritage assets and the potential for some higher focal buildings, taking into account key views.
- 3.6 The Residential Density Parameters Plan (Drawing Reference AC31350-09-006 Revision D) identifies how the residential density will vary across the site.
- 3.7 Full details of the building design and landscape details will be agreed at reserved matters stage but sufficient information has been made available to ensure EIA can be carried out at this time.

Construction Methodology

- 3.8 For the purpose of this EIA, construction of the development is anticipated to take approximately 6 years, including site set-up, site preparation, enabling works and construction, including groundworks, foundations, construction of buildings and planting of landscaping. The EIA has been prepared on the basis that construction works will commence in 2022/23 and end in 2029.
 - 3.9 Construction plant and machinery is expected to include excavators, dump trucks, fork lifts, cranes, Heavy Goods Vehicles ('HGVs'), concrete delivery HGVs, light transit vehicles, generators, pumps and compressors. The core construction hours will cover 08:00 – 18:00 on weekdays and 08:00-13:00 on Saturdays and there will be no working on Sundays, Bank or Public Holidays.
 - 3.10 The contractor/s will be required to produce and agree a 'Construction Environmental Management Plan' ('CEMP') to describe how construction will be managed to avoid, minimise and mitigate any construction effects on the environment and existing surrounding communities, businesses and residents of the area. This will include details of communication, general dust management, monitoring (if required), preparing and maintaining the site,
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operating vehicles/machinery, operations, waste management, earthworks, construction and trackout.

- 3.11 The information assessed in the EIA will form part of the tender documentation to be issued to contractors and they will be required to comply with the outline methodology described, as well as any relevant planning conditions.
- 3.12 The EIA has been prepared in accordance with the requirements of the EIA Regulations and with reference to best practice including that published by the Institute of Environmental Management and Assessment ('IEMA'). All information required to identify the significant environmental effects of the development has been provided as part of the ES.

Alternatives Considered

- 3.13 It is good practice to consider alternatives for the proposed development. This helps in clarifying the main advantages for taking forward the current scheme, taking account of the environmental effects.
- 3.14 Alternatives considered as part of the process include:
- **“No Development”** – Some adverse effects associated with the proposed development would not occur. However, a number of beneficial effects of the proposed development would be unlikely to come forward, including: improvements to connectivity through and within the site; socio-economic benefits from the provision of housing and job creation; enhancements to the SNCI and species following the implementation of the proposed Landscape Strategy; improvements to the watercourse running through the site; and reduced driver delay and pedestrian safety on Wotton Road. The no-development scenario would also make it unlikely that the Council's housing need objectives would be achieved.
 - **Maximised Development Area** – A maximised developable area would be likely to generate additional adverse impacts on heritage, visual and ecological receptors. Water resources would also likely be worse off from an increased impermeable area. Socio Economic receptors may experience additional benefits from extra housing provision and the associated job creation, though this would be off-set against increased pressure on local services.
 - **Alternative Junction Arrangements** – Alternative access options have been considered to Wotton Road and Little Bristol Lane however these would have been unsuitable for the specific access locations and would therefore have not delivered the same transport benefits.

4.0 Landscape and Visual Impacts

- 4.1 The landscape and visual assessment has been carried out in accordance with industry standard guidance (GLVIA3, Third Edition (2013)) and has been scoped with the Council.
- 4.2 Landscape and visual effects are interrelated but assessed separately. The following definitions help to differentiate between what constitute landscape and visual effects:
- Landscape effects relate to changes to the fabric, character and quality of the landscape and how it is experienced; and
 - Visual effects relate closely to landscape effects, but also concern the changes in views as visual assessment is also concerned with people's perception and response to change in visual amenity.
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- 4.3 The site is not located in a landscape designated at either a national or local level and is situated over 2km from the Cotswolds AONB. In elevated views from the Cotswolds Escarpment the site is experienced as part of distant, expansive elevated views, and is seen in context with the existing built form of Charfield. As identified within this report, it is considered that the site and therefore the proposal do not lie within the setting of the AONB.
- 4.4 It is concluded that moderate adverse effects arising from the operational phase of the proposed development are limited to a local landscape effect relating to the loss of the agricultural fields and a visual effect relating to those residents which are located closest to the site at the northern boundary. These are not considered to be overall significant effects due to the localised nature of the effect on the fields, the effect on the visual receptors is considered to be highly localised to the site area and the proposals will form a continuation of an existing context within the view. There are no major adverse effects arising from the operational phase of the proposed development and the assessment concludes that in fact some beneficial effects that improve the landscape and visual baseline would arise as a result of the delivery of the proposed development. The construction phase of development introduces some moderate adverse effects, however these are temporary in nature and are therefore not considered to be overall significant.
- 4.5 In addition to the landscape and visual assessment work, a landscape strategy is provided which has been based upon the Green Infrastructure Parameter Plan. The evolution of the scheme has sought to include measures such as the incorporation of existing tree groups and landscape features within the layout to provide a mature framework for development to work within and complement the wider landscape character and structure. This has been designed to break up the proposed development roofscape and building mass in views and soften the proposed built form when viewed from the surrounding area. In addition, the location, use and character of new spaces as demonstrated on the Landscape Strategy Delivery Plan has been carefully considered to respond to the local character and supplement the assessment process conducted within the Landscape and Visual ES Chapter. This strategy plan sets out the potential opportunities for the delivery of a high-quality landscape scheme within the wider parameters provided.

