

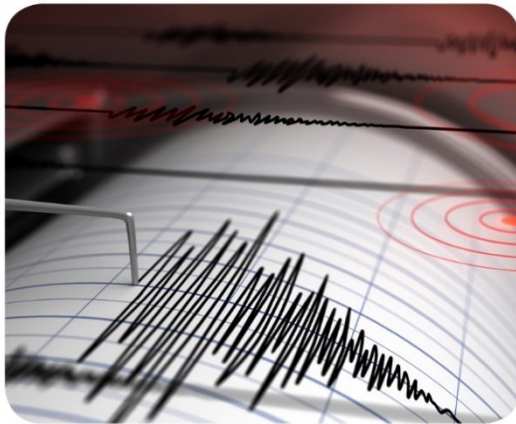


Barratt Homes | David Wilson Homes

Land North of Wykham Lane, Bodicote, Oxfordshire

Air Quality Assessment

October 2021



Barratt Homes | David Wilson Homes

Land North of Wykham Lane, Bodicote, Oxfordshire

Air Quality Assessment

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1 Introduction

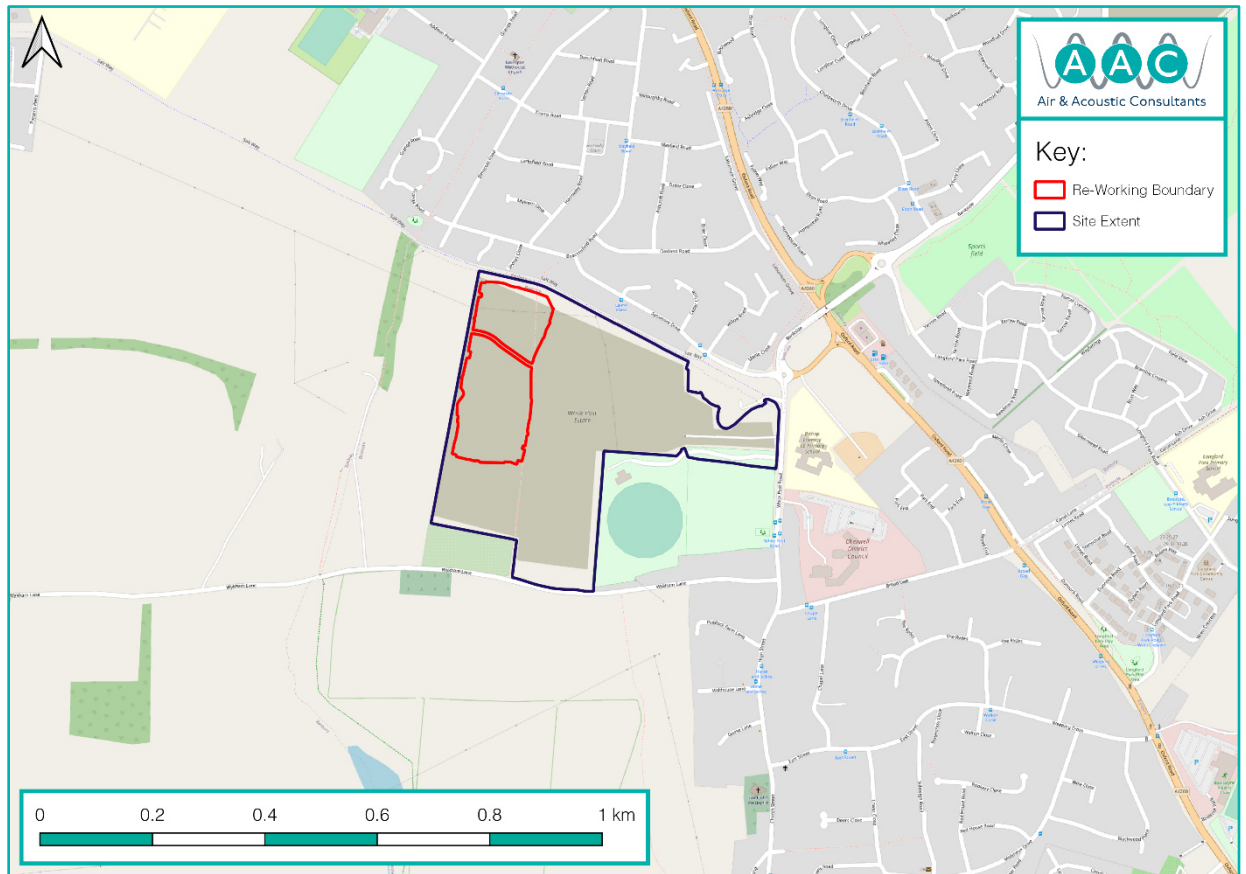
1.1 Brief

- 1.1.1 Air & Acoustic Consultants Limited have been commissioned by Barratt Homes | David Wilson Homes to complete an air quality assessment in support of a planning application for a replan of the site on Land to the West of Cricket Field, North of Wykham Lane, Bodicote, Oxfordshire.

1.2 Application Site

- 1.2.1 The original development (Planning Application 15/01326/OUT) was for:
- “Up to 280 dwellings (including 30% affordable housing), introduction of structural planting and landscaping, formal and informal public open space and play areas, surface water flood mitigation and attenuation, new priority junction arrangements to White Post Road, creation of section of spine road to link Bloxham Road with White Post Road as well as creation of 34 space car park and other associated ancillary works. All matters reserved except for access.”*
- 1.2.2 The consented development is currently at the beginning of the construction phase. The site bounded by agricultural land to the north by Sycamore Drive with residential dwellings, to the east by White Post Road, to the south by agricultural fields and to the west by further agricultural fields, which has permission for the development of up to 1,000 dwellings (14/01932/OUT).
- 1.2.3 The National Grid Reference for the centre of the site is, SP 45581 38356 (British National Grid co-ordinates E: [445581](#), N: [238356](#)). The site location and surrounding area are shown in [Figure 1.1](#).

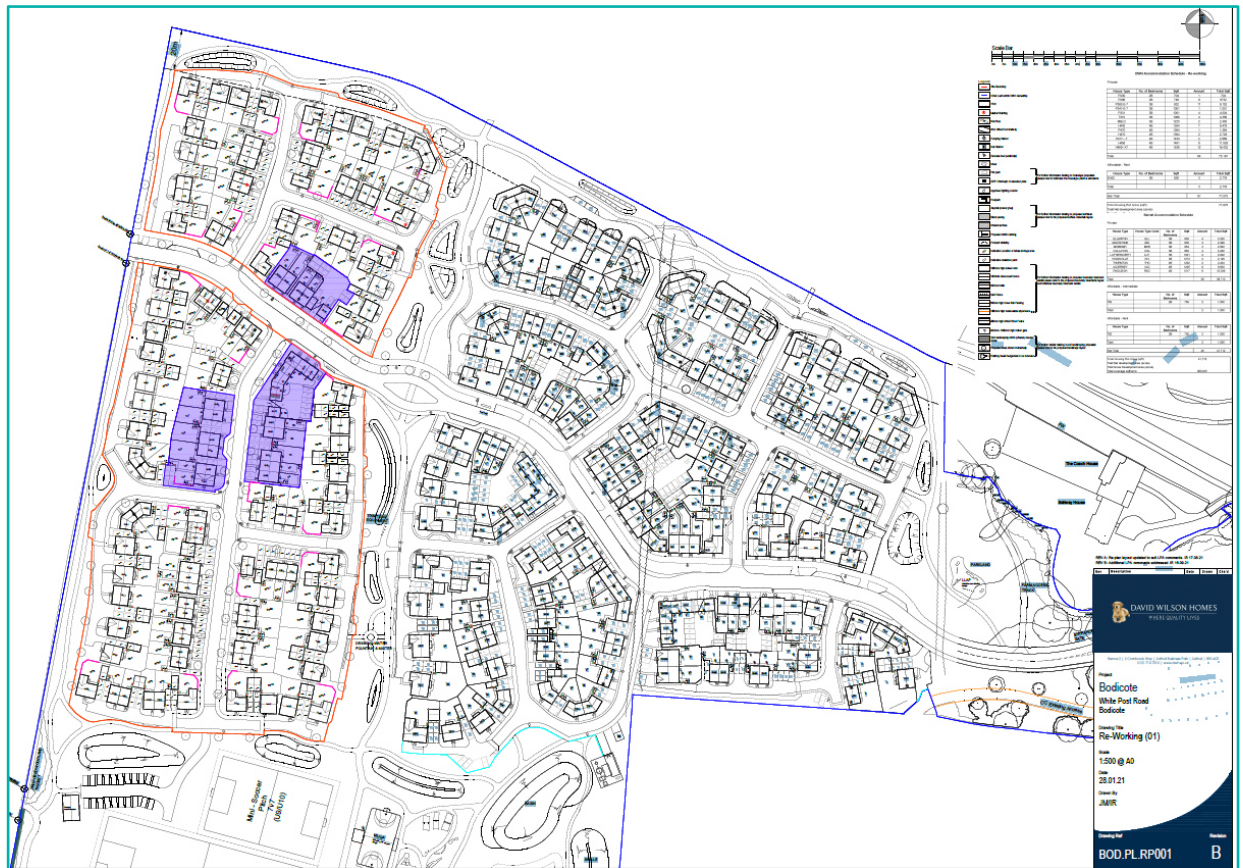
Figure 1.1: Site Location



1.3 Development Proposals

- 1.3.1 The application seeks approval for the erection of 23 additional dwellings within the existing consented development. This is illustrated in [Figure 1.2](#).

