Wiltshire Housing Site Allocation Plan

Examination in Public

Draft Statement of Common Ground

As agreed between:

Wiltshire Council

and

PlanningSphere representing Malaby Holdings (Representor Ref: 556400)

and

Savills representing Keysley Ltd (Representor Ref: 1137935)

concerning

Land at Bore Hill Farm, Warminster
Policy H2, site allocation H2.8

March 2019

1.0 Introduction

1.1 This Statement of Common Ground (SoCG) is provided in respect of the identification of land at Bore Hill Farm, Warminster as a proposed housing allocation in the draft Wiltshire Housing Site Allocation Plan (the Plan) under Policy H2, site allocation H2.8. The SoCG is structured to provide the Inspector with relevant background information relating to the site promotion and assessment. Section 5 sets out a response to the Inspector's Initial Matters, Issues and Questions including the matters that the principal parties (i.e. Wiltshire Council, Malaby Holdings and Keysley Ltd) agree, and those matters that remain in dispute.

1.2 The following appendices are included:

- Appendix A: Site Location Plan
- Appendix B: Masterplan approved under planning permission W/10/00660/WCM
- Appendix C: Proposed Illustrative Masterplan for Bore Hill Farm including the Phase 3 residential site
- Appendix D: Aerial Emissions Statement (Malaby Biogas)
- Appendix E: March 2019 Odour Survey, Non-technical summary (CSO Group)

2.0 Site context

2.1 The Bore Hill Farm site is in the freehold ownership of Malaby Holdings. The adjoining land at Bradley Road is in the separate freehold ownership of Keysley Ltd. The combined sites, as included in site allocation H2.8 (as set out in Proposed Change 79) are annotated on the Site Location Plan at **Appendix A** and extend to 4.83ha.

2.2 The site lies approximately 1.4km to the south of the Warminster town centre. The site is bounded by existing residential development at Ludlow Close, Bradley Close and Bradley Road to the north; Deverill Road to the east; and the A36 Warminster bypass to the south.

2.3 The Bore Hill Biodigester, which became operational in May 2012, adjoins the south west corner of the site.

3.0 Existing lawful use and Planning History

3.1 The present lawful use of the proposed residential allocation land is agricultural. The land was severed from a larger agricultural holding in the early 1990s following the construction of the Warminster Bypass. The land is not in productive agricultural use.

3.2 Relevant planning history is summarised below:

Reference	Description	Decision Date
W/10/03967/WCM	S.73 application: erection of Biogas Plant; employment units; and associated works without compliance with condition 2 of permission W/10/00666/WCM (approved plans) to reduce ground levels, and alter size, location and design of plant / buildings.	Permission 08.03.2011

W/10/00666/WCM	Erection of Biogas Plant; employment unit; associated land modelling; landscaping and access works.	Permission 16.07.2010

3.3 The biodigester element of planning permission W/10/03967/WCM has been lawfully implemented, and the plant, which is operated by Malaby Biogas, has been fully operational since May 2012.

3.4 Planning permission W/10/03967/WCM included 6 No. new employment buildings (Class B1) and an access road adjacent to the biodigester plant, which are referred to as the Phase 2 proposals (the masterplan is included at Appendix B). Initial ground preparation and site levelling works relating to the Phase 2 employment development were completed in 2016. The permitted Phase 2 employment buildings are therefore 'preserved' by virtue of the partial lawful implementation of planning permission W/10/03967/WCM.

3.5 A pre-application enquiry (Ref: 18/00122/PREAPP) was submitted in January 2018 to consider an alternative use for the permitted Phase 2 site a combined training, research and innovation facility (TRIF) to spin out expertise which has been developed within the Bore Hill Farm Biodigester business. The operator, Malaby Biogas, has established a national position as an industry leader-innovator, and wishes to build on the work it undertakes with universities to develop research-based innovations utilising Bore Hill Farm's location between a number of universities and using the good road and rail transport connections. Their aim is to achieve an exemplar model for innovation and development of 'green' skills and products for the future economy. The pre-application response supported a change of use on the Phase 2 site to support development of such a facility, subject to conditions restricting use and submission of acceptable evidence to demonstrate that the vitality of the town centre would not be harmed.

4.0 Site promotion history

4.1 The Bore Hill Farm site was acquired by Malaby Holdings in 2009. The site owned by Keysley Ltd came into one of the director's ownership in the 1980s moving to Keysley Ltd.'s ownership in the 1990s.

4.2 The site was identified by Wiltshire Council as a potential 'strategic site' in an Issues and Options consultation document as part of the Wiltshire Core Strategy process. Representations were submitted in 2009 and 2011 on behalf of Malaby Holdings promoting the site as an allocation as a potential residential development opportunity. The Wiltshire Core Strategy went on to identify only one strategic site at the town, the West Warminster Urban Extension (WWUE) (Core Policy 2). This allocation is now the subject of a resolution to grant planning permission (LPA Ref: 15/01800/OUT).