5.0 Ecology and Nature Conservation

- 5.1 The suite of surveys undertaken to date on the Site have identified that there are two on-site SNCIs; Marshy Field near Charfield SNCI and Meadows near Charfield SNCI, both of which are deteriorating due to lack of management and the Site supports a range of protected and notable species including badgers, bats (roosting, commuting and foraging), GCN, reptiles and hedgehogs.
- 5.2 The proposed development has been designed to incorporate the most important ecological features including the SNCIs and the mature tree and hedgerow corridors. Potential loss of two bat roosts can be compensated for through the provision of bat boxes both on retained trees and integral to the residential units and key commuting and foraging corridors will be retained and bolstered by additional planting. Most habitats to be lost are of negligible ecological importance and therefore the Landscape Strategy proposed, which incorporates large extents of wildflower grassland, scattered tree and hedgerow and tree planting, will enhance the ecological importance on the on-site habitat retained within the GI.
- 5.3 During the construction phase, potential effects can be mitigated through the implementation of a detailed CEMP and method statements associated with the required Natural England licences for both badgers and GCN ensuring that overall residual effects are no more than negligible.
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- 5.4 During the operational phase, a detailed LEMP will be produced which will incorporate detailed management strategies designed to maximise the potential for biodiversity on the Site. As a result of implementing the Landscape Strategy and associated LEMP, moderate beneficial residual impacts are anticipated in relation to the SNCIs and non-significant minor beneficial residual effects are anticipated for a range of protected and priority species using the Site.

6.0 Heritage

- 6.1 The built heritage assessment was prepared by Montagu Evans LLP and is presented in full within ES Chapter F and the associated appendices. This sets out the likely significant effects arising from the proposed development of the site, on all heritage receptors within a 1km radius of the site, including listed buildings, and locally listed buildings. It has also considered the impact on assets further afield, where these have a visual relationship with the land at the Site, and therefore could experience change as a result of the development.
- 6.2 The chapter has assessed the proposed development against the existing baseline conditions. The methodology applied to the assessment is the product of legislation, policy and best practice guidance. In particular the methodology takes into account the National Planning Policy Framework ('NPPF'), Historic England's Historic Environment Good Practice Advice in Planning Note 2: Managing Significance (GPA2) and Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (2017) (GPA3).
- 6.3 The development site is experienced within a mixed context, comprised of open, arable land interspersed with settlements. To the west is the remnant of the settlement at Churchend Lane, which is focussed on the grade II* listed Church of St James, characterised by its leafy and enclosed graveyard setting on rising ground. To the north east is Charfield, which predominantly comprises late nineteenth and early twentieth century residential development. To the south, south east and northwest, is open land.
- 6.4 The historic nature of the settlement at Churchend Lane and its location distinct from Charfield contributes to the historic value of the listed and locally listed buildings located here. Of particular interest is the Church of St James, which was founded in the 13th century, and remained the parish church until local migration out of the area in the 18th century meant it no longer had a congregation. The church was subsequently taken into the care of the Churches Conservation Trust, who are responsible for its management and maintenance.
- 6.5 In developing the proposals, the design team has therefore sought to preserve the significance of the church by maintaining a sense of separation between the earlier settlement at Church End, and the post-18th century 'new' town at Charfield. The Applicant and the consultant team have consulted with relevant stakeholders to enable a responsive design process, which has regard to professional judgement and appropriate expertise. Extensive consultation has been undertaken with the District Council, Historic England and the Churches Conservation Trust.
- 6.6 Following the initial submission, the applicant has revised the masterplan and reduced the amount of development in response to consultee comments. The arrangement to the north of the PROW has been carefully considered to minimise the impact on the setting of the Church, and preserve the separation between the two settlements at Church End and Charfield. A central band of open space has been maintained which distinguishes the areas of development from one another, and preserves a sight line through the Site to the existing settlement beyond.
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Predicted Impacts