Figure 1.2: Development Layout



1.4 Assessment Approach

- 1.4.1 This assessment has been undertaken to assess if the proposed scheme is likely to give rise to any air quality impacts, and to establish the magnitude of impact caused as a result of the scheme in respect to the prevailing air quality.
- 1.4.2 The report is structured as follows:
- **Section 2** sets out an overview of the national and local air quality policy context, in relation to the scheme proposals;
 - **Section 3** details the methodology for estimating the air quality impacts;
 - **Section 4** describes the baseline conditions;
 - **Section 5** considers the operational impacts as a result of the development; and
 - **Section 6** summaries and concludes the assessment.
- 1.4.3 To note, no considerations have been made for construction dust impacts. It has been recommended that a continuation of the Construction Environmental Management Plan (CEMP), which was approved as part of a discharge of conditions application (19/01643/DISC) should be in place for this scheme.
- 1.4.4 The scope and methodology of this air quality assessment has been sent to Cherwell District Council (CDC) Environmental Health department. At the time of writing no response has been received.

2 Legislation and Policy Context

2.1 European Legislation

- 2.1.1 The following text is taken from the [legislation.gov.uk](https://www.legislation.gov.uk)¹ website and sets out how EU Legislation will be retained in the United Kingdom after the Brexit transition.

"The UK is no longer a member of the European Union. EU legislation as it applied to the UK on 31 December 2020 is now a part of UK domestic legislation, under the control of the UK's Parliaments and Assemblies, and is published on [legislation.gov.uk](https://www.legislation.gov.uk).

[...]

EU legislation which applied directly or indirectly to the UK before 11.00 p.m. on 31 December 2020 has been retained in UK law as a form of domestic legislation known as 'retained EU legislation'. This is set out in [sections 2 and 3](#) of the European Union (Withdrawal) Act 2018 (c. 16)."

- 2.1.2 Air pollutants at high concentrations can give rise to adverse effects upon the health of both humans and ecosystems. The European Union (EU) legislation on air quality forms the basis for the national UK legislation and policy.
- 2.1.3 The EU Framework Directive 2008/50/EC came into force in May 2008 and sets out legally binding limits for concentrations of the major air pollutants that can impact on public health. This Directive came into force in England in June 2010². Amendments to this Directive was made following amendments to the 2008/50/EC and 1004/107/EC on air quality made by Directive 2015/1480/EC. The updated Directive, The Air Quality Standards (Amendment) Regulations 2016, came into force on 31st December 2016³.

2.2 National Legislation, Policy and Strategy

- 2.2.1 Part IV of the Environment Act 1995⁴ requires local authorities to review and assess the air quality within their boundaries. As a result, the Air Quality Strategy was adopted in 1997⁵, with national health-based standards and objectives set out for the, then, eight key air pollutants including benzene, 1-3 butadiene, carbon monoxide, lead, nitrogen dioxide (NO₂), ozone, particulate matter and sulphur dioxide.
- 2.2.2 The purpose of the Air Quality Strategy was to identify areas where air quality was unlikely to meet the objectives prescribed in the regulations. The strategy was reviewed in 2000 and the amended Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2000) was published. This was followed by an Addendum in February 2003 and in July 2007, when an updated Air Quality Strategy was published⁶.
- 2.2.3 The pollutant standards relate to ambient pollutant concentrations in air, set on the basis of medical and scientific evidence regarding how each pollutant affects human health. Pollutant objectives are the future dates by which each standard is to be achieved, considering economic considerations, practical and technical feasibility.

¹ EU legislation and UK law. Accessible at: <https://www.legislation.gov.uk/eu-legislation-and-uk-law>

² Statutory Instrument, 2010. *The Air Quality Standards Regulations*, No. 1001. Queen's Printer of Acts of Parliament.

³ Statutory Instrument, 2016. *The Air Quality Standards Regulations*, No. 1184. Queen's Printer of Acts of Parliament.

⁴ Parliament of the United Kingdom, 1990. *Environmental Protection Act*, Chapter 43. Queen's Printer of Acts of Parliament.

⁵ Department for Environment Food and Rural Affairs, 1997. *The United Kingdom National Air Quality Strategy*, Cm 3587.

⁶ Department for Environment Food and Rural Affairs, 2007. *The Air Quality Strategy for England, Scotland, Wales and Northern Ireland*, Cm 7169, Department for Environment Food and Rural Affairs.

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Air Quality Assessment

2.2.4 The air quality objectives are managed through the Local Air Quality Management, (LAQM) regime, which is defined within the Air Quality (England) Regulations 2000, (SI 928), The Air Quality (England) (Amendment) Regulations 2002, (SI 3043). [Table 2.1](#) lists the National Air Quality Objectives that are relevant to this assessment, as set out in the Air Quality Standards (Amendment) Regulations 2016.

Table 2.1: Air Quality Objectives (England)

Pollutant	Air Quality Objective	
	Concentration	Measured as
Nitrogen Dioxide (NO ₂)	200 µg/m ³	1-hour mean not to be exceeded more than 18 times per year
	40 µg/m ³	Annual mean
Particulate Matter (PM ₁₀)	50 µg/m ³	24-hour mean not to be exceeded more than 35 times per year
	40 µg/m ³	Annual mean
Particulate Matter (PM _{2.5})	25 µg/m ³	15% reduction in background to be achieved between 2010 & 2020

[National Planning Policy](#)

2.2.5 The National Planning Policy Framework (NPPF)⁷ (2021) sets out the planning policy for England, to help achieve sustainable development within the planning sector.

2.2.6 Paragraph 105 states:

“The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making”

2.2.7 Paragraph 174 states:

“Planning policies and decisions should contribute to and enhance the natural and local environment by:

[...]

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local

⁷ Ministry of Housing, Communities & Local Government, 2021. *National Planning Policy Framework*.

environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.

[...]"

2.2.8 Paragraph 185 states:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development."

2.2.9 Paragraph 186 states:

"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."

2.2.10 Paragraph 188 states:

"The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities."

2.2.11 The NPPF also sets out the national planning policy on biodiversity and conservation. This emphasises that the planning system should seek to minimise effects on and provide net gains in biodiversity, wherever possible, as part of the Government's commitment to halting decline and establishing coherent and resilient ecological networks.

2.2.12 The NPPF is supported by Planning Practice Guidance (NPPG)⁸ (DCLG, 2021), which sets out the principles on how planning can take account of the impacts of new development on air quality.

2.2.13 Paragraph 001 Reference ID: 32-001-20191101 states:

"The 2008 Ambient Air Quality Directive sets legally binding limits for concentrations in outdoor air of major air pollutants that affect public health such as particulate matter (PM₁₀ and PM_{2.5}) and nitrogen dioxide (NO₂).

The UK also has national emission reduction commitments for overall UK emissions of 5 damaging air pollutants:

⁸ National Planning Practice Guidance web-based resource. Accessible at: <http://planningguidance.planningportal.gov.uk/>

- fine particulate matter ($PM_{2.5}$)
- ammonia (NH_3)
- nitrogen oxides (NO_x)
- sulphur dioxide (SO_2)
- non-methane volatile organic compounds (NMVOCs)

As well as having direct effects on public health, habitats and biodiversity, these pollutants can combine in the atmosphere to form ozone, a harmful air pollutant (and potent greenhouse gas) which can be transported great distances by weather systems. Odour and dust can also be a planning concern, for example, because of the effect on local amenity."

2.2.14 Paragraph: 005 Reference ID: 32-005-20191101 states:

"Whether air quality is relevant to a planning decision will depend on the proposed development and its location. Concerns could arise if the development is likely to have an adverse effect on air quality in areas where it is already known to be poor, particularly if it could affect the implementation of air quality strategies and action plans and/or breach legal obligations (including those relating to the conservation of habitats and species). Air quality may also be a material consideration if the proposed development would be particularly sensitive to poor air quality in its vicinity.

- *Where air quality is a relevant consideration the local planning authority may need to establish:*
- *The 'baseline' local air quality, including what would happen to air quality in the absence of the development;*
- *whether the proposed development could significantly change air quality during the construction and operational phases (and the consequences of this for public health and biodiversity); and*
- *whether occupiers or users of the development could experience poor living conditions or health due to poor air quality".*

National Clean Air Strategy

2.2.15 The Clean Air Strategy (CAS)⁹ was published in January 2019 and sets out how the government will improve air quality nationally. The document aims to tackle the issue of air quality across all parts of government and society to protect public health and the environment, and identifies what needs to be done to achieve this. The document complements the Industrial Strategy (archived), the Clean Growth Strategy¹⁰ and the 25 Year Environment Plan¹¹ and is a key part of delivering the government's 25 Year Environmental Plan.

2.2.16 The document has adopted international targets to reduce emissions of fine particulate matter, ammonia, nitrogen oxides, sulphur dioxide and non-methane volatile organic compounds by 2020 and 2030. The document proposes tougher goals to cut public exposure to particulate matter pollution, as recommended by the World Health Organisation.

⁹ Department for Environment, Food and Rural Affairs, 2019. *Clean Air Strategy 2019*.

¹⁰ Department for Business, Energy and Industrial Strategy, 2017. *The Clean Growth Strategy*.

¹¹ Department for Environment, Food and Rural Affairs, 2018. *A Green Future: Our 25 Year Plan to Improve the Environment*.

2.2.17 The strategy not only targets the reduction of emissions, but also a reduction in exposure.

Reducing Emissions from Road Transport: Road to Zero Strategy

2.2.18 The *Reducing emissions from road transport: Road to Zero Strategy*¹² (2018) document produced by the Office for Low Emission Vehicles (OLEV), Office for Zero Emission Vehicles (OZEV) and the Department for Transport (DfT) sets out how the government aims to end the sale of new conventional petrol and diesel cars and vans by 2040, with almost every car and van having zero emissions by 2050. Furthermore, the aim of the government is to see at least 50%, and as many as 70%, of new car sales being ultra-low emission by 2030 (and up to 40% of new van sales).