4.3 A third party developer, David Wilson Homes (DWH), submitted a pre-application enquiry to Wiltshire Council in respect of the balance of the agricultural land owned by Malaby Holdings, which is referred to as the Phase 3 site (Ref: 13/03407/PREAPP). Subsequently, Malaby Holdings and Keysley Ltd decided to promote their sites jointly through the Wiltshire Housing Site Allocation Plan. If the allocation is confirmed it is their intention to seek a niche / regionally-based housing development partner to deliver a bespoke housing scheme that could take advantage of the on-site renewable energy potential through the provision of direct renewable heat and electricity from the adjacent

biodigester (subject to design and regulatory approval). This is in line with the opportunity identified in paragraph 5.96 of the Plan.

4.4 The site promoter prepared an early indicative masterplan for Phase 3 of the development in 2017 to illustrate how residential development could be accommodated alongside the Phase 2 employment development (**Appendix C**).

5.0 Response to Matter 3: Housing Site Allocation (Policy H2.9)

5.1 The following table sets out agreed matters relating to 'issue 5' under Matter 3:

Issue No.	Agreed Matters
5.1	Malaby Holdings and Keysley Ltd agree with the response provided in the Wiltshire Council Position Statement (PS.M3.39).
5.3	Wiltshire Council and Malaby Holdings / Keysley have agreed: (i) Ecology: the WHSAP assessment for this site identifies that local impacts on biodiversity could be mitigated, which would need to be considered in detail through ecological assessment at the planning application stage. The site promoters have undertaken site surveys to support the biodigester applications did not identify the presence of any protected species on site. However, the Phase 3 residential proposals have potential to enhance biodiversity through implementation of a comprehensive landscaping scheme combined with the use of sustainable drainage systems. Development of the site will need to incorporate appropriate measures to mitigate against the likely significant effects of phosphate discharge into the River Avon SAC resulting from residential development. (ii) Agricultural land: the land is not in productive agricultural use as it was severed from a larger land holding following the construction of the Warminster Bypass in the early 1990s. All parties agree that a minor loss of best and most versatile land would be justified by the benefits of delivering housing. (iii) Landscape quality and character: all parties agree the site constitutes a logical infill between the existing housing to the north and the implemented (Phase 1) and permitted (Phase 2) commercial development on site, and Warminster Bypass to the south. Development of the subject site will not be visible from AoNB to the north west and with high quality design will only have a localised and limited visual impact from Deverill and Bradley Roads. (iv) Heritage: there are no heritage assets proximate to the subject site. The WHSAP site assessment determined that the site has low/medium archaeological politically/sensitivity. (v) Access: a priority junction access from Deverill Road, sufficient to provide access to the Phase 2 (permitted employment scheme) developments was permitted under planning permission W/10/03967/WCM. The site promoters state that if necessary, this permitted junction could be adapted to a right turn lane priority junction to provide access to the Phase 2 (permitted employment scheme) and Phase 3 (proposed residential area). The full detail of the

	junction design will be agreed with the Highway Authority as part of a post-examination pre-application process. An access and /or cycle link connecting Deverill Road and Bradley Road could be provided through the site. The existing PROW that runs along the northern boundary of the site, and the footway along Deverill Road, could also be enhanced to improve pedestrian accessibility. (vi) Highway Safety: all parties agree that a right-hand lane priority junction can be accommodated within the adopted highway and constructed to fully adoptable standards also providing a full standard exit visibility in both directions. (vii) Environmental and flood risk considerations: aerial emissions from the Biogas Plant are managed by Malaby Biogas in accordance with the Environmental Permitting regime, as explained described in **Appendix D**. The potential impacts of the proximity of this site to the operational biodigester have been considered through the WHSAP site assessment process and paragraphs 5.94-5.96 of the Plan set out how residential uses will be brought forward in a manner which is compatible with the adjoining use. This includes separation between the biodigester and proposed residential development through the delivery of commercial uses on the part of site that benefits from extant permission, and through the additional landscape screening at the site boundaries to preserve and maintain the living conditions of adjoining residential dwellings. Local amenity effects of environmental conditions such as noise and odour are to be managed by the biodigester plant's Environmental Permit. The site lies in Flood Zone 1. A comprehensive scheme of surface water management and attenuation will form part of the detailed design development in due course. (viii) Open space and PROWs: the site promoters have included an indicative masterplan at **Appendix C**, which shows how onsite public open space could be achieved. The site also benefits from access to the countryside via an existing PROW (WARM60) that runs along the north boundary of the site and can be improved as part of the development.
5.4	Malaby Holdings and Keysley Ltd agree with the response provided in the Wiltshire Council Position Statement (PS.M3.39).
5.5	Critical infrastructure: there are no known off-site infrastructure constraints that are critical to the site's delivery. If required by Education Authority, financial contributions could be made to cater for the increased education needs from the site in accordance with the Council's standard formula. Similarly, funding contributions may be south where needed to increase capacity at local GP surgeries at the town.
5.6	Site accessibility; the existing local bus service, which presently terminates at Ludlow Close, could potentially be extended to loop around the A350/A36 roundabout with a new bus stop provided adjacent to the proposed site access on Deverill Road. The site is also within cycling distance of community facilities and services in the Warminster Town Centre, as well as a train connection on the Cardiff-Portsmouth line.
5.7	Malaby Holdings and Keysley Ltd agree with the response provided in the Wiltshire Council Position Statement (PS.M3.39).