- 6.7 Taking into account the topography, intervening development and vegetation, the assessment finds that there will be no residual impact on the grade II listed buildings along Wotton Road and to the north east of Charfield. These are separated from the Application Site by the settlement and are experienced in a more urban context which differs from that to the south.
- 6.8 Similarly, locally listed buildings within the urban development of Charfield to the north east, and along Station Road, will not experience a change to their setting as a result of the Proposed Development.
- 6.9 In all, the chapter concludes that there are two heritage receptors in close proximity to the Site which may experience a harmful setting effect as a result of the proposed development. They are the Church of St James (grade II*); and Manor Farm (locally listed).
- 6.10 The implementation of a well-considered masterplan will develop the Site in a way that is sympathetic and appropriate. This will include planting along the border closest to Churchend Lane, to provide a visual buffer between the Site and the buildings at Church End, and the retention of green open space in the south western corner of the Site, which will preserve important views towards the Church. An open corridor across the Site, broadly east-west, will visually distinguish between the historic and modern development, and prevent the new areas of built form coalescing in views from Churchend Lane.

Mitigation

- 6.11 The development of the masterplan has been undertaken with a view to creating a high quality development that will respond positively to the mixed suburban/ rural character of the local area and be an attractive feature in the setting of heritage receptors. This has developed through extensive consultation with the Council and with Historic England.
- 6.12 At the operational phase, the Proposed Development incorporates mitigation measures that have been embedded into the project design. These include the setting back of development from the settlement at Church End, the preservation of areas of open space, and the low height of the proposed development, which responds to the ridge line of the escarpment at Church End, and low scale of housing on the outer edges of the proposed development.
- 6.13 Whilst it is inevitable that some adverse setting impacts will be identified as a result of the change in the character of the land from open space to residential development, it is not considered that these alterations would result in the loss of integrity of the whole.
- 6.14 To mitigate the moderate adverse effect caused to St James' Church by development in its setting (which equates to a degree of less than substantial harm as per paragraph 196 of the NPPF), the Applicant and Montagu Evans have engaged with the Churches Conservation Trust and proposed to provide funding towards a programme of works to preserve and restore the church, and to improve its immediate setting through works to the Churchyard. The possible scope of these restoration works is set out in a Feasibility Study at Appendix F4 of the main ES.
- 6.15 It is therefore considered that the proposed development meets the statutory provisions of Section, 66(1) of the Planning (Listed Buildings and Conservation Areas) Act 1990, and meets the requirements of paragraphs 193, 194 and 197 of the NPPF, as well as the relevant Development Plan policies.
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7.0 Archaeology

- 7.1 This ES Chapter has been informed by an archaeological desk-based assessment (Orion Heritage, 2017), geophysical survey (Magnitude Surveys 2017), assessment of aerial imagery (Air Photo Services 2017), archaeological evaluation trial-trenching (Cotswold Archaeology 2018) and by discussion with Paul Driscoll, Archaeology and Historic Environment Record Officer at south Gloucestershire Council.
- 7.2 The site is known to contain archaeological assets comprising a Roman road and associated features and has the potential to contain archaeological assets principally relating to Roman activity and to Medieval agricultural activity. The proposed development may have a minor adverse effect on archaeological remains. However, it is considered that the archaeological potential of the Site can be secured through a carefully worded condition. This condition will require implementation of a formally agreed phased archaeological investigation of those development plots not already evaluated and, should significant remains be recorded, a formally agreed mitigation strategy. The knowledge gained from excavation, post-excavation analysis and publication, along with public dissemination of the results, will result in an overall minor adverse effect in the long-term. In relation to the Roman road, a minor beneficial effect is noted due to its proposed removal from a damaging agricultural regime to its preservation within a green corridor/shared open space.