2.2.19 A number of measures have been set out in the document which outline how the government will support this gradual transition, some of which are consumer incentives, research and development and innovation support based.

2.2.20 Since this document was released, the Prime Minister has announced that, as part of the *Ten Point Plan for a Green Industrial Revolution* (2020)¹³, the government will end the sale of new petrol and diesel cars and vans from 2030, 10 years earlier than set out in the document above.

2.2.21 This ambitious plan will see road traffic-related NO_x emissions to reduce significantly over the coming decades, likely beyond the scale of reductions forecast in air quality tools used to assess air quality impacts.

2.3 Local Legislation and Policy

The Cherwell Local Plan

2.3.1 The Cherwell Local Plan 2011 - 2031¹⁴, adopted in December 2016, sets out broadly how the District will grow and change in the period up to 2031. The plan contains the following policies that relate to air quality.

2.3.2 Policy ESD 10: Protection and Enhancement of Biodiversity and the Natural Environment, states:

“Protection and enhancement of biodiversity and the natural environment will be achieved by the following:

[...]

- *Air quality assessments will also be required for development proposals that would be likely to have a significantly adverse impact on biodiversity by generating an increase in air pollution*

[...]”

2.3.3 Policy ESD 15: Protection and Enhancement of Biodiversity and the Natural Environment, states:

“[...]”

New development proposals should:

- *Integrate and enhance green infrastructure and incorporate biodiversity enhancement features where possible (see Policy ESD 10: Protection and Enhancement of*

¹² Department for Transport, Office for Low Emission vehicles and Office for Zero Emission Vehicles, 2018. *Reducing emissions from road transport: Road to Zero Strategy*

¹³ Department for Transport and Office for Zero Emission Vehicles, 2020. *The Ten Point Plan for a Green Industrial Revolution*

¹⁴ Cherwell District Council, 2015. *The Cherwell Local Plan 2011 – 2031*.

Biodiversity and the Natural Environment and Policy ESD 17 Green Infrastructure). Well designed landscape schemes should be an integral part of development proposals to support improvements to biodiversity, the micro climate, and air pollution and provide attractive places that improve people's health and sense of vitality.

[...]"

2.3.4 Saved policies of the Adopted Cherwell Local Plan 1996¹⁵ remain part of the statutory Development Plan to which regard must be given in the determination of planning applications.

2.3.5 Policy ENV1, one of the saved policies, states:

"Development which is likely to cause materially detrimental levels of noise, vibration, smell, smoke, fumes or other type of environmental pollution will not normally be permitted."

2.4 Air Quality Action Plan

National Air Quality Action Plan

2.4.1 Defra has produced an Air Quality Plan¹⁶ to tackle roadside NO₂, throughout the United Kingdom. Along with a package of infrastructure, initiatives and grants, the plan requires local authorities to produce local action plans by March 2018, with the aim of reducing the air quality concentrations below the objective as soon as practically possible, should they be predicting exceedances of the air quality objectives beyond 2020.

Local Air Quality Action Plan

2.4.2 CDC produced an Air Quality Action Plan (AQAP) in 2017 that lists a number of measures to be carried out in the jurisdiction to improve air quality, particularly in the declared AQMAs. Some of the measures are as follows:

- Explore the Local Plan including Low Emission Vehicle uptake measures being incorporated into new developments;
- Travel plans submitted with development proposals will make reference to their contribution to an air quality mitigation strategy. Progress will be reported to OCC post development completion; and
- Damage cost calculations to be included in air quality assessments to show the financial impact of developments.

2.4.3 Further measures, including their progress and completion dates, can be found in the latest CDC Annual Status Report (ASR)¹⁷.

¹⁵ Cherwell District Council, 1996. *Cherwell Local Plan*.

¹⁶ Department for Environment Food & Rural Affairs & Department for Transport, 2017. *UK plan for tackling roadside nitrogen dioxide concentrations*.

¹⁷ Cherwell District Council, 2020. *2020 Air Quality Annual Status Report (ASR)*.

3 Assessment Approach

3.1 Operational Phase

Operational Impacts

- 3.1.1 The key guidance document which has been used to determine the potential for impacts upon air quality is the Environmental Protection UK (EPUK) & Institute of Air Quality Management (IAQM) (2017)¹⁸ *Land-Use Planning and Development Control: Planning for Air Quality* document.
- 3.1.2 This guidance document provides indicative criteria for the requirements of an Air Quality Impact Assessment. The following criteria has been considered for this assessment:

Local Highway Network

Step 1:

- If any of the following apply to the development:
 - Contains 10 or more residential units or a site area of more than 0.5ha; or
 - Contains more than 1,000 m² of floor space for all other uses or a site area greater than 1ha.
- Coupled with any of the following:
 - The development has more than 10 parking spaces; or
 - The development will have a centralised energy facility or other centralised combustion process.

Step 2:

- A change of cars / LDVs (light duty vehicles) flow of:
 - More than 100 AADT within or adjacent to an AQMA; or
 - More than 500 AADT elsewhere.
 - A change of HDVs (heavy duty vehicles) flow of:
 - More than 25 AADT within or adjacent to an AQMA; or
 - More than 100 AADT elsewhere
- 3.1.3 Should these criteria not be met, then the guidance documents consider air quality impacts associated with a scheme to be negligible and no further assessment is required.
- 3.1.4 This is further set out in [Section 5](#).

¹⁸ Environmental Protection UK (EPUK) and Institute of Air Quality Management (IAQM), 2017. *Land-use Planning & Development Control: Planning for Air Quality*.

4 Baseline Conditions

4.1 Air Quality Review and Assessment

- 4.1.1 Under the Air Quality Strategy, there is a duty on all local authorities to consider the air quality within their boundaries and to report annually to Defra.
- 4.1.2 Local Air Quality Management has been assessed by CDC through the national Review and Assessment process and in fulfilment of Part IV of the Environmental Act 1995.
- 4.1.3 At the time of writing CDC have four AQMAs covering different areas in their jurisdiction. Two AQMAs are located to the north of the development, as illustrated in [Figure 4.1](#), and are:
- The Cherwell District Council Air Quality Management Areas No. 1, declared for exceedances of the NO₂ annual and 1-hour mean objectives and;
 - The Cherwell District Council Air Quality Management Areas No.2, declared for exceedances of the NO₂ annual mean objectives.

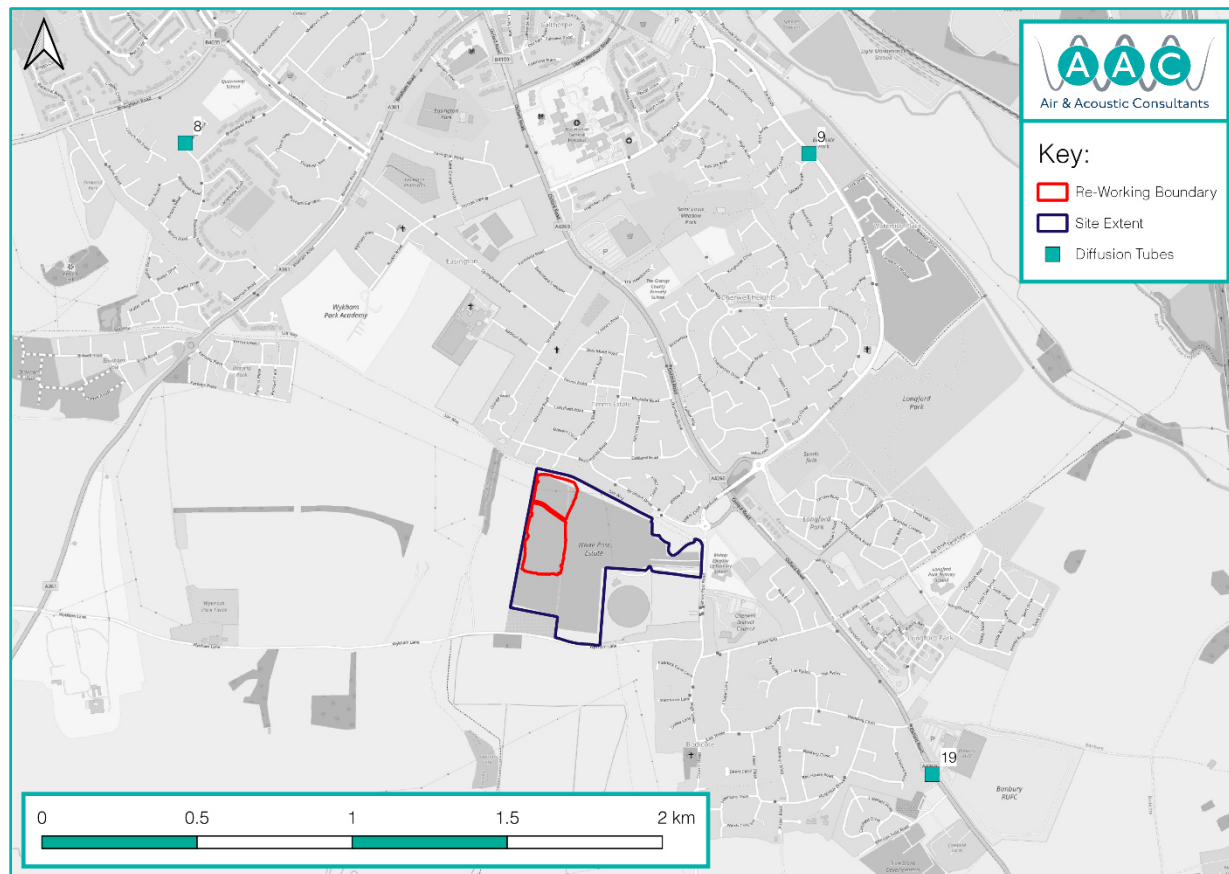
4.2 Local Air Quality Monitoring

- 4.2.1 CDC did not undertake any automatic monitoring in 2019. CDC do however have a network of non-automatic NO₂ diffusion tubes located across the jurisdiction.
- 4.2.2 A review of the available data indicates that monitoring was undertaken close to the development site, as illustrated in [Figure 4.1](#). [Table 4.1](#) sets out the NO₂ monitoring data collected between 2015 and 2019, for these closest monitoring sites.