5.8	Delivery: the anticipated delivery for Phases 2 (employment) and 3 (housing) is by the end of 2024. This time frame is contingent upon: further detailed design development; the approval of outline and reserved matters planning applications; a planning condition discharge process; and the construction process (estimated duration of 30 months). The site would also provide a significant quantum of affordable housing in accordance with Core Policy 43 of the adopted Wiltshire Core Strategy.
5.16	Biodigester operational considerations: the proximity of the biodigester plant provides a unique opportunity for housing and commercial development to deliver sustainability benefits accruing from the integrated use of 'on site' renewable energy (heat, power and renewable gas) and a neighbourhood organic waste management system. The potential impacts of the proximity of this site to the operational biodigester have been considered through the WHSAP site assessment process and paragraphs 5.94-5.96 of the Plan set out how residential uses will be brought forward in a manner which is compatible with the adjoining use. This includes separation between the biodigester and proposed residential development through the delivery of commercial uses on the part of the site that benefits from extant permission, and through the additional landscape screening at the site boundaries to preserve and maintain the living conditions of adjoining residential dwellings. Local amenity effects of environmental conditions such as noise and odour are to be managed by the biodigester plant's Environmental Permit. Subject to detailed design, viability testing and regulatory approval, the presence of the biodigester plant will not have an adverse impact on the deliverability of the Phase 3 residential site. Local amenity effects of environmental conditions such as noise and odour are managed by the biodigester plant's Environmental Permit. For further information see the Aerial Emissions Statement (Malaby Biogas) and an Odour Survey non-technical summary (CSO Group) at **Appendices D** and **E**.

5.2 Proposed Change 80 is supported by the parties. Proposed Change 79 is agreed insofar as it relates to the amended site boundary, albeit there is disagreement over the site area.

5.3 The following table includes the matters relating to 'Issue 5' that are not agreed under Matter 3:

Issue No.	**Matters not agreed**
5.2	Malaby Holdings and Keysley Ltd consider that the combined Phase 3 housing site extends to circa 4.00ha, and has potential to accommodate up to 90 dwellings at a density of approximately 22.5 dph (gross). This assessment takes into account the site topography, existing foul drainage easement constraints, and the provision of onsite surface water attenuation systems and on site pubic open space.

Development Trajectory (WHSAP allocation of approximately 70 dwellings)

Year	No of completions
2022	40
2023	30

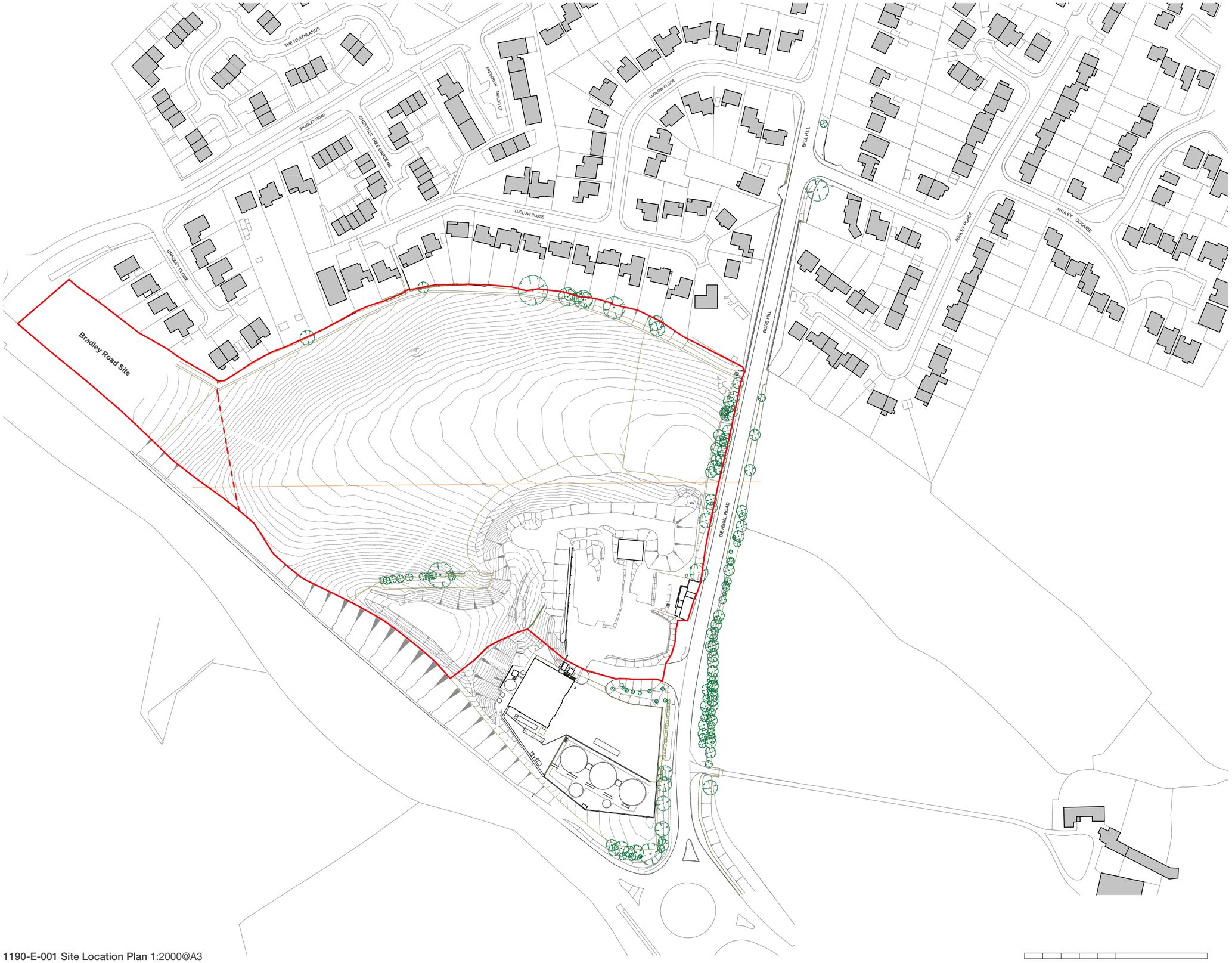
Development Trajectory (site promoter's alternative capacity of 90 dwellings)