8.0 Socio Economic

- 8.1 The proposed development will have a beneficial socio-economic impact across the South West region but this will be felt most strongly in South Gloucestershire.
- 8.2 The key features of the demographic and economic conditions in South Gloucestershire and the Stroud 015 MSOA can be summarised as follows:
- 1 The age profile of the population of South Gloucestershire is younger than the wider South West region but slightly older than the national average.
 - 2 The Stroud 015 MSOA has an older population and has experienced lower levels of growth than South Gloucestershire between 2001 and 2011.
 - 3 Economic activity in South Gloucestershire is higher than the national and regional levels.
 - 4 Economic activity rates are slightly lower in the Stroud 015 MSOA, which is likely to be due to the larger number of retired people in this area.
 - 5 The unemployment rate in South Gloucestershire is slightly lower than the average for the South West and Great Britain.
 - 6 South Gloucestershire is a net importer of labour and has large commuting flows in both directions.
 - 7 Recent housing delivery in South Gloucestershire has not met the Core Strategy housing requirement, and the District suffers from high house prices and worsening affordability.
 - 8 The adopted Core Strategy states that all villages in the District are facing a decline in local services and facilities, poor access to local jobs, and a lack of affordable housing.
 - 9 The nine primary schools within 3 miles of the proposal site currently have surplus capacity of 239 places. The secondary schools within 5 miles of the proposal site have surplus capacity of 285 places.
- 8.3 The most significant economic impacts of the proposed development would be:
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- 1 A capital investment of between £72.1 million over a build period of 6 years.
 - 2 1,200 person-years of temporary construction work, equivalent to 200 FTE direct construction jobs.
 - 3 Additionally, 305 indirect and induced FTE jobs during the construction period.
 - 4 A contribution of £33.4 million in total GVA to the South West economy from direct and indirect/induced jobs during the construction period.
 - 5 Following completion, the creation of 126 (equivalent to 105 FTE jobs).
 - 6 The creation of 54 indirect and induced jobs (45 FTE) in the South West, of which 32 jobs (27 FTE) will be in the local area.
 - 7 A contribution of £9.0 million in total GVA to the South West economy from direct and indirect/induced jobs.
 - 8 The total expenditure from new residents at the proposed development is expected to be £16.8 million, of which £11.5 million will be new to the local area. This would support 110 new FTE jobs in retail and leisure sectors.
 - 9 The scheme will result in the following tax contributions:
 - a £110,000 per annum in business rates;
 - b £930,000 per annum in Council Tax revenue; and,
 - c New Homes Bonus payments of £880,000 per annum over four years, resulting in a total income of £3.5 million to South Gloucestershire Council.
- 8.4 The proposed development will contribute to providing new workers and re-balancing the age profile of the local area in proximity to the Stroud 015 MSOA, an area that has experienced less growth in recent years and has an older, less economically active population than the District as a whole.
- 8.5 The proposed development will also provide a substantial number of employment opportunities, including both during the construction phase and once the scheme is complete and operational. These additional jobs would support the local economy and could help to reduce local unemployment levels.
- 8.6 The proposed development offers significant benefits in relation to the provision of housing in Charfield. It will contribute to meeting the need for housing identified in the adopted South Gloucestershire Local Plan and, in so doing, will provide a range of dwellings, including affordable homes and would therefore help to provide housing choice within the District and across the local towns and villages in the area. It will also contribute to reducing the level of net in-commuting by accommodating workers in the District.
- 8.7 The potential impact of the proposed development on neighbouring local authority areas in terms of commuting would be mostly felt in Bristol. However, this impact will be to increase the net level of in-commuting to Bristol by just 0.2% and is not considered to be significant.
- 8.8 New residents at the proposed development would place a minor additional demand on nearby sports and leisure venues but would also provide valuable support for these facilities and the activities held there, a number of which are located in Wotton-under-Edge. The introduction of additional residents to the area would therefore help contribute towards halting the recognised decline in local facilities and services in nearby villages.
- 8.9 Whilst the new development will increase demand for school places, there will still be some surplus capacity with local primary and secondary schools. The reservation of a site for a 3-form
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entry primary school will mitigate any adverse impact, as will a financial contribution towards the provision of secondary school places.

- 8.10 Were the proposed development not to proceed, this could have adverse impacts in social and economic terms. A “do nothing” option would not generate any socio-economic benefits for the area of assessment and would fail to make any contribution towards key local economic issues such as the need for additional housing.
- 8.1 The proposed development represents a significant new capital investment in the area, which in addition to providing housing, will increase the number of employment opportunities and the level of resident expenditure in the area.