Table 4.1: Summary of NO₂ Diffusion Tube Monitoring (2015 – 2019)

ID	Type	Annual Mean (µg/m³)				
		2015	2016	2017	2018	2019
Cranleigh Close (8)	Roadside	35.3	37.7	37.3	36.4	29.9
Bankside (9)	Roadside	16.3	17.9	17.0	18.8	17.2
Oxford Road 2014 (19)	Roadside	19.4	22.1	20.3	20.0	17.1
Objective		40				
Notes: Bold indicates exceedances of the NO ₂ annual mean objective. <u>Bold and underlined</u> indicates exceedances of 60 µg/m³ (which is an indication the hourly mean objective could be being breached).						

Figure 4.1: Monitoring Locations



4.2.3 The diffusion tube monitoring carried out close to the development site shows compliance of the NO₂ annual mean objective for the past 5 years of available data.

4.3 Mapped Background Concentrations

Defra Background Concentrations

4.3.1 The Defra website includes estimated background air pollution data for NO_x, NO₂, PM₁₀ and PM_{2.5} for each 1km-by-1km OS grid square¹⁹. Background pollutant concentrations are modelled from the base year of 2018 and based on ambient monitoring, meteorological data from 2018 and then projected for future years. Projected pollutant concentrations for the baseline years (2019 and 2021), covering the closest OS grid square to the chosen receptor locations, are provided in Table 4.2 and have been utilised as part of this assessment.

4.3.2 It should be noted that a recent statement from Defra states:

“Users of the updated LAQM tools should be aware that the projections in the 2018 reference year background maps and associated tools are based on assumptions which were current before the Covid-19 outbreak in the UK. In consequence these tools do not reflect short or longer term impacts on emissions in 2020 and beyond resulting from behavioural change during the national or local lockdowns.”

¹⁹ Department for Environmental Food and Rural Affairs. Accessible at: <https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018>

Table 4.2: Estimated Annual Mean Background Pollutant Concentrations ($\mu\text{g}/\text{m}^3$)

Pollutant	2019	2021
NO ₂	9.31	8.64
PM ₁₀	14.74	14.30
PM _{2.5}	9.66	9.32

Notes: Data presented are derived from the ordinance survey grid references E: 445581, N: 238356

- 4.3.3 Annual mean concentrations are within the relevant objective limits for NO₂ and PM₁₀. There are no ambient air quality limits for PM_{2.5}.
- 4.3.4 Background NO₂ concentrations have been calibrated against Automatic Urban and Rural Network (AURN) sites with more than 75% data capture. The methodology for this is set out in the Air Quality Consultants document²⁰.

²⁰ Air Quality Consultants, 2020. *Calibrating Defra's 2018- based Background NO_x and NO₂ Maps against 2019 Measurements*.

5 Operational Impacts

5.1 Traffic Emissions

- 5.1.1 The proposals will see 10 or more residential units created and it has been assumed that more than 10 car parking spaces will be created. This does exceed the criteria in Step 1 of the EPUK & IAQM (2017) screening criteria (as set out in [Section 3](#)).
- 5.1.2 The proposals have been screened against Step 2 of the EPUK & IAQM (2017) screening criteria (as set out in [Section 3](#)). A review of the traffic data provided by the transport consultant indicates that the proposed development would generate 161 additional daily car movements across the highway network. On the basis that the development is located outside of an AQMA, it is anticipated that the AADT will not exceed the criteria set out in Step 2.
- 5.1.3 However, as identified in the baseline section, two AQMAs sit north of the development, and therefore the more stringent criteria should also be applied. When looking at the distribution of the traffic data, 94 car movements are predicted to travel north of the site along the Oxford road towards the AQMAs. On this basis, it is anticipated that the AADT will not exceed the more stringent criteria set out in Step 2.
- 5.1.4 In line with the EPUK & IAQM (2017) guidance, a full impact assessment has been scoped out of this assessment, and the traffic emission impacts are anticipated to be negligible and 'not significant.'

5.2 Potential Future Exposure

- 5.2.1 The application site is not located within an AQMA. The closest monitoring sites to the development did not show any exceedances of the NO₂ annual mean objective (40 µg/m³) for the past 5 years of available data. Furthermore, the background concentrations recorded in [Table 4.2](#) are considerably lower than the relevant air quality objectives.
- 5.2.2 Based on this, the application site is anticipated to be compliant with all air quality objectives, and provide an environment suitable for a residential development.

5.3 Plant Emissions

- 5.3.1 At this stage it has not been possible to undertake a quantitative assessment of any operational plant, as it is unknown if any will be proposed.

6 Mitigation Measures

6.1 Operational

Operational Mitigation

- 6.1.1 The results of the air quality assessment demonstrated that the air quality concentrations at the site and surrounding area are not anticipated to be at a level that would adversely impact future sensitive receptors and would fall within the NO₂ annual mean objective (40 µg/m³). Furthermore, the PM₁₀ and PM_{2.5} air quality objectives are expected to be comfortably met at the site.
- 6.1.2 Based on the Assessment conducted in [Section 5](#), and the EPUK & IAQM (2017) guidance concludes that the impacts as a result of the development are anticipated to be negligible and 'not significant.'
- 6.1.3 Therefore, specific measures are not considered necessary to mitigate the impact on existing receptors as a result of the development or on the introduction of future residential receptors.

7 Summary & Conclusions

7.1 Baseline

- 7.1.1 The proposed scheme is not situated within an AQMA. The closest NO₂ monitoring locations to the site carried out by CDC have not exceeded the annual mean objective for the past 5 years of available data. The Defra background concentrations set out in [Table 4.2](#) indicates that the objectives, as set out in [Table 2.1](#), are not being exceeded on site.

7.2 Operational Phase

- 7.2.1 The air quality assessment indicates that the proposed development will not have a significant impact on air quality concentrations, and is deemed suitable to introduce new residential receptors.
- 7.2.2 It can, therefore, be concluded that the proposed development is not considered to conflict with national, regional and local planning guidance referenced in this assessment.

APPENDICES

APPENDIX A – CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Contents (Note: the plan must be contained in a folder with each of the below in clearly defined sections)

Section 1	Details of the Development
Section 2	Amendments to the Plan
Section 3	Review of the Plan
Section 4	Site Management Structure
Section 5	Arrangements for Managing the Development
Section 6	Site Management Safety, Health and Environmental Duties
Section 7	Site Rules Specific to the Development
Section 8	Specific Environmental Management Controls
Section 9	Site Security and Protection Assessment
Section 10	Site Execution Plan Checklist
Section 11	Worker Consultation
Section 12	Site Pedestrian/Traffic Management Plan
Section 13	Temporary Works Assessment (SHE Form 95)
Section 14	Safe System of Work Index (SHE Form 73)
Section 15	Consortium Arrangements
Section 16	Fire Plan
Section 17	Emergency Procedures (SHE Form 81)
Section 18	Surface Water Management Plan / SHE 86 Sustainable Drainage RA
Section 19	Planning Consent / Decision Notice / F10 / SHE 19 / Delivery Route
Section 20	BDW RA's 001 - 008 / SHE 28 Telehandler Lift Plan / Method Statements /
Section 21	SHE 78 Site Mgt Inductions / Training Records / FFP3 records
Section 22	SHE 99 Drug & Alcohol Reasonable Suspicion / SHEB03
Section 23	SHE 43 Temporary Works Assessment / SHE 96 Temporary Works Inspections

Details of the Development

Development	H7942 - DWH Bodicote, Off White Post Road, Bodicote, Banbury, Oxon, OX15 4BN		
Divisional Office	BDW Mercia - Remus 2, 2 Cranbrook Way, Solihull, West Mids, B90 4GT		
Client	BDW Trading Ltd, Trading as David Wilson Mercia		
Principal Contractor	BDW Trading Ltd, Trading as David Wilson Mercia		
Principal Designer	BDW Trading Ltd, Trading as David Wilson Mercia		
Lead Designer	BDW Trading Ltd, Trading as David Wilson Mercia		
Description of Development	Construction of 280 residential dwellings with associated roads, sewers and landscaping works. This includes S278 works and alterations to re-prioritize White Post Road.		
Development Start Date	September 2019	Completion Date	December 2024
Notification sent to HSE by		Date	
Reviewed by SHE Manager Signature		Date	
Construction/Project Director Signature		Date	
Approved by MD		Date	

[illegible]

[illegible]

[illegible]

[illegible]

Site Management Structure

Position	Name	SHE Management training (including - date achieved)	Signature (Confirmation of understanding of plan)
Contracts/Project Manager/Director	Harry Marcuse-Harris	IOSH Senior Management Training, Environmental Awareness, CSCS.	
	Ricki Hughes	SMSTS, CSCS, Emergency Aid, Scaffold Inspection, Manual Handling, CAT, Environmental Awareness Awareness, Fire Marshal, Mgt of Confined Spaces, Temp Works Supervisor.	
Quantity Surveyor(s)	TBC	CSCS, CDM Awareness	
Site Manager(s)	TBC	SMSTS, CSCS, Scaffold Inspection, Fire Marshal, CAT, 1st Aid at Work, Manual Handling, LOLER, Environmental Awareness, Mgt of Confined Spaces, Temp Works Supervisor.	