Year	No of completions
2022	40
2023	40
2024	10

6.0 Agreement

Signed:
Name: Clifford Lane MRTPI (Director, Savills)
For and on behalf of Keysley Ltd
Date: 29th March 2019
Signed:
Name: Christopher Beaver MRTPI (Director, PlanningSphere)
For and on behalf of PlanningSphere for Malaby Holdings
Date: 29th March 2019
Signed:
Name: Georgina Clampitt-Dix (Head of Service, Spatial Planning)
For and on behalf of Wiltshire Council
Date: 29th March 2019

Appendix A



1190-E-001 Site Location Plan 1:2000@A3

0 50 100 m

NOTES

This drawing has been produced for Malaby Holdings Ltd for the proposed development at Bore Hill Farm and is not intended for use by any other person or for any other purpose.

Responsibility is not accepted for errors made by others in scaling from this drawing.

All construction information should be taken from figured dimensions only.

All omissions and discrepancies to be reported to Keep immediately.

Key

- Proposed Site Allocation Boundary
- Shared Boundary between Malaby Holdings Ownership and Bradley Road Site

Total Proposed Site Allocation Area = 5.14 ha / 12.70 acres

Malaby Holdings Ownership Area = 4.60 ha / 11.37 acres

Bradley Road Site Area = 0.54 ha / 1.33 acres

Notes	DR	CH	Date	Rev
First issue	NS	SC	19/09 2017	-

Keep Architecture Limited
1.3 Temple Studios
Bristol, BS1 6QA
t: 0117 325 0359
e: info@keeparchitecture.co.uk
w: keeparchitecture.co.uk

Project
Bore Hill Farm

Drawing
Site Location Plan

Drawing number
1190-E-001

Scale
1:2000 @ A3

Revision number
-

Original drawing size A3

Appendix B

NB. this is the landscape masterplan approved under planning permission W/10/00666/WCM. The biodigester plant has been implemented. The Phase 2 employment buildings are preserved in planning terms following the partial implementation of planning permission W/10/00666/WCM. The approved northern priority junction vehicular access onto the Deverill Road will provide a sufficient means of access to the proposed Phase 2 (employment) and Phase 3 (residential) development, subject to minor geometrical alterations to the alignment of the internal access road.

KEY

- Boundary line
- Existing vegetation to be removed
- Indicative vegetation outside of survey area
- Existing trees to be retained
- Existing hedgerows
- Semi-mature tree planrting
- Standard and feathered tree planting
- Proposed ornamanetal and native hedgerow planting
- Proposed native structure and woodland planting
- Proposed ornamental planting
- Proposed native scrub planting
- Proposed 10Lt specimen shrubs and small trees
- Proposed climbing plants i.e 10Lt, advanced nursery grown, 90cm min, canned.
- Amenity grass and seeding to embankments.
- Native Meadowgrass and wildflower mixes

Revision	Description	Drawn by	Checked by	Date
A	Biogas plant and employment area revised inc landform.	DS	VN	10.02.12

Christopher House, 11-12 High Street, Bath, BA1 5AQ Tel:01225 464 690 Fax:01225 429 962 enquiries@macgregorsmith.co.uk

Malaby Martin LIMITED

Malaby Biogas

0 10m 20m

1:500 SCALE AT A1.