9.0 **Transport**

- 9.1 The Transport chapter of the ES has been prepared by Evoke Transport Planning Consultants Ltd and assesses the environmental effects that could arise on the local transport and highway network and which are attributable to changes in predicted travel demand associated with the Proposed Development (during construction and operation) and other Committed Developments and potential future developments (‘Sensitivity Tests’) in the vicinity (as part of a cumulative assessment).
- 9.2 The Transport chapter has been prepared to support the amended scheme and therefore provides an updated assessment to that previously provided to support the original application. Some matters of assessment had previously been agreed through the original application and therefore some elements of the Chapter remain unchanged.
- 9.3 The Transport chapter has been prepared in accordance with national, regional and local policy and guidance and is supported by an Addendum Transport Assessment and Addendum Framework Travel Plan (included within an Appendix to the ES).
- 9.4 Extensive consultation has been undertaken with all key stakeholders and relevant parties, and has included attendance at numerous meetings to discuss the scope of assessment required; both for the original application (for which some transport elements continue to apply) and for this proposed development. Key stakeholders include:
- South Gloucestershire Council;
 - Highways England;
 - A National Bus Operator;
 - Charfield Liaison Group and Local Residents; and
 - Other nearby developers and their consultants.
- 9.5 To determine the extent of assessment, a number of receptors have been identified, which include users of local roads and land uses which may affect their sensitivity. The ‘magnitude of effect’ of the potential impact of development traffic has been defined based upon this sensitivity, with the potentially significant effects identified in respect to transport. These potentially significant effects are:
- Severance;
 - Driver Delay;
 - Pedestrian Delay;
 - Pedestrian Amenity;
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- Fear and Intimidation;
- Accidents and Safety; and
- Hazardous Loads.

- 9.6 The significance of each effect has been identified on each link through analysis of Construction Traffic and Proposed Development Traffic (when the site is operational). To ensure a robust assessment, the future year of 2023 has been analysed which demonstrates the highest percentage impact of development traffic compared to the base position.
- 9.7 Analysis of construction traffic demonstrates high volumes of existing HGVs on the network in the AM Peak period in particular; anticipated to be a result of the Wickwar and Cromhall Quarries to the west/ south west of the development as well as HGVs routing to and from the M5 J14. Construction traffic will only add to the existing HGV volumes on Wotton Road and the B4509 links due to the main routing for construction vehicles (that will be agreed with SGC), and the effects will be temporary.
- 9.8 Analysis of the cumulative impact of the background growth, Committed Development, Sensitivity Testing and proposed development demonstrates 'potentially significant' increases in traffic as a result of the proposed development on three highway links; Wotton Road (east of B4509/ Churchend Lane Junction), Little Bristol Lane (south of Wotton Road junction) and Little Bristol Lane (south of Woodlands Road junction). Each of these links has therefore been analysed in further detail.
- 9.9 The Wotton Road (east of B4509/ Churchend Lane junction) link has been assessed as having a 'medium' level of sensitivity. It will experience the greatest volumes of traffic from the proposed development. The link also includes the Churchend Roundabout which experiences peak hour queues in the base scenario; it also has limited pedestrian amenities.
- 9.10 The Little Bristol Lane links are both considered to have low levels of sensitivity due to the low traffic and pedestrian volumes and no sensitive receptors. The proposed development would lead to a large percentage increase in traffic (although small in absolute number), however the links have been calculated to be well within their capacity, and therefore the increase is still considered 'negligible/ neutral'.
- 9.11 Mitigation measures which relate to this EIA have also been considered. Aside from specific measures during the construction period (which will be included in a construction management plan), measures include the following:
- Footway Improvements and pedestrian refuge islands on Wotton Road
 - Improvement/ mitigation scheme at the Churchend Roundabout to the west of the site
 - Contribution to new bus service through the village, connecting with the Bristol northern fringe;
 - Contribution towards the implementation of a traffic calming scheme through the village;
 - Preparation of a Framework Travel Plan which contains a number of measures to reduce single-occupancy car as a mode of travel and simultaneously promote walking, cycling and public transport through various measured, monitored targets.
- 9.12 It is anticipated that the proposed mitigation measures will have a beneficial impact on each link; in particular on the Wotton Road (East of B4509/ Churchend Lane Junction) link, as the improvements at the Churchend Roundabout will have a substantial beneficial effect on severance and delay. The potential bus service would also provide a beneficial effect to severance and delay by reducing the volume of traffic on each link (including attracting existing car trips).
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- 9.13 The proposed new footway provision and refuge islands on Wotton Road will increase Pedestrian Amenity and will reduce Pedestrian Delay, and will also have a beneficial impact on Fear & Intimidation and Accidents, and the proposed traffic calming scheme is anticipated to greatly improve safety through the village, whilst providing environmental enhancements to further reduce the effects of pedestrian delay and Fear and Intimidation.
- 9.14 It is therefore demonstrated that the proposed mitigation measures will provide an overall net benefit to all receptors, on all links, with the greatest effect being on the Wotton Road (East of B4509/ Churchend Lane Junction) link.