Position	Name	SHE Management training (including - date achieved)	Signature (Confirmation of understanding of plan)
Assistant Site Manager(s)	TBC	SMSTS, CSCS, Scaffold Inspection, Fire Marshal, CAT, 1st Aid, Manual Handling, LOLER Supervisor, Environmental Awareness, Confined Spaces	
		SMSTS, CSCS, Scaffold Inspection, Fire Marshal, CAT, 1st Aid, Manual Handling, LOLER Supervisor, Environmental Awareness, Confined Spaces	
		SMSTS, CSCS, Scaffold Inspection, Fire Marshal, CAT, 1st Aid, Manual Handling, LOLER Supervisor, Environmental Awareness, Confined Spaces	

Position	Name	SHE Management training (including - date achieved)	Signature (Confirmation of understanding of plan)
Technical Team	David Green	CSCS, Principal Designer / Awareness, TWC / Temporary Works Supervisor.	
Temporary Works Coordinator	TBC	TWC	
Construction Support Manager	Darren Broderick	1st Aid, Fire Warden, RiskAssBSC(lev2), SMSTS, LOLER, CSCS, Scaff Insp, IOSH, ManHandling, EnvAware, Temp Work Sup. CDM	
Site Labourer	TBC	CSCS, Vehicle Banksman, Manual Handling, EFA, Fire Safety, FFP3, Site Ladder Safety	
Site Labourer		CSCS, Vehicle Banksman, Manual Handling, EFA, Fire Safety, FFP3, Site Ladder Safety	
Site FLDriver	TBC	CPCS, Vehicle Banksman, Manual Handling, EFA, Fire Safety	
Site FLDriver		CPCS, Vehicle Banksman, Manual Handling, EFA, Fire Safety	

[illegible]

Arrangements for Managing the Development

Organisation

It is the responsibility of the Contracts/Project Director/Manager on this development to ensure the Occupational Safety, Health & Environmental Management System (OSHEMS) is observed by all employees and contractors.

The Contracts/Project Director/Manager may delegate aspects of Management to other members of the site team as identified in this Plan. However, the Contracts/Project Director/Manager retains responsibility for ensuring the roles are carried out.

Review of the Plan

The plan will be reviewed throughout the duration of the development and a formal review undertaken every **3 months** by the Contracts/Project Director/Manager or if arrangements on the development alter. The review will examine the detailed control measures required for each element of the development and evaluate current performance. Safety, Health & Environmental (SHE) documentation is continually updated by virtue of the site SHE filing system.

Safety, Health and Environmental Inductions

All persons working on the project will be provided with a SHE Induction identifying site rules and general requirements prior to commencing work. The Induction will be site specific and a record maintained on site. The site-specific rules and relevant emergency procedures will be communicated and included in the induction. Training provided to operatives will be evaluated by Site Management to ensure they have achieved the required competency to carry out the tasks.

Inductions will include all aspects of SHE control measures on site including the requirements to manage and segregate waste in accordance with this plan. Induction will also ensure that all site operatives are aware of the procedures minimising water and air pollution.

Selection and Appointment of Subcontractors

All contractors are required to complete an assessment of competency via one of the Site Safety in Procurement Schemes (SSIP). Their performance on the project will be continually assessed as the development progresses.

The Contracts/Projects Director/Manager will advise each contractor of the safe system of work information required for each work element. The contractor will be required to provide documentation acceptable to the Site Management team before they start work on site.

A copy of the Group's Safety, Health & Environmental Code for Subcontractors will be issued to all sub-contractors. The code provides detail on the minimum standards to be applied on our developments.

Communication and Co-ordination

The OSHEMS is the fundamental method for ensuring consistency on site. This management system is complimented by issuing regular Safety, Health & Environmental Alerts, which identify any changes in policy or management arrangements. Changes in policy or arrangements are reviewed at quarterly Group SHE Committee Meetings and details of any changes are issued via the Company's Group memo system. The Divisional SHE Manager will attend Bi-Monthly SHE meetings where these policy and arrangement changes can be discussed with Senior Divisional Managers. Discussions will also be held with the Site Management Team during regular visits to developments by the SHE Manager.

Subcontractor progress meetings will be held as required with the nominated person responsible for each contractor on site. The intention of the meeting is to communicate the SHE requirements for management on the project and to discuss forthcoming work and required control measures.

A poster will be displayed in the site offices identifying whom to contact in order to consult on SHE matters. The group has also introduced a 'Safecall' system for any person to provide information on SHE matters which in their view are not being dealt with by our management. The telephone number of the SHE Manager will, in addition, be displayed in the site office.

Specific details for means of consultation with the workforce are detailed in this plan.

Safety, Health & Environmental Briefings (SHEBs)

SHEBs or tool-box talks will be provided to site operatives and should reflect the actual work being undertaken on site. The briefings can be undertaken by contractor supervisors if they are deemed competent. Records will be maintained of the briefings.

Safety Alerts/Incident Announcements

These are issued on the basis of learning from near misses or incidents or if a specific issue SHE issue requires disseminating through the Company. These will be briefed to the relevant personnel that they affect and be recorded. They will also be displayed on the SHE notice boards.

Monitoring of SHE Standards

Formal monitoring of the development will be undertaken in the following manner:

A review of site SHE performance will be undertaken by the Site Manager daily and recorded in the site diary. The site management team will also carry out formal recorded inspection of the project every week. The Contracts/Project Director/Manager will formally review the project at least once per month.

All contractors will be required to have their own monitoring arrangements for their work activities and provide reports to Site Management.

An independent SHE review of the development will be undertaken at least monthly by one of the SHE Managers. Copies of the review report are forwarded to the Construction Director and site performance reported to the Divisional Board. The Contracts/Project Director/Manager is responsible for ensuring that all items identified by the SHE Manager are actioned by the Site Manager.

Statutory Notices

The following notices will be completed (where required) and displayed in the Site Office and Welfare Facilities.

- Health & Safety Law poster 'What you should know' (Site office only)
- Health & Safety Policy Statement
- Environmental Policy Statement
- Site Rules
- Emergency Procedures
- Fire Action Notice
- Employers Liability Insurance Certificate
- F10 'Notification of the project' to the Enforcing Authority.

Emergency Procedures

Emergency procedures in the event of fire, accident, contact with live services, Dangerous Occurrence or a significant environmental incident will be displayed throughout the site facilities. **Any other emergency requirements for the project are detailed in this plan.** The site location plan, which is included in this Plan, identifies the site muster/assembly points and evacuation routes. Evacuation procedures will be communicated to site personnel at the Site Induction.

Accidents and Dangerous Occurrences

Contractors will be required to report all accidents, incidents and dangerous occurrences to site management. All accidents will be reported to the site office and recorded in the site accident book. All accidents which result in more than 24hrs being lost by an operative, a major injury, a member of the public being injured or a dangerous occurrence must be reported immediately to the SHE Manager and Construction Director. The Construction Director is responsible for ensuring that appropriate notification is given to the relevant enforcing authority where required.

Welfare Facilities

Provisions will include:

- A suitable canteen containing chairs and tables, facilities to heat food and boil water and washing facilities for utensils
- Adequate First Aid boxes which are correctly stocked
- Adequate and suitably qualified First Aid cover
- Adequate toilets and a suitable drying room for wet clothing
- Facilities will be inspected daily by Site Management and will be cleaned daily

Health & Safety File

Information required for the Health & Safety file will be retained within our SHE site filing system and forwarded to the Principal Designer prior to units being handed over on the development.

Traffic/Pedestrian Management

The arrangements for managing traffic/pedestrian movements on site are detailed on a plan displayed in the site office, which is reviewed regularly.

Waste Management

The strategy for waste reduction is primarily to adopt a waste minimisation strategy which will reduce the amount of raw material used on site and therefore the amount of wasted resources discarded. This is undertaken in accordance with the following waste hierarchy:

1. Eliminate - Avoid producing waste in the first place.
2. Reduce - Minimise the amount of waste you do produce.
3. Re-use - Use items as many times as possible
4. Recycle - Recycle what you can only after you have re-used it.
5. Dispose - Dispose of what is left in a responsible way.

Waste production is likely to fall into the following categories.

Waste Group (incl. European Waste Code)
170107 - Mixed Inert (Bricks, blocks, tiles, ceramics)
170802 - Gypsum
170201 - Timber
170203 – Plastics (Rainwater goods, Drainage)
200301 - Mixed compactable
Hazardous

Site Management Safety, Health and Environmental Duties

Duty	Frequency	Person Responsible
Scaffold Inspection	Prior to use for the 1 st time, following alterations or adverse weather and in all cases at intervals not exceeding 7 days	TBC
Excavation Inspection	Before any person carries out work at the start of each shift, following any event likely to affect the strength or stability and following any accidental fall of earth etc.	TBC
Lifting Appliances	Daily by Operator and inspection records provided every 7 days.	TBC
Fire Precautions	Checked regularly and formal records maintained weekly	TBC
Welfare Facilities	Daily	TBC
Temporary Electrical Installations	Following installation – temporary accommodation every 12 months thereafter or following any move. Temporary on site installations every 3 months.	TBC Electrician -
Crane Coordination	On crane arrival to site and prior to commencing lifting operations	TBC
Safety, Health & Environmental Inductions	First visit to site and following any significant changes to site rules of plans.	TBC
Issue of Permits to Dig/Drive Piles/Excavate	As necessary	TBC
Issue of Hot Work Permits	As necessary	TBC
Evaluation of Method Statements/Risk Assessments	Prior to any contractor commencing work on site	TBC
Traffic Management Plan	As necessary	TBC

Site rules specific to the Development

Detailed below are the site rules for this project, which will be included in the Safety, Health & Environmental Induction.