Macgregor ▪ Smith
Design for the Environment

project	Borehill Farm Warminster	drawn by	DS
status	For planning	checked by	checked by
title	Landscape Masterplan	date	10.07.09
Xref	xref	scale	1:500 @ A1
drawing No	978-001-1-A		

Appendix C

1190-F-001 Illustrative Masterplan 1:2000@A3

Key

- Site Owneship Boundary
- Bradley Road Site*
- House Type A1/A2 Bungalow/ 2 bed home (18 no)
- House Type B1/B2/B3 3/4 bed family reversed split level (54 no)
- House Type C Detached 4 bed family house (13 no)
- House Type D 2/3 bed split level with home office (11 no)
- Flats 1 bed (4 no)
- Proposed Employment
- Swale
- Green Infrastructure
- Existing Trees
- Proposed Trees
- Main Road
- Parking
- Existing Drain with Easement

Area of Housing = 3.99 ha / 9.86 acres
Total Housing Units = 100

Area of Phase 2 Employment = 0.61 ha / 1.51 acres

**The Bradley Road site of 0.54ha is available for development, but is in third party ownership. The masterplan shows how the adjoining land at Bradley could be brought forward to accommodate an additional circa 17 dwellings as part of a comprehensive masterplan for the whole proposed allocation site.*

0 50 100 m

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Notes	DR	CH	Date	Rev
First issue	NS	SC	19/09 2017	-

Keep Architecture Limited
1.3 Temple Studios
Bristol, BS1 6QA
t: 0117 325 0359
e: info@keeparchitecture.co.uk
w: keeparchitecture.co.uk

Project
Bore Hill Farm

Drawing
Illustrative Masterplan

Drawing number
1190-F-001

Scale
1:2000 @ A3

Revision number
-

Original drawing size A3

Statement of Common Ground

Appendix D

Bore Hill Farm Biodigester

Emissions to Air Management Statement

(Noise, Light, Odour & Dust)

Malaby Biogas Ltd

March 2019

This document is provided as Appendix D to the draft Statement of Common Ground for Bore Hill Farm, Warminster, Wiltshire. Specifically, for consideration by the Planning Inspector in April 2019 with reference to a residential allocation proposed under Policy H.8 of the draft Wiltshire Housing Site Allocation Plan. Accompanying appendices A, B and C identify the site in more detail

This document sets out the operational and environmental controls under which Bore Hill Farm Biodigester operates.

Bore Hill Farm Biodigester

Malaby Biogas Ltd is the owner and operator of Bore Hill Farm Biodigester in Warminster, Wiltshire. The biodigester processes organic wastes using anaerobic digestion (AD) technology to produce:

- **Biofertiliser**. A low carbon nutrient rich fertiliser for use on farms as a sustainable low carbon alternative to energy intensive mineral fertilisers.
- **Renewable Energy.** Biogas created in the AD process is used on site to generate renewable electricity and heat. A small proportion of the power generated is used to run the process and site and the remainder is exported to the local electricity grid for use in nearby homes (approximately 25% of Warminster's houses are powered from this locally made green electricity). The heat is used in the process and associated hygienisation, cleaning and heating systems. Additional heat is available for use in future site uses such as space and water heating and district heating systems.

Regulatory Controls

Bore Hill Farm Biodigester operates under an Environmental Permit (EPR/AB 3036 RT) issued and manage by the Environment Agency (EA). The permit controls operational systems and environmental risks and emissions from the site boundary. It is a site-specific, bespoke permit rather than a 'Standard Rules' permit because of the proximity to residential areas. The site has a good compliance history with its permit and is considered a good performer, consistently falling into compliance Band A (poor performers are classed D, E or F). The EA have inspected the site regularly since the permit was issued in 2012 and the site has been audited 3 times.

According to the EA the site *"is towards the top end in regards to performance and impact on the environment. For example, the site has good infrastructure, trained staff and management systems. The operator also demonstrates that they want to be the best and is engaging with us to improve where required. They already engage directly with the public; offering site tours, school visits and providing a range of resources on their website. It is the only site in England that has achieved the Anaerobic Digestion Certification Scheme provided by the Anaerobic Digestion and Bio resources Association (ADBA). As an externally audited certification, this is a great achievement. It is a good demonstration of how motivated Malaby Biogas are to be the best in the industry and we will continue to work with them to achieve this."*

Site Operational Monitoring & Controls

Malaby Biogas operate a well-designed facility to ensure environmental impacts are reduced to acceptable levels. The company and the management have been recognised by industry awards as having an innovative and progressive position within the industry and this is reflected in the level of operational control that is places on all elements of the site. The company strives to achieve new standards and the management systems are recognised through certifications such as ISO 9001, 14001, AD Certification Scheme, Animal By Products Certification and Biofertiliser Certification Scheme.