10.0 Water Environment

- 10.1 The Water Environment chapter of the ES considers the potential impacts of the proposed development on surface water, groundwater, flood risk management, land drainage and infrastructure (water supply and wastewater treatment and sewerage).
- 10.2 A small unnamed watercourse flows through the Application Site and the residential area of Charfield. Within the residential area the watercourse flows within an open channel and culverts (designated as public surface water sewers) before passing under Little Bristol Lane, the railway line and Station Road before re-emerging as an open channel to the east. The watercourse outfalls into the Little Avon River, approximately 0.4 km to the east of the Application Site.
- 10.3 The unnamed watercourse through the Application Site has not been assessed under the Water Framework Directive (WFD). However, the Little Avon River has been assessed as having a 'Moderate' overall and ecological status and a 'Good' chemical status.
- 10.4 Soils at the Application Site is indicated to be loamy/clayey, overlying Mudstone, Siltstone and Sandstone bedrock (Mercia Mudstone Group). According to the Department for Environment, Food and Rural Affairs (DEFRA) mapping the underlying bedrock is defined as a Secondary B aquifer. The Application Site is shown not to be located within a designated Groundwater Source Protection Zone. The underlying groundwater body is assessed to have a 'Good' overall status.
- 10.5 According to the Environment Agency Flood Map for Planning the Application Site is located within Flood Zone 1 ('low probability' of river flooding). However, the catchment area of the unnamed watercourse is too small to be modelled for inclusion within the mapping process. Any potential flood risk from this source may therefore not be accurately represented.
- 10.6 Detailed hydraulic modelling has been undertaken to assess the level of flood risk to the Application Site from the unnamed watercourse. The model outputs indicate that the majority of the Application Site would not be expected to flood in up to the present day 1 in 1,000 AEP event, but that some flooding is indicated to the north-east and south of the application site.
- 10.7 The Environment Agency Flood Risk from Surface Water map indicates that there is a risk of surface water pathways developing across parts of the Application Site in extreme rainfall events.
- 10.8 There are no canals or other artificial waterbodies located within the immediate vicinity of the Site. The Risk of Flooding from Reservoirs map indicates that the Application Site is not at risk of flooding from such sources.
- 10.9 The BGS Groundwater Flooding Hazard Map indicates that the majority of the Application Site is not at risk from this source; however, there are some isolated areas at a low to moderate risk in the northern part of the Application Site.
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- 10.10 The Application Site currently comprises entirely of undeveloped, permeable (greenfield) land. Little/no existing formal surface water drainage system is expected to be present. The topography of the Application Site suggests that surface water would naturally drain to the unnamed watercourse located through the Application Site.
- 10.11 Bristol Water (BW) water main and Wessex Water (WW) sewer records indicate that there is existing potable water supply and foul drainage infrastructure within/adjacent to the site boundary.
- 10.12 The construction and operational phases of the proposed development have the potential to reduce surface water and groundwater quality and increase flood risk, the demand for potable water and foul water discharges to the public sewer network.
- 10.13 During the construction phase this would be managed through a range of control and monitoring measures including best practice construction methods that, as a whole, would act to mitigate the potential effects on surface water, groundwater, flood risk, land drainage and infrastructure.
- 10.14 The likely significant effects during the operational phase of the proposed development would be managed by a package of mitigation measures comprising the implementation of a surface water strategy (including the incorporation of Sustainable Drainage Systems (SuDS)), raising finished floor levels to cater for event exceedance, providing a suitably designed access crossing on the unnamed watercourse and the monitoring and maintenance of the unnamed watercourse.
- 10.15 Furthermore, the effect of the proposed development on flood risk has been assessed and indicates that this is not expected to have an adverse impact elsewhere (i.e. off-site). Conversely overall betterment is anticipated downstream within the existing built up area of Charfield.
- 10.16 It is possible that off-site reinforcement of water supply and sewerage infrastructure will be required to facilitate the proposed development. This will be delivered by Bristol Water and Wessex Water with part of the works identified by Wessex Water funded by the developer.
- 10.17 To reduce the effects of the proposed development on water supply infrastructure and water resources, the potential for the implementation of water efficiency measures will be investigated.
- 10.18 The identified mitigation measures will result in a residual significance of environmental effects on the water environment which is assessed to be Negligible with Minor Beneficial in respect of the quality of and flood risk from the unnamed watercourse.