Item	Site Rule						
1	All operatives must receive induction before being allowed to commence work on site.						
2	All inducted persons must sign in and out when arriving and leaving site.						
3	All visitors to site must sign in and out of the site and be under the control of site management at all times.						
4	<div>The working hours on this site are:<table><tr><td>Monday to Friday</td><td>07:30 - 18:00</td></tr><tr><td>Saturday</td><td>08:00 - 13:00</td></tr><tr><td>Sunday</td><td>NOT PERMITTED inc Bank Holidays</td></tr></table><p>Work outside these hours requires site management approval.</p></div>	Monday to Friday	07:30 - 18:00	Saturday	08:00 - 13:00	Sunday	NOT PERMITTED inc Bank Holidays
Monday to Friday	07:30 - 18:00						
Saturday	08:00 - 13:00						
Sunday	NOT PERMITTED inc Bank Holidays						
5	Alcohol and drugs are forbidden on site unless the drugs are prescribed and will not affect that person's ability to work in a safe manner.						
6	The site speed limit is 10 mph.						
7	All persons on site must follow the access routes on site and keep clear of hazardous areas such as designated traffic routes, material compounds or where overhead work is being carried out.						
8	<div>Fires are prohibited on site. All personnel must be aware of the escape routes from the building and comply with instructions given from the fire plan during induction. The fire assembly point is located at<div>REAR OF SUB-CONTRACTORS CAR PARK</div><p>No smoking in welfare facilities, site offices, plots under construction, completed properties or near flammable gases or liquids.</p></div>						
9	All accidents, incidents, dangerous occurrences and near misses must be reported to site management immediately no matter how small and recorded in the appropriate book.						
10	Do not encourage or take part in horseplay of any kind.						
11	Keep the site tidy, dispose of litter properly, use designated waste skips provided and be considerate to people and their property. Don't leave your mess for others to clean up or fall over.						
12	Any minor spillage must be cleaned up immediately and notified to site management.						
13	Any major spillage must be contained and prevented from entering drains/sewers/water courses etc. and must be notified to the site management immediately. Spill kits are located in the compound.						

Item	Site Rule
14	Persons aged between 16 years and 18 years must have a suitable young person's risk assessment completed and be under close personal supervision. (Work experience (below 16 years) must be approved by the Construction/Project Director before being allowed on site.
15	The following PPE is mandatory on site, safety boots, high visibility vest/coat, safety helmet (EN397) bump caps are not allowed. Other items i.e. ear protection, eye protection, hand protection, respiratory protection etc. shall be worn where required by risk assessment.
16	All 'ride' on plant (mobile plant) must be checked over by site management (SHE Form 55) before being put to use on site for the first time. Items checked include visual aids, audible warnings, lifting certificates, safety devices and all round visibility checks.
17	Operatives should carry out daily checks on mobile plant before first putting to use and a record maintained of all weekly checks.
18	All plant operators must be over the age of 18 and must hold either a Construction Plant Competence Scheme (CPCS) or National Plant Operators Registration Scheme (NPORS) card for the particular plant being operated. Operators of any plant that will operate on roads where the Road Traffic Act applies must hold a full UK/EU equivalent driving licence.
19	No lifting equipment/accessories are to be used unless it is suitable for the task, in good mechanical condition and is accompanied by a valid test certificate or certificate of conformity.
20	All sub-contractors must instruct their operatives of the relevant safe method of work, risk assessments, COSHH assessments, and manual handling assessments as required. Acknowledgement of this information for each operative must be recorded and issued to site management.
21	Welfare facilities (canteen, W.C's, drying room etc.) are provided on site for everyone's benefit, action will be taken against anyone found defacing or abusing these facilities. Using plots or other areas of the site for tea breaks or toilets is prohibited.
22	Scaffolding erection and alterations on site must only be carried out by competent scaffolders. If you require alterations contact site management. Do not use scaffolds/working platforms with 'scaffold incomplete' notices displayed.
23	All electrical tools used on site must be 110v or battery powered and PAT tested every 12 months with suitable markings to demonstrate evidence of last test carried out.
24	All ladders and step ladders used on site must be class 1 type, suitable for the task which must be risk assessed and included on the work equipment inspection regime.
25	No person other than a trained and competent electrician is permitted to carry out work on electrical equipment.
26	Permits to work are required for permit to dig/excavate/drive piles, cranes, temporary works, hot work permit, confined spaces and electrical.
27	The following high risk activities may not be undertaken by non-English speaking workers:- <ul style="list-style-type: none"> - Demolition. - Lifting Operations. - Plant Operations. - Any Permit to Work activities. - Lone Working.

[illegible]

Specific Environmental Management Controls (including Environmental objectives)

i) Environmental Objectives for the site

Objectives	Current levels (where applicable)	Site Specific Control Measures
Maintain compliance with environmental standard ISO 14001		SHE inspections completed at least every four weeks by visiting SHE Manager. A visiting Contracts Manager shall be completing regular inspections and recording monthly SHE tours with the Site Mgt Team. Meetings shall be held with contractors and minutes taken for review.
Reduce water usage on site	27.3m³ per unit legally completed.	Utility bills are to be monitored monthly. Meter readings to be undertaken by site manager results to be displayed on site. Turn off water taps, welfare to be fitted with push button type taps to reduce water usage.
Reduce energy used in the construction process including site offices	1,792 kg CO² per unit legally completed.	Fit door closers to reduce heating loss. PIR's to be fitted to site cabins, lights to reduce energy usage. Materials to be procured through group deals where possible.
Reduce total tonnes of waste generated per plot during construction	37.3 m³ per unit legally completed.	Precut materials shall be procured where possible. Re-use materials such as brick/ blocks in haul roads and private drives & paths. Suppliers to recycle packaging materials. Site waste management area to be provided to ensure correct waste streams are segregated, including hazardous waste - area shown on TMP.

Objectives	Current levels (where applicable)	Site Specific Control Measures
Increase waste segregated on site for recycling	Colour coded skips and segregation signs. Provide separate hazardous waste skip or bin including signs.	Use of recycling facilities where possible as per Group Waste Management procedure.
Minimise the impact of Noise and Dust generation.		Monitored weekly via SHE 29. 3m noise meters are available to CM's for use where noise from on-site activities has raised concerns. All Site Managers have access to a noise meter App on their iPads, this is not calibrated, but will give a sufficiently precise reading to be able to plan a course of action or where required call in specialized monitoring equipment. Dust and mud will be monitored on a daily basis by the Site staff and a road brush will be used as required.
Minimise the impact of Dust generation.		Where there is an immediate need a jet washer will be used to clean the wheels of all vehicles exiting the development. If mud is transported onto the main highway it must be cleaned up immediately. Use of road brush attachment will be used during the weekdays to keep all site roads mud and dust free. Where the site gets excessively dry, dampening down MUST be considered to control DUST on site.
Minimise the impact of Dust generation.		The use of a water bowser with sprinkler system to be used for dampening down during periods of excessive dry weather. Care to be taken when disturbing made / contaminated ground.

(ii) Protection of Existing Site Features

- Hedgerows need to be taken down either outside of the bird nesting season (October - February) or under supervision of a qualified ecologist. No other wildlife constraints have been identified,
- Tree lines borders and central woodland area including public footpath and stream.
- White Post Road is to be re-prioritized as part of our scheme directing traffic into the site, the spine road of which will eventually serve the proposed development to the western boundary and beyond. A new junction will be formed to direct traffic along the remainder of White Post Road.
- As part of the approved access arrangements a new 34 space car park for the use of the public will be formed.
- There is a planning condition prohibiting the use of Wykham Lane to the south of the site for construction traffic.
- There are no known protected species cohabiting the development site however a badger sett has been identified within the neighboring properties to the NE of the site that will need to be fenced off to prevent heavy vehicles disturbing the sett.
- Archaeology has been identified across the site and whilst a further intrusive investigation will be undertaken prior to commencement where development is to take place, where it is proposed to provide open space areas and sports pitches the archaeology will remain in situ and will need to be fenced off to prevent it from being destroyed by construction traffic. Refer to the Written Specification of Investigation (to be approved by the LPA) for further information.

(iii) Protection of Immediate Environment.

- The diesel bund, mortar and cement materials will be kept over 10mts away from any watercourse and monitored weekly as per SHE 29.
- All road gullies must be protected as soon as they are fitted and will be monitored by the site team on a weekly basis via use of SHE 29. Contracts Managers will also monitor this on a monthly basis and recorded on SHE 18.
- Dust and mud will be monitored on a daily basis and a road sweeper will be used as required, to both site and public roads. Where there is an immediate need a jet washer will be used to clean the wheels of all vehicles exiting the development. If mud is transported onto the main highway it must be cleaned up immediately. Use of road brush attachment will be used during the weekdays to keep all site roads mud and dust free. Where the site gets excessively dry, dampening down MUST be considered to control DUST on site. Care to be taken when disturbing made / contaminated ground.
- Audible noise on site MUST be kept to a minimum, all conditions MUST be complied with and wherever possible the reversing of vehicles MUST be a last resort. SMART alarmed vehicles should be used wherever possible.
- A public right of way remains open and MUST be segregated from the site.
- All of the boundaries are to be secured with heras fencing.
- All pumped water to be discharged MUST be through a silt interceptor.
- Refer to Section 18 of plan for Site Surface Water Strategy.

(iv) Arrangements for the Storage and Dispensing of Fuel

- All diesels will be stored in a double bunded storage tank with an appropriate spillage kit located next to it.
- Dispensing of fuel will be completed in a controlled manner with the use of a catchment tray. All mobile plant will be filled directly from the hose nozzle in to the filling point on the machine by the plant operator.
- Diesel tanks will remain locked at all times when NOT in use and controlled by key holders.
- Site Telehandler will be stored overnight in the welfare storage area, all other plant under control of ground worker will stored on site at their storage area.