The Environmental Management System and Odour Management Plan are key systems monitored within Environmental Permit compliance and these are regularly reviewed and updated. The site uses BAT (Best Available Technology) standards on most of its systems and the Managing Director sits on trade association working groups including the ADBA's Environment, Safety & Training Working Group and the REA's Digestate Working Group. He is also a member of the ADBA's Industry Advisory Board.

Operational controls relevant to air borne emissions include:

- Daily Site inspections which record noise and odour levels at key perimeter points.
- Operational site diaries and digital comments recording

- 3rd party specialist odour assessment surveys
- 3rd party health & safety officer inspections which include operational reviews, documentary auditing and noise level monitoring
- Written operational procedures, policies and training routines to ensure site staff operate with due regard to environmental impacts and emissions
- Continual management reviews and improvements to ensure application of BAT

The site is defined as one of high public interest because of its proximity to public access routes (highways, public foot paths and pedestrian walkways) and residential areas. Thus a robust and active operational regime is in place to ensure day to day activity does not cause a persistent nuisance to the public. A neighbourhood contact log is maintained to monitor & manage reports received either directly to site or by agencies such as local environmental health officers, elected officials, Environment Agency etc who may receive report but which were not made to site directly. In frequent reports have been received during the operational life of the plant which, in general, relate to odours. Occasional reports regarding noise and light have been received. Each report is addressed directly by the site Operations Manager and/or Managing Director in his absence.

Noise Reduction & Mitigation

An analysis of reported noise nuisance shows direct correlation with specific site activities and equipment. In these cases measures have been put in place to stop, reduce or alter the timing of activities that generate elevated noise levels which cause the reported nuisance. While maintaining compliance with regulatory and statutory requirements (e.g. Health & Safety at work, site operational standards & regulatory controls etc), every effort is made to adjust operational practices to reduce elevated operational noise. Examples of operational adaptations and mitigation measure include:

- Installing noisier equipment within sound attenuated containers, buildings etc
- Fixing equipment in place using anti-vibration mountings
- Reducing service intervals for external motors
- Changing timings of specific operational procedures
- Restricting site access times for delivery & collection vehicles
- Reducing vehicle reversing where possible
- Establishing site rules to control running of standing vehicles out of hours

The nearby local and trunk road highways create noise emission pollution which form part of the background circumstances in which the site operates. Such noise emissions include:

- Normal traffic operations
- Exceptional traffic operations (high acceleration noises & emergency sirens, horns etc)

Light Reduction and & Mitigation

An analysis of reported light nuisance shows direct correlation with specific site activities especially at night. In these cases measures have been put in place to reduce the use of bright light sources to times of necessity and site operational safety. A range of variability in light sources have been installed to ensure low levels of ambient light and shielded point sources to reduce the occurrence of bright light sources from area and access route lighting. Examples of site adaptations and mitigation include:

- Delaying site arrival times for delivery & collection vehicles
- Adding low level access lighting
- Enabling reduced site lighting by individual unit switching
- Realigning high level lights
- Adding switched LED area lights

Surrounding built up area and the nearby local and trunk road highways create light emission pollution which forms part of the background circumstances in which the site operates. Such emissions include:

- Vehicular lights
- Highway and street illumination
- Residential lights
- Ambient light levels from the urban area of Warminster

Odour Reduction & Mitigation

Site management work with EA officers in exploring new monitoring techniques and controls.

An analysis of reported odour nuisance shows some historic correlation with specific site activities and in these cases measures have been put in place to reduce, contain, divert and treat and these odour emissions at source. On-going, active site monitoring and training also enable proactive measures to be put in place to reduce odour. Examples of measures put in place include:

- Collection and treatment of displaced air from collection tankers (condensate dropout filters, fan assisted air handling ducts and trickling bed biofiltration)
- Collection and treatment of displaced air from tank dome inflation (carbon filtration, condensate drop out filters, fan assisted air handling ducts & trickling bed biofiltration)
- Collection and treatment of displaced air from solids screen separator (condensate dropout filters, fan assisted air handling ducts and trickling bed biofiltration)
- Secondary polishing of biofilter exhaust air (counter flow water wash in dispersion stack)
- Improved odour monitoring metrics at site boundary (daily sniff testing & monitoring)
- Weekly management operational reviews

A site specific air handling and treatment system was designed by a specialist contractor and installed as part of the overall site facility (see Appendix 1). The integrated approach taken from the earliest concept stages ensured that the system is flexible to adapt to site conditions and requires very little maintenance or downtime. Elements include:

- Reduction of open air odour production
- Active air ectraction form building
- Sealed fast acting roller doors
- Louvred ventilation for make up air
- Fan assisting ducting of odourous air for treatment
- Variable speed irrigated trickling bed biofiltration (biofilter)
- Low condensation air emissions stack with integrated counter-flow water wash polishing
- Multiple monitoring point.

The performance of the air handling and treatment system was reviewed in 2018 by the original design contractor and the company employs Best Available Techniques (BAT) to manage and deliver operational improvements.