11.0 Cumulative Effects

- 11.1 An assessment has been carried out to establish whether any cumulative effects may arise from the proposed development when considered with various other schemes in proximity to the site (see Table 11.1 below). The objective is to identify whether impacts from several developments which individually might be insignificant could, when considered together, cause a significant indirect and cumulative impact requiring mitigation.
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Table 0.1 Schemes identified for cumulative Assessment

Ref	Address / Local Authority	Ref. Number	Status and Description of Development
1	Land South of Wotton Road, Charfield / SGC	PT13/4182/O	Erection of 106 dwellings. Granted at appeal June 2015.
2	Land at field known as Day House Leaze, Charfield / SGC	PT/16/0462/O	Erection of 64 dwellings. Granted 7 June 2016.
3	Land North of Wotton Road, Charfield / SGC	PT16/6924/O	Erection of 121 dwellings. Granted at appeal July 2018.
4	Land South of Wotton Road, Charfield / SGC	P20/00860/RM	375 sq m Use Class A1 retail unit, which would require the demolition of a locally listed building. Granted February 2020.
Additional Cumulative Sites Requested by Highways England, SGC Highways Officer and Stroud DC Highways Officer and included in the Cumulative Assessment			
5	Land West of Park Farm, Butt Lane / SGC	PT18/6450/O	Erection of up to 595 dwellings and a retail/community hub with a 1 form-entry primary school. Application Validated December 2018.
6	Land North of Wotton Road Charfield / SGC	P19/18237/O	Erection of up to 250 dwellings, community/employment uses and associated development including open space and drainage infrastructure. Application validated January 2020.
7	Land at Crossways Morton Way / SGC	P19/8659/O	Erection of up to 80 dwellings and employment uses. Validated July 2019.
8	New Mills, Renishaw Plc / Stroud District Council	S.18/2368/FUL	Expansion of Renishaw to provide 33,131 sq m of new floorspace and an 845-space car park. Validated November 2018.
Additional Cumulative Sites Requested by SGC Highways Officer and included in the Transport Assessment Only			
9	Land South of Poplar Lane, Wickwar	PK16/4006/O	Erection of up to 80 dwellings. Granted July 2017.
10	Land South of Horwood Lane, Wickwar	PK17/4552/O	Erection of up to 90 dwellings. Under determination, application validated October 2017.
Off-Site Infrastructure Works for the Charfield development included in the Cumulative Assessment			
11	Off-site water main reinforcement for 400 metres along Wotton Road, to connect the site to Charfield Reservoir. This will be delivered by Bristol Water.		
12	Reinstatement of the second compartment of Charfield Reservoir. This will be delivered by Bristol Water.		
13	Potential water quality investment at the Charfield Waste Water Treatment Works. This will be delivered by Wessex Water.		
14	Off-site reinforcement of the foul sewer network, following the initial phase of development. This will be delivered by Wessex Water.		
15	Off-site highway works to improve capacity at Junction 14 of the M5.		

11.2

The assessment has shown that in relation to most topics there are no or Negligible cumulative effects. Where additional impacts are predicted these relate to:

- 1 Additional townscape and visual effects however these are unlikely to combine to give rise to significant cumulative landscape effects within the wider environment. Any impacts are localised and not significant.
- 2 The potential for some views from the Tynedale Monument and Jubilee Clump to experience additional heritage impacts, however this would be seen in the context of the existing built form and would not have a cumulative urbanising effect on the setting of the receptors.
- 3 Additional socio-economic benefits in respect of socio-economic receptors during construction and operation from the additional benefits of housing provision/affordability, the local economy and ensuring local business viability.

11.3 A further assessment has also considered the inter-relationships between impacts identified within this ES and whether there is a need for further mitigation. It has been identified that combined effects exist for some receptors within or in close proximity to the site.

11.4 During the construction phase these are:

- 1 Adverse impacts on the local road network due to transport and landscape/visual impacts; and
- 2 Adverse impacts on the Grade 1 listed St James' Church, cemetery and garden of remembrance from landscape/visual and heritage impacts.

11.5 During the operational phase these are:

- 1 Beneficial impacts in terms of landscape/visual and ecology on hedgerows and trees;
- 2 Beneficial impacts on the local road network in respect of commuting and transport matters;
- 3 Minor adverse landscape/visual and heritage impacts on St James' Church, Cemetery and Garden of Remembrance; and
- 4 Minor beneficial landscape/visual, ecology and water environment impact on water receptors including waterbodies, watercourses and water infrastructure.