(v) Arrangements for washing out concrete wagons or road sweepers or cleaning of vehicle wheels etc.

- Any remaining quantity of concrete and washing out of wagons is to be deposited into skips at the waste collection area. Under no circumstances is this process to take place in any areas considered to have the possibility of contamination to sewers and watercourses. All delivery drivers to have this communicated to them during site induction and on subsequent access to the sites.
- For large amounts of wash out, a catchment pit is to be dug and lined with plastic. Concrete will then be allowed to cure and then broken out as hard-core for reuse.
- All tipping from road brushes to be in segregated, bunded area and minimum 10 meters from any water course, or removed to licensed tipping area.

Site Security and Protection Assessment

Person conducting assessment	Darren Broderick	Date	04th June 2019
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	Low	Med	High
High			
Med			
Low			
Severity			
<div>Low Risk</div> <div>Med Risk</div> <div>High Risk</div>			

Item	Risk	Control Measures
Site Boundaries - Control of unauthorised access taking into consideration the nature of the site and its surroundings	Low	ALL SITE BOUNDARIES TO BE SECURED PRIOR TO COMMENCEMENT OF CONSTRUCTION PHASE. DWH TO SECURE WITH HERAS ON FEET OR SECURED ON TIMBER POSTS, ALL BOUNDARIES. BOTH SITE ACCESS AND EGRESS SECURED WITH STEEL GATES WITH ACCESS FOR SITE VISITORS AND SALES STAFF. CCTV FITTED TO SITE WELFARE. ALL BOUNDARY FENCING TO BE INSTALLED INSIDE OF THE DEVELOPMENT BOUNDARY AND NOT TO ENCROACH INTO THE PUBLIC HIGHWAY.

Item	Risk	Control Measures
Control of access to the site by vehicles and pedestrians who are working on site and prevention of unauthorised persons entering the site – Detail controls to be put in place	Med	SITE SECURED WITH HERAS ON TIMBER POSTS OR FEET AND DOUBLE CLIPPED. PUBLIC PROTECTION SIGNAGE TO BE ERECTED AND DISPLAYED APPROX EVERY 20 - 25 METERS, TMP WITH APPROVED ROUTES TO BE ISSUED. EMERGENCY CONTACT DETAILS TO BE DISPLAYED AT SALES OFFICE. SITE STEEL GATES TO BE ERECTED TO CONTROL TRAFFIC MOVEMENTS ACCESSING / EGRESSING THE DEVELOPMENT.
Prevention of materials falling outside the site boundary – Consider how this will be controlled	Low	THERE ARE NO PLOTS WHICH ARE POSITIONED IN CLOSE PROXIMITY TO SITE BOUNDARIES, HOWEVER ALL PLOTS WITHIN 2 METERS OF ESTATE ROADS ARE TO BE DEBRIS NETTED. ALL MATERIALS MUST BE LANDED ONTO THE LOADING BAYS AND ALL POSSIBLE PEDESTRIAN ROUTES TO BE REDIRECTED AWAY FROM LOADING BAYS. ALL LADDER ACCESSES MUST BE TO THE REAR OF ALL PLOTS WHERE SCAFFOLD LOADING BAYS ARE ERECTED TO FRONTAGES.
Scaffold or other access equipment falling whilst being erected or dismantled – Review controls in place	Med	ALL LOADS TO BE SECURE WITHIN STILLAGES OR ON BANDED PALLETS. NO MIXING OF MATERIALS WITHIN LOADS. ALL LIFTS ABOVE 1ST LIFT MUST BE LANDED ONTO LOADING BAY OR WORKING PLATFORM. NO LOADS ARE TO BE REMOVED FORM THE FORK LIFT FROM OUTSIDE OF SCAFFOLD PERIMETER.

Item	Risk	Control Measures
Deliveries to the site – How are they being controlled – Consider delivery times and routes to the site	Low	NO DELIVERIES PRIOR TO 08.00 AND AFTER 17.30. NO DELIVERIES BETWEEN SCHOOL DROP OFF AND COLLECTION TIMES - 0830-0900, 1515-1545, WHERE POSSIBLE AVOID 1200-1300 FOR MID-DAY COLLECTIONS. ALL DELIVERIES TO BE MADE APPROVED DELIVERY ROUTE: * All construction HGV/Articulated deliveries via M40 jct 11, A361, A4260 Oxford Road, Bankside and onto White Post Road.
Storing and stacking of materials – How will they be stored i.e. secure compound	Med	COMPOUND AND STORAGE SECURED WITH METAL COMPOUND FENCING & HERAS ONTO TIMBER POSTS. LOOSE LINTELS TO BE STORED ON LINTEL RACKS TRUSSES AND TIMBER PACKS TO BE LOADED ONTO SPECIFIED RACKS AS PART OF PLOT SCAFFOLDING. NO MATERIALS TO BE STORED HIGHER THAN THE COMPOUND FENCING AND ON FIRM AND LEVEL GROUND. DIESEL AND GENERATOR TO BE SECURE AT ALL TIMES.
Additional controls required to prevent unauthorised access 'out of normal hours' – Consider if the site will attract children etc	Med	PUBLIC PREVENTION SIGNAGE TO BE IN PLACE ON ALL BOUNDARIES. ALL BOUNDARY FENCING TO BE IN GOOD CONDITION AND DOUBLE CLIPPED, NO GAPS. MUST BE CHECKED DAILY
Controls required to protect occupants of existing or new homes	Med	ALL OCCUPATIONS IN ACCORDANCE WITH APPROVED EXECUTION PLAN & STRATEGY PLAN. NEW COMPOUND AND TMP HAS BEEN ISSUED

Item	Risk	Control Measures

Site Execution Plan Checklist (Copy of the Execution plan to be inserted in this section)

Person completing checklist	Darren Broderick	Date	04th June 2019
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Item	Yes/No	Comments
Consideration has been given to enabling works and set-up of both appropriate temporary and permanent site facilities – Has a suitable programme been developed for the initial delivery of the enabling works of the site?	Yes	Compound located on plots 180-213, material storage on plots 180-198. Generator and clean water tank with pump initially until temporary supply called off. Grd Works contractor initially PC for 20 weeks.
Service connections to plots reviewed and considered – Orders in place to enable site facilities to be appropriately connected and for planned connections to plots	Yes	Temporary mains connections booked in.
Site broadband connection – Is it in place and if not has the order been placed and date provided for a connection point which will enable site and sales teams to utilise IT facilities?	Yes	BT SDP box to be positioned with 1 PSTN lines and 2 BB lines for site and sales offices.
Has a plan of the site been developed including details of material storage areas, welfare facilities, traffic/pedestrian routes, position of loading bays and ladder access points etc?	Yes	TMP developed and issued.
Has access and egress to the site been considered – Temporary access during enabling works and permanent access for the duration of the works – Is there a suitable plan in place to control access and egress to the site?	Yes	Permanent sales and construction access off White Post Road only. Single vehicular access only, controls required during S278 works, especially during foul connections and re-prioritizing of White Post Road.

Item	Yes/No	Comments
Has the route of build been clearly detailed on a plan including reference to release of plots and consideration given to their safe occupation. Does this enable safe access to be provided for the initial phases to be occupied (including any Social Housing plots) and consideration given to further phases? Has safe occupation zones been considered as part of the strategy?	Yes	Build routes agreed for DWH, detail of completions as per site execution plan. Route of build has been designed to allow safe access and occupations.
Does the site plan provide details of sales arena including safe access for customers?	Yes	TBC
Does the plan include sufficient infrastructure to be constructed i.e. roads, services and foul/surface water connections prior to the commencement of super-structures?	Yes	First phase of roads and sewers in place prior to DWH taking over as PC. This includes completion of the re-prioritizing of White Post Road and new access into the development.
Has all planning conditions been reviewed and any specific requirements taken into consideration as part of the arrangements on site i.e. protection of wildlife, habitat, public rights of way or tree/hedge preservation orders?	Yes	<ul style="list-style-type: none"> • A public right of way remains open and MUST be segregated from the site. • Archaeology has been identified across the site. Refer to the Written Specification of Investigation (to be approved by the LPA) for further information.
Has the execution plan been reviewed with Sales staff and do they clearly understand the principals of the plan including requirements for safe occupations of plots?	Yes	Sales Director has briefed his sales team on execution strategy.