As measures have been introduced to control point source emissions it has become apparent that there is a low level of intermittent non-point source odours present within the site boundary. Such emissions are known as fugitive emissions as they are diffused across the area and do not directly relate to a single emission point. While they are present on site, they tend to dissipate within the site and become diluted at or near the site boundary in accordance with the original dispersion model which forms part of the odour management plan. On occasions various combinations of atmospheric conditions (wind direction, air pressure & temperature), operational activity on site, receptor perception and location of detection combine to effect infrequent, intermittent, low level and non-specific odour levels at distances sufficient to trigger a report being made.

Such odours are difficult to identify and being intermittent in nature are perceived differently by different people. Specialist external advice is regularly sought and methods and procedure are reviewed and updated to minimise the occurrence of nuisance odour levels outside the site boundary.

A specialist independent consultancy has been engaged by Malaby Biogas to undertake odour assessment surveys in the local area and their reports are used to inform additional operational odour mitigation activities.

Malaby Biogas has also initiated a neighbourhood engagement process to inform residents of site activities, continual improvement work and assessment and review processes. Approximately 120 residences are present between 50 and 200m away from the site and they have all been contacted to attend local on and off-site meetings. Two meeting were held in late 2018 at which approximately 16 to 20 residents from a pool of approximately 240 attended. Newsletters are circulated and the company actively engages with the local community to aid communications and understanding.

Local residential and agricultural activities, the nearby presence of the local sewage treatment works and the local and trunk road highways individually combine to create odour pollution which forms part of the background circumstances in which the site operates. Such emissions are not controlled or caused by the Bore Hill Farm Biodigester but have an effect on the perception of residents and passers-by. They include:

- Air-borne sewage treatment works odours (particularly in the summer)
- Vehicle exhausts
- Braking and gear box odours at and around the roundabout junction
- Contents of commercial bulk vehicles in transit (pressurised tankers and open top bulkers)
- Nearby farming activities including livestock management and handling of manures and slurries.
- Neighbourhood organic odours (catering, garden care, compost heaps and sewer pipe ventilation)

Dust Reduction & Mitigation

Nuisances caused by dust and particulates in the air form part of the permitted activities. To date no reports have been received relating to site generated dust. Site design and management incorporate a reduction of factors that contribute to dust generation and site cleanliness and maintenance ensure the build up of dust is reduced wherever possible.

The local and trunk road highways and rural activities create dust and particulate emissions which form part of the background circumstances in which the site operates. Such pollution includes:

- Traffic related particulates from exhausts
- Road dust from traffic (especially in summer)
- Civic and agricultural dusts from surrounding land management (verge, hedge and field grass cutting)

Appendix E

CSO Group Ltd
Chequers Barn
Chequers Hill
Bough Beech
Edenbridge
Kent TN8 7PD

CSO Group
AD & Pollution Solutions

www.csogroup.co.uk

T: +44 (0) 1732 700011 F: +44 (0) 1732 701050 E: sales@csogroup.co.uk

07/3/2019

Mr Thomas Minter
Malaby Holdings Ltd
3 Farleigh House,
Frome Rd,
Bradford on Avon,
Wiltshire,
BA15 1LE

Dear Mr Minter,

Re: Odour Survey – Bore Hill Farm – Non-Technical Summary- Draft Report

1.0 Introduction

This letter is provided as a free standing non-technical summary of our detailed sampling report produced following our comprehensive on- and off-site survey undertaken on 1st of March 2019.

This letter provides information to assist the assessment of a residential allocation proposed under Policy H.8 of the draft Wiltshire Housing Site Allocation Plan, which will be considered at an examination in public in April 2019. The prospective Phase 2 employment and Phase 3 residential sites are outlined in red on the Site Location Plan (Statement of Common Ground Appendix A, drawing ref: 1190-E-001), and the Illustrative Master Plan Phase 3 (Statement of Common Ground, Appendix C, drawing 1190-F-001).

Below I summarise our observations together with recommendations for further mitigation measures to be implemented prior to the occupation of the proposed residential development.

2.0 Survey

I visited Bore Hill Farm on 1st March 2019 with a specialist colleague and survey equipment to undertake an initial assessment of potential odour emissions from the Bore Hill Farm Biodigester.

(i) Off-site survey

Neither I nor my colleague were able to detect any food waste related odour at any of the sample points on the neighbouring roads. A minor low-grade and transient organic odour of undetermined source was detected, by nose, at two points on the footpath immediately to the north of the site adjacent to the back gardens of Ludlow Close. The levels of hydrogen sulphide (a key organic odour indicator) detected by the Jerome monitor at all points were commensurate with typical background levels (1 to 3 parts per billion). The Photo-Ionization Detector (PID) monitor did not measure any Volatile Organic compounds (VOC's) at any of the sample points.

(ii) On site survey

The site is very clean and well run with no obvious matters that would lead to significant odour emissions to atmosphere. There were a few very minor point sources (identified below) around the site where odours were detectable at low levels however these odours did not appear to travel beyond the site boundary of the Biodigester.