11.6 Having reviewed these impacts it is concluded that no additional mitigation and monitoring is required during the construction period or once the development is operational.

11.7 Overall, the proposed development represents a significant investment in the area providing a significant volume of much needed market and affordable housing and creates new local employment opportunities and expenditure in the local area without creating significant adverse effects on existing facilities. Overall, therefore, the cumulative effect on the local community is concluded to be positive.

12.0 Mitigation, Monitoring and Conclusions

12.1 The EIA process has identified the need for a range of mitigation measures to ensure that the conclusions of the ES can be secured and that effects will be negligible or kept to an absolute minimum. This includes:

- 1 During the Construction Period:
 - a Construction Environmental Management Plan;
 - b Construction Traffic Management Plan;
 - c Landscape and Ecological Management Plan;
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- d Construction lighting details;
- e Further archaeology evaluation, trial trenching, archaeological excavation and recording;
- f The preservation in situ of the Roman Road;
- g Archaeological watching brief; and,
- h Receipt of appropriate consents and permissions from the utility companies and Lead Local Flood Authority.

2 During the Operational Period

- a Detailed Landscape Strategy and its implementation;
- b Landscape and Ecological Management Plan;
- c Travel Plan;
- d Churchend Roundabout Improvement Scheme;
- e Pedestrian enhancements on Wotton Road (footway provision, traffic calming measures and pedestrian refuge islands);
- f Surface Water Drainage Strategy and watercourse maintenance regime;
- g Finished floor levels to be a minimum of 0.15m above adjacent ground levels; and,
- h Use of low-flow water fittings within dwellings.

12.2 The above measures can be secured via planning condition attached to any future planning permission. Other mitigation that would be secured via legal agreement (s106 Agreement) relates to:

- 1 Financial contribution towards secondary education provision;
- 2 Affordable housing;
- 3 Financial contribution towards repairs and enhancements to St James' Church;
- 4 A financial contribution towards bus services and the implementation of a traffic calming scheme through Charfield village.

12.3 The final extent of any financial contribution will be discussed and agreed with SGC during the determination of the planning application.

13.0 Availability of Environmental Statement

13.1 An electronic copy of the ES and Non-Technical Summary ('NTS') is available at a cost of £10.00. Reasonable copying charges will apply for a hard paper copy of the full ES. For further information please contact:

Lichfields, The Quorum, Bond Street, Bristol, BS1 3AE

Tel: +44(0)11 7403 1980

13.2 The Coronavirus Regulations amend Regulation 23 of the EIA Regulations, which relate to the availability of the document via the insertion of new Regulation 23A. In order to comply with this, the ES has been provided to SGC in a format that can be uploaded to their website. Therefore, once the application has been submitted to and registered by SGC, the full ES and associated planning application documents can be viewed at:

<http://developments.southglos.gov.uk/online-applications/?searchType=Application>

The information is also usually available for viewing during the opening hours of SGC. During the COVID-19 pandemic, it may not be possible to view this information at the SGC offices. In such circumstances, and should you require a copy of the ES, please use the details for Lichfields above or liaise with the planning team at SGC for further assistance.

- 13.3 Further queries on viewing the planning application and ES should be directed towards the South Gloucestershire Council Planning Department, which can be contacted on +44(0)14 5486 8004.
 - 13.4 All comments on the ES (and planning application) should be issued directly to SGC.
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Appendix 1: Key Plans and Drawings

Drawing Name	Drawing Number
Site Location Plan	AC31350-09-009
Parameter Plan 1: Development Extents and Land Use	AC31350-09-004 Rev D
Parameter Plan 2: Heights	AC31350-09-005 Rev D
Parameter Plan 3: Density	AC31350-09-006 Rev D
Parameter Plan 4: Access	AC31350-09-007 Rev D
Parameter Plan 5: Landscape Infrastructure	AC31350-09-008 Rev F
Landscape Framework	10264/P49b
Wotton Road Proposed Priority Junction General Arrangement	105518-GA-P2 Revision B
Wotton Road Proposed Priority Junction Visibility Splays	105518-VS-P2 Revision A
Little Bristol Lane Proposed Priority Junction General Arrangement	105518-11-GA-P1 Revision A
Little Bristol Lane Proposed Priority Junction Visibility Splays	105518-11-VS-P1 Revision A
Illustrative Masterplan	AC31350-09-011 Rev D

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