Confirmation that the Site Execution Plan is appropriate to enable the site works to commence

Signed (Managing Director)		Print Name		Date	
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Details of arrangements for Worker Consultation

- All site staff, contractors and site visitors to report any concerns about Health & Safety to the Site Manager.
- Safe Call : 0800 915 1571 or email Barratt@safecall.co.uk
- Site Inductions
- Notice Boards
- Trade Meetings
- SHE Briefings and tool box talks
- Observation / Suggestions Board

TRAFFIC MANAGEMENT RISK ASSESSMENT

SHE Form 05 - Section 12

Date: Nov 2018

Site H7942 - Bodicote

Date 13th June 2019

Name of person
conducting
assessment

Position Site Manager

Number of Persons Exposed

Employees	<input type="text"/>	Other Workers	<input type="text"/>	General Public	<input type="text"/>	Disabled Persons	<input type="text"/>
Visitors	<input type="text"/>	Young Persons	<input type="text"/>	Inexperienced Workers	<input type="text"/>	Estimated Number of Persons at Risk	<input type="text"/>

HAZARDS WHICH CREATE POTENTIAL FOR HARM (mark X to all that apply)

1 Access/Egress	<input checked="" type="checkbox"/>	11 Work on / adjacent to water	<input type="checkbox"/>	21 Heat	<input type="checkbox"/>	31 Live Services	<input type="checkbox"/>
2 Underground / Obstructions / Services	<input type="checkbox"/>	12 Adverse Weather	<input type="checkbox"/>	22 Radiation	<input type="checkbox"/>	32 Moving Machinery Parts	<input type="checkbox"/>
3 Overhead / Obstructions / Services	<input checked="" type="checkbox"/>	13 Hazardous Substances / Materials	<input type="checkbox"/>	23 Sharp Objects / Needles	<input type="checkbox"/>	33 Manual Handling	<input type="checkbox"/>
4 Excavations	<input type="checkbox"/>	14 Disease / Wells Disease / Dermatitis	<input type="checkbox"/>	24 Restricted Access	<input type="checkbox"/>	34 Electrical Equipment / Tools	<input type="checkbox"/>
5 Collapse of ground / earth / materials	<input type="checkbox"/>	15 Fire / Explosion	<input type="checkbox"/>	25 Pressure Systems	<input type="checkbox"/>	35 Abrasive Wheels	<input type="checkbox"/>
6 Collapse of Structures	<input type="checkbox"/>	16 Noise	<input type="checkbox"/>	26 Reversing / Overturning Vehicles	<input checked="" type="checkbox"/>	36 Surface Obstructions / Falls on level	<input type="checkbox"/>
7 Contaminated Ground	<input type="checkbox"/>	17 Hand Arm Vibration	<input type="checkbox"/>	27 Falls from Height	<input type="checkbox"/>	37 Vehicle Movements	<input checked="" type="checkbox"/>
8 Soft Ground	<input type="checkbox"/>	18 Whole Body Vibration	<input type="checkbox"/>	28 Falls of Materials	<input type="checkbox"/>	38 Temporary Works	<input type="checkbox"/>
9 Confined Spaces	<input type="checkbox"/>	19 Fumes / Gas	<input type="checkbox"/>	29 Lifting Operations	<input type="checkbox"/>	39 Others (Please provide details in additional notes on page 2)	<input type="checkbox"/>
10 Demolition	<input type="checkbox"/>	20 Dust	<input type="checkbox"/>	30 Flying Particles	<input type="checkbox"/>		

Evaluation of Risk (Use the table below to evaluate the level risk associated with each hazard identified)

Severity	5	5	10	15	20	25	LIKELIHOOD	Rating 1	Very Unlikely	SEVERITY	Rating 1	No Injury	RISK	Risk = Likelihood (L) x Severity (S)	
	4	4	8	12	16	20		Rating 2	Unlikely		Rating 2	Minor Injury or Illness		1 - 4	Acceptable
	3	3	6	9	12	15		Rating 3	Likely		Rating 3	7 Day Injury of Illness		5 - 10	Further Review
	2	2	4	6	8	10		Rating 4	Very Likely		Rating 4	Major Injury or Illness		11 - 25	Unacceptable
	1	1	2	3	4	5		Rating 5	Almost Certain		Rating 5	Fatality			
		1	2	3	4	5									
	Likelihood														

ADDITIONAL HAZARDS

SHE Form 05 - Section 12
Date: Nov 2018

ITEMS TO BE ASSESSED AND CONTROL MEASURES TO BE IMPLEMENTED

Item	Factors of Harm		Risk	Control Measures	Residual Factors		Risk	Further Controls Required
	L	S	(L x S)		L	S	(L x S)	
Control of vehicles accessing the site. Review types of delivery vehicles and route to and from the site entrance. Consider any restrictions or holding points required			0				0	
Detail access/egress requirements to the site, including measures for safe entry and exit of pedestrians Consider car parking for staff and contractors			0				0	

ITEMS TO BE ASSESSED AND CONTROL MEASURES TO BE IMPLEMENTED

SHE Form 05 - Section 12

Date: Nov 2018

Item	Factors of Harm		Risk	Control Measures	Residual Factors		Risk	Further Controls Required
	L	S	(L x S)		L	S	(L x S)	
<p>Review visibility and consider if drivers can see both ways when driving out of the site on to public roads.</p> <p>Consider barriers or traffic control measures</p>	<input type="text"/>	<input type="text"/>	0		<input type="text"/>	<input type="text"/>	0	
<p>Review how vehicles will access through the site. Detail controls to manage reversing delivery vehicles etc.</p> <p>Consider traffic routes and one way systems. If required safe reversing zones.</p>	<input type="text"/>	<input type="text"/>	0		<input type="text"/>	<input type="text"/>	0	
<p>Detail delivery times for the site and any restrictions. Are these sufficient to control any risks to adjacent properties?</p>	<input type="text"/>	<input type="text"/>	0		<input type="text"/>	<input type="text"/>	0	

HAZARDS IDENTIFIED ARE TO BE ASSESSED - CONTINUED

SHE Form 05 - Section 12

Date: Nov 2018

Item	Factors of Harm		Risk	Control Measures	Residual Factors		Risk	Further Controls Required
	L	S	(L x S)		L	S	(L x S)	
Consider how vehicle speeds will be controlled on site and also leaving the site adjacent to occupied areas/premises, especially schools			0				0	
Review signage required for on-site traffic management and for vehicles getting to and from the site			0				0	
Detail how segregation between the site access roads and pedestrian routes will be maintained			0				0	

ITEMS TO BE ASSESSED AND CONTROL MEASURES TO BE IMPLEMENTED

SHE Form 05 - Section 12

Date: Nov 2018

Item	Factors of Harm		Risk	Control Measures	Residual Factors		Risk	Further Controls Required
	L	S	(L x S)		L	S	(L x S)	
Review if traffic marshals are required to control deliveries including details of training for those undertaking the roles			0				0	
Consider safe unloading and loading zones on site and how these will be managed and controlled			0				0	
			0				0	

ITEMS TO BE ASSESSED AND CONTROL MEASURES TO BE IMPLEMENTED

SHE Form 05 - Section 12

Date: Nov 2018

Hazard	Factors of Harm		Risk	Control Measures	Residual Factors		Risk	Further Controls Required
	L	S	(L x S)		L	S	(L x S)	
			0				0	
			0				0	
			0				0	

1. Site	Date Plan Completed	Completed By
H7942 - Bodicote	05th June 2019	Darren Broderick

2. Review Dates		
Reviewed by	Date	Details of any amendments

3. Purpose

To ensure that any surface water leaving a BDW Trading Limited development is sufficiently treated as to be acceptable for disposal into controlled waters. This will be achieved by:-

- identifying potential entry points of surface water onto or within the site,
- the implementation of specific measures for capture (lagoons) and final treatment within our boundaries, prior to being discharged off site.
- Implementation of Emergency Measures/Arrangements

Additionally, the plan will identify the requirements to ensure that any implemented measures are adequate and effective, through monitoring, sample collection or other means.

Records (logs, photographs etc.) will be kept.

The plan will identify the responsible parties (named) for each item and the frequency of each event. The plan will be reviewed at appropriate frequencies dependant on risk and impact.

4. Identifying Water Sources

Details of existing streams or ditches

Details of springs, pumping sources

Details of existing, proposed streams or ditches, road gullies, land drainage, surface water drainage etc.

5. Capture Measures (*attach a plan of the site identifying surface water management measures*)

Ditches

N/A

Settlement Ponds

N/A

Earth Bunds

N/A

Other

Road and drainage infrastructure will be in place to provide protection.

6. Treatment
Dirt/Silt Bags (attach manufacturer's literature on the type to be used) Refer to manufacturers literature & RAMS available from Grd Works contractor.
Gulley Bags (attach manufacturer's literature on the type to be used) Refer to manufacturers literature & RAMS available from Grd Works contractor.
Silt Fences (attach manufacturer's literature on the type to be used) N/A
Settlement tanks Sediment Sumps will be dug where there is a need to de-water any foundations. This will be pumped into the new infrastructure ensuring silt bags are fitted.
Other – Road cleaning, assessments, contact with neighbours Road sweeper to be utilized, area for effluent waste to be identified, shown on TMP and agreed by SM. or Waste to be removed from site to licensed area.

7. Discharge points
Water Courses Refer to DWG No:
Surface Water Mains Drainage N/A
Tanker For immediate tanker emergency response call - Reconomy

8. Emergency Measures/Arrangements
Excessive Rainfall/Water Flow Infrastructure including roads and sewers in place for house build areas. Capacity within S104 approved drainage design. Reconomy can be called in for tankers in an emergency.
Emergency Team Site Manager, Contracts Manager, Ground Works Foreman For immediate tanker emergency response call - Reconomy

9. Monitoring Arrangements			
What	How	When	By Whom
Monitoring of Surface Water Management Arrangements	Visual inspection of all Surface Water Management Arrangements and implemented control measures (Silt fences, Gulley Bags, Manhole bags etc.) Daily Log to be kept.	Visual daily recorded and submitted to Site Manager weekly or after any remedial action	Ground worker Competent Person(s)
Management of Surface Water Management Arrangements	Weekly review by Site Management recorded on SHE Form 29	Weekly review	Site Manager
Review of Surface Water Management Arrangements	Review by Contracts/Projects Manager recorded on SHE Form 18	Monthly review	Contracts/Projects Manager
Testing/Analysis of samples	Selected Biological solid/settlement test	As required or as plan outlines	Independent analytical company

10. Review Frequencies			
	How	When	By Whom
Surface Water Management Plan	A set procedure - minimum every 3 months and following/during severe weather conditions.	Every 3 months and following adverse weather	Contracts Manager & Groundworker
Environmental objective	Silt/slurry collection, also visual assessments, flow rate assessments	As above process and following adverse weather	Contracts Manager & Groundworker
Actions	System amendment if potential failures identified	Immediate	Contracts Manager & Groundworker