The point source locations and proximity of odour detection were:

1. The black outlet pipe from the digestate storage tank (5m)
2. Sludge screen separator (5 – 10m)
3. Drain cover next to sludge screen (<5m)
4. Tanker unloading point – pipe outlet (5m)
5. Reception Hall – intermittent only when doors were opened (5 -30m)
6. Biofilter/emission stack (5 -20m)

3.0 Observations, Actions & Potential Mitigation Measures

The following measures are recommended to address each of the points above:

(i) Digestate storage tank outlet and vent connection pipes and the tanker unloading point (1 and 4)

When tankers are not unloading the pipes are open to atmosphere and emit a slight odour, albeit at a low volumetric load – a simple bung should be inserted when not in operation.

Generally speaking tanker loading and unloading frequently causes high level odour emissions however we understand that the tanker drivers are monitored to ensure that they connect their vent pipes to the odour extraction system to prevent this and strict monitoring should continue.

(ii) Sludge screen (2)

The sludge screen separator was not operational at the time of testing, but freshly screened solids were in the open topped reception bin. Odour from the unit

contributed to the odour in the general area (approximately 5 -10m away) and could be wider when operational. We recommend considering enclosing the discharge chute and reception vessel and provide air extraction at a rate of 10 ACPH to the existing odour control unit (OCU), if sufficient capacity, or alternatively a new localised OCU such as a carbon filter.

(iii) Drain Cover next to sludge screen (3)

The drain cover has a number of small orifices from which odour is permeating – covering these orifices with a heavy-duty rubber mat or similar would prevent the discharge.

(iv) Reception Hall (5)

At the time of testing the volume of food waste within the building was relatively low and corresponding odour loads were generally low. The building is well sealed and designed to be under negative pressure from the extraction system that sends the air to the OCU for abatement. The doors were closed at the time of the test and external odour loads were minimal downwind of the building at the entrance gate between the site and the car park. House-keeping is good with no solid waste being left on the floor at the end of the day.

When the process recirculation system was switched on there was a significant spike in point source odours (H2S, VOC's and Ammonia). Covering the recirculation tank and extending the extract ductwork to ensure that these spikes are entrained into the OCU system is recommend.

The volume of waste at the time of testing was low as were background levels, however odour was circulating within the building into the adjacent offices. Assessment of the ventilation system should be undertaken to verify that the recommended 3 air changes per hour (ACPH) is being achieved.

(v) Biofilter (6)

Two separate odour tests were carried out on the biofilter one with the system under normal operation and one with enhanced odour loads from digestate tanker collection and the reception hall recirculation process both operational at the same time.

The pressure drop through the biofilter was in line with expectations at an airflow rate of 7,500 m3/hr. The current irrigation rate is approximately 640 litres per day. The biofilter irrigation system is currently leaving some dry areas and is currently being modified to increase the water dispersion across the filtration media.

While VOC removal rates are in line with expectations the H2S removal rates are on the low side of expected performance and the current irrigation modification work should improve this. With supporting evidence a pre-humidifier may be considered in the future to ensure the media bed is properly humidified.

While the evidence from the site survey indicated no odours dissipating across the site boundary, further specialist VOC testing can be undertaken to inform the choice of appropriate treatment and mitigation strategies if needed. For example, VOC breakdown analysis and dispersion modelling can identify, if needed, installation of a VOC polishing system such as activated carbon or photo-oxidation as a downstream addition to the existing Biofilter.

(vi) Extraction system

The extraction fan is equipped with an 18.5 kW motor and should be capable of operating at a higher extraction rate if needed. The motor speed can be controlled by a variable speed drive and the extraction rate increased. We understand, that smoke tests are to be carried out in the near future to determine the extract system efficiency. Thereafter if necessary, a detailed survey of the extraction system can be undertaken to inform recommendations for improvement.

(vii) Emission stack (6)

The emission stack currently does not have a speed cone fitted although there are plans to design and install one to increase the discharge velocity from 10m/s to 15 m/s in order to achieve optimum dispersion.

4.0 Conclusion

While the on and off-site odour surveys verified that the site is currently operating efficiently and without causing a nuisance, there are opportunities to additionally improve the systems if the need arises. Malaby Biogas are using Best Available Techniques (BAT. Subject to further assessment of need and ongoing regular monitoring, there are opportunities to improve odour management (as summarised in Section 3.0, i-vii) to ensure the operation of Bore Hill Farm Biodigester is able to adapt to the increased demand for odour control imposed by further nearby development. Provided that the above observations are addressed, and consequent mitigation measures are adopted, actioned and monitored, and that the plant continues to be run as efficiently as it currently is, we see no reason why the Bore Hill Farm Biodigester should cause an odour nuisance to receptors in the proposed Phase 2 (employment) and Phase 3 (residential) development.

Yours sincerely

Colin Froud
Managing Director